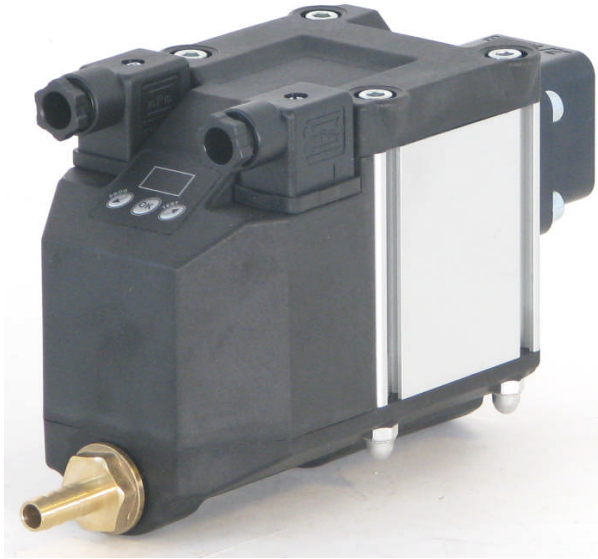


Smart Guard Ultra

ZERO AIR LOSS CONDENSATE DRAIN



02/09

GENERAL OPERATION

The *Smart Guard Ultra* is a zero-air-loss, electronic level sensing condensate drain.

By installing the *Smart Guard Ultra* you prevent the loss of valuable compressed air during the discharge of condensate. There are no sensors to foul up and the unit functions equally well with clear water or heavily emulsified and dirty condensate.

The side and top inlets allow the *Smart Guard Ultra* to be widely applied. One model for all applications up to 3500 SCFM compressor capacity.

The *Smart Guard Ultra* is easy to install.

SAFETY INSTRUCTIONS

SAFETY AND PROPER USAGE

To ensure safe and enduring performance of this product, you must comply strictly with the instructions enclosed herein. Non-compliance with instructions or improper handling of the product will void your warranty! This product is designed to drain condensate from compressed air systems. Usage of this product in conditions not specified in this manual or in contrary to the instructions hereby provided is considered IMPROPER. The manufacturer will not be held liable for any damages resulting from improper use of the product.

