PETERSIME

Maintenance of Incubators

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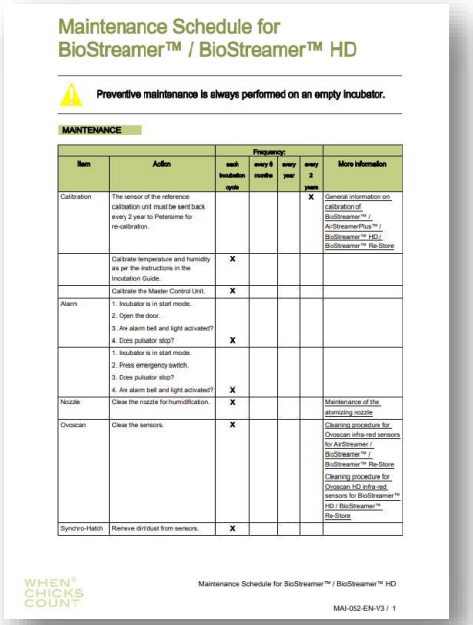
2026

Maintenance schedule



Maintenance Schedule for BioStreamer™ / BioStreamer™ HD

Preventive maintenance is always performed on an empty incubator.

MAINTENANCE

Item	Action	Frequency: each incubation cycle	every 6 months	every year	every 2 years	More information
Calibration	The sensor of the reference calibration unit must be sent back every 2 year to Petersime for re-calibration.				X	General information on calibration of BioStreamer™ / AirStreamerPlus™ / BioStreamer™ HD / BioStreamer™ Re-Store
	Calibrate temperature and humidity as per the instructions in the Incubation Guide.	X				
	Calibrate the Master Control Unit.	X				
Alarm	1. Incubator is in start mode. 2. Open the door. 3. Are alarm bell and light activated? 4. Does pulsator stop?	X				
	1. Incubator is in start mode. 2. Press emergency switch. 3. Does pulsator stop? 4. Are alarm bell and light activated?	X				
Nozzle	Clean the nozzle for humidification.	X				Maintenance of the atomizing nozzle
Ovoscan	Clean the sensors.	X				Cleaning procedure for Ovoscan infra-red sensors for AirStreamer / BioStreamer™ / BioStreamer™ Re-Store Cleaning procedure for Ovoscan HD infra-red sensors for BioStreamer™ HD / BioStreamer™ Re-Store
Synchro-Hatch	Remove dirt/dust from sensors.	X				

Item	Action	each incubation cycle	every 6 months	every year	every 2 years	More information
Full technical check	Use the "Commissioning document".		X			Commissioning document - Incubator
	Keep the filled in forms in the Petersime technical folder.		X			
	Take corrective actions where necessary and note in maintenance logbook.		X			Commissioning procedure for BioStreamer™ / BioStreamer™ HD
Environment conditions for incubators	Use the "Checklist - Environment conditions for incubators".		X			Checklist - Environment conditions for incubators
	Check against document: "Dimensions and specifications ..." for the BioStreamer / AirStreamerPlus / BioStreamer HD machines.		X			
	Keep the filled in forms in the Petersime technical folder.		X			
	Take corrective actions where necessary and note in maintenance logbook.		X			
Electrical compartment	Open the compartment and examine visually boards, wiring connections, terminals and relay points.			X		
	Make sure all boards and plugsare firmly seated.			X		
	In case of dust or fluff, switch of the electrical supply and vacuum.			X		
Pulsator	Remove dust from the cooling fan motor.		X			
	Check belt for abnormal wear and correct tension.		X			Belt Drive for BioStreamer™ / AirStreamerPlus™ / BioStreamer™ HD / BioStreamer™ Re-Store
	Check coverplates.	X				
	Remove dust from the frequency converter.		X			
	Check unusual sounds on motor.		X			
	Check temperature around the frequency converter.		X			Must not exceed 40 °C.
Cooling	Clean the valve(s).		X			
	Remove any solid particles.		X			
	Check for small water leaks at bottom of console and on roof.		X			

Item	Action	each incubation cycle	every 3 months	every 6 months	every year	every 2 years	More information
	Release air from radiator.			X			
	For Operational Excellence Technology™: Check unusual sounds / LED on pump.			X			
Sensors	Clean filter of humidity.			X			Maintenance of the temperature sensor, Electronic Humidity Sensor - EHS and CO_2 sensor in BioStreamer™ / AirStreamerPlus™ / BioStreamer™ HD
	Setters: Clean filter of the CO_2 sensor.			X			
	Hatchers: Replace the membrane of the green cover of the CO_2 sensor.		X				
Pressure regulators	Drain the condensation water from the bowl.			X			
Turning	Check or air leaks on seals of pneumatic cylinder.			X			
ADS	Checks according specific maintenance program.			X			
Trolleys	Grease and oil all pivot points.			X			Maintenance of the setter trolley, setter trays and, hatcher baskets
	Check or formation of rust on the housing. Restore paint if necessary.			X			
CO_2 sensor	Make a "zero calibration".				X		Calibration of the CO_2 sensor

PREVENTIVE REPLACEMENT OF PARTS

The service life of your incubators can be increased by simply following the above preventive maintenance instructions. However, even regular maintenance can not exclude certain parts from suddenly breaking.

By replacing "wearing parts" preventive you will minimize loss of production from unscheduled equipment breakdown. Even if it means too early replacement of a specific part, it will improve system reliability.

The principle of "breakdown maintenance" is not recommended at all.
List of "wearing parts" per group:

Group	Part	Frequency	Time needed to replace
Pulsator	Belt	1 year	2 minutes
	Pulsator shaft bearing block	2.5 years	15 minutes
	Motor bearings*	5 years	30 minutes
Turning	Plastic inserts holding pin of trolley	2.5 years	5 minutes
	Bearings	2.5 years	20 minutes
Cooling	No Operational Excellence Technology™: Valves	2.5 years	15 minutes
	In case of Operational Excellence Technology™: Automatic air vent	2.5 years	5 minutes
	Fan for ACU (setters) or fans for air cooling (hatchers)	5 years	20 minutes
Humidity	Valves	2.5 years	15 minutes
Ventilation	Pneumatic cylinders on air inlet and outlet dampers.	5 years	10 minutes
Doors	Seal on bottom door	2.5 years	15 minutes
	Seal around the door	2.5 years	15 minutes

*Note: to be done by an experienced person.

