



INNOVATION IS PART OF OUR CULTURE



- Climate regulation, irrigation devices
- Mechanisation





anjouautomation.com



Anjou Automation was created in 1982. It designs and manufactures regulation and automation equipment for sectors such as the agri-food, environment and automotive industries.

Based on techniques that use digital electronics and industrial IT, the business was able to develop innovating lines of standard products that are perfectly suited to user needs and is also available to create bespoke products.



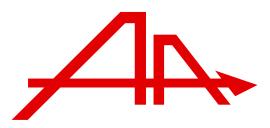












Today, Anjou
Automation is
recognised all over the
world for its greenhouse
climate and irrigation
regulators, its weather
sensors and its
Mechanisation line.









## Anjou Automation activities

#### **HORTICULTURE - MARKET GARDENING**













#### AGRI-FOOD INDUSTRY



#### **AUTOMOTIVE**



#### **MACHINERY**



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#### **SELECTION GUIDE**

#### **POLYCLIM 2000 PRODUCT LINE**

- · Management of one climate
- Pre-defined functions depending on the model
- · Delivered with sensor
- · Built-in manual controls
- · Non-supervisable



More information on page 11

#### **KAIROS**

- Management of 1 to 6 climate zones depending on the number of outputs per zone
- Functions configurable depending on the project
- Embedded website and compatible with Supervision



More information on page 14

#### **POLYCLIM NG**

- Management of one climate zone several zones on specific configurations
- · Pre-defined functions with possibility of adding functions
- · Built-in manual controls
- Embedded website and compatible with Supervision



More information on page 12

#### **ARTIC**

- Management of 1 to 12 climate zones
- Irrigation, fertilisation and boiler room management
- ${\boldsymbol{\cdot}}$  Functions configurable depending on the project
- Embedded or box version
- Embedded web site and compatible with Supervision



More information on page 16

#### **AVAILABLE SOFTWARE FUNCTIONS**

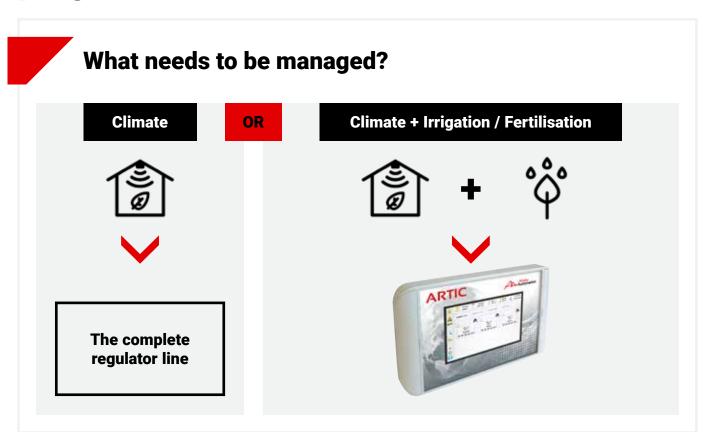






	Functions	Description	Number of outputs
	Ventilation on 1 side	Regulation proportional to the ambient temperature Weather safety systems (wind and rain)	2
	Ventilation on both sides	Outside influences (wind, wind vane, outside temperature and sunlight) Temperature integration over 24 hours	4
	Shade screen / thermal screen	Shading mode depending on sunlight (Watt/m²) Thermal mode depending on the ambient temperature Outside influences (outside temperature)	2
	Heating ON/OFF	Thermostatic control according to the ambient temperature Possibility of managing a circulator at one water temperature separately from the unit heater	1
9	Heating : 3-way valve + circulator	Proportional control according to the ambient temperature and the water circuit temperature Outside influences (wind, outside temperature and sunlight) Circulator control according to the water circuit temperature Temperature integration over 24 hours	3
<b>FUNCTIONS AVAILABLE</b>	Deshumidification	Regulation of the ambient hygrometry Influence on ventilation, heating and shading	-
IONS AV	Inflation	Turbine operation control by "pulse and variation" Outside influence (wind speed)	1
FUNCT	Fog	Regulation proportional to the ambient temperature and/or hygrometry Influence on ventilation	1
	Air mixer	Thermostatic control depending on the ambient temperature and/or hygrometry Possible combination with heating operation	1
	Cooling	Control of a pump and 1 to 3 extractor pumps depending on the ambient temperature Influence on ventilation	2 to 4
	CO2	CO2 injection control by "pulse and variation" Influence on ventilation	1
	Clock	Starting by timer or according to the sensors connected (adjustable thresholds) Applications: photosynthetic lighting, irrigation, etc	1
	Alarm	Activation on passing a top or bottom threshold (temperature or hygrometry) or control malfunction (circuit, sensors disconnected, etc). Output normally closed when switching on	1

## Choosing the regulator for your project



#### How many climate zones need to be managed?

A climate zone is a growing surface area (regardless of its size) in which the required climate is the same (temperature set point for example).

To simplify: 1 climate zone = 1 single temperature sensor



#### **CHOOSING THE RIGHT REGULATOR**

#### Which functions should be managed in the zones?

Functions corresponding to a pre-defined model of Polyclim 2000 product line (on page 11) or Polyclim NG (on page 12)



Functions that are outside the Polyclim 2000 and Polyclim NG line pre-defined standards



#### Calculate the number of outputs per zone

To calculate the number of outputs per zone, list your function per zone and indicate the number of outputs for each function (see table on page 7).

Then add up the total number of outputs used.

For multizone regulation, the zone that uses the most outputs must be taken into account.

For example: a project with 4 climate zones

Zone 1	
Roof ridge aeration x1	4
Shade	2
Heating ON-OFF	1
Total outputs	7

Zone 2					
Roof ridge aeration x1	2				
Shade	2				
Heating ON-OFF	1				
V3V heating	3				
Total outputs	8				

Zone 3						
Roof ridge aeration x1	4					
Heating ON-OFF	1					
V3V heating	3					
Total outputs	8					

Zone 4	
Roof ridge aeration x1	4
Shade	2
Heating ON-OFF	1
V3V heating	3
Total outputs	10

As indicated above, the zone using the most outputs must be taken into account, in this case zone 4 with 10 outputs.

By referring to the Artic table (on page 18), we can see that the 4 zone / 16 output reference is needed

#### **RGAP / CLIMTOP / VIGI'CALL**



#### **TEMPERATURE CONTROLLER**

Temperature controller to control hot air generator heating. 230V supply with 2 adjustable thresholds and 2 dry contact outputs (NO+NO or NO+NF).

Supplied with a CAP0007 type temperature sensor.

**RGAP** with sensor

(2 NO) CLI0050

(1 NO+1 NC) CLI0051



#### VIGI'CALL

VIGI'CALL GSM : GSM alarm box for sending vocal messages and SMS text messages

- 4 fault entries on contacts with programmable filtering, including 1 voltage presence input.
- Dispatch of messages to several phone numbers with possible chaining. Alarm acknow-ledgement (vocal only).
- 230V supply, box supplied with battery and charger. SIM card not supplied.

Vigi'Call GSM (excl. SIM card)

#### **CLI1311**



#### **CLIMTOP**

#### **BOX FOR SIMPLIFED VENTILATION CONTROL**

Simplified ventilation control management. Built-in motor control and protection. Automatic thermostatic control -10 / +40° (supplied) and Pulse and Deviation timer.

**CLIMTOP 1 for 1 motor with thermostat** 

#### **CLI0907**

**CLIMTOP 2 for 2 motors with thermostats** 

#### **CLI0909**



#### **THERMOSTAT**

Thermostat, -10°C / +40°C, 1 reverser contact CLI0515



## POLYCLIM 2000 PRODUCT LINE (NOT SUPERVISED)

#### **POLYCLIM 2100**



#### 1 side ventilation



Inflation



Alarm



Interal manual mode

. A

Ambient temperature sensor (supplied)

with temperature sensor

**CLI5095** 



#### **POLYCLIM 2150**



#### **Shading screen**



Alarm



Interal manual mode



Watt & Lux sensor (supplied)

with Watt & Lux sensor

CLI5096



#### **POLYCLIM 2000**



#### 2 sides ventilation



Inflation



Alarm



Interal manual mode

Æ

Ambient temperature sensor (supplied)

with temperature sensor

**CLI5097** 



#### **POLYCLIM 2200**



#### 2 sides ventilation





Inflation



Alarm



Interal manual mode

Ambient temperature sensor

(supplied)

with temperature sensor

**CLI5098** 



# SENSORS Temperature sensor CAP0007 Watt & Lux sensor CAP0018 Wind sensor CAP0021 Wind vane sensor CAP0022

Rain sensor

**CAP0030** 



#### **POLYCLIM NG (MAX. 13 OUTPUTS)**

#### **Adapt your Polyclim NG to your project**

All Polyclim NGs have one month archiving and 4 period management. The 13th relay output must be the alarm.



	Designation	Number of ventilation(s)	Shading screen	On / OFF heating	Air mixer	Inflation	Nbr of used outputs	Nbr of outputs remaining	Reference	Price
	POLYCLIM NG 01		Χ				2	10	CL17009	
	POLYCLIM NG 10	1		X	X	X	8	4	CLI7010	
ш	POLYCLIM NG 11	1	X	Χ	Χ	X	7	5	CLI7011	
ZON	POLYCLIM NG 20	2		X	X	X	7	5	CL17020	
ATE Z	POLYCLIM NG 21	2	X	Χ	Χ	X	9	3	CLI7021	
MA	POLYCLIM NG 30	3		X	X	Х	9	3	CLI7030	
CLIM,	POLYCLIM NG 31	3	X	X	X	Χ	11	1	CLI7031	
1	POLYCLIM NG 40	4		Х	Х	Х	11	1	<b>CLI7040</b>	
	POLYCLIM NG 41	4	X	Х		Х	12	0	CLI7041	
	POLYCLIM NG 50	5		X		X	12	0	CLI7050	

	POLYCLIM NG 01-2Z		1 by zone				4	8	CLI7118
	POLYCLIM NG 01-3Z		1 by zone				6	6	CLI7119
ш	POLYCLIM NG 01-4Z		1 by zone				8	4	CLI7120
ZONE	POLYCLIM NG 10-2Z	1 by zone		1 by zone	1 by zone	Χ	9	3	CLI7102
ПZ	POLYCLIM NG 10-3Z	1 by zone		1 by zone		X	10	2	CLI7103
MUL	POLYCLIM NG 10-4Z-CH	1 by zone		1 by zone			12	0	CLI7104
	POLYCLIM NG 10-4Z-G	1 by zone				X	9	3	CLI7105
	POLYCLIM NG 11-2Z	1 by zone	1 by zone	1 by zone		X	10	2	CLI7110
	POLYCLIM NG 20-2Z	2 by zone		1 by zone		X	11	1	CLI7202

