



PROMESS



Sensing Systems for Manufacturing



Rotational Electro-Mechanical Assembly Press Systems



Providing fully programmable control of both linear and rotational motion with integrated force and torque sensing

ROTATIONAL ELECTRO-MECHANICAL ASSEMBLY PRESS

As every application places different demands on assembly and test systems, Promess has designed a complete line of electro-mechanical rotating press systems to provide a solution for the most demanding applications.

Rotational Electric Press Sizes*				
Linear Axis			Rotational Axis	
Force (kN)	Stroke (mm)	Speed (mm/sec)	Torque (Nm)	Speed (RPM)
1	100	200	20, 50, 100	250
5	200	200	20, 50, 100, 200	250
12	400	200	20, 50, 100, 200	250
20	400	200	20, 50, 100, 200	250
30	400	175	20, 50, 100, 200	250

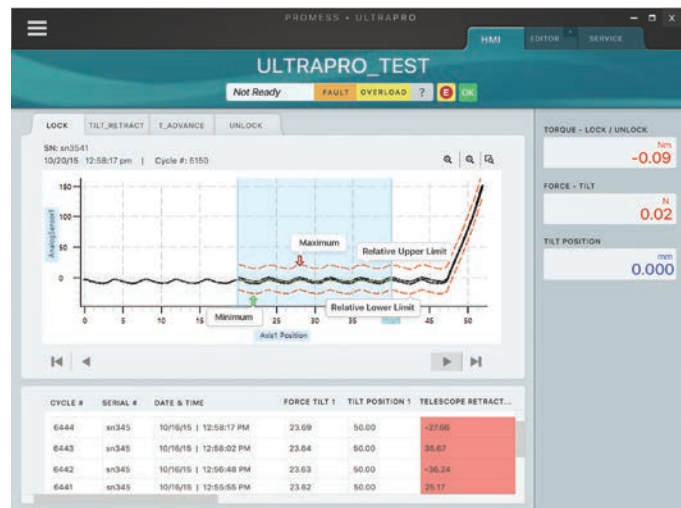
*Custom configurations available upon request



FEATURES AND BENEFITS

Features/Capabilities:

- Press ram extends, retracts and rotates
- All motion independently controlled
- Programmable position, velocity, acceleration, angle, angular velocity, angular acceleration and relative and absolute limits
- Press to position
- Turn to angle
- Press to force
- Turn to torque



Monitoring Capabilities:

- Signature monitoring, any combination of:
 - Torque vs. angle, torque vs. position, force vs. position, force vs. torque, force vs. angle, etc.
- Gauging of sensing data points such as force, torque, position and angle (single point, minimum, maximum and average) values
- Adjustable process limits and tolerances

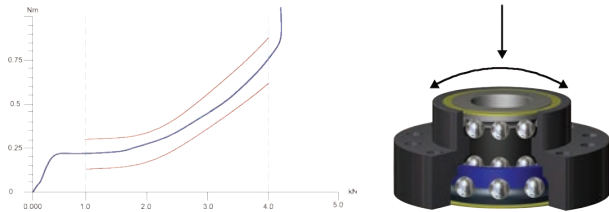
Benefits:

- Standard compact systems
- Reduced integration cost
- High flexibility
- Integrated force/torque sensing
- Simplified station design

REMAP APPLICATIONS

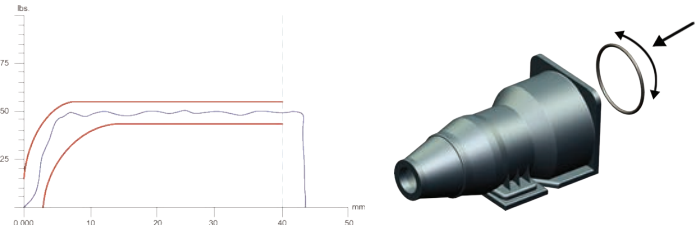
Bearing Pre-load

The REMAP is the perfect tool when a component must be pre-loaded axially during a torque-to-turn test. Breakaway torque and running torque can be tested under varying load conditions. All data can be collected and plotted including the torque vs. force curves.



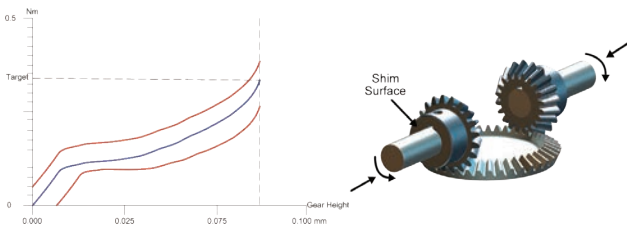
Seal Pressing

Rolled or cut O-rings and seals are two common issues that can be greatly reduced by implementing Promess' REMAP solution. Repeatability control of both the linear and rotational axes while monitoring force, torque and position through the entire operation will help produce a quality assembly every time.