Parts can be found on the e-shop on our website www.partspetersime.com

WORK TIME ESTIMATION FOR PREVENTIVE MAINTENANCE PER ANNUM

Time required for preventive maintenance per incubator is very low if your maintenance personnel is properly trained and has understanding of the functionality of the equipment.

Time calculations, as stipulated in the tables below, are estimations based on several hatcheries, averages for setter and hatcher, small size and large size incubators.

Work time for maintenance requirements at 6 months and 1 year			
Maintenance schedule	Time required	Per year	Total
Every 6 months	90 minutes	x 2	180 minutes
Every year	20 minutes	x 1	20 minutes

Average per year and per incubator: **200 minutes.**

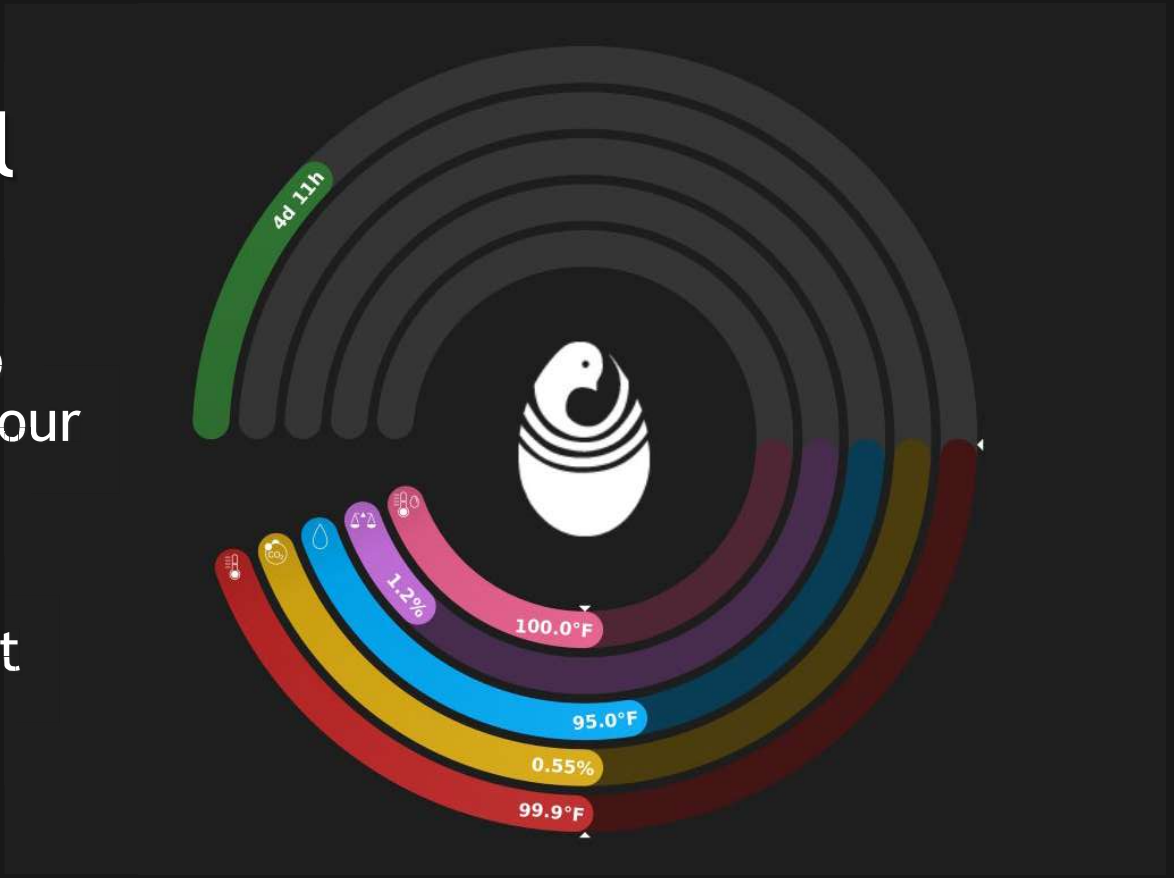
Work time for preventive replacement of parts		
Replacement schedule	Time required	Time per annum
After 1 year	2 minutes	2 minutes
After 2.5 years	100/105 minutes	: 2.5 = 40/42 minutes
After 5 years	60 minutes	: 5 = 12 minutes

Average per year and per incubator: **54 minutes.**

Petersime’s proposal

Our maintenance proposal is to simulate the real behaviour of our equipment before every cycle.

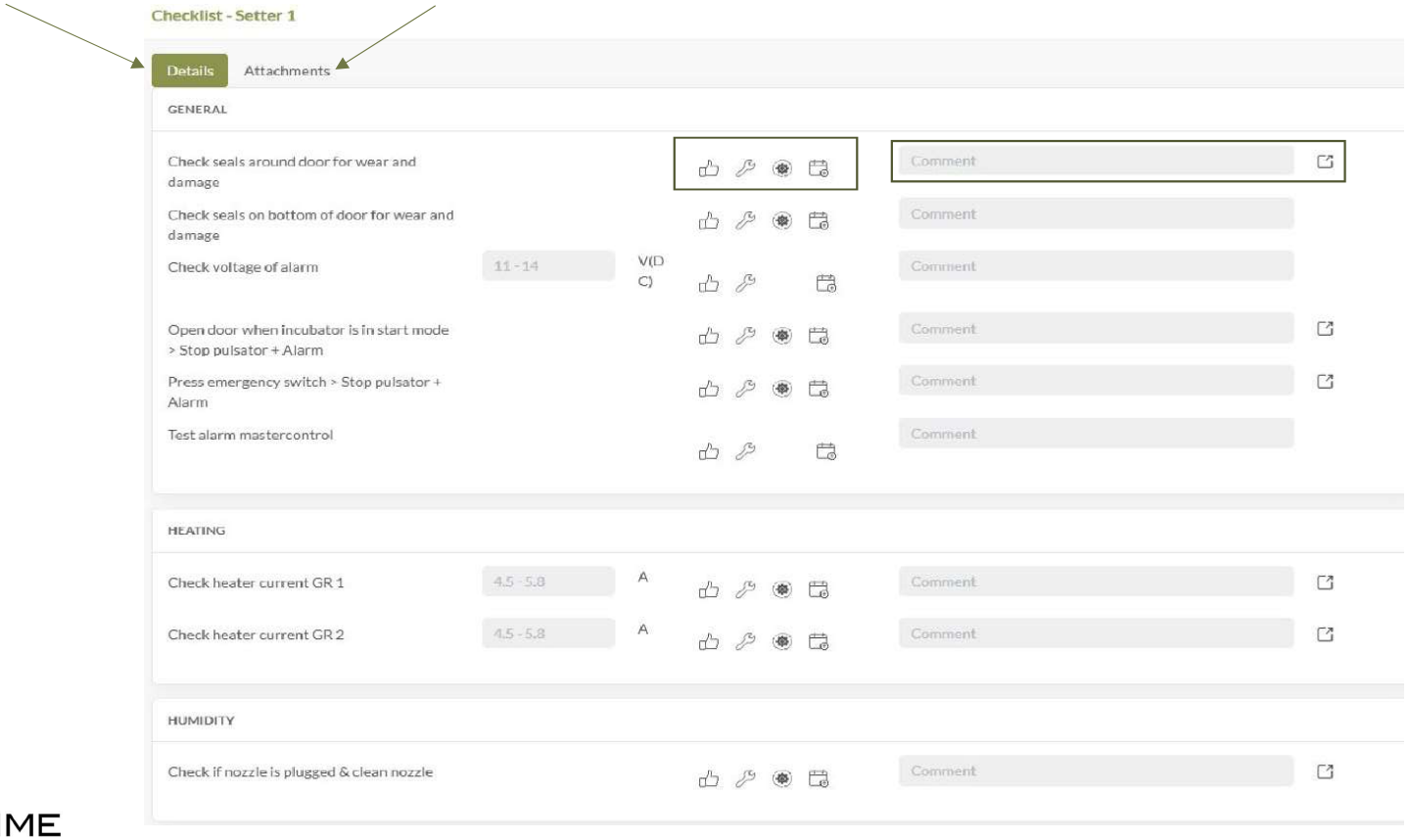
This always guarantees the best performance of the incubator.