#### Available options (depending on the remaining number of outputs)

Designation	Nbr of output(s)	Reference
3-way valve heating + circulator	3	CLI5500
FOG	1	CLI5503
CO2	1	CLI5504
Cooling	2 to 4	CLI5505
Clock	1	CLI5506



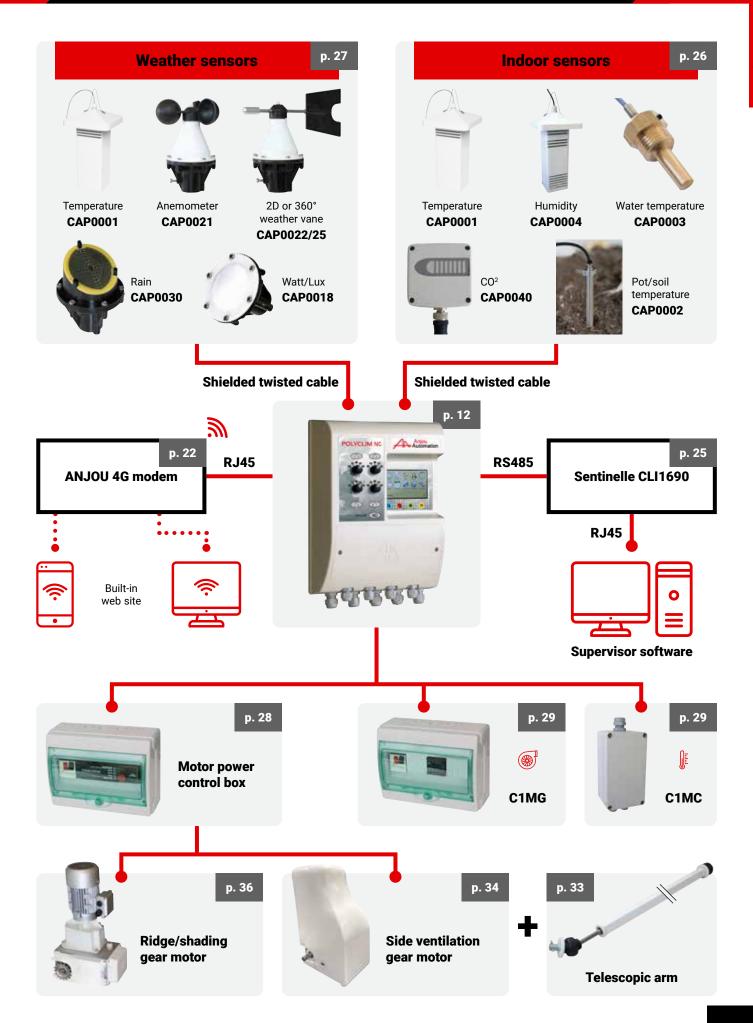
Now each Polyclim NG fitted with a 4-20mA sensor will have "/420" at the end of its reference.

Example: Polyclim NG 20 + temperature / humidity sensor (CAP0024) will have CLI7020/420 as its reference

If you operate using a sensor stock, please indicate the possible presence of a 4-20mA sensor in order to properly configure your Polyclim NG inputs

IMPORTANT: all the sensors must be 4-20mA in that case (water, pot and ambient sensors)

#### **POLYCLIM NG INSTALLATION SYNOPSIS**



#### **KAIROS Regulator**

The KAIROS regulator is a next generation climatic management computer. Between the Polyclim NG and the ARTIC, the KAIROS makes it possible to provide an ergonomic and cost effective solution for your multizone projects.

It has a colour touch screen and an embedded website providing the best browsing and the possibility of monitoring your installation remotely. Compatible with ARTIC supervision, the KAIROS is perfectly adapted to new or refurbishment projects. Its USB port can be used for easy software updates (new version, added function).

The KAIROS is delivered in kit form ready to be fitted into your control / power cabinet.



#### **CLIMATE**

- From 1 to 6 climate zones with 8 (6Z), 16 (4Z) or 24 (2Z) outputs
- Full weather management
- Boiler-room module (1 boiler + 1 transport)
- External fault management: 3 standard + 16 optional

#### **SUPERVISION**

- Compatible with ARTIC supervision
- 4G access from embedded web site (see page 18-19)

#### **ADVANTAGES**

- · Instant zone temperature and weather displays
- · Easy icon access to menus and settings
- Value entry using a touch numeric keypad
- · Setting backups and restores using the embedded website
- Software and configuration upgrades using a basic USB thumb drive
- Virtual manual mode: the 3 and 5 position switches for all functions are included on the screen

On its 5 inch colour touch screen, browsing through the KAIROS settings is fluid. The KAIROS includes one month of archives (alarms, events, statistics) and management of 4 periods.









#### **KAIROS**

#### **KAIROS: CLIMATE MANAGEMENT**

Climate management	8 outputs by zone CLI5808 / 01 - 06	16 outputs by zone CLI5816 / 01 - 04	24 outputs by zone CLI5824 / 01 - 02
1 zone - Ref /01			
2 zones - Ref /02			
3 zones - Ref /03			
4 zones - Ref /04			
5 zones - Ref /05			
6 zones - Ref /06			

#### KAIROS: BOILER ROOM MANAGEMENT

Boiler room module (management of 1 boiler + 1 transport) CLI5835

#### KAIROS: EXTERNAL FAULT MANAGEMENT

16 fault input module CLI1681

#### KAIROS: CABINET INSTALLATION

The HMI and input/output boards and built into a sheet metal cabinet (size depending on the configuration)

#### **CLI5840**

#### **KAIROS: 4G ACCESS**

SIMA box CLI1680

p. 23

2-year subscription to a secure 4G connection

#### **CLI1662**

The secure 4G connection makes it possible for you to connect to the embedded KAIROS web site from outside your installation from any device that has a web browser (PC, tablet and smartphone). Our services fully secure this connection and guarantee the protection of your regulator and your computer system.

#### Web site view



## ARTIC REGULATOR (12 X 24 OUTPUTS MAX.)

#### **Regulator ARTIC**

The ARTIC REGULATOR is a latest generation climate and Fertilisation / Irrigation management computer. It is compatible with ANJOU AUTOMATION line sensors and can be connected to the Sentinelle ARTIC. Its wide, colour touch screen makes its configuration and the use of its data both simple and userfriendly. Its processor power makes regulation accurate and effective. Its onboard SD card makes it possible to locally store data safely for easy use. Its USB port can be used for easy software updates (new version, added function).



#### **CLIMATE**

- From 1 to 12 zones with 8, 16 or 24 outputs
- Boiler room module (3 boilers, 3 transports, cascade, storage tank)
- · Weather management

#### **IRRIGATION**

- Up to 40 groups
- Management of 6 to 94 valves
- · Management of 2 to 18 motors (master valve, pump, mixers, etc.)
- · Management of 2 stations: fertilisation and clean water
- Other characteristics: identical to the NERO (see page 42)

#### THE PLUSSES:

- · Zone temperature, weather, station status at a glance
- Easier access to menus and settings using icons and tree structure navigation
- · Value entry using a numeric keypad
- Configuration copy and restore (from one zone to another)
- · Data archival (events, alarms, etc.) for an unlimited period
- 100% compatible with current supervision
- · Software or configuration upgrades using a USB stick

Equipped with a 7 inch, colour touch screen, it is as easy to use as a tablet. It is fitted with SD card memory making it possible to record almost unlimited temperatures, events and alarms.

Updates are very easy: just

connect a USB stick.





## ARTIC - CLIMATE / IRRIGATION / FERTILIZATION

#### **ARTIC: CLIMATE MANAGEMENT**

Climate management	8 outputs by zone CL16308 / 01 - 12	16 outputs by zone CLI6316 / 01 - 12	24 outputs by zone CL16324 / 01 - 12
1 zone - Ref /01			
2 zones - Ref /02			
3 zones - Ref /03			
4 zones - Ref /04			
5 zones - Ref /05			
6 zones - Ref /06			
7 zones - Ref /07			
8 zones - Ref /08			
9 zones - Ref /09			
10 zones - Ref /10			
11 zones - Ref /11			
12 zones - Ref /12			

#### **ARTIC: IRRIGATION MANAGEMENT**

16 channels module (Valve or motors)

#### PRO1007



Irrigation cabinet for ARTIC PRO1009

#### ARTIC: FERTILIZATION MANAGEMENT

8 channels injection module for venturi lines

#### PR01001

2 analogs outputs 0/10V module for fertiliser / acid / Pressure regulation  $\,$ 

#### PR01003

8 dry contacts inputs / 8 analogs inputs module

#### PRO1008

EC sensor 0/10ms with screw mounting

#### PR01011

PH sensor 0/10 with screw mounting

#### PR01012

Interface EC sensor module, digital calibration

#### PR01013

Interface PH sensor module, digital calibration

#### PR01014

Drainage (6 tanks) / pre-mixing (1 valve) module

#### PR01015

#### ARTIC - BOILER ROOM & SUPERVISION

#### ARTIC: BOILER ROOM MANAGEMENT

Boiler room module (management of 3 boilers + 3 transports)

#### **CLI6035**

Boiler room + open buffer module (management of 3 boilers + 3 transports + "open buffer" type storage tank)

#### **CLI6036**

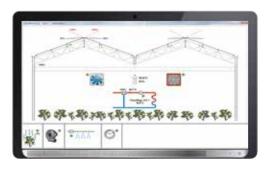
#### **ARTIC: SUPERVISION**

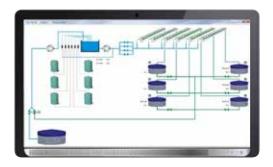
Artic monitoring software for a single Artic (if several Artic in supervision, see ref. CLI1690 p.21)

#### **CLI1650**

#### **Supervision view**







#### ARTIC: EXTERNAL DEFAULT MANAGEMENT

16 fault input module

#### **CLI1681**

#### **ARTIC: 4G ACCESS**

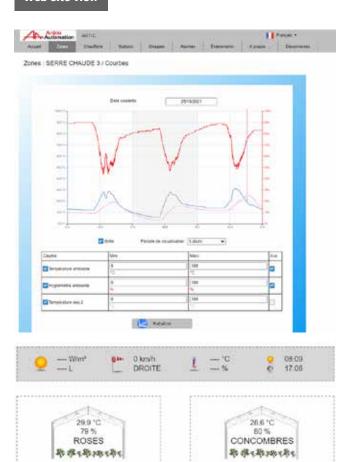
Text alarm option + 4G network access on ARTIC