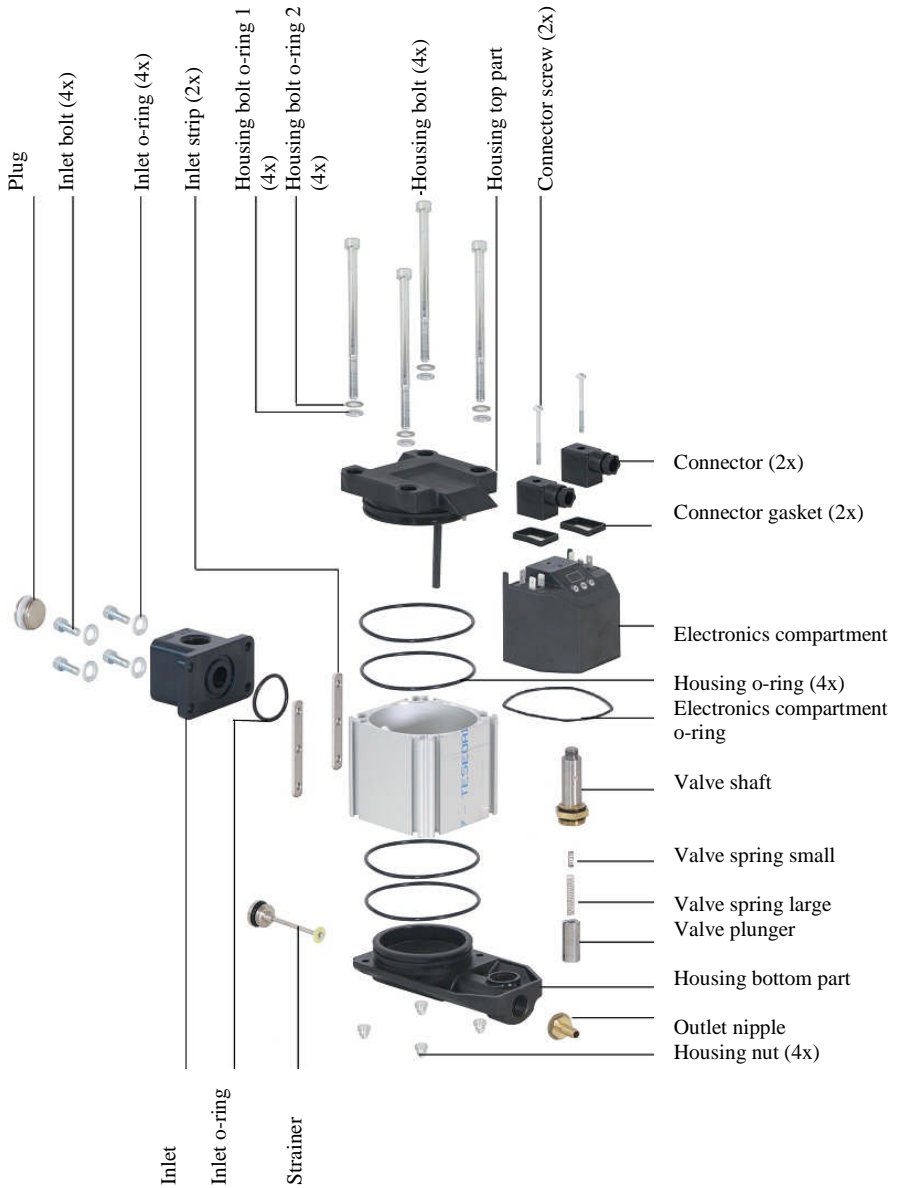
SAFETY & WARNING INSTRUCTIONS

ATTENTION

- Observe valid and generally accepted safety rules when planning, installing and using this product.
- Take proper measures to prevent unintentional operation of the product or damage to it.
- Do not attempt to disassemble this product or lines in the system while they are under pressure.
- Always depressurise the compressed air system before working on the system.

It is important that personnel use safe working practices and observe all regulations and legal requirements for safety when operating this product. When handling, operating or carrying out maintenance on this product, personnel must employ safe engineering practices and observe all local health & safety requirements & regulations. International users refer to regulations that prevail within the country of installation. Most accidents, which occur during the operation and maintenance of machinery, are the result of failure to observe basic safety rules or precautions. An accident can often be avoided by recognising a situation that is potentially dangerous. Improper operation or maintenance of this product could be dangerous and result in an accident causing injury or death. The manufacturer cannot anticipate every possible circumstance, which may represent a potential hazard. The WARNINGS in this manual cover the most common potential hazards and are therefore not all-inclusive. If the user employs an operating procedure, an item of equipment or a method of working which is not specifically recommended by the manufacturer he must ensure that the product will not be damaged or made unsafe and that there is no risk to persons or property.

EXPLODED VIEW - IDENTIFY ALL COMPONENTS DIAGRAM

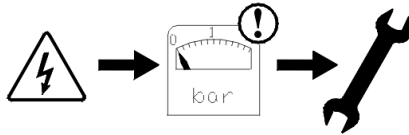


INSTALLATION INSTRUCTIONS

IMPORTANT NOTICE

Before installing this product, make sure it complies with your request and that it suits your application!

1. Unpack the unit and visually inspect for any transport damage incurred after leaving our factory.



2. Depressurise the system before installation or maintenance is carried out!

3. Top inlet connection.

Locate a suitable condensate draining point on your compressed air system and connect your Smart Guard Ultra as illustrated below in the case of a top inlet installation. Connect the outlet to an oil/water separator. We recommend using a JORC condensate cleaner.



The use of a ball valve strainer is advisable.

4. Side inlet connection.

Locate a suitable condensate draining point on your compressed air system and connect your Smart Guard Ultra as illustrated below in the case of a side inlet installation. Connect the outlet to an oil/water separator. We recommend using a JORC condensate cleaner.

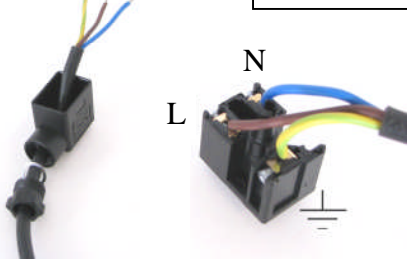
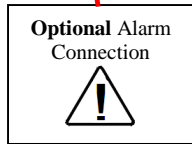
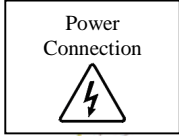
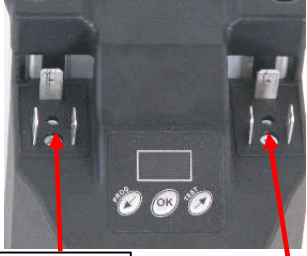


The use of a ball valve strainer is advisable.

