Customer solution found through clever use of products and design

The Motion Tech News

WEATHER REPORT
Kookaburra's laughing until midday. Afternoon laughter storms

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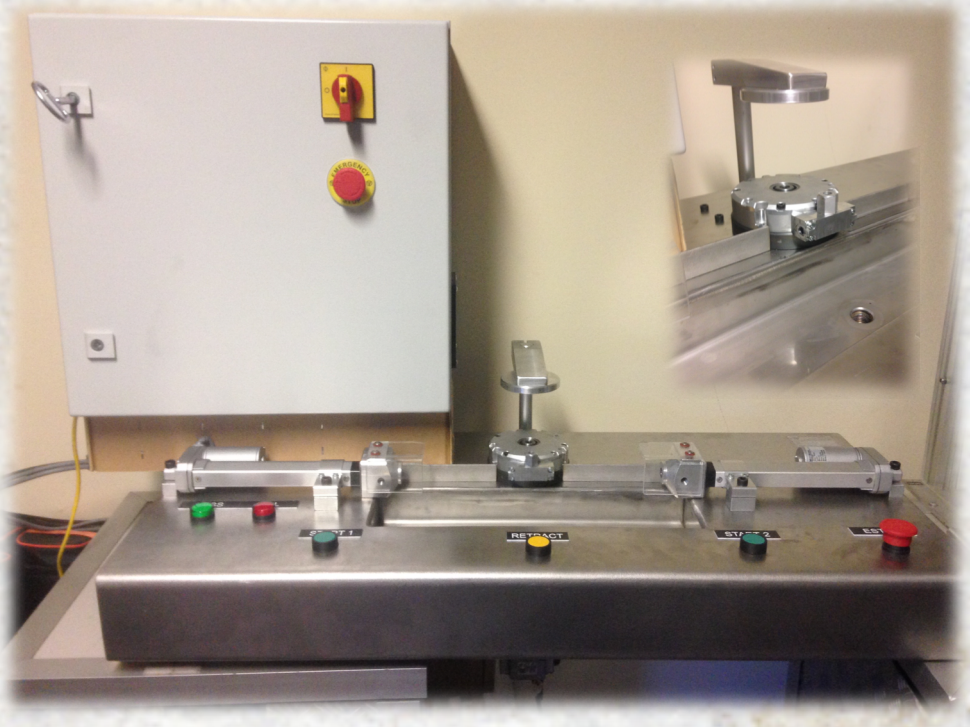
Another Solution Found!

PRODUCTION AID OF CUSTOMERS DECELERATOR



Under Control

The measured torque is compared to the required torque range required and a light for pass or fail alights.

Motion Technologies designed and constructed the the complete machine seen in these pictures. It was fabricated in stainless steel for easy cleaning and a welded in oil collection tray with drain pipe fitted as well.

The control panel was designed, built in house and is made to Australian standards which far exceeds CE standards.

The control electrics utilised a EtherCat version of a Trio Motion controller with a Moons EtherCat servo drive and motor. We used etherCat for ease of connection as we needed to read the torque consumed from the motor and compare in realtime to a constant variable in the motion controller. We also recorded the data to SD card though we could have published the data to an IP address on the customers network and worked live on a web browser.

The linear actuators which is our LEA series that presents the oil lines are controlled via I/O through H bridge drives.

Sounds simple though not!

An Australian manufacturing company requested supply of a machine to aid the manufacturing process of a decelerator. For those not in the know, a decelerator is a constant friction device and normally activates in one direction. This decelerator is rotary.

A rotary decelerator is in essence a motor filled with a heavy weight fluid. If the centistoke of the fluid is different then diffent friction levels are obtainable.

A brief description of what Motion Technologies supplied is two force control actuators that present oil lines to the motor and a rotary axis to rotate the customers motor. This is very over simplified, so thus we now go into detail to find out how this machine is going to help production.

The operation cycle: The operator of the machine places their motor onto the rotation spindle and presses two green buttons which allows the clamping actutor to come down and clamp the motor in place. Meanwhile the left and right actuators travel and press against the motor ports. These actuators have fluid lines attached. The green buttons are pressed again and the spindle rotates the motor which causes the motor "decelerator" to prime and fill with fluid. The spindle driving the customers decelerator is a servo motor and is measuring torque from the motor.