#### **CLI1661**

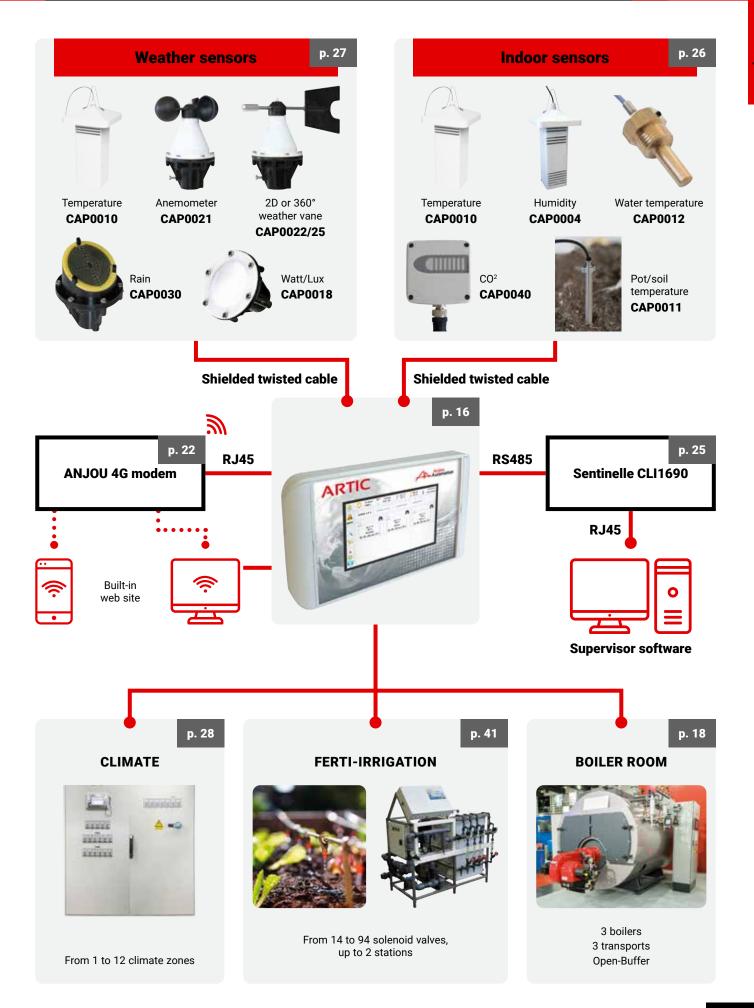
2-year subscription to a secure 4G CLI1162 connection CLI1662

The secure 4G connection makes it possible for you to connect to the embedded Artic web site from outside your installation from any device that has a web browser (PC, tablet and smartphone). Our services fully secure this connection and guarantee the protection of your regulator and your computer system.

#### Web site view



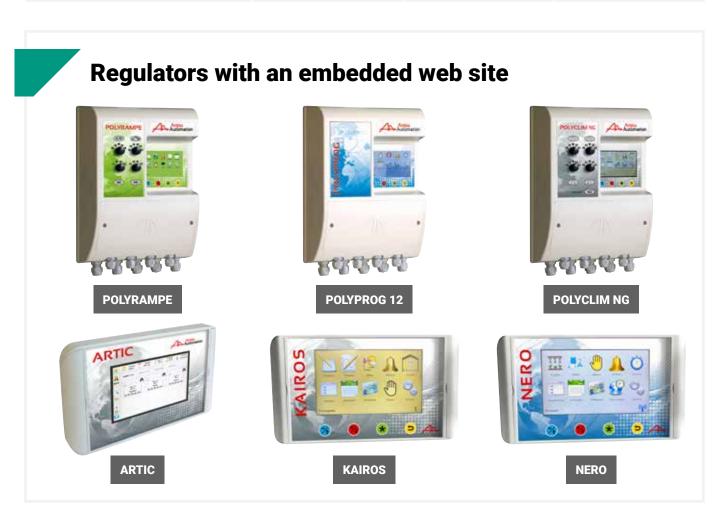
#### **ARTIC INSTALLATION SYNOPSIS**



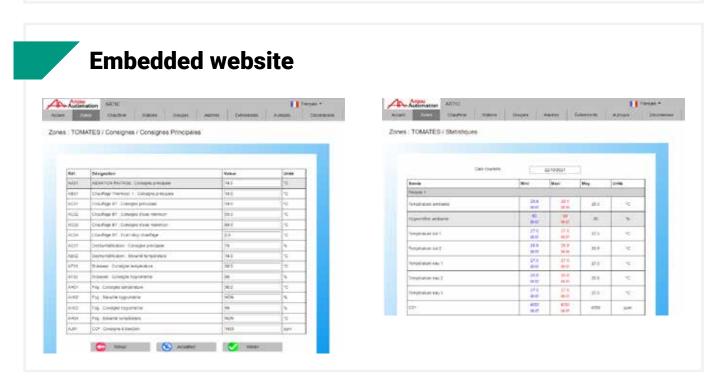
#### **REMOTE VIEWING REGULATOR**

#### **Display supports for your regulator**

FUNCTIONS	REGULATOR SCREEN	EMBEDDED WEBSITE	MONITORING
Real time sensor / probe data	X	X	X
Set point display / update	×	X	Х
Alarm display and reset	x	X	X
Statistics display	Min / max value/ daily average	Min / max value/ daily average	Tables / charts
Event / alarm archival	1 month	1 month	Unlimited
Parameter import / export	-	X	X
Remote access (PC, smartphone, tablet)	-	X (subject to conditions)	X (subject to conditions)
Data extraction	-	-	X
Custom window creation	-	-	X

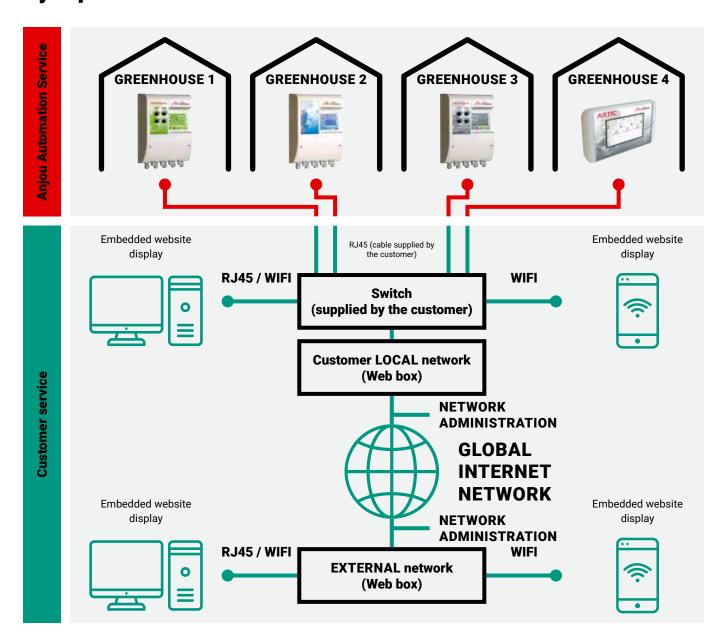


#### **Regulator screen** 693 W/m² 11 km/h 255.3 °C 265° (E) 0 % Période 3 / Période 2 / Période 3 / Période 4 Aération 2 : Consigne principale Température ambiante 81 25.6 26.8 26.2 Hygrometrie ambiante 81 81 Chauffage V3V 1 : Consigne principale Température sel 1 26.8 °c 26.8 26.8 40.4 Température sol 2 40.5 40.5 °C Température eau 1 40.5 40.5 40.5 .. Température eau 2 40.5 40.6 40.6 °C Température eau 3 40.6 40.6 40.6 Ecran 1 : Consigne d'ombrage

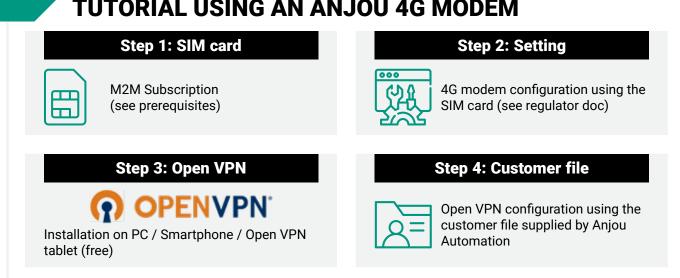




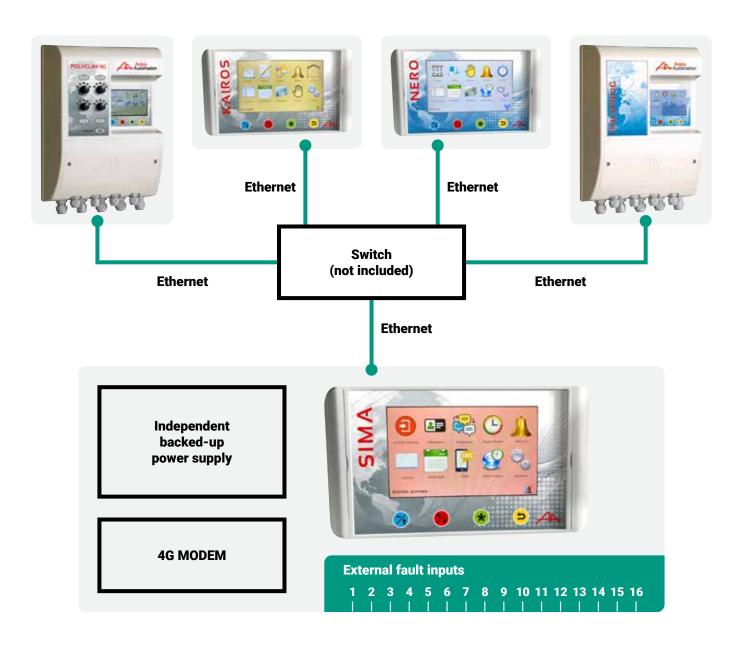
#### Synoptic remote access embedded website



#### **TUTORIAL USING AN ANJOU 4G MODEM**



#### SIMA: STAND-ALONE ALARM SYSTEM + 4G ACCESS



#### **DESCRIPTION**

- · Separate box from the regulators and programmers
- SIMA configuration on colour touch screen and embedded website
- Issue of text messages from the Alarm contact of connected regulators
- Possibility of connecting 48 external faults (thermostat, level measurement, circuit breaker, etc.)
- · 4G access to the connected regulator embedded websites
- Up to 10 users
- · Priority management
- Up to 11 sequences