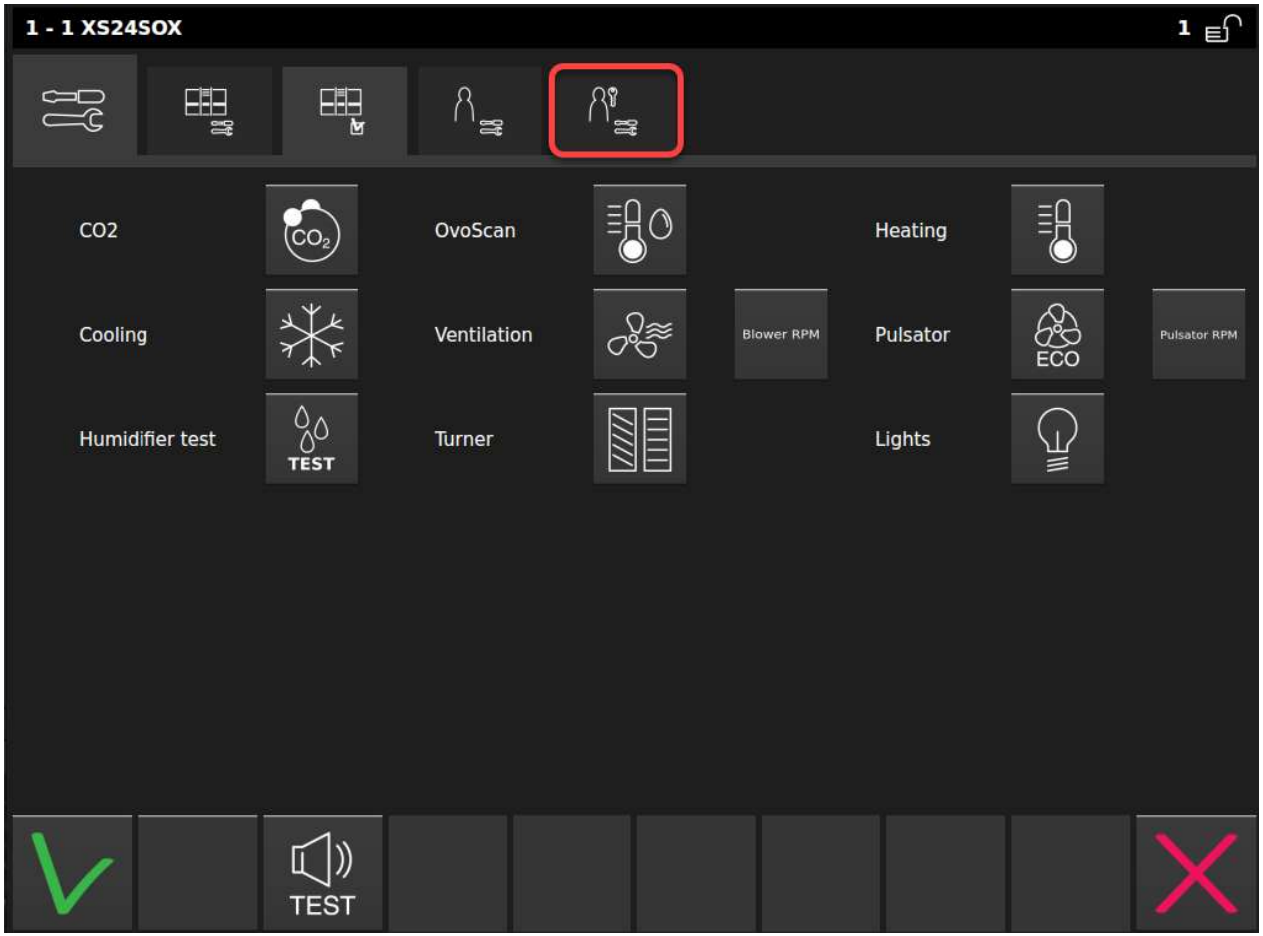
Before each cycle – paper checklist

MAINTENANCE	TYPE : SETTER		# Machine:	
PULSATOR	CHECK BELT TENSION		OK ☐	
	CHECK FAN BLADE BOLTS		OK ☐	
	CHECK TENSIONER SECURITY		OK ☐	
	CHECK PROXIMITY SWITCH		OK ☐	
VENTILATION	0%: POSITION ALL DAMPERS		OK ☐	
	100% : POSITION ALL DAMPERS		OK ☐	
HEATING	GROUP 1 : Ph1: ..... A Ph2: ..... A Ph3: ..... A			
	GROUP 2 : Ph1: ..... A Ph2: ..... A Ph3: ..... A			
COOLING	CHECK VALVE FOR LEAKS		OK ☐	
	CHECK HOSES & PIPEWORK FOR LEAKS		OK ☐	
HUMIDITY	SETVALUE PRESSURE AIR : ..... Bar - WATER : ..... Bar			
	SPRAYING NOZZLE		OK ☐	
TURNING	TURNING FROM LEFT <-> RIGHT		OK ☐	
	TURNING HORIZONTAL		OK ☐	
	OIL & CHECK PINS		OK ☐	
ALARM	VOLTAGE : ..... V(DC)	TEST RED LAMP: OK ☐ (open doors)	TEST BEL: OK ☐	TEST MASTERCONTROLLER: OK ☐
OVOSCAN	All 12 BLOCKS TURN GREEN IN ALARM STATUS WINDOW		OK ☐ Allow to get to temperature (+95ºF)	
CO_2/WEIGHTLOSS	DISPLAY VALUE CO_2 : ..... % (values within limits 0,03% and 0,09% OK, if not, calibrate sensor!)			
