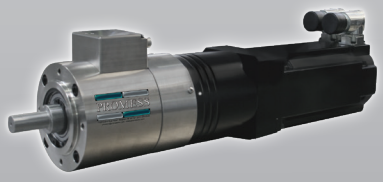
PROMESS

Sensing Systems for Manufacturing



Promess provides COMPLETE systems for your monitoring, motion and testing needs

Electro-Mechanical Assembly Press

The Promess Electro-Mechanical Assembly Press (EMAP) combines Promess's electric ball screw press technology with our Motion Control System to provide a high precision, closed-loop press system.

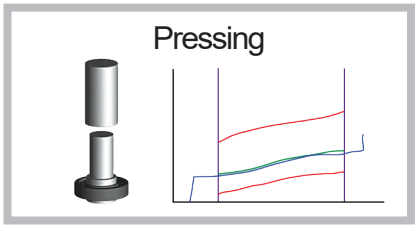
EMAP

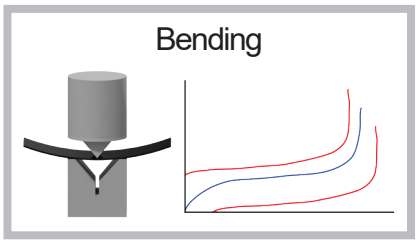
Key Features of EMAP:

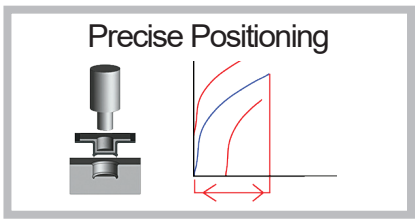
- Robust Design:
  - Ball screw design that features dynamic press load capacity 3 times greater than the stated load capacity
  - Servo system is sized to reach press load capacity within the continuous current zone of the motor and drive
- Integrated force and position sensors
- Push or pull with equal accuracy
- 360° mounting orientation

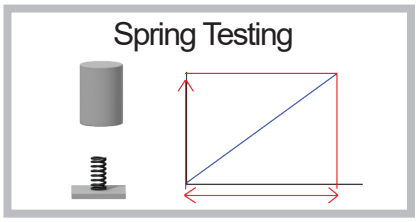
Monitoring & Test Capabilities:

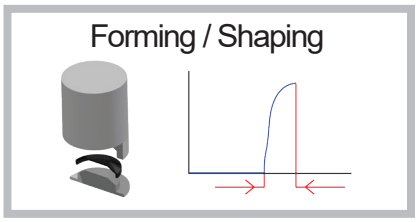
- Force vs. position signature monitoring with advanced curve analysis
- Customized algorithms

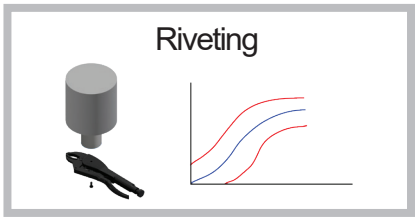


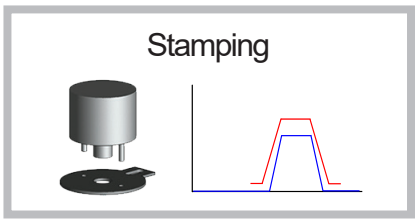












EMAP Sizes*

EMAP Sizes	Force		Travel		Speed
kN	kN	LBS	mm	inch	mm/sec
EMAP 0.2kN	0.2	45	100	3.9	200
EMAP 01kN	1	225	100/300	3.9/11.8	200/150
EMAP 03kN	3	675	100, 300	3.9/11.8	200
EMAP 05kN	5	1,125	200, 350	8/13.8	200
EMAP 08kN	8	1,800	200, 350, 500	8/13.8/19	200
EMAP 12kN	12	2,700	200, 350, 500	8/13.8/19	200
EMAP 20kN	20	4,500	180, 350, 550	7/13.8/21.6	200
EMAP 30kN	30	6,750	180, 350, 550	7/13.8/21.6	200
EMAP 40kN	40	9,000	330, 660	13/26	200
EMAP 60kN	60	13,500	330, 660	13/26	200
EMAP 80kN	80	18,000	330, 660	13/26	175
EMAP 100kN	100	22,500	330, 660	13/26	200
EMAP 120kN	120	27,000	330, 660	13/26	175
EMAP 160kN	160	36,000	400	15.75	125
EMAP 200kN	200	45,000	400	15.75	100
EMAP 300kN	300	67,500	400	15.75	100
EMAP 500kN	500	112,000	400	15.75	70
EMAP 1000kN	1000	225,000	400	15.75	40