#### **REFERENCES**

SIMA box

#### **CLI1680**

2-year subscription to a secure 4G connection

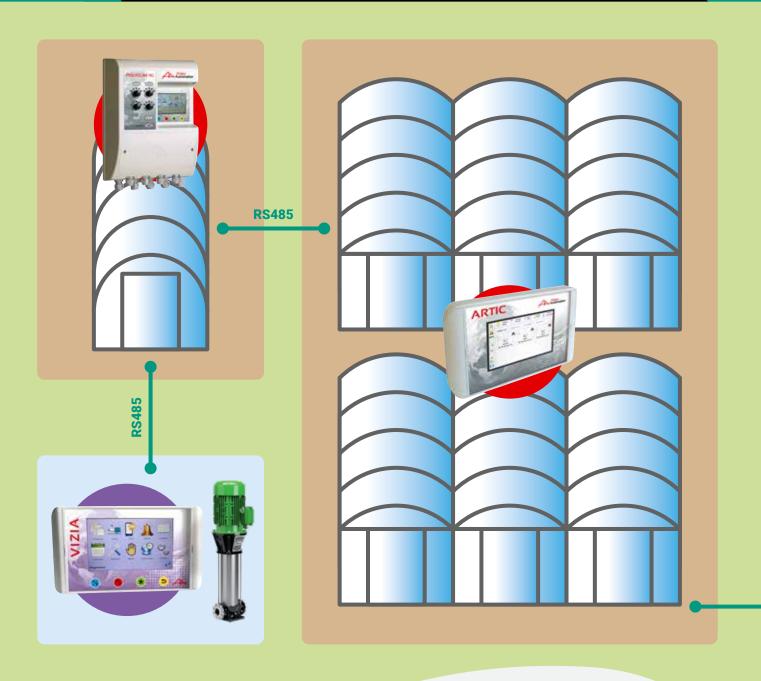
#### CLI1662

16 fault input module

#### **CLI1681**

48 faults maximum

#### **MONITORING SYNOPTIC**



#### **SENTINELLE**

Sentinelle is a communication gateway between the regulator networks (POLYCLIM, KAIROS, POLYRAMPE, ARTIC, NERO, VIZIA and POLYPROG 12) and the Ethernet office computer network. In addition, it provides:

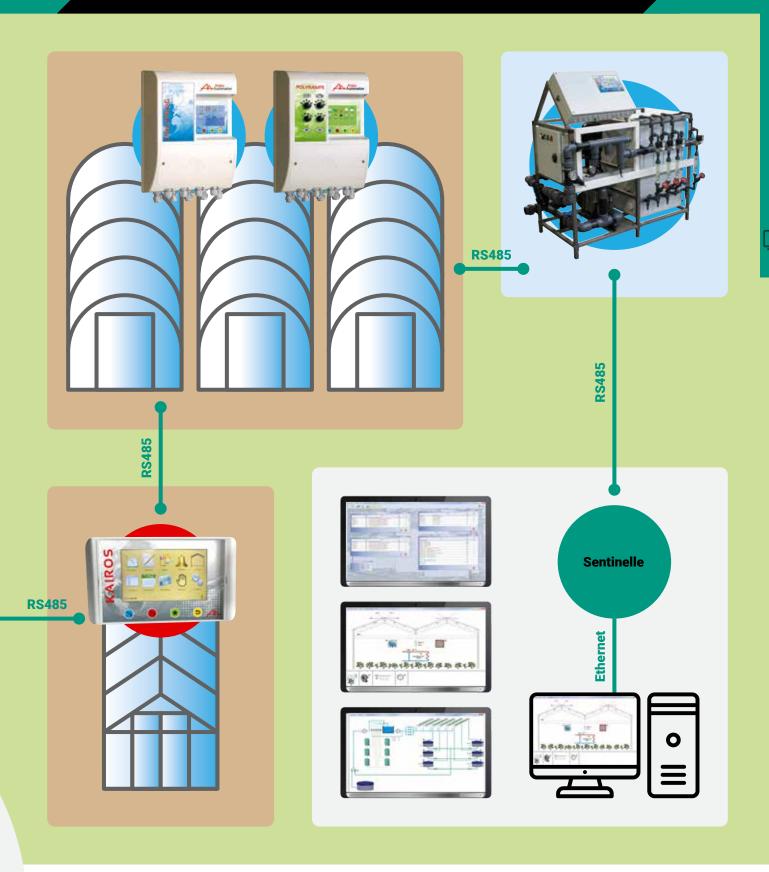
- The collection of all the settings and data from the connected regulators.
- The archival of this data locally on an SD card (without a connected computer)
- As an option: Alarm management by sending SMS messages

#### **MONITORING SOFTWARE**

The 4G Monitoring Software (climate and irrigation) enables:

- A real time overview of the installation. The latter can be customised for each site.
- The display and modification of the settings for the connected regulators.
- The real time viewing of the measurements from the different sensors, the regulations statuses, etc. in summery or table format...
- The use of the data recorded by Sentinelle (measurements, events) in the form of graphs, chronograms or tables.
- The creation and use of windows allowing the display and update of the most commonly used settings.
- Settings backup and restore.
- · Settings copies.
- Multi-user management.
- · As an option: the alarm system settings.

#### **MONITORING SYNOPTIC**





SENTINELLE + supervision software CL11690



SMS ALARM FOR SENTINELLE OPTION

SMS alarm for SENTINELLE option CLI1663

#### **INSIDE SENSORS**

#### AMBIENT TEMPERATURE, HUMIDITY AND COMBINED SENSOR

Ambient temperature sensor, type NTC 5kOhms

#### **CAP0001**

Ambient temperature sensor type 4-20 mA

#### **CAP0010**

Relative humidity sensor, 4 / 20 mA output

#### **CAP0004**

Ambient temperature + humidity sensor, PT 100 /  $2 \times 4$ -20mA type

#### **CAP0024**



#### **WATER PROBE**

Water temperature probe, type CTN 5kOhms

#### **CAP0003**

Water temperature applise probe, type CTN 5kOhms

#### **CAP0003.A**

Water temperature probe, type PT 100 / 4-20 mA

#### **CAP0012**

Water temperature applise probe, type PT 100 / 4-20 mA CAP0012.A



#### **POT / SOIL PROBE**

Pot / soil probe, type CTN 5kOhms

#### **CAP0002**

Pot / soil probe, type PT 100 / 4-20 mA

#### CAP0011



#### CO<sup>2</sup> SENSOR

- Range 0 5000 ppm
- 4-20 mA output
- · For use in greenhouses or breeding farms

#### **CAP0040**



#### **CERBERE MODULE**

 Inclinometer in watertight enclosure for accurate and reliable measurement of greenhouse vent opening angles. Secured rapidly by 2 screws directly to the vent structure – no adjustment, no wear. Replaces copy potentiometers. 2-wire 4-20 mA output signal (others on request). Adjustable measurement range - 55° to +55°

4/20 mA output

#### **CAP0060**



#### **OUTSIDE SENSORS**

#### **SUNLIGHT & LUMINOSITY SENSOR**

#### Watt/m<sup>2</sup> sunlight sensor

• Range 0-1500 W/m2, 4/20 mA output

#### **CAP0013**

#### **Luminosity (lux) sensor**

• Range 0-100 KLux, 4/20 mA output

#### **CAP0017**

Watt/m<sup>2</sup> + Lux sensor - 2 x 4/20 mA outputs

• Range 0-1500 W/m2 / 0-100 KLux

#### **CAP0018**



#### **WIND VANE SENSOR**

• Wind vane sensor, 2 directions

#### **CAP0022**

· 0-360° wind vane, 4/20 mA output

#### **CAP0025**



#### **INCLINED RAIN SENSOR**

• Rain sensor, carbon cell, 1 dry contact (0.5 A under 24 V)

#### **CAP0030**



#### **WIND SENSOR**

• Wind speed sensor, 2-wire frequency output

#### **CAP0021**



#### **RAIN GAUGE**

Mesures rainfall in mm Accuracy of 0,2 mm Dry contact output

#### **CAP0026**



#### **POWER CABINETS**

#### **Custom cabinet**

Thanks to an equipped wiring workshop, Anjou Automation is capable of meeting your specific electric cabinet requirements for sectors such as:

- · Greenhouse climatic management
- · Agricultural irrigation
- · Drainage
- · Miscellaneous automation

From creating the wiring diagram to wiring the cabinet, we propose a turnkey solution for your electric project

Compliant with applicable standards, our cabinets can be delivered with one of our regulators embedded in the facade.

Please contact us directly for any request for information or quotations



#### C1MA

#### SINGLE-MOTOR AUTOMATIC MODE POWER UNIT

- Unit providing power interface for control of 1 ventilation motor or screen
- · Inversor contactor + circuit breaker, limit switch management
- · 24 VAC control unit
- · Power: 400 V, 3-phase (others on request)

C1MA 1/1,6A

#### **PUI0001**

C1MA 0,6/1A

#### PUI3003



#### C1MA/SA

#### SINGLE-MOTOR MANUAL MODE UNIT

- · Unit providing power interface for local control of 1 motor
- Inversor contactor + circuit breaker, limit switch management
- · Control in local mode only: Open / Off / Close
- Power: 400 V, 3-phase (others on request)

C1MA / SA 1/1,6A

#### PUI0004

C1MA / SA 0,6/1A

PUI3013



#### C1MA/SA/AUTO

#### SINGLE-MOTOR MANUAL AND AUTOMATIC MODE UNIT

- Unit providing power interface for control of 1 ventilation motor or screen in local switched mode or remotely (as for C1MA).
- Inversor contactor + circuit breaker, limit switch management
- 24 VAC remote control unit
- Power: 400 V, 3-phase (others on request)

C1MA / SA / AUTO 1/1,6A

#### PUI0005

C1MA / SA / AUTO 0,6/1A

#### PUI3023



#### **C1MCE MANU**

#### CE CERTIFIED POWER BOX: 1 MANUAL MODE MOTOR

- Unit providing power interface for control of 1 ventilation motor or screen
- Inversor contactor + circuit breaker, limit switch management, signal output for advisement of movement
- · Local command only: OPEN / CLOSE / STOP
- · Certification for rule 2006/42/CE

C1MCE MANU 1-1,6A

**PUI0866** 

C1MCE MANU 0,6-1A

**PUI0865** 



#### **C1MCE AUTO**

#### CE CERTIFIED POWER BOX: 1 AUTOMATIC MODE MOTOR

- Unit providing power interface for control of 1 ventilation motor or screen
- Inversor contactor + circuit breaker, limit switch management, signal output for advisement of movement
- · Local command only: OPEN / CLOSE / STOP / AUTO
- · Certification for rule 2006/42/CE