DOOR SEALS	CHECK DOOR SEALS FOR WEAR & DAMAGE		OK ☐	
GENERAL	EMERGENCY SWITCH > STOP PULSATOR+ALARM		OK ☐	
CALIBRATION	CHECK AFTER 1 DAY 12HRS: OK ☐		CALIBRATION TEMPERATURE: OK ☐	DONE ON ..... °F
			CALIBRATION HUMIDITY: OK ☐	DONE ON ..... °F
			CALIBRATION MASTERCONT.: OK ☐	DONE ON ..... °F
REMARKS >				
	SIGNATURE MAINTENANCE:	SIGNATURE PRODUCTION:	DATE:	

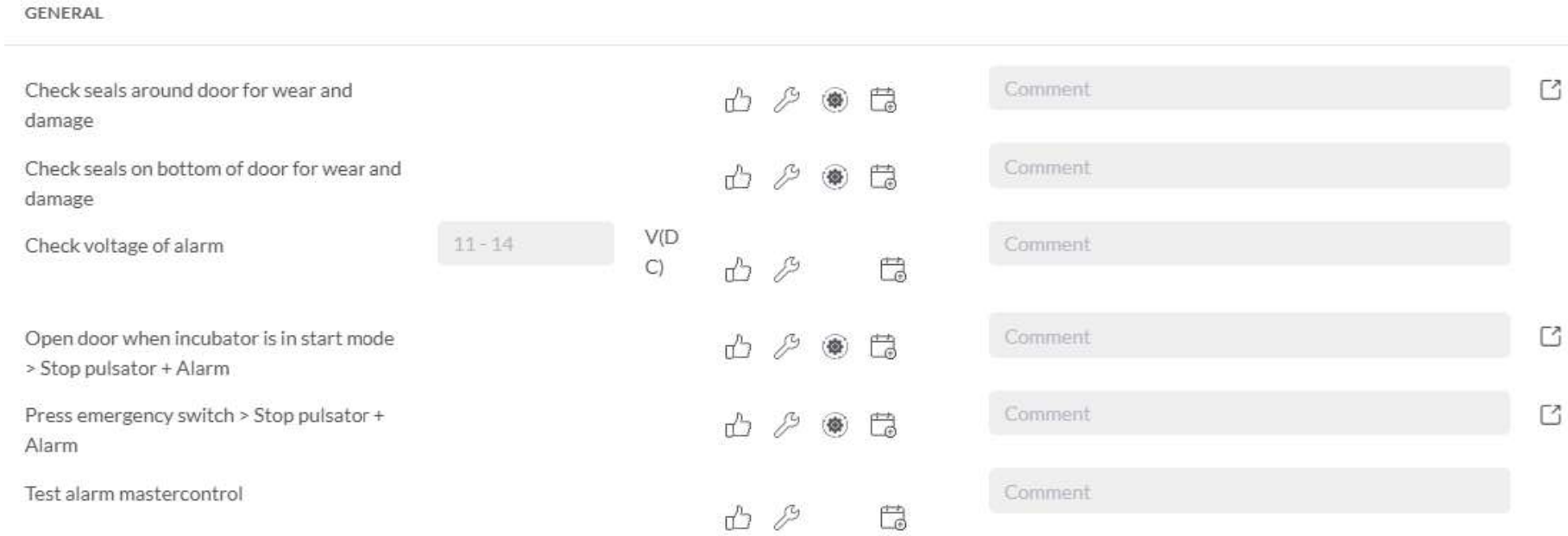
Before each cycle – digital checklist Eagle Trax



OX module – Maintenance window

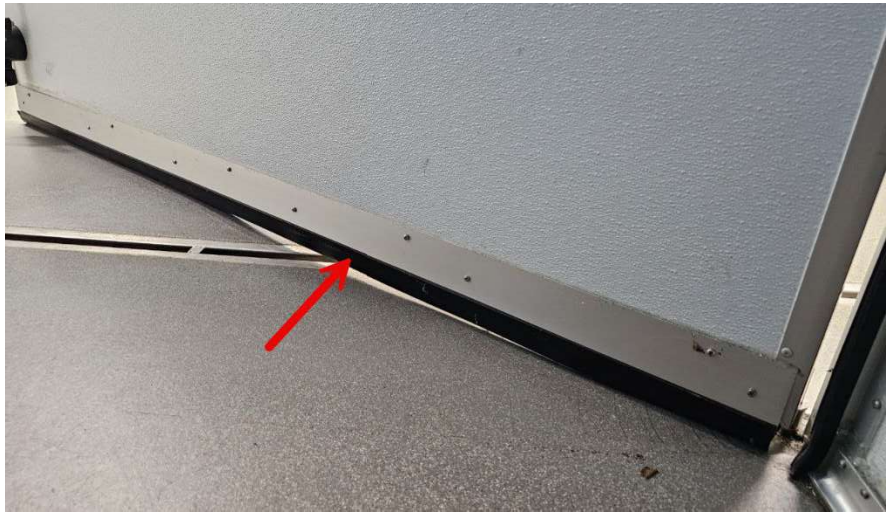


Digital checklist – General



Digital checklist – General

Door seals



Digital checklist – General

MC alarm

Digital checklist – General

Door alarm

Digital checklist – General

Emergency switch alarm

Digital checklist – General

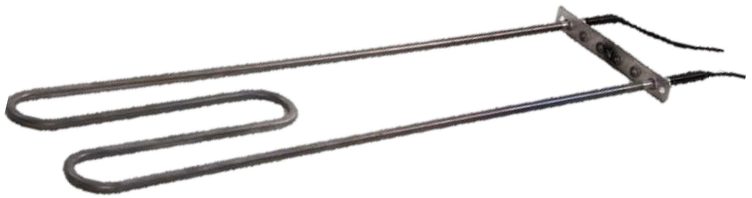
Alarm

Alarm voltage: 11...14VDC

Digital checklist – Heating

HEATING

Check heater current GR 1	4.5 - 5.8	A	Comment	
Check heater current GR 2	4.5 - 5.8	A	Comment	



