

TECH TUESDAY - WEBINAR SERIES

‘Maintaining Your Incubators’



In regard to calibrating temperature, why do you recommend completing on day 4-6 instead of day 2?

During the second day of incubation you may find the incubator still has some instability due to the eggs getting up to temperature and still requiring heat from the control. By waiting another 2-4 days you will find the temperature stability improved, which will lead to a more accurate calibration.

After 1st setting eggs in multi-stage machines, will the calibration be accurate if completed only on day 6?

With multi-stage machines the best calibration will occur once the machine is full - so when filling a machine for the first time you should calibrate it (to get near the correct calibration). Then you must do it again 2-3 weeks later once the incubator is full in order to get the environment as stable as possible.

On a Classic machine, should the cooling and heating be turned OFF to calibrate?

Yes - this will give a good stable condition for calibration.

If equipped with only electric heaters and 4-hours of pre-heating, how much time does it take an Avida setter to reach its target temperature after loading eggs?

This depends on the egg storage temperature (the cooler the egg stored, the longer the warm-up time) as well as the heating capacity of the machine. In most cases the warm-up time will be 10-14 hours, however this can be greatly reduced to 3-5 hours by installing a hot water heating kit onto the incubator.

Do we need calibration tools to calibrate the kit?

In addition to the calibration kit, it is important to have a master thermometer to act as the “source of truth” for calibration.

Can we use electric heaters instead of boiler water for pre-warming?

Yes, however keep in mind the higher electrical load will impact the electrical distribution and cable requirements in the hatchery – for a load that will only be used for the first few hours of incubation. Our recommendation is to use hot water where possible.

Do you suggest stopping turning after Day 15? Any benefits?

There are a few specific cases where this can benefit – along with turning more often in the early stages. Please reach out to our incubation specialists to discuss your personal case.

In an S3 with a GEN 4 controller, should the turning angles still be a minimum of 38 degrees, and how often is turning best?

Yes, 38 degrees should be attainable for every incubator – below that will impact your hatchability. Turning once per hour – with a short pause at level – is the industry standard.

Is wick size important?

Yes – the wick must be tight to the probe to ensure it is saturated to get an accurate web bulb humidity reading. The wick must also be long enough to be fully submerged into the cistern through the entire hatcher cycle to avoid drying out.

For checking belt tension, how many RPM is expected for chick master’s Avida setter and hatcher?

The RPM of an Avida fan without a Variable Frequency Drive (VFD), or with a VFD running at maximum speed, is 224 RPM.

How much is the standard deflection for a fan belt?

The belt tension tool is designed to measure the required force to deflect the belt by 2 inches. This deflection is measured from a straight line taken between the edges of the upper and lower pulleys.

What are the signs that the power supply on an Allen Bradley G4 machine needs replacing?

Regular measuring of the output voltage will show when this is deteriorating below the expected 24vDC. Thermal imaging can also assist in providing an early warning of hardware failure.

How to calibrate the humidity in ROCK setter? Any specific tool to do the calibration?

Getting a RH handheld probe - or by measuring using wet-bulb humidity with the RC2 and converting the reading.

For hatchers, when is the best time to calibrate temperature/humidity?

24 hours after transfer unless you are doing a late transfer (day 18), in which case 12 hours post transfer will give the most stable results.

How does incorrect humidity levels affect incubation in the setters?


There are multiple aspects of incubation that will be impacted by either high or low humidity - the main one being chick weight loss. This is a topic we'll cover in more detail during a later Tech Tuesday Webinar.

For the thermal imaging, is it best to place image on the control panel or for the eggs inside the setters?

Getting thermal imaging of both portions of the machine will have value. However, from a maintenance point of view, thermal imaging of the control cabinet is a great way to detect early component failures.


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