



Welcome to the second issue of Techtorque for 2010. We will do our best to provide you with informative and relevant reading matter. Please email your comments and requests to our Sales and Marketing Manager, Chris Hoare, at choare@acrodyne.com.au

NOAH NA SERIES NOW WITH INTEGRAL CONTROLS

The Noah NA Series quarter turn electric actuators are now available with integral controls and added features. This makes the actuator more self contained, minimises customer wiring, provides remote and local valve automation with non intrusive set-up, control and self diagnosis.

Actuators are available in voltages of 24 VDC, 110 / 240 VAC 1 Ph and 415 V AC 3 PH and torques upto 2500 Nm.

Standard Features include IP-67 enclosure, 24 V DC internal control voltage, Aux limit switch dry contacts for remote indication, torque sensing relay contacts, Motor reversing contactors, Monitor relay dry contact for over torque / local / remote indication, Local controls with selector switch to enter set-up mode, control type, phase check, ESD behaviour, auto-scan and LCD display.

Options include Exd Atex / IP 68 enclosure, 120 to 270 degrees extended travel, 4 to 20 mA DC transmitter and 4 to 20 mA DC / 1 to 10 V DC positioner with feedback.

Like the NA series the Noah Integral Actuators are built with the same rugged construction to provide a reliable and economical solution to today's Valve Automation Industry.



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Limatorque QX - Now With a 24VDC Option

Limatorque, a leading provider of flow control products and services for the global infrastructure markets, has announced the availability of 24- to 48-volt DC-input power for all sizes Limatorque QX electronic valve actuators.

While primarily designed to meet the needs of remote, low-voltage DC applications in the offshore oil and gas industry, this capability can also be used in commercial power, solar power and water applications.

"The new DC power capability completes the Limatorque QX product line and helps secure Limatorque's position as a premier electronic heavy-duty actuator supplier to the oil and gas industry, "The QX offers reliability for remote applications that require an uninterrupted power supply but cannot use single or three-phase AC volts."

The electronic controls in the Limatorque QX actuators with DC volt capability are 100 percent digital with no moving parts, making them more reliable than electro-mechanical devices. Additionally, the QX software provides a torque boost to overcome excessive valve torque when pulling the valve out of the seat.

The Limatorque QX is a quarter-turn and limited multi-turn, smart electronic valve actuator designed to enhance safety and reduce downtime through improved diagnostics, built-in self-test (BIST) features, and LimiGard™ fault protection capabilities.