Digital checklist – Heating

Digital checklist – Humidity

HUMIDITY

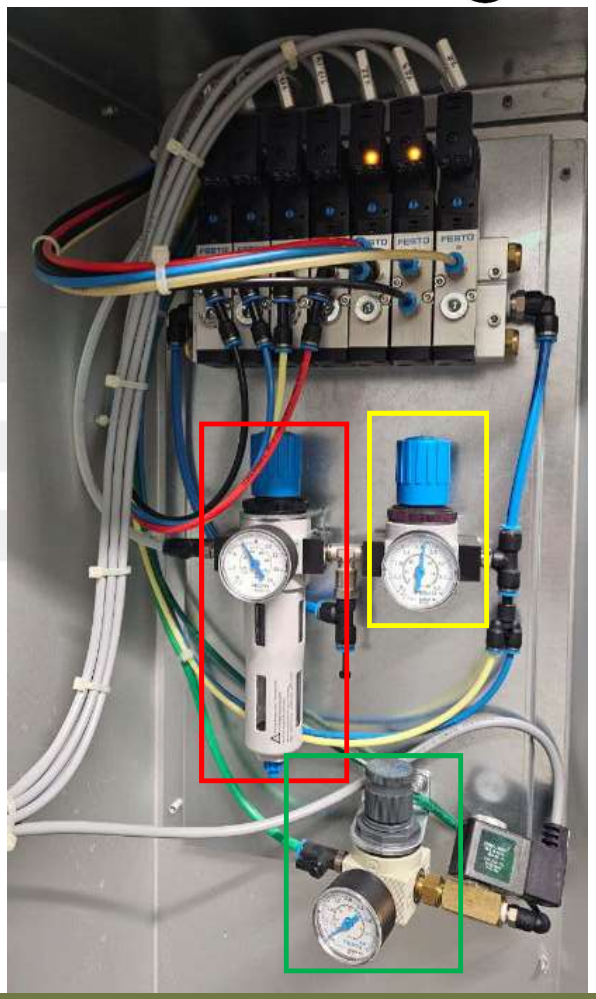
Check if nozzle is plugged & clean nozzle

Comment

Digital checklist – Hydropneumatics

HYDROPNEUMATICS

Setvalue air pressure high	6 - 6	bar		Comment
Setvalue air pressure low	2 - 2	bar		Comment
Setvalue water pressure	1 - 1	bar		Comment



Digital checklist – Pulsator

PULSATOR

Check belt condition and tension + check correct position of cover plates		Comment
Check fan blade bolts		Comment
Check tensioner security		Comment

Digital checklist – Sensors

SENSORS

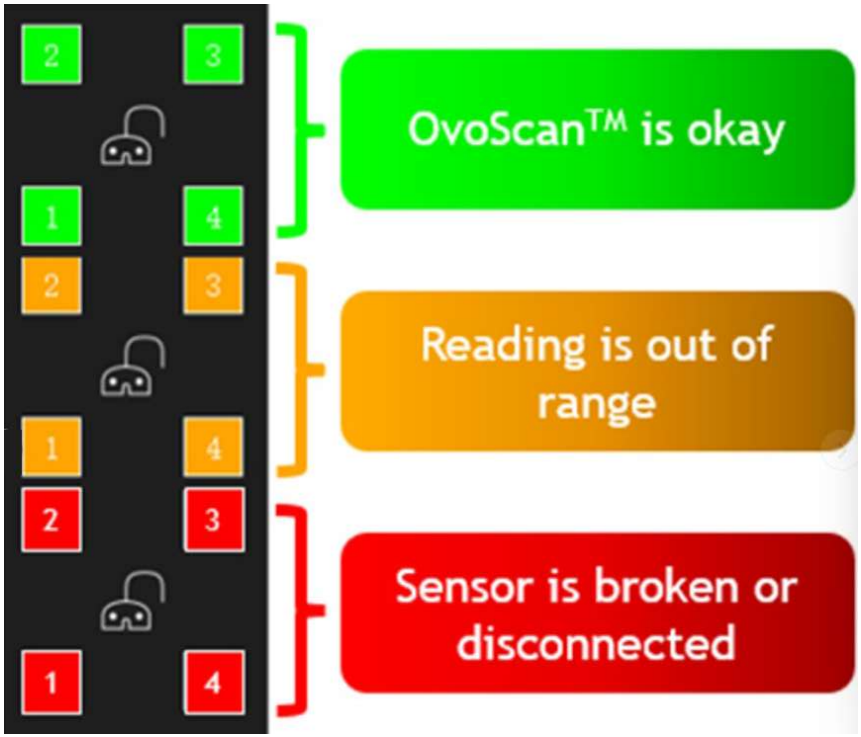
All 12 blocks of Ovoscan turn green in alarm status window			Comment
Calibrate humidity as per the instructions in the Incubation Guide			Comment
Calibrate temperature as per the instructions in the Incubation Guide			Comment
Check display value of CO2, calibrate if not within limits	0.03 - 0.09	%	Comment
Clean the Ovoscan sensors			Comment

Digital checklist – Sensors

Compact way to store both covers:

Digital checklist – Sensors

Ovoscan readings



Digital checklist – Sensors

Ovoscan cleaning

- Recommend to store in the dry zone during cleaning
- Remove the dust from the sensor with a compressed air can
- Spray an anti-static cleaning liquid on the lens in the sensor opening
- Remove stubborn dirt with the help of a swab
- Blow all remaining dirt and cleaner liquid away with compressed air

Digital checklist – Sensors

CO2 sensor

Inspection list+ Every 1 year

CO_2 sensor

Perform a ‘zero calibration’.

HP-011999

Inspection list+ Every 1 year

CO_2 sensor

- ►See video guide
- ►Calibration cap B14845

Digital checklist – Sensors

Synchro-Hatch

Digital checklist – Sensors
Calibration

WHEN should you calibrate?

