XPSG brochure

XPSG

pig house environmental control unit

XPSG ventilation control

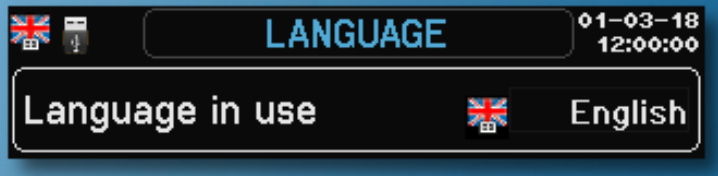
main feature

The main feature of the XPSG is the color display screen (3.5") with 320x240 dots resolution with led backlighting. **XPSG** is made in DIN 96x96 format and the module dimensions are 96x96mm.

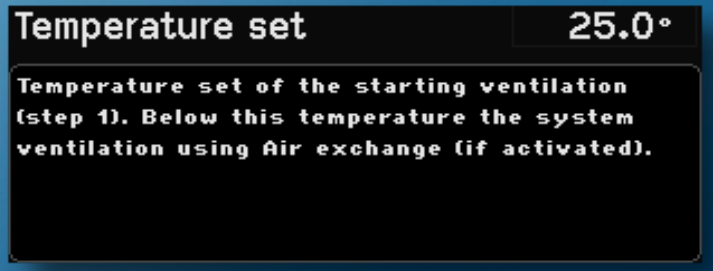
The user interface is easy and friendly.
The easy touch screen system gives both the typical "easy to use" approach of a touch screen system and the strength and mechanical protection of a polycarbonate IP54 keyboard.

At every screen the function keys display a different graphic making the program very user friendly.

The user can select the display language: all the wordings, acronyms and "help" texts for programming assistance will be displayed in the chosen language.



Each programming step has its own help screen so the program has a "built in" instruction manual.



XPSG ventilation control

XPSG
pig house environmental control unit

XPSG manages the climate control of the Ventilation system (0 ... 100% speed adjustment), of the Heating system (Environment-Floor-Infrared Lamps), of the Flaps (air inlet and outlet) and of the Cooling system.

In addition to ambient temperature, ventilation can be affected by humidity, CO2 (carbon dioxide), NH3 (ammonia) and external temperature.

You can program the operating calendar so that the program automatically adapts to the animal growth curve day by day.

All the climate parameters controlled by the **XPSG** are recorded and can be exported via USB key.

Remote supervision ensures complete PC management of all **XPSG** connected in the network.

XPSG ventilation control

inputs and outputs

INPUTS

- Ventilation temperature probe
- Ambient heating temperature probe
- Floor heatong temperature probe
- Infrared lamps heating temperature probe
- Air inlet 1-2 temperature probe
- Humidity probe
- CO2 probe
- NH3 probe
- Outdoor temperature probe
- Air inlet 1-2 potentiometer
- Tachometer signal input
- Thermal block signal input

OUTPUTS On/Off

- Ventilation command
- Auxiliary ventilation command
- Ambient heating command
- Floor heating command
- Inlet flap 1-2 command
- Cooling command
- Alarm command

OUTPUTS 0-10V

- Ventilation
- Ambient heating
- Floor heating
- IR lamps heating
- Air inlet flap 1
- Air inlet flap 2

Other available connections

- **USB plug**
  XPFC has a USB plug inside.
- **XNET**
  Network connection card (optional) for **XPSG** processor (see remote supervision).

XPSG ventilation control

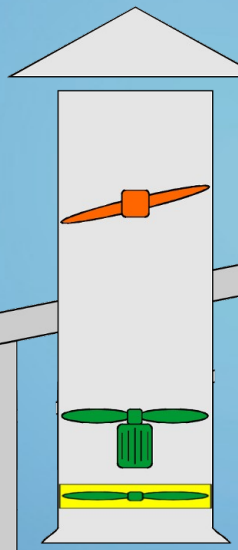
delivery room / weaning example

Ambient humidity probe (optional)

Ambient CO2 probe (optional)

Ambient NH3 probe (optional)

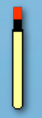
Outdoor temperature probe (optional)