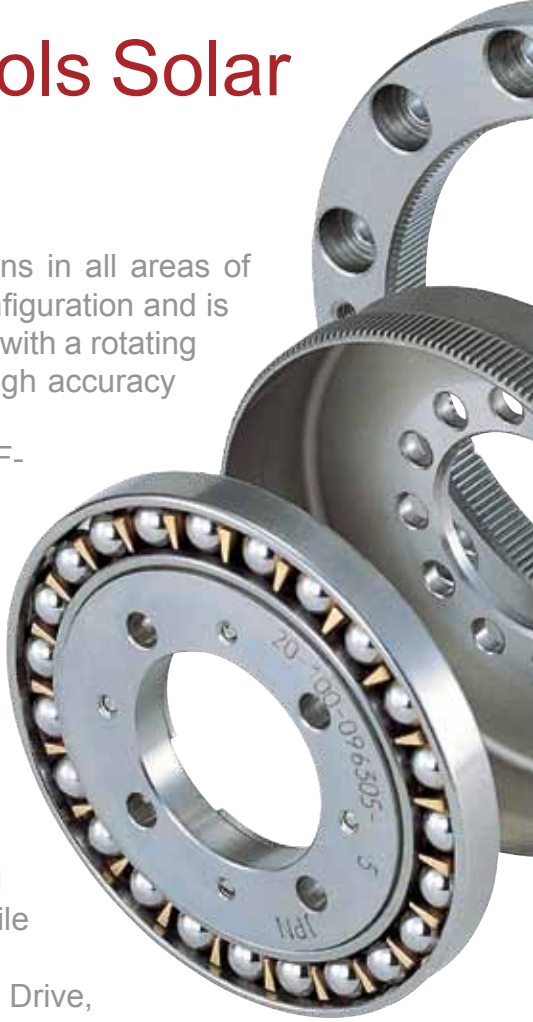
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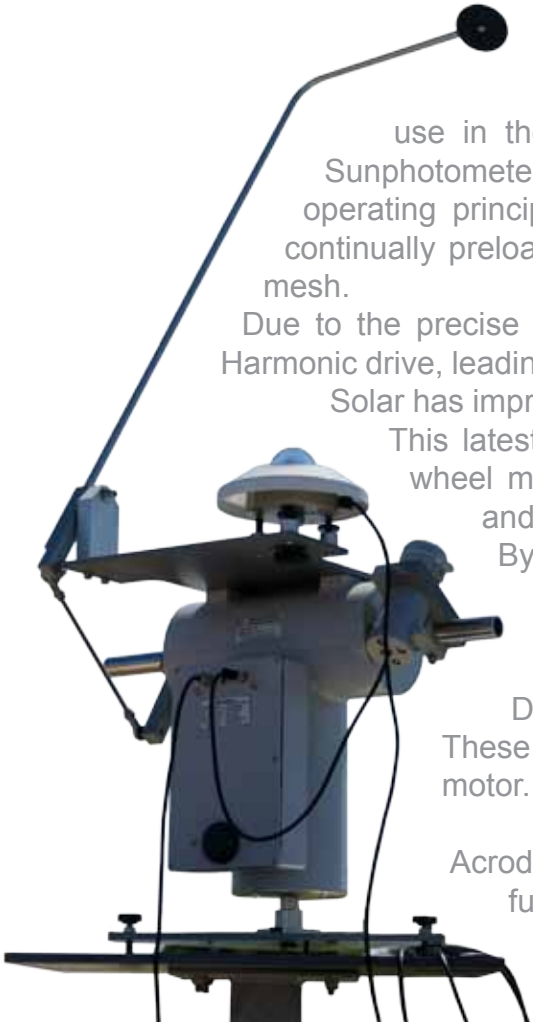
FEATURED ARTICLE: **MIDDLETON SOLAR**

Harmonic Drive Product Controls Solar Tracking Device

The unique Harmonic drive principle continues to open new applications in all areas of modern engineering. It is available in a wide selection of mechanical configuration and is used extensively in Robots, machine Tools, Radars and any applications with a rotating shaft where positioning, tilting and panning is required because of its high accuracy and no backlash.



The Compact high performance CSF-GH range gearhead is lightweight in construction therefore suitable for use in the positioning of Pyrheliometers and Sunphotometers with a Solar Tracker. It's unique operating principles means that the gear teeth are continually preloaded hence no backlash in the tooth mesh.



Due to the precise movement and zero backlash of the Harmonic drive, leading solar tracker manufacturer Middleton Solar has improved the efficiency in their latest design.

This latest design change replaces the worm and wheel method which was considered to be fragile and inefficient.

By redesign incorporating the Harmonic Drive, Middleton Solar have also found a considerable reduction in power consumption which is a critical factor as these devices can be located in remote areas using battery D.C power supply.

These gearheads are also available as compact servo drives with an integrated motor.

Acrodyne's Precision Motion Control Division is aggressively promoting the full range of Harmonic Drive High ratio, Zero-Backlash and Low-Backlash gears and actuators to expand market share.

If you require any further information relating to Harmonic Drive products please contact Andrew Hartley of Acrodyne Pty Ltd Tel. 03 8727 7800 - Email ahartley@acrodyne.com.au

PRECISION MOTION CONTROL SYSTEMS

CONTROL



FEATURED ARTICLE: **GROUNDPROBE**

Harmonic Drive Delivers High Precision For Slope Stability Radar.

For many years now Groundprobe have been designing and manufacturing Slope Stability Radar Systems. Slope Stability Radar Systems are commonly used in the real time monitoring of the stability of rock walls such as at open-cut mine sites. Primarily this system offers increased safety to the mine operators and at the same time increases mine profitability.

The Slope stability radar continuously and systematically scans the rock face detecting any movement which could result in a catastrophic collapse. With this in mind the system requires accuracy and reliability and therefore the SHF series Harmonic drive was chosen for the precise movement of the rotating and inclining radar dish. This accuracy is due to the inherent "Zero Backlash" for which the Harmonic drive is renowned for. Acrodyne Pty Ltd have been the Australian and New Zealand agents for Harmonic Drive Systems offering Precision Motion Control solutions for over twenty years.