You should perform a calibration check of the sensors every setter cycle (as alarmed by the machine). The more stable the process, the more reliable your calibration check will be (endothermic phase, minimal or no ventilation). That's why it's important to follow these 4 requirements each time:

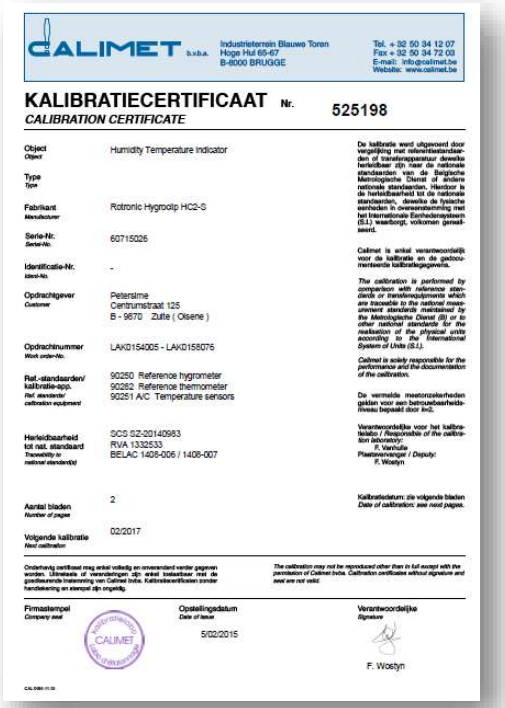
1. Between 1 day 12 hours and 2 days 12 hours of incubation time
2. Actual Temperature and Humidity value are on setpoint
3. Machine is fully set with eggs
4. Turning is in /-\ position

*OvoScan™ and Master Control will calibrate automatically

Inspection list+ Every 2 years

Calibration kit

- The sensor of the reference calibration unit must be sent back every 2 years to Petersime for re-calibration



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KALIBRATIECERTIFICAAT Nr. 525198
CALIBRATION CERTIFICATE

Object	Humidity Temperature Indicator
Type	
Fabrikant	Rotronic Hygroclip HC2-S
Serie-Nr.	60715026
Identificatie-Nr.	-
Opdrachtgever	Petersime Centrumstraat 125 B - 9670 Zulte (Olsene)
Opdrachtnummer	LAK0154005 - LAK0158076
Ref.-standaarden/ kalibratie-app.	90250 Reference hygrometer 90262 Reference thermometer 90251 A/C Temperature sensors
Herleidbaarheid tot nat. standaard	SCS SZ-20140983 RVA 1332533 BELAC 1408-006 / 1408-007
Aantal bladen	2
Volgende kalibratie	02/2017

De kalibratie werd uitgevoerd door vergelijking met referentiestandaarden of transferapparatuur dewelke herleidbaar zijn naar de nationale standaarden van de Belgische Metrologische Dienst of andere nationale standaarden. Hierdoor is de herleidbaarheid tot de nationale standaarden, dewelke de fysische eenheden in overeenstemming met het Internationale Eenhedenstelsel (S.I.) waarborgt, volkomen gewaarborgd.

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The calibration is performed by comparison with reference standards or transferequipments which are traceable to the national measurement standards maintained by the Metrologische Dienst (B) or to other national standards for the realisation of the physical units according to the International System of Units (S.I.).

Calimet is solely responsible for the performance and the documentation of the calibration.

De vermelde meetonzekerheden gelden voor een betrouwbaarheidsniveau bepaald door ilnC.

Verantwoordelijke voor het kalibratielabo / *Responsible of the calibration laboratory:*
F. Vanhulle
Plaatsvervanger / *Deputy:*
F. Wostyn

Kalibratiedatum: zie volgende bladen
Date of calibration: see next pages.

Onderhavig certificaat mag enkel volledig en onveranderd verder gegeven worden. Uittreksels of veranderingen zijn enkel toelaatbaar met de goedkeurende toelatenning van Calimet bvba. Kalibratiecertificaten zonder handtekening en stempel zijn ongeldig.

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Firmastempel / *Company seal*

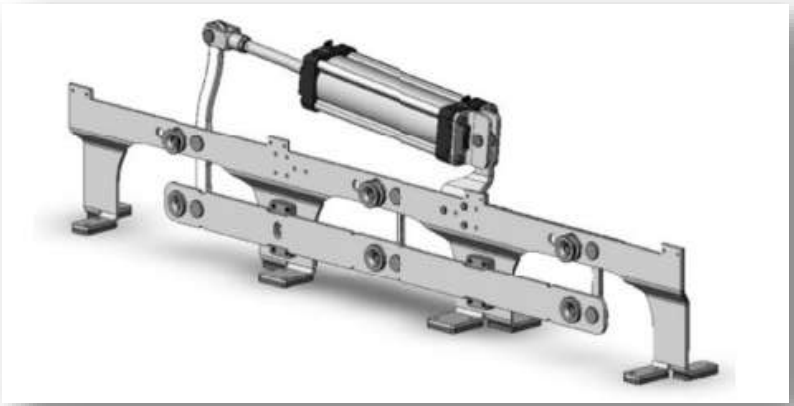
Opstellingsdatum / *Date of issue*: 5/02/2015

Verantwoordelijke / *Signature*: F. Wostyn

Digital checklist – Turning

TURNING

Check turning from left <--> right		Comment
Check turning horizontal		Comment
Coupling trolleys: oil and check pins		Comment