**C1MCE AUTO 1-1,6A** 

**PUI0817** 

C1MCE AUTO 0,6-1A PUI0816



3WV + PUMP

#### POWER INTERFACE CONTROL BOX FOR A CIRCULATION PUMP AND A 3-WAY VALVE

- Power interface control box for a circulation pump and a 3-way valve
- Pump controlled by circuit-breaker + contactor, 3-way valve output either 24VAC or 230VAC. 2 selectors for manual / automatic commands
- Automatic command input using a dry contact, 24VDC or 24VAC

3WV + PUMP

PUI0009



#### C1M C

#### **INTERFACE UNIT FOR 1 HOT AIR GENERATOR**

- Unit providing power interface between heating control and heater
- · Connected in place of thermostat
- $\bullet$  24 VAC remote control only Dry contact relay output

C1MC

**PUI0003** 



#### **AABFR SINGLE OR THREE-PHASE**

#### SIMPLIFIED INFLATION MANAGEMENT FOR SINGLE OR THREE-PHASE INFLATION TURBINE

- AABFR single or three-phase: simplified inflation management for single or three-phase inflation turbine
- Built-in circulator circuit breaker and contactor
- · Adjustable pulses and intervals
- Integrated manual operation

**MONO 230VAC** 

**CLI0906** 

TRI + N 400VAC 0,4/0,6A CLI0905



#### C1M G

#### **POWER UNIT FOR 1 INFLATION TURBINE**

- $\bullet$  Unit providing power interface for control of inflation turbine
- Contactor + circuit breaker
- · Low-voltage, 24 VAC control unit
- · Power: 400 V, 3-phase (others on request)

C1MG 0,4/0,6A

**PUI0002** 

C1MG 0,25/0,4A

**PUI3031** 



#### Manual gears for roll-up ventilation

A line of reducing gear to mechanise all your roll-up ventilation on your tunnel and multi-span greenhouses. This reducing gear can be operated manually or using a hand-held power tool (not included).

#### **DESCRIPTION:**

- · Non reversible transmission under load
- Sealed motor on bearings in a white lacquered aluminium casing with top-up lubrication
- Stainless steel drive shaft
- Manual operation using a crank handle (depending on the model)
- Operation using a hand-held power tool (depending on the model)

#### **ROLLING WITH TELESCOPIC ARM**

Position : static

Input shaft  $\emptyset$  for : 20mm

Output shaft  $\emptyset$  for : telescopic arm MEC0001 to MEC0008

Reduction: 1/8
Manœuvre: Handle

Max winding lenght Ø32:75m Max winding lenght Ø60:50m

#### **MEC0100**

**Reduction: 1/16**Manœuvre: Handle

Max winding lenght Ø32 : 90m Max winding lenght Ø60 : 65m

#### **MEC0101**

Reduction: 1/23 Manœuvre: Screwer H17 Max winding lenght Ø32: 140m Max winding lenght Ø60: 90m

#### **MEC0105**

#### **DIRECT ROLLING ON A CART**

Reduction: 1/23

Manœuvre: screwer 18V 400tr/mn max or Brace

Position: mobile

Input shaft Ø for : For 1" tube Output shaft Ø for : tube 1" Max winding lenght Ø32 : 100m Max winding lenght Ø60 : 55m

#### **MEC0160**



#### **DIRECT ROLLING ROUND TUBE**

Manœuvre : Handle Position : mobile Input shaft Ø for : 26mm

Reduction: 1/8

Output shaft Ø for : tube 1" Max winding lenght Ø32 : 75m Max winding lenght Ø60 : 50m

**MEC0120** 

Reduction: 1/16

Output shaft Ø for : tube 1" Max winding lenght Ø32 : 90m Max winding lenght Ø60 : 65m

#### **MEC0121**

Reduction: 1/23

Output shaft Ø for : tube 1" Max winding lenght Ø32 : 140m Max winding lenght Ø60 : 90m

MEC0125



#### **DIRECT ROLLING SQUARE TUBE**

Reduction: 1/8

Input shaft  $\emptyset$  for : 21,5 x 21,5mm

Output shaft Ø for : tube 25 x 25 x 1,5mm Max winding lenght Ø32 : 75m Max winding lenght Ø60 : 50m

MEC0122

Reduction: 1/8

Input shaft Ø for : 20,5 x 20,5mm Output shaft Ø for : tube 25 x 25 x 2mm Max winding lenght Ø32 : 75m Max winding lenght Ø60 : 50m

**MEC0123** 

Reduction: 1/16

Input shaft Ø for : 20,5 x 20,5mm Output shaft Ø for : tube 25 x 25 x 2mm Max winding lenght Ø32 : 90m Max winding lenght Ø60 : 65m

MEC0124

Reduction: 1/23

Input shaft Ø for : 20,5 x 20,5mm Output shaft Ø for : tube 25 x 25 x 2mm Max winding lenght Ø32 : 140m Max winding lenght Ø60 : 90m



#### **MANUAL GEARS**

#### **FACADE ROLLING**

Reduction : 1/4 Manœuvre : Handle Position : mobile

Output shaft  $\emptyset$  for : tube 1" et tube 25 x 25 x 1,5mm

Max winding lenght Ø60:75m

**MEC0140** 



Input shaft  $\emptyset$  for : Built-in crankshaft

Max rolling height: 0,8m

**MEC0144** 

Input shaft Ø for : Built-in crankshaft

Max rolling height: 2,5m

**MEC0141** 

Input shaft Ø for : Built-in crankshaft

Max rolling height: 3,5m

MEC0142

Input shaft Ø for : Built-in crankshaft

Max rolling height: 4,3m

**MEC0143** 



#### **SPREADER**

Reduction: 1/23 Position: static

Manœuvre: ratchet handle

**MEC0102** 

Manœuvre : - **MEC0152** 



#### HALF MOON AND GUILLOTINE VENTILATION. HATCH AND FOOD CHAIN (BREEDING)

Reduction: 1/23

Manœuvre : ratchet handle

Position : static

Input shaft Ø for: Fitted with a hook

Output shaft Ø for : tube 1" Max winding lenght Ø32 : 100m Max winding lenght Ø60 : 55m

#### MEC0103

#### **MEC0104**





#### **ANGLE TRANSMISSION**

Reduction : 1/1 Position : static

Input shaft Ø for : junction tube 1"

Rotation direction: right

Output shaft Ø for : telescopic arm

**MEC0300** 

Rotation direction : left

Output shaft Ø for : telescopic arm

MEC0302



Rotation direction: right
Output shaft Ø for: tube 1"

MEC0301

Rotation direction : left
Output shaft Ø for : tube 1"



#### **MANUAL GEARS ACCESSORIES**

#### **CRANK**

Type: Brace

Extremity: tubular for 1" tube"

For reducer:

MEC0120/0121/0123/0160

Size: size 0,45m **MEC0203** 

Type: Brace

Extremity: tubular for tube tube

25x25x1,5

For reducer: MEC0122 Size: size 0,45m

**MEC0207** 

Type: Handle

Extremity: Fitted with a hook For reducer: MEC0102/0103/0104

Size: size Handle 1,10m

**MEC0210** 

Size: size Handle 1,50m

MEC0211

Size: size Handle 2,00m

MEC0212

Size: size Handle 2,50m

MEC0213

Type: Handle

Extremity: Fitted with a hook For reducer: MEC0102/0103/0104

Size: size Handle 0,60m

MEC0214

Type: Handle For reducer:

MEC0102/0103/0104/152/105

MEC0201

Type: Handle

For reducer: MEC0100/101

MEC0202

Type: Ring For reducer:

MEC0152/0102/0103/0104

MEC0200

#### **SLEEVE**

Type: sleeve

For reducer : MEC0001 à MEC0006

Extremity: Ø28 **MEC0025** 

Extremity: Ø26 **MEC0027** 

Type: sleeve

For reducer: MEC0001 à MEC0006

Extremity: 25 x 25 x 1,5

**MEC0026** 

Extremity: 25 x 25 x 2

**MEC0035** 

Type: sleeve Extremity: Ø60

For reducer: jonction Ø26

MEC0028

Type: sleeve Extremity: Ø55

For reducer: MEC0141 à MEC0144

**MEC0036** 

Type: sleeve Extremity: Ø26

For reducer: MEC0120/0121

**MEC0130** 

Type: sleeve

For reducer: MEC0120/0121

Extremity: 25 x 25 x 1,5

MEC0131

Extremity: 25 x 25 x 2

**MEC0134** 

Type: Screwer kit Extremity: H27 For reducer:

MEC0109/0160/0124/0125/0126

Reducer 1/23 MEC0132

Type: Cart

For reducer: MEC0109























#### Telescopic arms for roll-up ventilation

ANJOU AUTOMATION proposes that you use this mechanism to make operating your roll-up ventilation on your tunnel and multi-span greenhouses easier. These telescopic arms can be operated manually or automatically depending on your requirements.

#### **DESCRIPTION:**

- · winding height up to 4.20m,
- Output Stem stainless steel
- Aluminum Tube white lacquered high resistance
- Improved sealing with specific joints
- No sharp corners to preserve your plastics and nets

Max Ø32 single double rolling lenght : 125 m Max Ø60 single double rolling lenght : 75 m Max Ø60 tube double rolling lenght : 45 m



Max rolling height: 1,40 m Length closed: 0,90 m Lenght open: 1,10 m

#### MEC0002

Max rolling height: 2,00 m Length closed: 1,10 m Lenght open: 1,45 m

#### **MEC0003**

Max rolling height: 2,40 m Length closed: 1,30 m Lenght open: 1,90 m

#### **MEC0004**

Max rolling height: 3,20 m Length closed: 1,50 m Lenght open: 2,40 m

#### **MEC0005**

Max rolling height: 3,60 m Length closed: 2,10 m Lenght open: 2,60 m

#### **MEC0006**

Max rolling height: 4,20 m Length closed: 2,10 m Lenght open: 3,20 m

Drive 2 cones male / female

#### **MEC0030**

Entry tip : Round Exit tip : Round

Input shaft Ø for : 20 mm



#### MEC0031

Entry tip: Flat bar Exit tip: Round

Input shaft Ø for : 20 mm Thickness flat bar : 14 mm



#### **MEC0032**

Entry tip : Flat bar Exit tip : Flat bar

Thickness flat bar : 14 mm



#### **Motorization for** roll-up ventilation

A line of gear motors to mechanise all your roll-up ventilation on your tunnel and multi-span greenhouses using telescopic arms.