QTRCO - Designed for Maximum Performance

Features / Benefits:

- Offset cylinders - eliminate the cantilever forces inherent in rack & pinion actuators
- Roller support of racks - eliminates sliding friction and wear
- Twin rack rails - prevent over engagement of gear teeth
- Pressure balanced shaft - eliminates axial thrust, friction and wear common to rack & pinion design
- Massive shaft bushings - shaft to body contact cannot occur
- Inward located springs - eliminates shaft seals & their possible failure on SR versions (a common cause of rack & pinion actuator failure)
- Full size springs - prevent buckling
- Springs captured for safety - springs will not extend during actuator disassembly
- 3 Year Warranty



Design Details - QTRCO Rack & Gear actuators

Are these features truly beneficial?

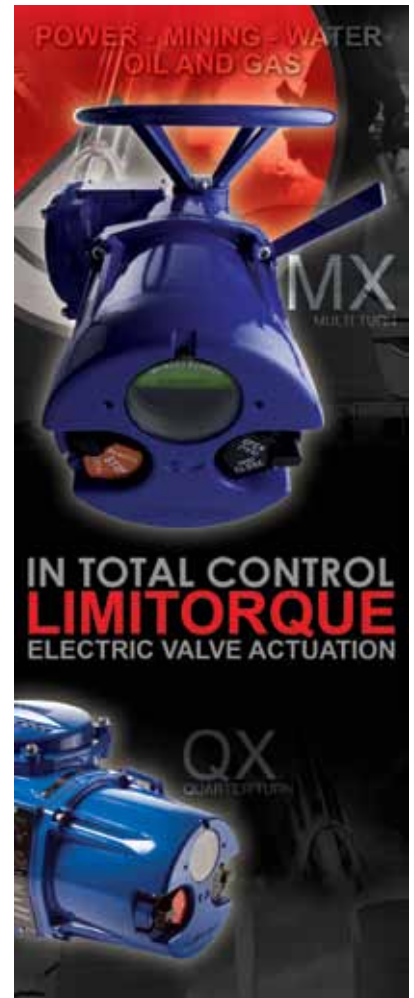
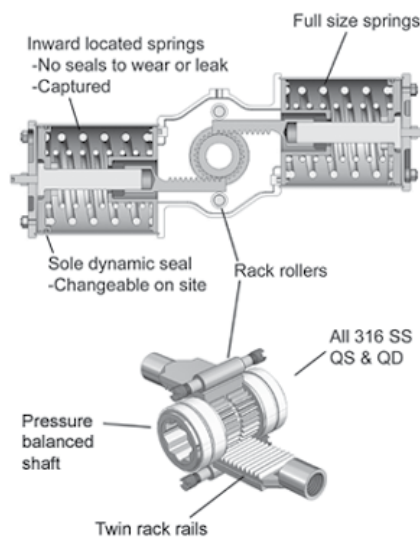
One customer explained that the only problem he saw with our actuators is that "The design is too well thought out for our own good, you do not receive any parts business".

Another, after several years of trouble free service asked "Whatever caused you to design such a great product?"

Another, having hundreds of actuators installed for over 8 years with no failures jokes that "They will get one to fail someday". He is still waiting.

Still another has a difficult application on rig service boats that ply the Gulf of Mexico being splashed constantly with sea water. A number of boats are in service with a total of over 700 QTRCO Rack & Gear actuators with no failures and no required service after up to 8 years of service.

Summary, yes, the features truly do offer meaningful cost savings to users.



Spray Booth

On the 19th February Acrodyne's open front spray booth was commissioned, an addition that allows us to use higher quality paints to give a professional paint finish on our repairs and to our new products that need painting to suit customer colour schemes.

The dimensions of the booth are 2.4 metres (W) x 2.7 metres (H) x 1.2 metres (D) thus giving us scope to paint quite large items.



Upcoming Events

WIOA Water Industry Engineers and Operators Conference

31 AUG - 2 SEP 2010

Bendigo Exhibition Centre, Prince of Wales Showgrounds, Holmes Road, Bendigo VIC



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Actuation and Control

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