Digital checklist – Turning

Left <-> Right, Horizontal

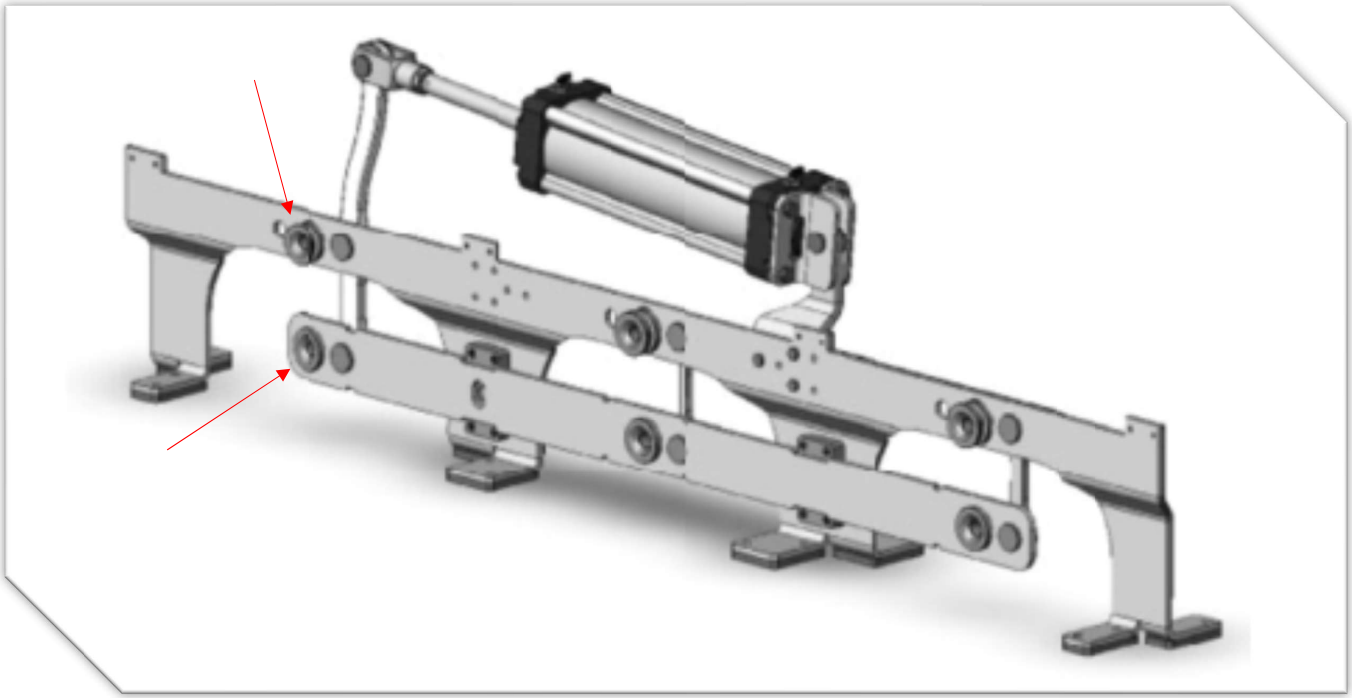
1) /\ -> \/

2) \/ -> /

3) Horizontal for min 60 sec

Digital checklist – Turning

Coupling trolleys



Digital checklist – Ventilation

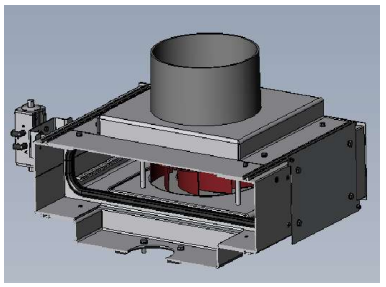
VENTILATION

0%: Position all dampers

Comment

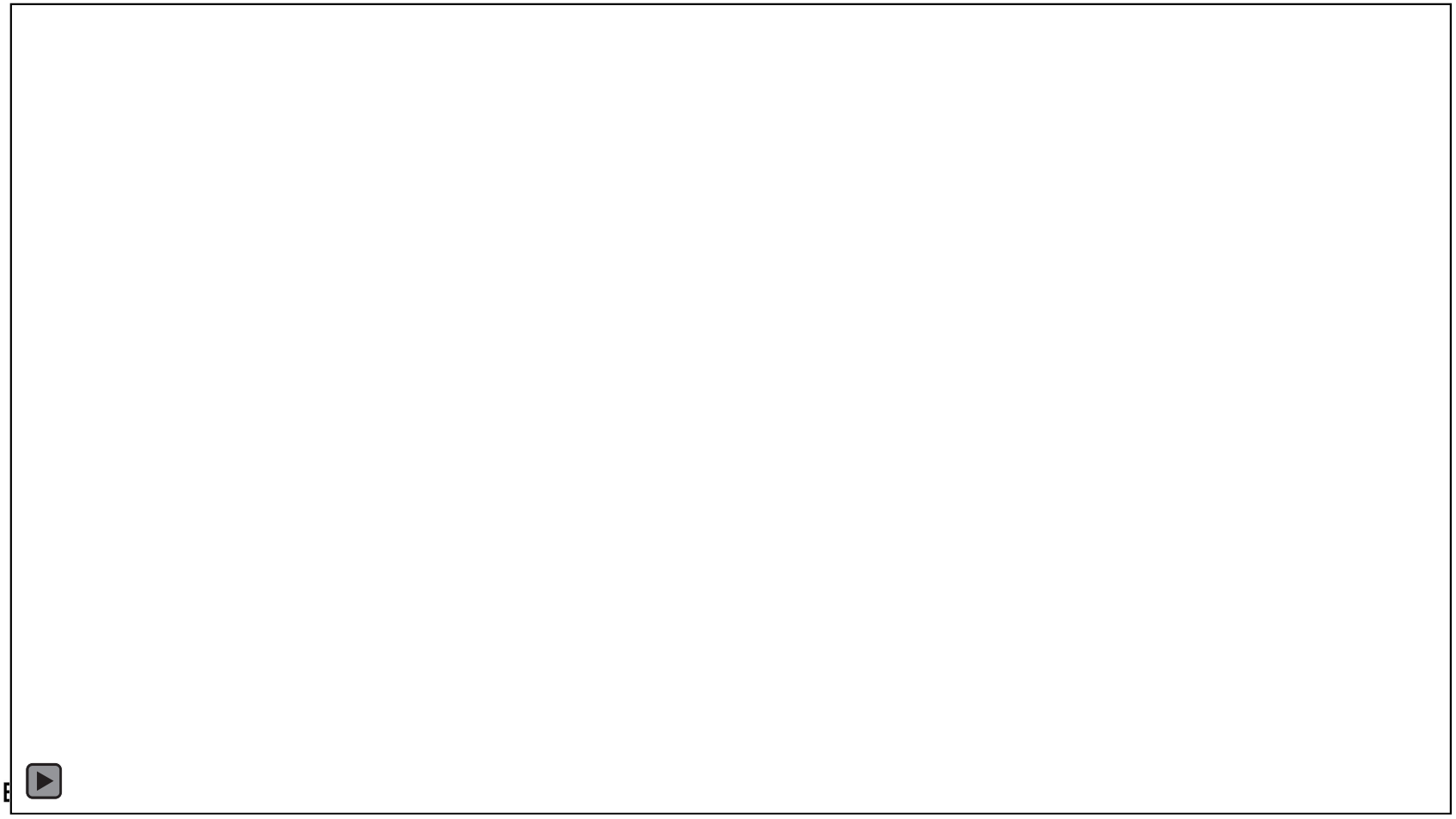
100%: Position all dampers