* Other sizes, stroke lengths and speeds available

TorquePRO Test Systems

Promess TorquePRO System combines a servo motor and torque transducer in a single plug-and-play package. TorquePRO Systems have the ability to control and monitor the rotational torque and angle of your process. It is designed to fit a broad range of functional torque testing and measurement applications.

Features:

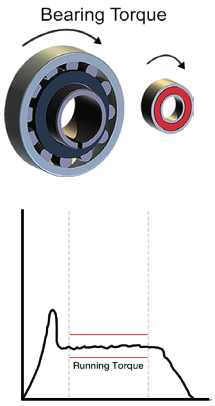
- Move to an angle
- Move to a torque
- Move to multiple positions & torques within same program
- Hold a constant torque
- Data acquisition and analysis
- Signature monitoring
- Advanced data analysis
- Easy to integrate
- Base mount / face mount option
- Smooth running servo technology

TorquePRO

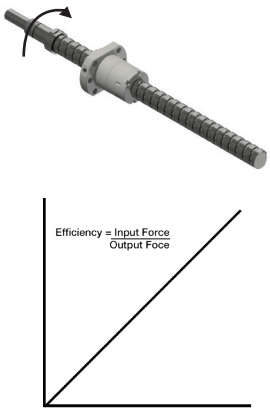
TorquePRO Capacity*		
Torque Capacity		Speed
Nm	Lb-in	RPM
5	44	250
20	177	250
50	442	250
100	885	250
200	1,770	250
500	4,425	100
1,000	8,851	75
2,500	22,127	20
5,000	44,254	10
10,000	88,507	4

*Other sizes and options available.

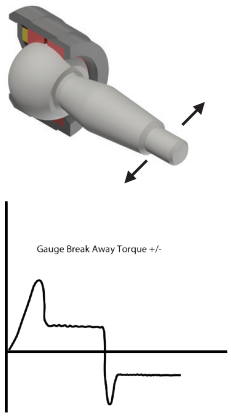
Running Torque



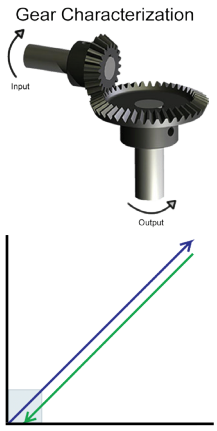
Efficiency



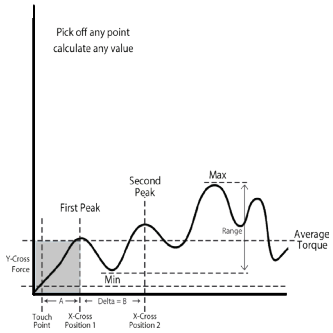
Breakaway Torque



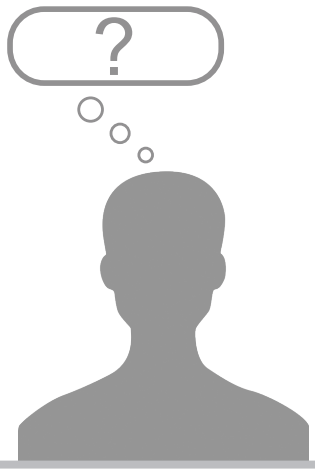
Backlash



Advanced Analysis



Design Your Own Test



Rotational Electro-Mechanical Assembly Press

The Promess Rotational Electro-Mechanical Assembly Press (REMAP) combines independent linear and rotational motion in a single unit. The REMAP system has integrated force and torque sensors for controlling and monitoring every aspect of your process.