#### **DESCRIPTION:**

- Sealed construction in aluminium casing
- Non reversible load
- · Manual backup operation on electric motor
- No-tool adjustable limit switch
- · Phase inversion check (If MISSI option)
- Adjustable 50 rotation stopper stroke
- External ABS casing
- · Stainless steel output shaft
- Silent running
- Housing provided to add the MISSI AA line





#### **MEC1218**

Torque: 115 NM Rotation speed: 5 TR/MIN 100 m Max lenght Ø60 mm (alu): Max lenght Ø32 mm (steel): 100 m 0,18 kW Power: Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 0,7 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,2 A Weight: 23 Kg

#### **MEC1200**

Torque: 160 NM Rotation speed: 5 TR/MIN Max lenght Ø60 mm (alu): 150 m Max lenght Ø32 mm (steel): 150 m Power: 0,25 kW Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 0,75 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,3 A 23 Kg Weight:

#### **MEC1201**

Torque: 100 NM Rotation speed: 8 TR/MIN Max lenght Ø60 mm (alu): 100 m Max lenght Ø32 mm (steel): 100 m 0,25 kW Power: Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 0,75 Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,3 A Weight: 23 Kg

## **∰** MECHANIZATION

#### **CART GEAR MOTORS**



#### **DESCRIPTION:**

- Non reversible load
- Sealed construction in aluminium casing
- Manual backup operation on electric motor
- No-tool adjustable limit switch
- Adjustable 50 rotation stopper stroke
- External ABS casing
- Stainless steel output shaft
- Silent running



#### **MEC1213**

Torque: 160 NM Rotation speed: 5 TR/MIN Output shaft: Tube 1" et 25X25x1,5 0,25 kW Power: Current at 3 x 400V / 50HZ

0,75 A 3 x 460V / 60HZ:

Current at 3 x 230V / 50HZ

3 x 280V / 60HZ: 1,3 A Weight: 25 Kg **MEC1211** 

160 NM Torque: 5 TR/MIN Rotation speed: TUBE 25X25x2 Output shaft: 0,25 kW Power: Current at 3 x 400V / 50HZ

0,75 A 3 x 460V / 60HZ:

Current at 3 x 230V / 50HZ

3 x 280V / 60HZ: 1,3 A Weight: 25 Kg



### RIDGE VENTILATION / SHADING GEARMOTORS / MISSI

Ride ventilation and shading motorization

A line of gear motors to mechanize all your ridge vents and/or motorize your shading system.



MEC1400-32/34

400 NM Torque: Rotation speed: 2,8 TR/MIN 0,37 kW Power: Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 1,1 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,9 A

#### MEC1401-32/34

400 NM Torque: Rotation speed: **1.8 TR/MIN** Power: 0,25 kW Current at 3 x 400V / 50HZ

3 x 460V / 60HZ:

0,9 A Current at 3 x 230V / 50HZ

3 x 280V / 60HZ:

1,6 A

#### MEC1402-32/34

350 NM Torque: Rotation speed: 5 TR/MIN Power: 0,55 kW Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 1,5 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 2,6 A

#### MEC1403-32/34

Torque: 250 NM Rotation speed: 2,8 TR/MIN 0,25 kW Power: Current at 3 x 400V / 50HZ 0,75 A 3 x 460V / 60HZ: Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,3 A

#### **TUBULAR CHAIN** COUPLING

Ø32 mm

**MEC1100** 

Ø34 mm

**MEC1101** 





#### MEC1404-32/34

200 NM Torque: Rotation speed : 3,6 TR/MIN Power: 0,25 kW Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 0,9 A Current at 3 x 230V / 50HZ

1,6 A

3 x 280V / 60HZ:

#### MEC1405-32/34

Torque: 550 NM Rotation speed: 2.8 TR/MIN Power: 0,55 kW Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 1,5 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 2,3 A

#### MEC1406-32/34

Torque: 240 NM Rotation speed: 5 TR/MIN 0,37 kW Power: Current at 3 x 400V / 50HZ 3 x 460V / 60HZ : 1,1 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,9 A

#### MEC1407-32/34

Torque: 160 NM Rotation speed: 5 TR/MIN 0,25 kW Power: Current at 3 x 400V / 50HZ 3 x 460V / 60HZ: 0,9 A Current at 3 x 230V / 50HZ 3 x 280V / 60HZ: 1,6 A

#### **LIMIT SWITCH CASSETTE**

#### **MEC1164**



#### **DESCRIPTION:**

- Sealed construction in aluminium casing
- Non reversible load
- Manual backup operation on electric motor
- No-tool adjustable limit switch
- Phase inversion check (If MISSI option)
- 33 rotation working stopper stroke for vents and 100 rotations for shade
- Ø32 or Ø34 tubular chain coupling
- Two possible fixtures: side and back
- Silent running
- Housing provided to add the MISSI AA line

#### **MISSI RANGE**

- · Built into the Anjou Automation gear
- · Pre-wired between the limit switch and the motor UVW and MISSI terminals

MISSI option

**MEC1160** 

**MISSI LS option MEC1163** 

**MISAMP** option



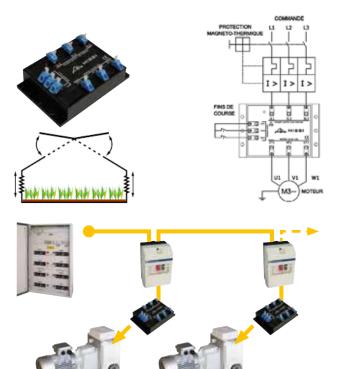
### **MISSI RANGE**

#### **MISSI**

- Three phased motor control module controlled by the power line. 200-500V three phased 50-60Hz power supply
- Motor output 3A max category Ac53a. 2 "open close" limit switch inputs.
- MISSI combines the limit switch inputs with the power supply phase rotation.
- Elimination of remote control cables, gear motor safety limit switches and phase checking relays.

MISSI + circuit breaker in a control box

#### **PUI0708**

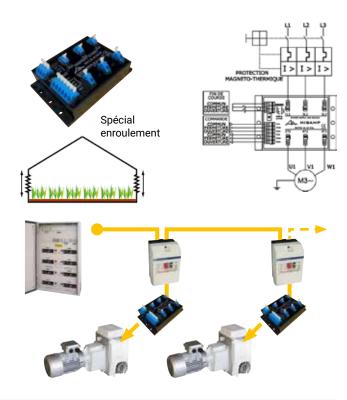


#### **MISAMP**

- Three phased inverter module. 200 500V 50-60Hz power supply. Motor output 3A max category Ac53a.
- 24Vac remote control on 3 wires (common, open, close)
- Fitted with a current check on the motor line, it can cut the control if there is an overload (winder jam,...).
- 2 "open close" limit switch inputs
- It can eliminate the winder motor limit switches (depending on the installation configuration).

**MISAMP** only

#### **PUI0500**

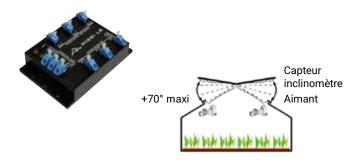


#### **MISSILS**

- Three phased motor control module controlled by the power line. 200-500V three phased 50-60Hz power supply
- · Motor output 3A max category Ac53a. 2 inputs for an inclinometer sensor with magnetic detection for "limit switch" management.
- MISSI LS combines the values measured by the inclinometer sensor with the power supply phase rotation.
- The "open limit switch" is set using 2 rotating switches (100 possible positions) to set the maximum angular position.
- The "close limit switch" is set by adjusting the magnet position on the greenhouse frame.
- Elimination of remote control cables, gear motor limit switches and phase checking relays.

MISSI LS + magnet + sensor in a control box

#### PUI0707





## **IRRIGATION CART MANAGEMENT**

#### **POLYRAMPE**

- 230V power supply
- Up to 10 solenoid outputs
- 0-100% speed adjustment
- · Front, back and safety limit switch input
- Metering input (sectorisation) encoder / plot
- · Variable drive fault input
- · Manual mode using the switches on the front
- 1 communication bus to the variable drive
- 1 Ethernet port
- 1 embedded web site for programming and manual mode from a mobile support

#### PR00270



ONLY COMPATIBLE WITH THE VARIABLE DRIVE BOX BELOW

#### **VARIABLE DRIVE BOX**

- 1 main switch 2 x 10
- 1 N+6A circuit breaker
- 1 ATV12 0.37kW variable drive
- 1 Marked connection terminal block
- 1 set of cable glands

Box to be installed next to the irrigation cart motor

#### PR00271







### **NANORAMPE NG**

- 4 speeds available for moving the watering boom
- Control of a watering solenoid valve
- · Automatic return cycle with watering
- Manual mode (without watering)

#### PR00216

Devices intended for the management of watering booms. Controls a three-phase 230V motor to move the boom.

### **SELECTION GUIDE**

**ANJOU AUTOMATION** proposes several ranges of programmers and watering computers for professional use. All these products have been developed on the basis of producers' requirements.

#### **POLYPROG 12**

- 12 to 48 channel electronic programmers
- · Color-touch screen
- · Upgraded manual function
- · Time or percentage irrigation
- · Embbeded website



Applications: greenhouses, hydroponic culture, fertiliser injection and EC/pH monitoring, technical applications

# ANJOU FERTIL DIRECT

- Anjou Fertil is a direct injection station (venturi), using the network pressure, with flow rates ranging from 3 to 20 m3/h.
   Available in four versions:
- 3 up to 6 m3/hr
- 6 up to 9 m3/hr
- 9 up to 15 m3/hr
- 15 up to 20 m3/hr

#### **MICROFERTI**

- Controller for simplified fertilisation management, 3 fertilisers and 1 acid, EC and pH monitoring, alarms.
- · Very easy to use.



Applications: greenhouses, hydroponic culture, fertiliser injection and EC/pH monitoring, technical applications

#### ANJOU FERTIL BAC DE MELANGE

 The ANJOU FERTIL mixing tank station is an injection power station with a venturi and mixing tank system, for flow rates from 2 to 30m3/hr.

#### **NERO**

- 6- to 96-channel computer
- "Super programmer" or "Irri-Ferti station" version
- Compact and user-friendly (large graphic screen)
- 6 fertilisers and 40 groups
- Switch on each channel, remotable modules, time or volume management, integrated reports,
- SENTINELLE compatible



Applications: greenhouses, hydroponic culture, fertiliser injection and EC/pH monitoring, technical applications

# ANJOU FERTIL BYPASS

- ANJOU FERTIL BY PASS STATION: Direct injection system especially adapted to high flow rates (20 to 100m3/h).
   Available in version:
- 3 to 100m3/hr. Consult us.