Comment

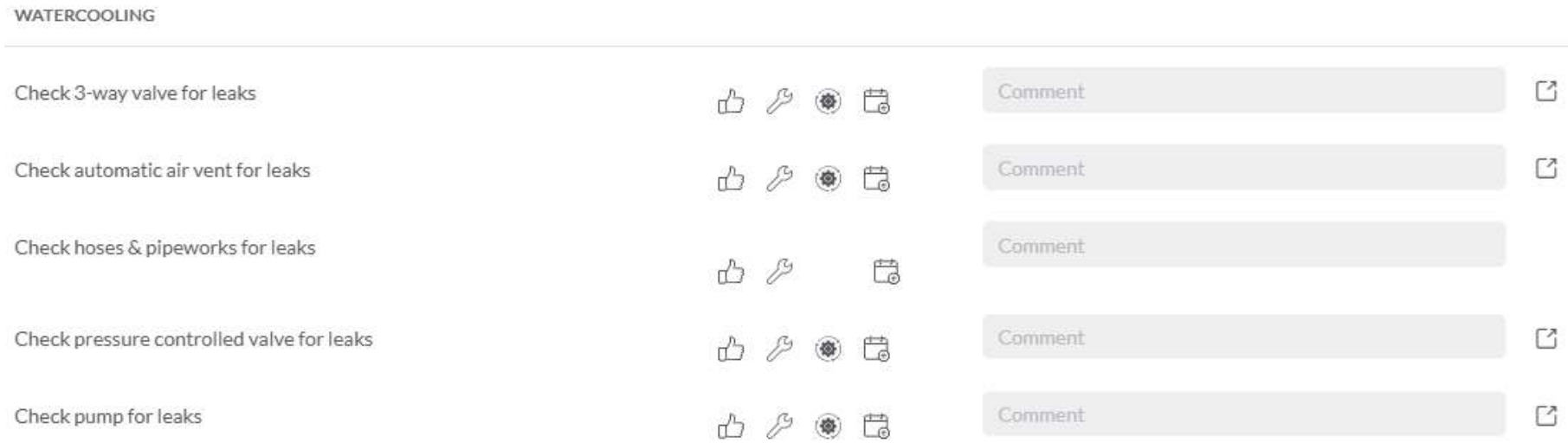


Digital checklist – Ventilation

Dampers: 0 – 100%

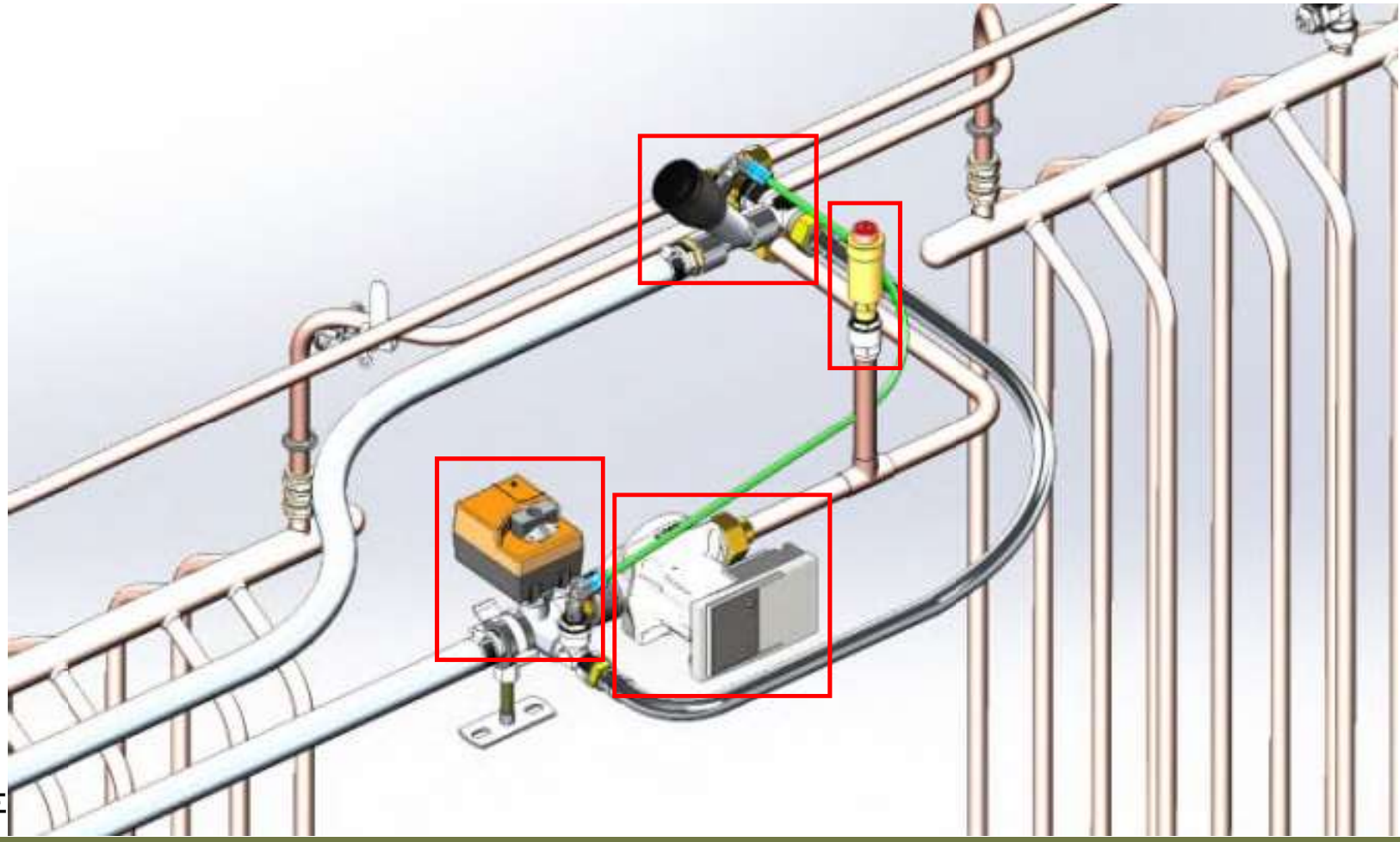


Digital checklist – Watercooling



Digital checklist – Watercooling

Waterleaks check



Summary of check list

Maintenance videos

- General
- Ventilation
- Heat
- Cooling
- Humidity
- Turning
- Pulsator
- Hydro Pneumo
- Sensor

Thank you!