REMAP

Features:

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

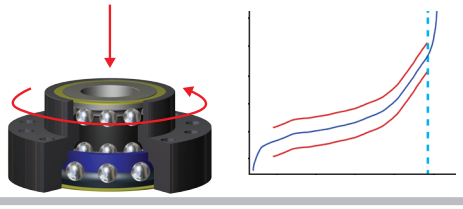
Monitoring Capabilities:

- Signature monitoring: any combination of force, position, torque, angle, other external sensors
- Advanced data analysis

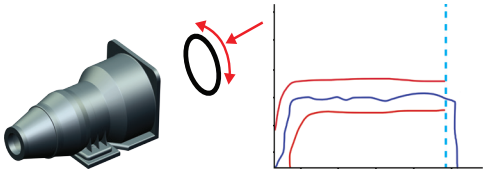
Rotational Electric Press Sizes*				
Linear Axis			Rotational Axis	
Force (kN)	Stroke (mm)	Speed (mm/sec)	Torque (Nm)	Speed (RPM)
1	100	200	20, 50, 100	250
5	200	200	20, 50, 100, 200	250
12	400	200	20, 50, 100, 200	250
20	400	200	20, 50, 100, 200	250
30	400	175	20, 50, 100, 200	250
40	400	200	20, 50, 100, 200	250
60	400	150	20, 50, 100, 200	250

