

## Questions & Answers from Precision Linear Actuator Webinar 101 Europe

4 November 2009

- What is the difference between LA10/LA14 products and PLA as the T90 T130?
  - T90 & T130 are designed for 100% duty cycle.
  - Lifetime on T90 T130 is calculated in 100 thousands of cycles or KM of travel.
  - Longer stroke up to 2000mm.
  - Allows side load on extension tube of up to 800N.
  
- Can the PLA units work in any direction?
  - Yes, they are capable of carrying the load, mounted in any direction.
  - The thrust force should be applied as straight pull/push force to avoid excessive side load.
  
- Is Thomson plant in Kristianstad ISO certified?
  - Yes, ISO 9001.
  - ISO 14000 is planned for 2010.
  
- Do you have units on stock?
  - No, all units are produced by order, but we have a short lead-time 2-3 weeks from order to delivery.
  
- What is the warranty period?
  - Normally 12 months from production date.
  - Special terms can be discussed based on application and volume.
  
- Is it possible to have two actuators driven in sync with each other?
  - There is a possibility to put a drive shaft between two units if worm gearbox or bevel gearbox is used, making them move in sync with only one motor.
  - There is also the option of having a servo drive connected to separate motors on two units and run them in sync.
  
- What is the duty cycle or operational time?
  - All units are designed for 100 % duty cycle meaning continuous motion without pause.
  
- Can you fit SEW or Bosch motors on T90, T130?
  - Yes, we can supply motor mounts to most types of motors.
  
- Is there stepper motors as standard option for PLA
  - No, but we can supply motor mount for stepper motors.
  - For a volume order we can also assemble and test the complete unit with stepper motor.
  
- When can I place an order for a T60
  - We can look at applications and make calculations and quotes already now.
  - Lead time for a prototype unit is at the moment 6 weeks.
  
- Can an higher IP rating be achieved
  - Yes there are solutions for increased protection with i.e. double wiper system.
  - An alternative is to have air pressure in to unit creating positive air flow through the unit.

- Is there a stainless version available?
  - Yes we have a S1 version with stainless hardware.
  - Extension tube is still hard chrome.
  - For volume inquiries stainless extension tubes can be offered.
- What types of gearboxes are available as standard?
  - Worm gearbox, belt reducer planetary gearbox.
  - Custom gearboxes.
- Can higher load, speed and stroke be achieved?
  - Yes based on a specific application we can make customized solutions.
- If I need a special 3D model of the unit how can I get that?
  - All standard PLA actuators can be downloaded from our website [www.thomsonlinear.com](http://www.thomsonlinear.com).
  - We also assist in modifying any 3D model to fit your application.
- What is the precision / backlash on PLA?
  - Repeatability is what we most often refer to and that is as standard 0,05mm
  - Max backlash between 0.1 to 0.2mm but in most cases this is as low as 0.05mm. The backlash is also load dependent as the load will impact the compression of bearing and ball nut.
  - Absolute accuracy depends on the complete system with control etc and has to be evaluated for each system.
  - Fully preloaded systems can be supplied on demand.
- What is the service interval?
  - The service that needs to be done is re-lubrication of the ball screw. This needs to be done based on the duty cycle and number of cycle the unit perform. In the installation CD manual this is explained.
  - Normal service interval is monthly to every 6months but both longer and shorter periods may apply.
- How do I know what motor size I need for a PLA actuator?
  - The sizing program or our application engineers can assist in determining motor torque, speed and power based on your application data.
- How is the sizing of the complete packages ECT90 and ECT130 done? What safety factor is there?
  - The system is designed to be able to handle the load or speed given in the specification.
  - There is a separate sizing tool for the ECT packages where motor size, inertia balance etc can be fine tuned.
- If I need to order a replacement or new system how can I find out what the configuration of the original system?
  - All units are labeled with an product identification label showing date of manufacturing, part number/description and some other information
  - Each unit is also marked with a serial number in the outer profile close to the drive side. This unit can be decoded by the application engineering or customer service team.

- Can the Thomson PLA be equipped with safety nut?
  - As standard there is no safety nut but this can be offered based on volume.
  
- What happens with the air inside the unit during high speed?
  - The air inside the Thomson PLA will move from side to side when the carriage is moving inside the unit.  
For high speed applications it may sometimes be necessary to evacuate the air to reduce temperature.  
For detailed information contact our application engineering team.
  
- Can the unit be supplied with control?
  - PLA packages ECT90 ECT130 can be supplied with Kollmorgen drives.