INSTALLATION INSTRUCTIONS

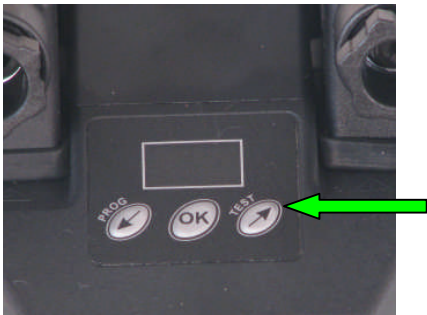
5. Power cable connection

Remove the protection cap from the connector and connect your power cable as shown.

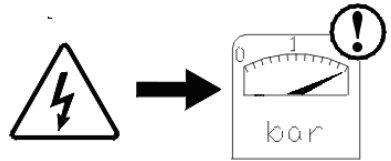
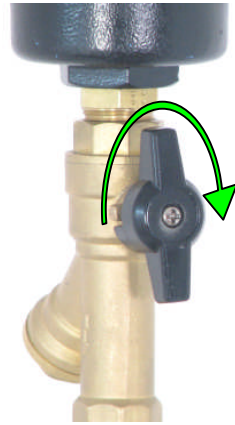


Revert to the programming manual to program the alarm feature (see page 11-12).

7. Press and hold down the TEST button to check the valve function.



6. Slowly open the ball valve to restore normal system pressure.



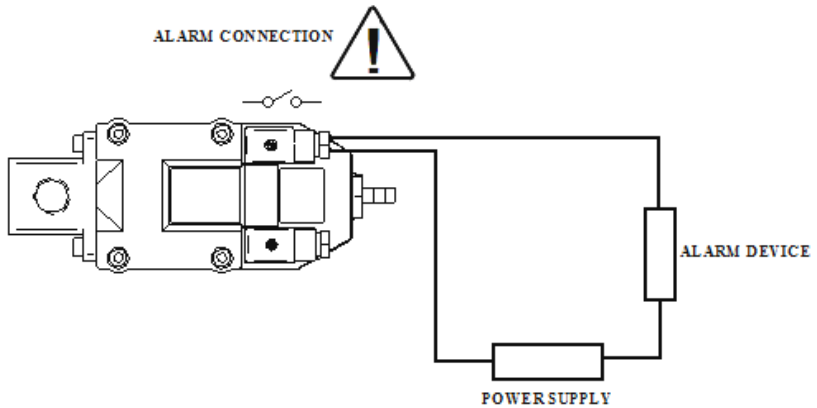
8. Your Smart Guard Ultra is ready for operation

The Smart Guard Ultra is pre-programmed to handle a standard compressed air installation requirement. If required, the Smart Guard Ultra can be programmed to handle the most demanding compressed air installation and application. Revert to the programming manual to alter the default settings of your Smart Guard Ultra (see page 11-12).

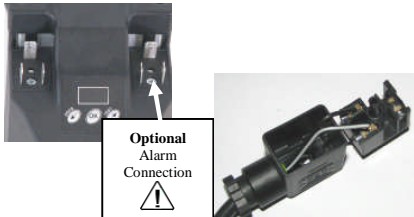
ALARM INSTALLATION INSTRUCTIONS

The Smart Guard Ultra is designed with an optional alarm feature. The alarm is pre-programmed to normally closed (NC), but can easily be programmed to normally open (NO) (see page 12).

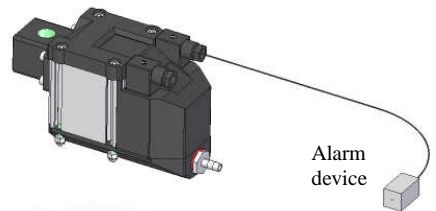
The optional alarm feature can be connected to any power supply and alarm device with a voltage range up to 240VAC, 150VDC / 4A.



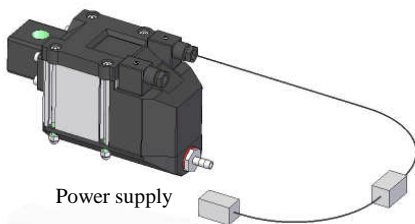
1. Remove the protection cap from the alarm connector and connect your power cable to the connector as shown below.