## **POLYPROG 12 - MICROFERTI**

#### **POLYPROG 12**

- 12 standard solenoid valves with extension possible up to 48
- · Pump/motor relay control.
- · Possibility of managing 8 extra pumps
- 12 irrigation groups
- · 3 irrigation stations available
- 1 pause input to suspend irrigation
- · Management of a Solar meter
- 6 analogue inputs: 3 temperature and 3 hygrometry / tensiometer
- · Management of 3 dry contact inputs
- Up to 12 valves operated simultaneously
- Manual start up of a group
- · Independent time per valve

#### PR01280



- · Setting of valve times to the second
- · Sequential programming
- · Filling, irrigation and rinsing step.
- · Group start up modes:
- Set time
- Cyclical
- Calendar
- Solar meter
- Dry contact
- Analogue
- Safety

#### **EXTENSION POLYPROG 12**

1st extension module -12 channels, relay output to switch from 12 to 24 channels, supplied in a box with a 24Vac transformer

#### PR01220

Following extension module, 12 channel relay outputs (maximum 48 channels per POLYPROG 12 programmer)

#### PR01221

Control module - 8 motors / fertilisation channels

#### PR01222

#### **MICRO'FERTI**

#### MICRO'FERTI: BOWED CONTROLLER FOR SIMPLIFIED FERTILIZATION **CONTROL**

- · Control of 3 fertlizers and 1 acid with EC and pH sensors (Venturi version)
- Control starting on 2 ON/OFF inputs (2 groups of set points)
- · Control of EC/pH alarms : one alarm relay
- 1 pump relay output
- Digital calibration of the EC/pH sensors. An easy device to use, espacially suitable for small
- Fully equipped box + EC/pH transmitters + EC sensor + pH sensor



#### PR01020

0-10V interface for controlling 2 variable speed metering pumps

#### PR01003

Option: Solar meter, change in EC in relation to sunshine (CAP0013)



# STATION OF DIRECT INJECTION FERTLIZERS / ACID

ANJOU FERTIL station is a central injection of fertilizer / acid for the conduct of the fertilization in hydroponic culture. Venturi-based technology, it uses the pressure of the existing network and allows flow rates ranging from 3 to 20m3 /h. It has two basic lines of injection (fertilizer or acid) and locations for 2 additional lines are available. ANJOU FERTIL can host MICROFERTI or OSCAR controllers and their probes to ensure control of the conductivity (fertilizer) and pH (acid) effectively. From simple installation and reduced maintenance, ANJOU FERTIL comes in 4 versions depending on the flow capacity of the installation:

- 3 to 6 m3/h
- 6 to 9 m3/h
- 9 to 15 m3/h
- 15 to 20 m3/h

Direct station 3-6 m3/h, 2 lines of injection (without controller)

#### STD0001

Direct station 6-9 m3/h, 2 lines of injection (without controller)

#### STD0002

Direct station 9-15 m3/h, 2 lines of injection (without controller)

#### STD0003

Line of additional injection

#### STD0010

**Suction strainer** 

#### STD0015



#### **ANJOU FERTIL BAC DE MÉLANGE**

# FERTILISER / ACID INJECTION STATION WITH MIXING TANK

The ANJOU FERTIL station is a fertiliser / acid injection station for the management of hydroculture crop fertilisation. Based on the Venturi technology and fitted with a 225 litre mixing tank, it allows flow rates from 2 to 30 m3/h. As standard it has 3 injection lines (2 fertiliser + 1 acid) and positions for 2 additional lines are available. ANJOU FERTIL allows the use of the OSCAR controller as well as its probes in order to provide efficient EC (fertiliser) and pH (acid) conductivity regulation. Frame extension for premixing valve and priming pump



#### **ANJOU FERTIL BY PASS**

# SPECIAL LARGE FLOW DIRECT INJECTION SYSTEM

The AnjouFertil By-Pass station is a direct injection station specially suited for large flows. ANJOU FERTIL allows the use of the OSCAR controller as well as its probes in order to provide efficient EC (fertiliser) and pH (acid) conductivity

Available in versions:

• From 3 to 100 m³/h. Contact us.



# **NERO**

The NERO is a next generation fertilisation-irrigation management computer. An upgrade from the OSCAR, it has kept the use logic while including additional functions.

It has a colour touch screen and an embedded website providing the best browsing and the possibility of monitoring your installation remotely. Compatible with SENTINELLE, the NERO is perfectly adapted to new or refurbishment projects. Its USB port can be used for easy software updates (new version, added function).

In its superprogrammer or fertilisation computer configuration, the NERO can also be directly installed on your fertilisation frames.



#### FERTILISATION-IRRIGATION

- From 14 to 94 solenoid valves
- Management of up to 4 fertilisation stations (2 standard + 2 optional)
- Management of 8 static outputs for injection lines or 4 0-10V dosing pumps
- Up to 40 irrigation groups

#### SUPERVISION

- Compatible with SENTINELLE
- Embedded website via 4G access (see page 18-19)

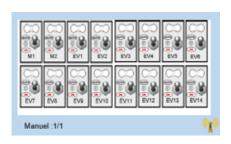
#### THE ADVANTAGES

- · Station status display,
- Easy icon menu and setting access
- · Value entry using a numeric keypad
- Setting backup and restore using the embedded website
- Software and configuration upgrades using a basic USB thumb drive
- Virtual manual mode: AUTO/0/MANUAL switches for the solenoid valves included on the screen

On its 5 inch colour touch screen, browsing through the NERO settings is fluid. The NERO includes one month of archives (alarms, events, statistics).









#### **NERO: FERTI-IRRIGATION MANAGEMENT**

Complete control box for 16 channels (2 motors + 14 valves)

#### PRO1400



Irri / Ferti station module, 1 board, 8 inputs/ 8 outputs "Venturi version"

#### PR01001

Irri / Ferti station module, 1 board, 2 outputs 0 / 10 V (1 acid / 1 fertiliser)

#### PRO1003

Module with 16 additional channels

#### PRO1007

8 dry contacts inputs / 8 analogs inputs module

#### PRO1008

Drainage / pre-mixing module

#### PRO1015

Soil moisture sensor 4/20 mA

#### PRO1016

EC sensor, 0-10 mS / cm, screw mounting, excl. Mounting

#### PR01011

pH sensor, 0-10, screw mounting, excl. Mounting

#### PR01012

Interface EC sensor module, digital calibration

#### PRO1013

Interface PH sensor module, digital calibration

#### PR01014

Paddlewheel Flow Sensors + support DN50

#### STD0051

#### **NERO: ADDITIONAL STATIONS**

2 additional stations managed by the NERO

#### PR01410

#### **FUNCTIONS**

- Up to 40 groups
- · Control of 6 to 94 valves
- Control of 2 to 18 motors (mastervalve, pump, stirrers, etc)
- · Control of 2 stations (standard) + 2 optional
- · Simultaneous or sequential valve control
- · Watering by time or by volume, valve optimisation module
- · Starting at fixed times, cyclically or by date
- EC and pH control:
- Control of 6 fertilisers + 1 acid in the "venturi" version
- Or control of up to 3 fertilisers and 1 acid in the "variable speed pump" version
- Change to the EC according to the solarmeter
- · Control of a mixing tank (filling, pre-mixing, and sunlight, draining)
- · Alarm management
- Forced operation switches on every output (automatic / 0 / manual)
- · Balance module with saving over 4 weeks
- · Drainage and pre-mixing options available

#### **NERO: 4G ACCESS**

SIMA box

#### **CLI1680**

р. 23

2-year subscription to a secure 4G connection

#### **CLI1662**

The secure 4G connection makes it possible for you to connect to the embedded NERO web site from outside your installation from any device that has a web browser (PC, tablet and smartphone). Our services fully secure this connection and guarantee the protection of your regulator and your computer system.

#### Web site view



## Pumping control cabinets with network flow and pressure regulation

These three devices are used to start up pumping and monitor the network. They inform you of any incident arising on the installation.

- Managed by controller with parameter setting via screen and front panel keypad.
- · Extremely user-friendly, easy access to all parameters.
- · Integrated link with variable speed drive, parameter adjustment from controller.



#### **MONOPUMP MANAGEMENT**

- · Pressure management using a variable speed drive control on the pump motor
- · Variable flow rate management to stop the pump
- · Start using a set point or a remote control using a text message
- · Alarm threshold management
- · Management of 3 programmes: set points, thresholds, etc

#### **MULTIPUMP MANAGEMENT**

- · Pressure or flow management using a variable master pump with the addition of 1 to 6 fixed or variable pumps.
- Flow management to trigger and stop the pumps
- · Minimum pressure maintained using a Jockey pump
- Other features identical to the Monopump version

#### **GSM MODEM OPTION FOR** VARIO'POMPE NG

- · Remote start and stop control
- Modification of pressure setpoints
- Reading of the operating status (pressure value, motor data)
- · Management of alarms

### **COMPLETE KIT FOR MONOPUMP MANAGEMENT (VIZIA + VARIABLE** SPEED DRIVE + PRESSURE SENSOR + GSM MODEM)

Cabinet 3kW - 7,2A max

#### APR0100

Cabinet 4kW - 10A max

#### APR0101

Cabinet 5,5kW - 13A max

#### **APR0102**

Cabinet 7,5kW - 16A max

#### APR0103

Cabinet 11kW - 24A max

#### **APR0104**

Cabinet 15kW - 32A max

#### APR0105

Cabinet 18kW - 37A max

#### APR0106

Cabinet 22kW - 44A max

#### **APR0107**

Cabinet 30kW - 61A max

#### **APR0108**

Cabinet 37kW - 73A max APR0109

Cabinet 45kW - 90A max APR0110

Cabinet 55kW - 106A max

#### **APR0111**

Cabinet 75kW - 147A max

#### APR0112

Cabinet 90kW - 177A max

#### **APR0113**

Cabinet 110kW - 212A max

#### APR0114

Cabinet 132kW - 260A max

#### APR0115

Cabinet 160kW - 315A max

#### APR0116







4-20mA pressure sensor



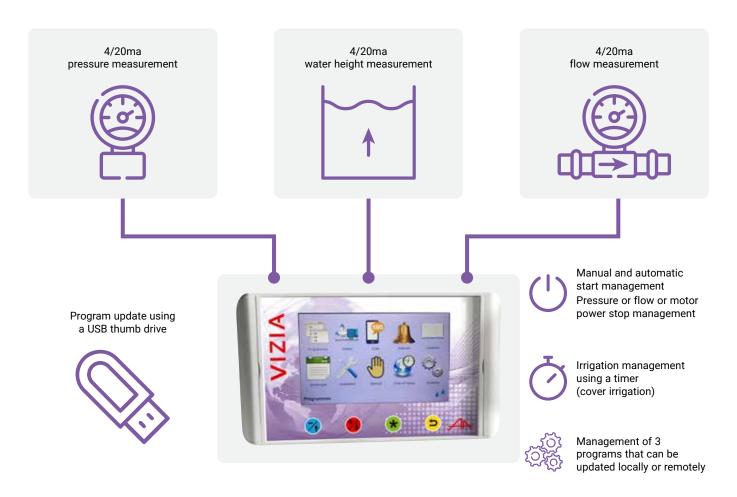
GSM modem



Variable speed drive **Delivered next to the cabinet** (IP55)