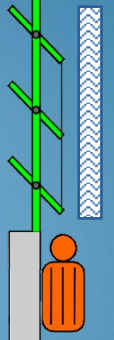
Air inlet

Fan

Meter air flow rate

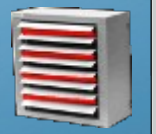


Ambient temperature probe



Flap 1

Cooling



Ambient heating

XPSG

IR lamp heating

Floor heating

SCSL
Fan power unit
(optional)

SCSL
IR lamps power unit
(optional)

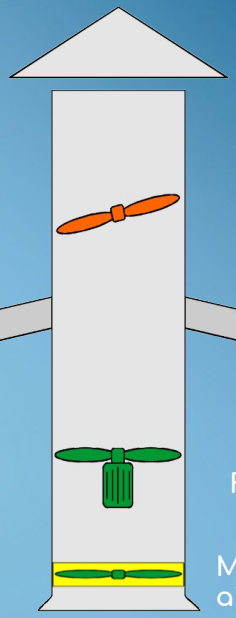
XPSG ventilation control

gestation room example

Ambient humidity probe (optional)

Ambient CO2 probe (optional)

Ambient NH3 probe (optional)



Air inlet

Fan

Meter air flow rate

Outdoor temperature probe (optional)

Cooling

Flap 1

Temperature probe Flap 1 (optional)

Ambient temperature probe

Temperature probe Flap 2 (optional)

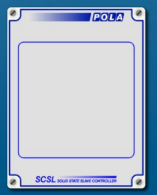
Flap 2

Cooling

FX01 (Flap 1)

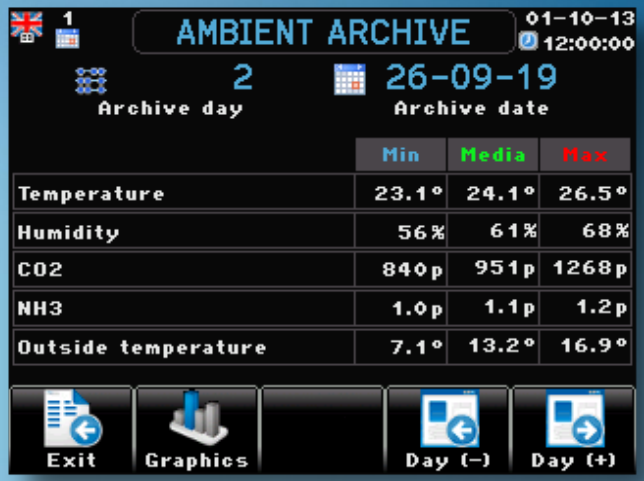
XPSG

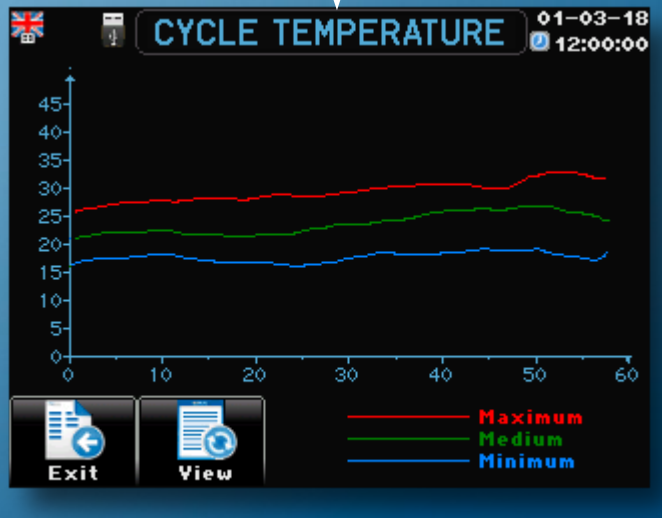
FX01 (Flap 2)



SCSL Fan power unit (optional)

