



Streamlined production management solutions that meet the demands of your operation

Cleco[®] Software Solutions is a scalable software suite that equips managers with critical production data and application management tools allowing them to make informed decisions and take the corrective actions quickly.

Production Benefits with the Cleco Software Solutions



Data Management

- Streamline enforcement of access, provisioning, and lifecycle management policies.
- Provide complete and unified control over content, customizations, users, security and sites.



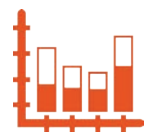
Production Optimization

- Remote management allows engineers to push changes to production from the software verses having to physically travel to the production line
- Convenient monitoring for use and location of all applications enables managers to easily identify what controllers are subscribing to a given application



Error Prevention

- User specific views in the dashboard provide meaningful data analysis that is relevant and actionable
- Change management capabilities provide ultimate control over authorizing changes prior to pushing to production



Quality Assurance

- Application archiving & rollback capabilities save application revisions so they can easily be reinstated into production
- Visibility & traceability features allow managers to review who, what, why and when a change was implemented



Tightening Parameter Server (TPS)

TPS enables customers to effectively and efficiently manage their tightening applications from a central location while providing real-time change management.

- Creates a more effective production tightening process by being able to easily determine what applications are being used and where
- Monitors what, why, when and whom made changes to an application enables production to build products more efficiently
- Communicates how the processes have changed and how they are evolving



TorqueNet

TorqueNet solves all of your data collection and analysis needs by making your local plant floor data visible anywhere using your internet browser. All data is sent to a single source making critical production information accessible by all roles working with the tightening process on the assembly line.

Data information is **efficiently** and **accurately** archived within easy access

Dashboard



Enhance the value of your existing TorqueNet data with the Dashboard add-on module. Dashboard allows managers to analyze data faster within the Cleco Software Solutions platform.

- Improves analysis speed and performance while allowing you to dive deeper into your data than you normally can with TorqueNet alone.
- Empowers businesses with the ability to explore data through customized views so managers can make the most informed decisions possible.

DASHBOARD
add-on module
interconnecting
with TorqueNet

Tightening Parameter Server (TPS) is a Central Application Management System



- Enables the user to coordinate all strategies to one database while monitoring all products performance from a single user interface
- Provides real-time change management so all changes are monitored and approved based on the organizational hierarchy

Tightening Parameter Server:

- Central Application Management
- Expanded Application Storage
- Product Performance Monitors
- Real-time Change Management
- Back-up, Compare and Restore Capabilities

Cleco TPS allows the engineers to have full control of the tightening applications being used across the plant or over multiple plants

Highlight an application to view additional application details

Select the relevant action to create/modify/retire an application



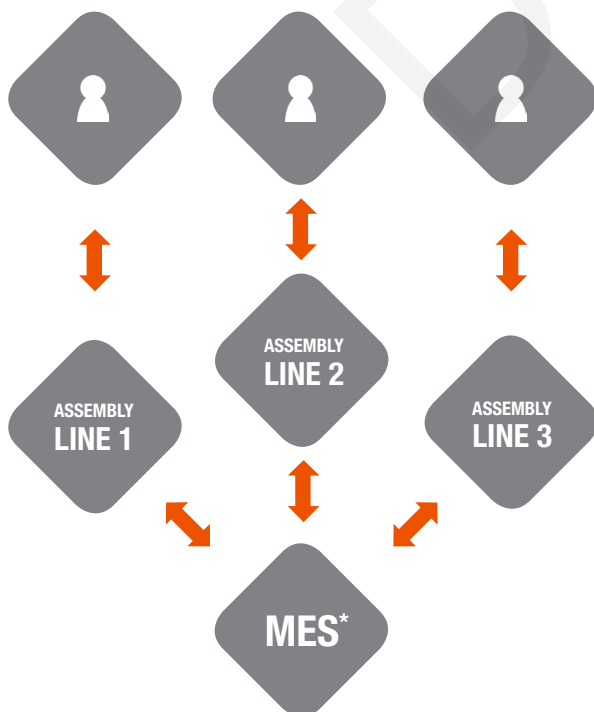
Click through each stage to view advanced details of the application

Tightening Parameter Solutions Overview

Traditional Application Management

Traditional production manager requires application changes to be made physically at the controller on the production floor. When making changes in multiple production locations there are many opportunities for costly errors.