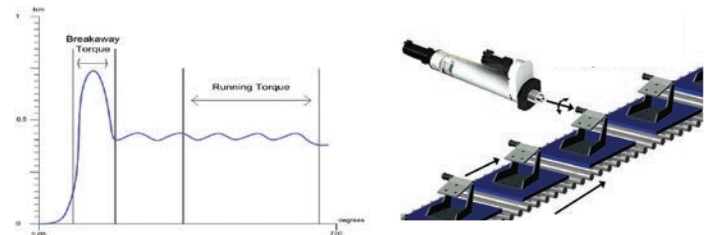
Shim Select

The complex process of selecting shims is made simple with the REMAP. The axial load on the assembly is progressively increased until the turning torque reaches the target level. At this point the exact gear height is measured and the required shim thickness is calculated.



Self Actuating Torque Test

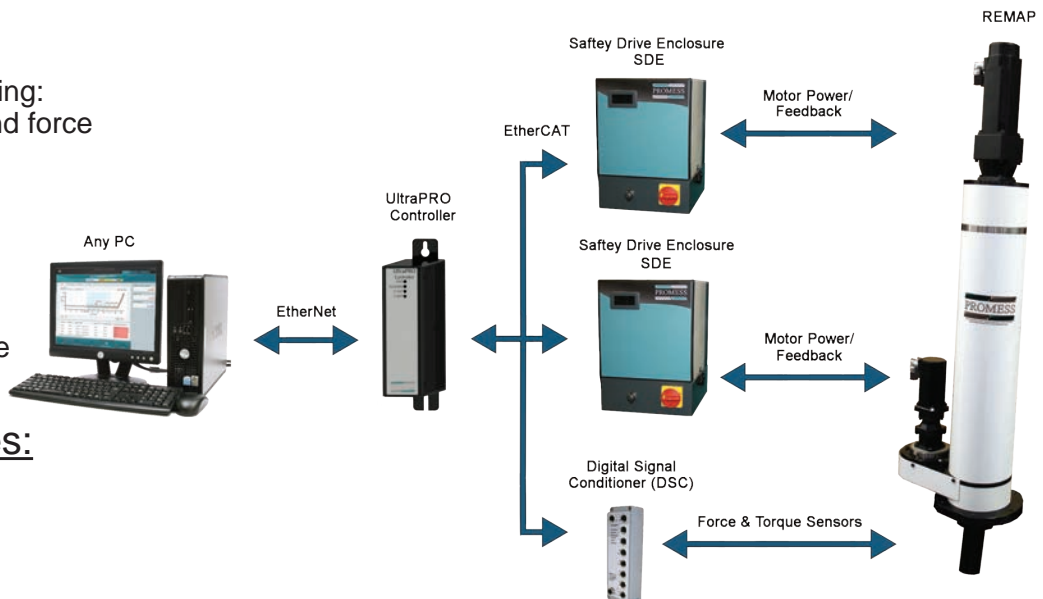
The REMAP is perfect for applications where you must feed out, couple to a component and perform a torque-to-turn test. It is well suited to handle multiple part models. The Promess motion controller controls all motion performed by the REMAP.



SYSTEM OVERVIEW

Promess Provides:

- REMAP/spindle including:
 - Integrated torque and force transducers
 - 2 Servo motors
- UltraPRO Controller
- Digital Signal Conditioner (DSC)
- Cables
- Motion control software



Fieldbus Interfaces:

- EtherNet I/P
- Profibus
- ProfiNet
- ModBus TCP

PROCESS DEVELOPMENT CENTER

Promess would like to invite you to our Process Development Center. The PDC is available to help you develop your processes and confirm the Promess technology that is best suited for your application. Call today to set up a visit.

The Process Development Center gives you access to:

- Electric Press Work Stations with capabilities ranging from 0.2kN-300kN
- Torque stations ranging from 1Nm-600Nm
- REMAP (Rotational Electro-Mechanical Assembly Presses) which combine rotational and linear motion in one machine



THE COMPANY



Promess Incorporated is recognized as a leading U.S. manufacturer of highly adaptive monitoring and motion control systems used by companies around the world to assemble and test their products.



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“Cloning the perfect part”