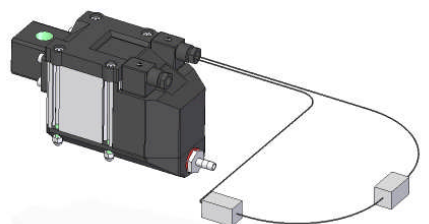
2. Connect the power cable to your alarm device, any device of your choice can be applied. i.e. a (flashing) light or alarm panel.



3. Connect your alarm device to a power supply. The alarm switch type is a “contact output switch”. An external power supply is necessary because the alarm connection point only works as a switch.

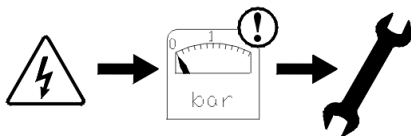


7. Connect the power supply to the Smart Guard Ultra alarm connector to close the circle.



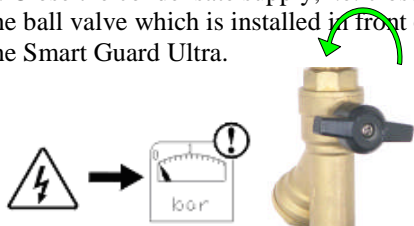
CLEANING INSTRUCTIONS

These instructions are for cleaning the Smart Guard Ultra. If your Smart Guard Ultra requires maintenance, i.e. replacement of wearing components, please refer to our dedicated maintenance instructions (supplied with the service kit).



Depressurise the system before installation or maintenance is carried out!

1. Close the condensate supply, i.e. close the ball valve which is installed in front of the Smart Guard Ultra.



2. Press the TEST button to empty the unit of any residual condensate and to depressurise the Smart Guard Ultra.



3. Switch off the electrical supply by unscrewing the connector screw and removing the connector.



Make sure the display is off to check if the power supply is successfully disconnected.

4. Open the housing by unscrewing the 4 housing bolts using a 5 mm allen key and take apart the top part from the reservoir and the electronics compartment.



5. Unscrew the valve from the bottom part of the housing using a 23 mm wrench.



6. Clean the valve parts. Also clean the other parts of the Smart Guard Ultra unit.



CLEANING INSTRUCTIONS

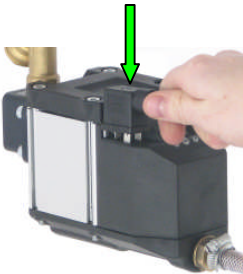
7. Reassemble the valve inner parts and screw the valve back in to the bottom part of the housing using a 23 mm wrench (Max. torque 2Nm).



8. Close the housing by replacing the electronics compartment and top part on the reservoir and fixing the 4 housing bolts. (Max. Torque 6Nm). Make sure the gaskets are secured properly to ensure NEMA 4 rating and make sure the electronics have not been in contact with water.

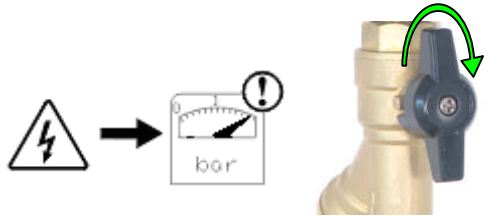


9. Switch on the electrical supply by replacing the connector and connector screw (max. torque 1Nm). Make sure the gasket is secured properly to ensure Nema4 rating.



Make sure the display is on to check if the power supply is successfully connected.