Built into a sheet metal cabinet





Management of 1 to 7 pumps (1 to 7 pumps on variable drives) Management of 1 jockey pump (fixed or variable) Management of 1 priming pump



Management of pressure - flow level - pump fault, etc. alarms



Contact output reporting level 3 threshold, flow thresholds, alarms, current program. RJ45 port to read and backup settings using an embedded website



#### Using GSM 3G/4G modem

Start and stop program change Alarm reset Irrigation network and motor data reading Management of up to 10 users

- Remote access embedded website option
- Management of all VIZIA settings, configuration backup
- 2-year subscription (M2M SIM card not included) CLI1662







## **DIRECT / PROGRESSIVE START-UP**

#### **PUMP START-UP UNITS POMPY NG**

Electromechanical version, 1 to 15 kW, robust build, no electronics

- Voltage surge protection
- AUTO/OFF/MANUAL function

POMPY NG 2,2kW - 5A max

POMPY NG 4kW - 9A max

POMPY NG 5,5kW - 12A max

POMPY NG 7,5kW - 16A max

POMPY NG 11kW - 25A max

POMPY NG 15kW - 32A max

- · Remote control input
- Fault display

**DIRECT** 

IRI0300

IRI0301

IRI0302

IRI0303

IRI0304

IRI0305

#### Options:

- · Run-dry
- · Flow rate and pressure
- · Safety devices
- · Gradual starter

#### **PROGRESSIVE**

POMPY NGDP 2,2kW - 5A max

IRI0310

POMPY NGDP 4kW - 9A max

IRI0311

POMPY NGDP 5,5kW - 12A max

IRI0312

POMPY NGDP 11kW - 25A max

IRI0313

POMPY NGDP 15kW - 32A max

IRI0314

# POMPY OPTIONS

Run-dry detection by electrodes

IRI0330

**HP/LP** safety timeout

IRI0332

LP filtering timeout

IRI0334

Flow switch unpriming timeout

IRI0336

Clock

IRI0338

Timer

IRI0340

32 A master switch

IRI0342

## **ACCESSORIES**

#### **PRESSURE SWITCHES**

• For high or low pressure safety system

Pressure switch 10-30 bars

IRI0070

Pressure switch 4-17 bars

IRI0071

Pressure switch 1-10 bars

IRI0069

#### PRESSURE SWITCH WITH POINTER

- Weatherproof, moulded aluminium case, diameter 114 mm.
- Measurement display and 2 adjustable thresholds on dial.
- Output on 2 changeover contacts, measuring 0/25 bar.

Pressure switch with pointer 0/25b

IRI0072



### **ELECTRODE LEVEL GAUGE**

Inox

Electrode level gauge

IRI0085



#### **MICRO START**

#### **START-UP ITEM (STATOR / STAR-TRIANGLE)**

- · Adjustable startup timer
- Adjustable pressurisation time
- · High and low pressure safety system management
- · Integrated remote control
- LED mimic panel (faults, startup, LP, HP)

Micro Start

IRI0093

**Automate Start** 

IRI0103





#### **ALIM START**

#### **400/24VAC POWER SUPPLY UNIT**

Protection by fuse + integrated varistors

Power supply ALST01

IRI0095

**Power supply ALST15** 

IRI0105





## **CABINETS WITH PROGRESSIVE START-UP**

#### **CABINETS WITH PROGRESSIVE START-UP**

Cabinet with progressive start-up. Management with an automaton which ensure the HP / BP security. Avoids "water hammers" and prolongs the service life of the facilities

Cabinet with progressive start-up 15kW -32A max

**APR0001** 

Cabinet with progressive start-up 22kW -47A max

**APR0002** 

Cabinet with progressive start-up 30kW -62A max

**APR0003** 

Cabinet with progressive start-up 37kW -75A max

**APR0004** 

Cabinet with progressive start-up 45kW -88A max

**APR0005** 

Cabinet with progressive start-up 55kW -110A max

**APR0006** 

Cabinet with progressive start-up 75kW -140A max

**APR0007** 

Cabinet with progressive start-up 90kW -170A max

**APR0008** 

Cabinet with progressive start-up 110kW -210A max

**APR0009** 

#### **OPTIONS FOR PROGRESSIVE** START-UP CABINETS

No-flow shutdown

**IRI0049** 

Voltmeter

IRI0054

**Unpriming** 

IRI0050

40 A differential switch

IRI0056

24-hour timer

IRI0051

63 A differential switch

IRI0057

24-hour clock

IRI0052

Resistor safety device

**IRI0058** 

Time counter

IRI0053

**Threshold ammeter** 

**IRI0067** 



#### **IRRI'CALL GSM**

#### **GSM REMOTE PUMP CONTROL - 1 OR 2 PUMPS**

- · Remote starting and stopping with status confirmationOn / off status check
- · Input status test
- · Pump fault and pressure fault reporting
- · Dispatch of short SMS or voice messages
- Straightforward remote programming by mobile phone or service room PC

**Excluding SIM card** 

**IRI0088** 



## General terms and conditions of sale

(applicable from 1st November 2021)

#### 1 - GENERAL TERMS AND CONDITIONS

Except in the case of a special, written agreement, all orders automatically imply the customer's acceptance of these conditions, notwithstanding any contrary clause which may appear in the customer's general terms and conditions of purchase.

#### 2 - ORDERS - ESTIMATES

Orders only become final after written or tacit acceptance by ANJOU AUTOMATION, hereinafter referred to as "the Company". If an estimate is provided, the order only becomes final after returning the accepted estimate to the Company by post, fax or by any other means of transmission, within eight days of its issue. Any modification of an order or estimate shall be subject to a written agreement between the Company and the customer

#### 3 - DELIVERY TIMES

Deliveries are made according to supply and transport availabilities, in the order of arrival of orders and according to the indications provided by the Company in its acceptance. The Company is authorised to make total or partial deliveries. Delivery times are provided for information purposes and are not binding on the Company, especially in cases of force majeure or unforeseeable circumstances. No delay in delivery may give rise to the application of penalties or damages, to any withholding or the cancellation of the order. In any event, deliveries may only be made to a customer if it is up to date with its obligations vis-à-vis the Company.

#### 4 - DELIVERIES

Prices are given excluding tax, ex-works, packaging included. Unless otherwise indicated in the order or on the accepted estimate, all orders are shipped excluding carriage. All costs of an express delivery shall be fully borne by the customer who makes such a request. Goods become the customer's property on leaving the Company's workshops, subject to the retention of title clause below. Consequently, all transport, customs, insurance and handling operations are carried out at the customer's expense and risk. The customer much check the compliance of the shipment, and for any damage or missing items and, if necessary, make the necessary reservations, by registered letter with acknowledgement of receipt and in the legal time limits, to the concerned bodies and carriers. The customer shall notify this to the Company. The return of a product must be subject to a formal agreement between the Company and the customer.

#### 5 - WARRANTIES

The Company has a duty to deliver goods which comply with the contract and is liable for any lack of conformity which may exist on delivery. To comply with the contract, the product must:

- Be fit for any use usually expected of such goods and, when applicable, match the description given by the Company, and have the characteristics it presented to the customer in the form of samples or models;
- Have the qualities the customer can legitimately expect given the declarations made by the Company, in particular in its advertising;
- Or present the characteristics defined in mutual agreement between the parties;
- Or be fit for any special use required by the customer, which the Company has been informed of and accepted.

Electrical devices are guaranteed for one year from the date of purchase, against any manufacturing defect. The warranty entirely covers parts and labour. The warranty covers the replacement of any defective part, but does not cover breakages caused by dropping or knocks, deterioration caused by abnormal use, connection errors or non-compliance with the conditions of use indicated in the user guide.

### 6 - SALES TERMS AND CONDITIONS SPECIFIC TO THE "GREENHOUSE CLIMATE REGULATION" ACTIVITY

ANJOU AUTOMATION's climate controllers are not safety devices. Therefore, it is the responsibility of each buyer and/or operator to implement all control and alarm systems necessary for the security of its greenhouses (both for the structures and for the crops). The Company remains at the disposal of its customers or operators for all advice on this matter.

#### 7 - PRICES

The prices and information appearing in the Company's catalogues or other advertising material are the sole responsibility of the Company, which reserves the right to make any modifications in the form, Sizes, materials or weight of its products presented or described, without any obligation to modify products previously delivered or already ordered. Goods are invoiced on the basis of the price in force at the time of the order. Payments are made to the Company's registered office. Unless otherwise stipulated, orders are payable in cash when the goods are collected, net and without discount. Any other payment terms must be subject to a prior agreement. In the absence of payment of a single term, all amounts due shall be immediately payable, without formalities, and shall be accompanied by a penalty equal to 3 times the legal interest rate. In addition, a flat-rate indemnity for recovery costs of an amount of 40 Euros will be automatically due, without formalities. If the recovery costs are higher than this flat-rate amount, an additional indemnity will be due, on the presentation of supporting documents. The Company may also suspend any further deliveries.

#### 8 - RETENTION OF TITLE

The Company retains full ownership of the goods sold until payment in full by the customer. However, the risks of loss, theft or deterioration of the goods are borne exclusively by the customer as soon as they are made available to it. The non-payment of any amount when due may give rise to the claim of the existing goods.

#### 9 - INTELLECTUAL PROPERTY

The designs, models, plans and estimates and, generally, the documents of any nature communicated by the Company are the exclusive intellectual property of the Company: they may not be communicated or executed without its written authorisation. They must be returned upon the Company's simple request.

#### 10 - APPLICATION OF CONVENTIONS

No delay, omission or tolerance by the Company in the exercise of one of its rights hereunder shall constitute a waiver by the Company to assert this right.

#### 11 - ATTRIBUTION OF JURISDICTION

In the event of a dispute, the Company and the customer concerned shall settle it by means of arbitration carried out by a single arbitrator acting as amiable compositeur, chosen by common agreement or, otherwise, appointed at the request of the most diligent party by the President of the Commercial Court of Roche-sur-Yon. The parties waive any appeal and any recourse against the arbitral award which will be rendered final and undertake to comply therewith, without any enforcement procedure.



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