XPSG records all the parameters of the environment





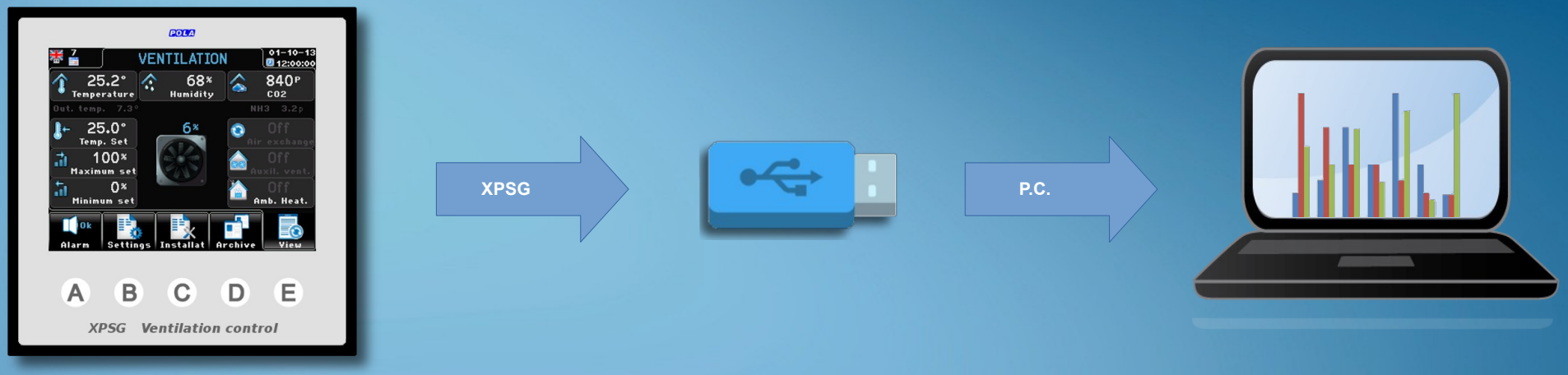
Multiple levels of registrations:

- Daily data, a recording for each day of the cycle
- Data of every single day with sampling every 15 minutes
- Full cycle data

The daily archive records the following parameters:

- Temperature
- Humidity
- CO2
- NH3
- Outside temperature

data transfer

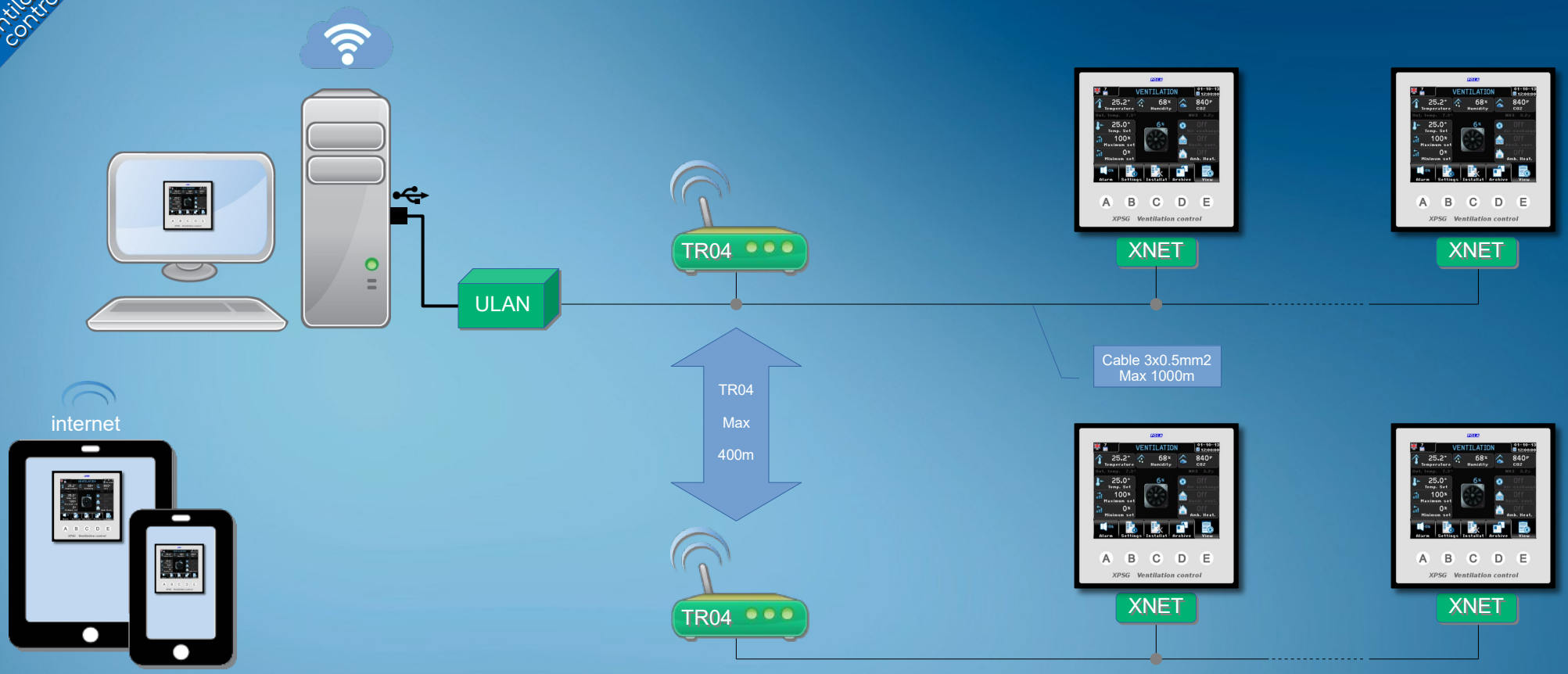


The communication with the outside world is performed by USB key.

- Export archives
  XPSG save in the USB memory a file containing all the day by day recorded data of the cycle.
  Connecting the USB key to a PC and by using the XPSG **Dialogue** software you can browse the recorded data in grid or graph formats.

- Importing / saving the setting
  You can save a file with all back-up infos on a USB file.
  Saved settings can be uploaded on **XPSG** anytime by a user friendly procedure.

remote supervision



Remote supervision of **XPSG** processors grants the full management of system by PC.

The XPSG **Net Pro** supervision software enables the full remote control of network connected processors.
ULAN peripheral is connected to PC through a USB connection. **XPSG – ULAN** connection is done by a simple 3 wires cable.
In all cases where **ULAN** cannot be cabled to **XPSG** we can supply **TR04** radio-modems with a reach of 400 mt.

Components for creating a supervision system:

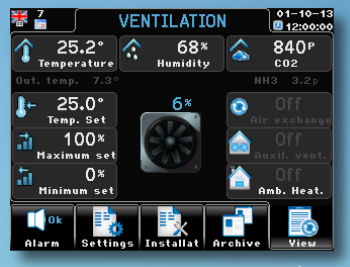
- **ULAN**: Network server Pc (with USB connection)
- **XNET**: Network adapter card (one for each **XPSG**)
- **TR04**: Radio-modem 485 (optional, to be used only when it is not possible to use the cable)