10. Slowly open the ball valve to restore normal system pressure.



11. Press and hold down the TEST button to check the valve function.

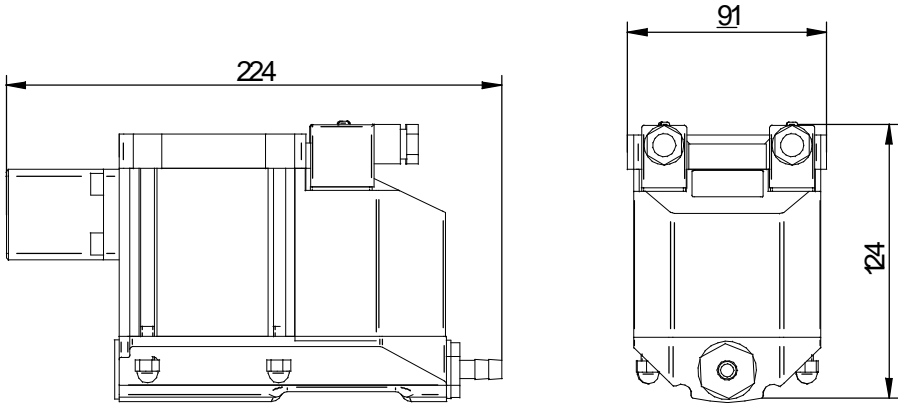


12. Your Smart Guard Ultra is ready for operation!







TECHNICAL SPECIFICATIONS

Inlet connection	NPT 1/2"
Outlet connection	G1/2" (Hose Barb)
Voltage	230V or 115V 50/60 Hz (+/- 10%)
Max. operating pressure	230 PSI
Min. operating pressure	0 PSI
Max. operating temperature	120°F
Min operating temperature	36°F
Weight	4,42 lbs

DIMENSIONS (MM) 25.4MM=1"



KAPTIV PROGRAMMING MANUAL

Operational display symbols	Meaning	Action
	Normal operations and condensate has not reached the discharge level.	None
	Discharge level has been reached, valve is opened to discharge the condensate.	None
 S flashing	Service interval reached. Unit will operate normally, but it is time to periodically service/clean the unit. The alarm output has been activated.	Service/clean the unit. After the unit has been serviced, enter the CL mode to reset this service warning.
 AC flashing	Alarm cycle and alarm output activated. The unit has purged more the (AC set value) times consecutively without pause. Unit will operate normally.	Check why the alarm cycle has been activated and reset by pressing the OK button.
 At flashing	Alarm cycle and alarm output activated. The unit has purged more the (AC set value) times in (At set value) hours. Unit will operate normally.	Check why the alarm cycle has been activated and reset by pressing the OK button.
	Cleaning mode. Unit will operate normally The unit can be flushed and cleaned. SI value and other alarm values are reset. Use the TEST button to purge.	Clean the unit and/or press OK to restore to normal operation.

KAPTIV PROGRAMMING MANUAL

Press the PROG button for at least 10 seconds to enter the menu structure.

You can move thru the menu structure by pressing the [up] or [down] arrows.










When you have reached the required menu option, press OK to enter the submenu.

In the submenu you can change the default setting by pressing the [up] or [down] arrows.

After you have changed the default setting, simply press OK to save the change.

Wait for at least 10 seconds (do not press any button) to exit the complete menu structure.

KAPTIV Menu structure:

Programming display symbols	Meaning	Action
	Default Settings. Resets all settings to factory settings	Press OK to select
	Anti-Air lock setting. Each x hours the unit will purge regardless of the condensate level.	Use [up] or [down] arrows to choose 1-99 hours. 0 = disabled, 8 = default.
	Purge time setting. When the condensate has reached a predefined level the unit will purge and open the valve for x seconds.	Use [up] or [down] arrows to choose 0.1-0.9 seconds. 0.3 = default.
	Alarm Cycle setting. If the unit purges more then x times consecutively without pause, this could mean that an not logical amount of condensate is being discharged. The alarm output is activated.	Use [up] or [down] arrows to choose 1-99 times. 0 = disabled, 0 = default.
	Alarm time cycle setting. If the units purges more then (x times set in AC) in x hours, this could mean that an not logical amount of condensate is being discharged in a period of x hours. The alarm output is activated.	Use [up] or [down] arrows to choose 1-99 hours. 0 = disabled, 0 = default.
	Alarm Output setting. The unit can be programmed to have a NO (Normally Open) or NC (Normally Closed) alarm relay output.	Use [up] or [down] arrows to choose NO or NC contacts. NC = default.
	Do not change.	1 = default.
	Sensing time setting. When the condensate has reached a predefined level the unit will wait for x seconds of continuous detection before purging and opening the valve for x seconds set in Pt.	Use [up] or [down] arrows to choose 0,1-9,9 seconds. 1 = default.
	Service Interval setting. The unit will remind you every x weeks that it is time to periodically service and clean the unit. Note: each time the power is switched off, the unit will add 1 week to its count memory.	Use [up] or [down] arrows to choose 1-99 weeks. 0 = disabled, 0 = default.