*Custom configurations available upon request

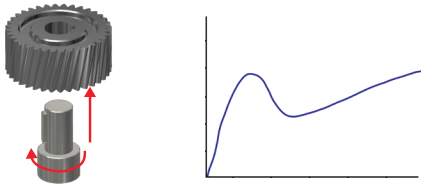
Bearing Pre-load



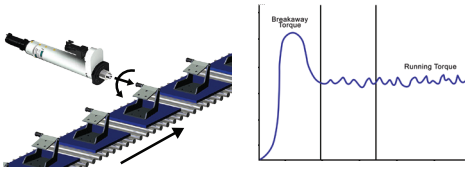
Seal Pressing



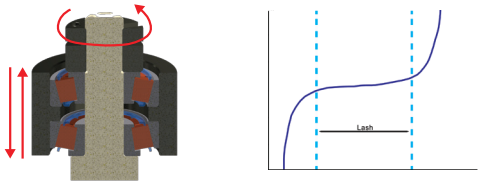
Spline Alignment & Press



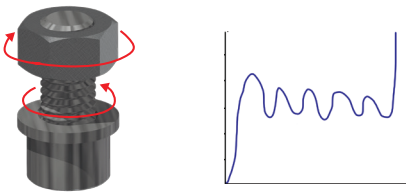
Self-Actuating Torque Test



Bearing Lash Adjustment



Assemble to Torque

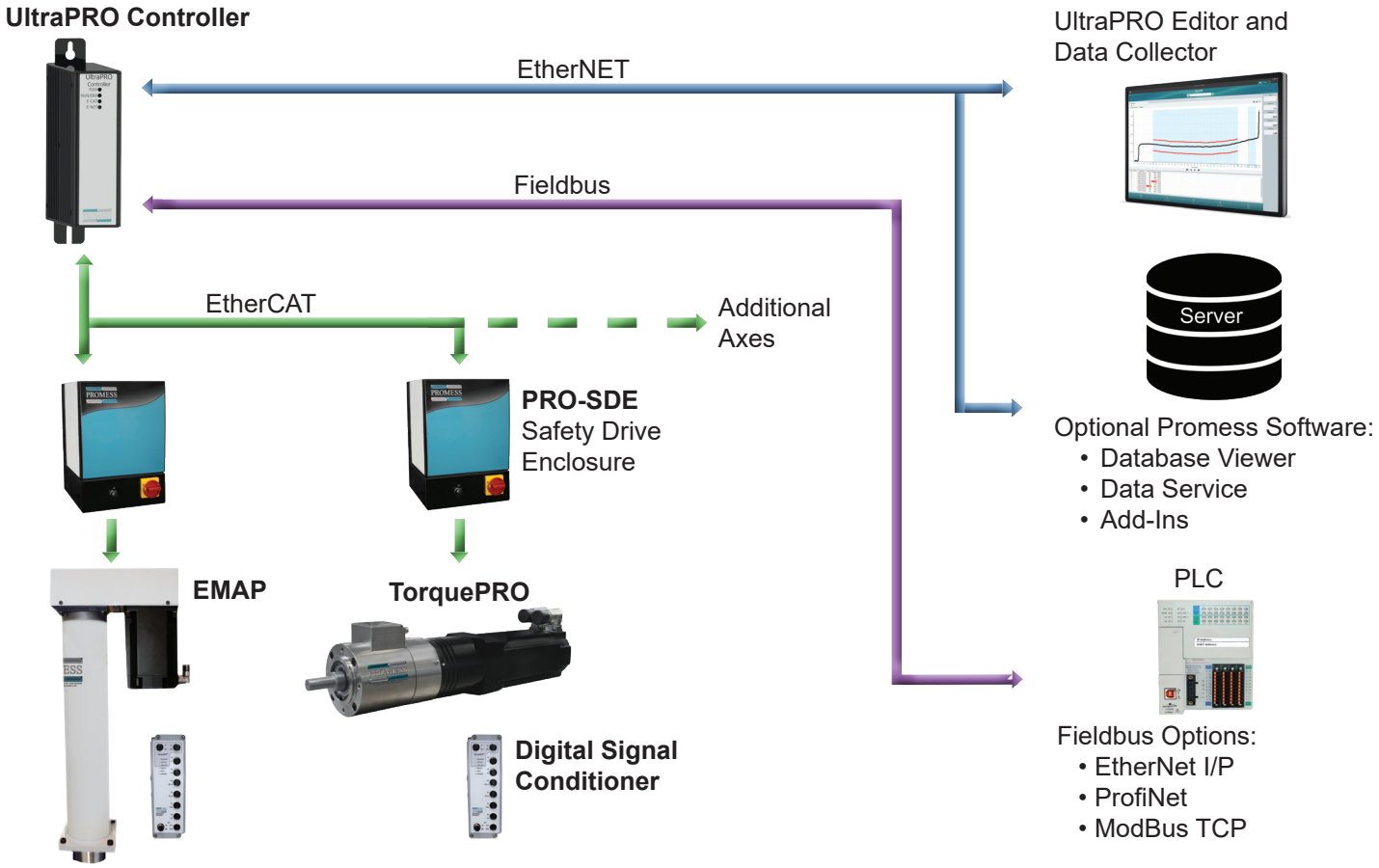


UltraPRO Editor/HMI

Easy menu-driven software includes:

- Motion control functions
  - Move to position / angle
  - Move to force / torque
  - Move to an external signal
  - Move to a rate of change
  - Move to a compensation factor
- Data acquisition and signature monitoring
  - Acquire force, position, angle or sensor versus time or distance
  - Fixed high and low limits
  - Reference curve limits
  - Gauge force, position, angle or sensor
  - Pass / fail outputs
- Data storage
- Custom commands
- Custom formulas
- Program debugging aids
- Hardware diagnostics screen
- Controller event logging
- Visualization of:
  - Signature curves
  - Gauge values
  - Live sensor readings

UltraPRO System Layout



Electric Press Work Stations

The Promess Work Station is a stand-alone system featuring a Promess motion controller and either a Promess Electro-Mechanical Assembly Press (EMAP), a TorquePRO motorized torque system or a Rotational Electro-Mechanical Assembly Press (REMAP), depending on application requirements. The Work Station provides a flexible foundation for use in assembly, test and lab applications.

The Promess Work Station is production ready for a wide range of uses:

- Production applications
- Process development
- Process validation
- Part validation
- Part testing
- Design optimization
- Cycle time optimization
- Signature analysis
- Offline training station
- Pre-production verification

Sample Applications:

- Spring testing
- Riveting
- Bending/measuring
- Straightening
- Crimping/staking

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.

Promess Incorporated

Promess 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.

PROMESS

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