XPSG ventilation control

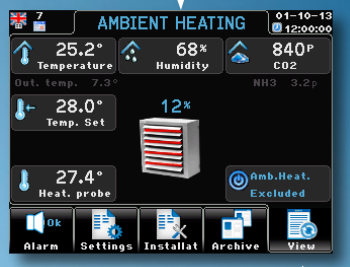
sample screenshots

Home

view screens

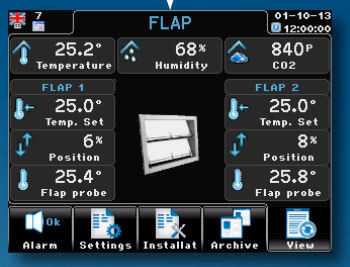


ventilation view



ambient heating view

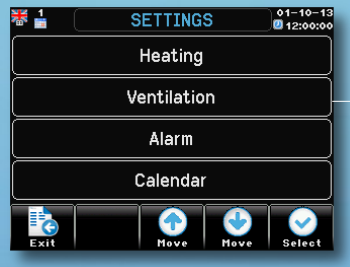
IR lamp heating view



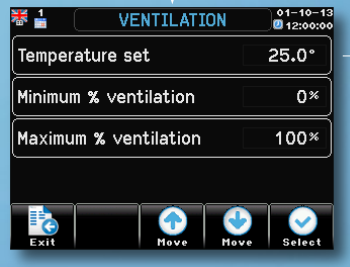
inlet flaps view

Imposta

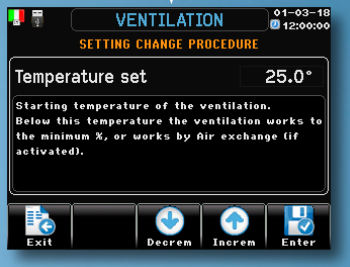
setting screens



settings selection



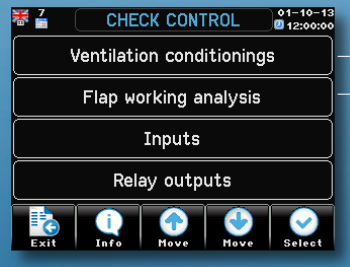
temperature set selection



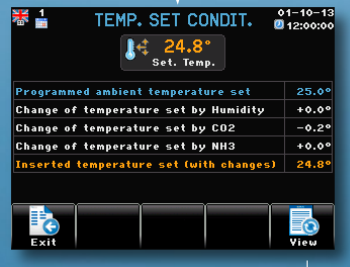
temperature set settings

Check

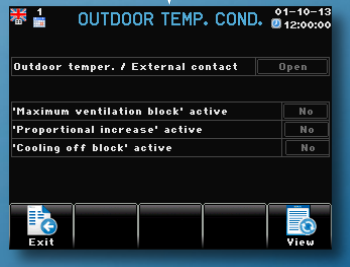
check control screens



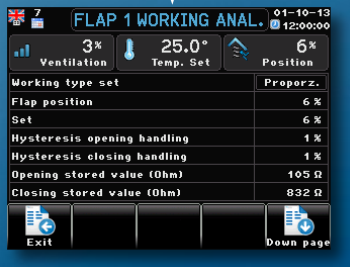
check ventilation selection



temperature set conditioning



outdoor temperature conditioning



inlet flap 1 working analysing

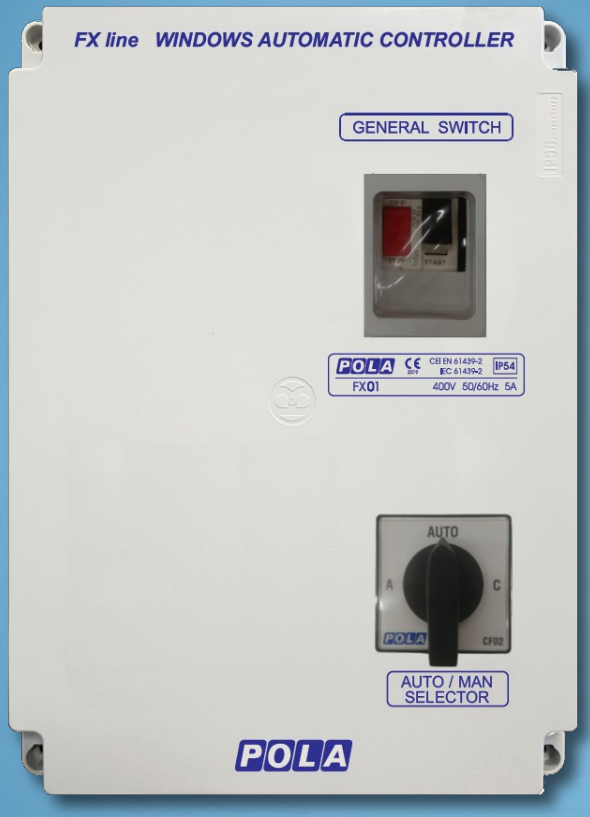
XPSG ventilation control

options available

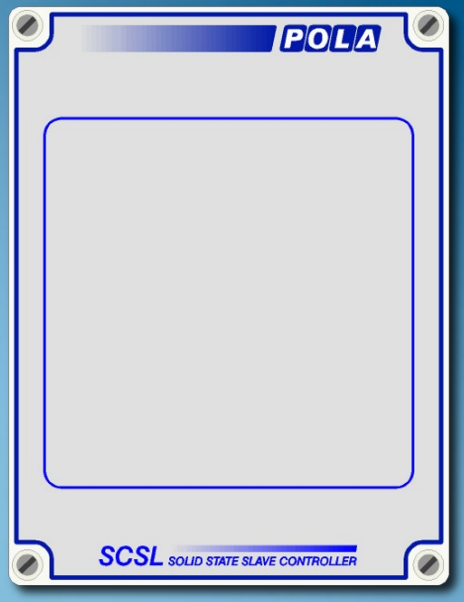
Model	*Description*
XPSG	Pig house environmental control unit
----------	*Options* ----------
SX	Temperature probe. XPSG is supplied with 1 SX: any other probe must be ordered separately
RHR	Humidity probe 0...100%
CO2E	CO2 probe 0...10.000ppm
NH3D	Ammonia probe 0.... 100ppm
HA20s	Power supply for RHR/CO2E (N° 1 HA20s for each probe)
HAR5	Power supply for NH3D
PT	Flap response potentiometer (1 KOhm)
USBP	External IP65 USB socket (to be mounted externally, to access the USB without the need to access inside the XPSG)
SCSL	6A power extension module for continuous control of single-phase fans (8A for infrared lamps heating)
FX01	Drive electrical box for three-phase gear-motor (specify motor power), with 1 SX temperature probe included
CSTX	Thermal trip contact (FX01 option). The intervention of the thermal shutter flap is signaled and managed by the XPSG
HMVU	0-10V gear-motor / ventilation control manualizer
HMVU/W	0-10V gear-motor / ventilation control manualizer (with IP54 box for wall mounting + gasket + transparent cover)
XNET	Network nodal point
ULAN	Network server Pc (with USB connection)
TR04	Radio-modem 485 (IP55 junction box with power supply 230/12v)

XPSG ventilation control

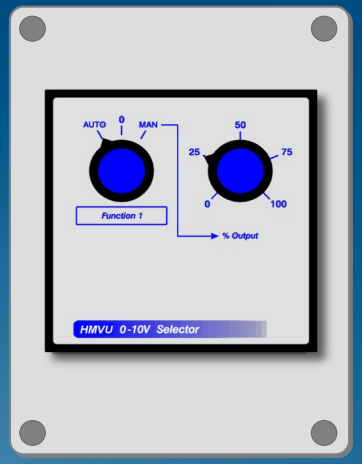
options available



FX01



SCSL



HMVU/W

SX

RHR

CO2E

NH3D

PT

HA20s

HAR5

ULAN

XNET

USBP

TR04

XPSG ventilation control

XPSG performance comparison with Our other models

Performance	*Models*					
	XPSG	XPSF	SC6G	SC6F	SC6E	SC6D
Color graphic display	Yes	Yes	No	No	No	No
Fan speed triac control 230V 6A (on board)	No	Yes	Yes	Yes	Yes	Yes
0-10V inverter output	Yes	Yes	Yes	Yes	Yes	Yes
Auxiliary ventilation	Si	Yes	Yes	Yes	No	No
Tachometer input	Yes	No	No	No	No	No
Ambient heating	Yes	Yes	Yes	Yes	Yes	Yes
Floor heating	Yes	No	Yes	No	No	No
IR lamps heating	Yes	No	Yes	Yes	Yes	No
Flap	Yes (2)	Yes (1)	Yes (2)	Yes (1)	No	No
Cooling	Yes	No	Yes	No	No	No
Humidity probe (provision)	Yes	Yes	Yes	Yes	No	No
Outdoor temperatrure probe (provision)	Yes	Yes	Yes	Yes	No	No
CO2/NH3 probes (provision)	Yes	No	No	No	No	No
Alarm	Yes	Yes	Yes	Yes	Yes	Yes
Growth curve calendar	Yes	Yes	Yes	Yes	No	No
Daily data archive	Yes	Yes	Yes	Yes	No	No
Export / import data with USB stick	Yes	Yes	No	No	No	No
PC network connection	Yes	Yes	No	No	No	No

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XPSG 1.0 Brochure EN 010121