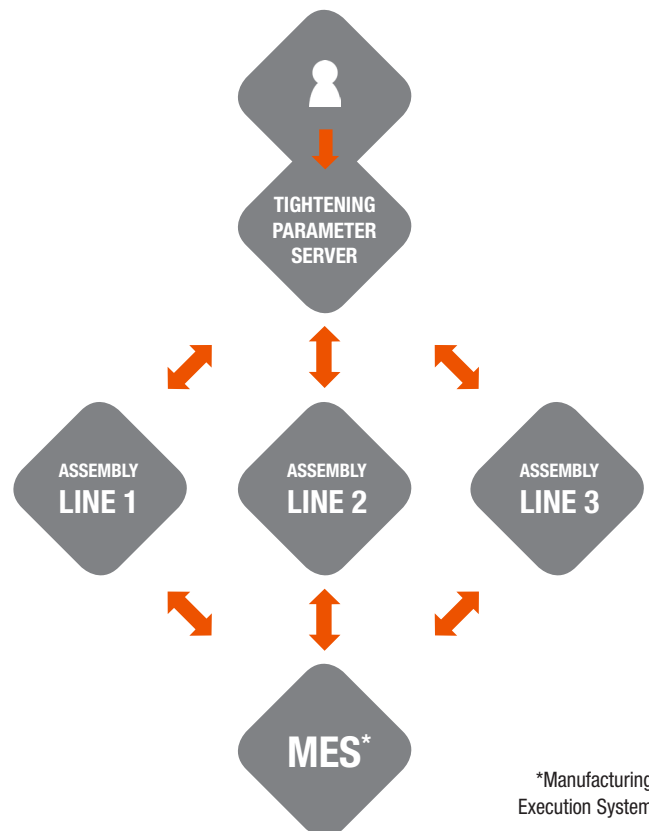
- 1) Application change is required
- 2) Engineer walks to station
- 3) Makes minimal updates to application parameters
- 4) Engineers test changes
- 5) Engineer saves changes and leaves station
- 6) MES sends tool enable and application number to be used from TPS
- 7) Controller/Tool runs application
- 8) Controller/Tool sends results back to MES



Streamlined Application Management

TPS provides engineers the ability to create and validate changes in a test environment prior to releasing into production. The Tightening Parameter Server enables controllers to have virtually limitless number of applications stored while ensuring the correct application is being used at any given time.

- 1) Application change is required
- 2) Engineers make changes in lab
- 3) Engineers test changes
- 4) Engineers promote changes to released status
- 5) TPS sends updated application revisions to subscribed production controllers
- 6) MES sends tool enable and application number to be used from TPS
- 7) Controller/Tool runs application
- 8) Controller/Tool sends results back to MES



*Manufacturing Execution System

TorqueNet 4.0 with Health Manager is a Data Acquisition and Archiving System



- Fastening process data of intelligent fastening systems and tools are acquired and archived directly
- Meets the requirements of safety-critical applications as well as regional and industry-specific regulatory requirements

TorqueNet 4.0

 Data Collection

  Event Capture

 Easy Search Function

 SMTP Email Service

 Server/Client Product

 Supports all Torque Units

  Competitive Data Collection

  Tightening Traces

Visualize trends in rundown information by viewing trace overlays

Health Manager:

  Tool Maintenance Indicator

 Preventative Maintenance

 Tool Calibration Scheduling



All equipment connected to TorqueNet is sorted in left hand navigation

Set a master curve to view trends against a known good trace

TORQUENET 4.0 OPTIONS	Standard	Professional	Enterprise
Data Collection	✓	✓	✓
Result Queries	✓	✓	✓
NOK % Monitor	✓	✓	✓
Trace / Trace Overlay	✓	✓	✓
Easy Search Function	✓	✓	✓
Maintenance Advisory		✓	✓
Process Statistics (Histograms and Curve Arrays)		✓	✓
Event Monitor and Email Notifications		✓	✓
TPS Link		✓	✓
Parameter Change History			✓
Tool History			✓

TorqueNet 4.0 & Dashboard Overview

Dashboard add-on Module Enhances the Value of Standard TorqueNet Data



Cleco Dashboard improves analysis speed and performance while allowing managers to dive deeper into data that is critical to their operation. User specific views enables quick navigation, identification of trends and issues, and transformation of data into actionable information.

Upgrade the analysis power of TorqueNet by adding a new interface where you can:

Available Fall 2017



Use pre-defined or standard views



Share data with the people make decisions/take action



Create custom questions/views



Stay engaged with the production process by creating your own KPI's

Data can be shared with the people to make decisions/take action

Set KPI's to stay engaged with the production process



Choose template view or create your own!

Create custom widgets by selecting the data to be viewed and the type of chart to show it in

Software Products

PART NUMBER	Description	Price Method	License Duration
S168171-ST-4	TorqueNet Standard	Per Spindle	Permanent
S168171-PR-4	TorqueNet Professional	Per Spindle	Permanent
S168171-NT-4	TorqueNet Enterprise	Per Spindle	Permanent
S168689-ST-1	Tightening Parameter Server	Per Spindle	Permanent
S168703-ST-1	Dashboard Manager	Per Spindle	Permanent
S168171-SP-4	TorqueNet Upgrade Standard to Pro	Per Spindle	Permanent
S168171-SE-4	TorqueNet Upgrade Standard to Enterprise	Per Spindle	Permanent
S168171-PE-4	TorqueNet Upgrade Pro to Enterprise	Per Spindle	Permanent
S168696-ST-1	Open Protocol Data Collector - TorqueNet Add-on	Per Instance	Permanent

Support Packages

Paid Maintenance Packages:

- Annual Standard Product Updates
- Phone Support
- Remote Desktop Support

Maintenance and Support Products include:

PART NUMBER	Description	Price Method	Expiration
S168171-MA-0	TorqueNet Maintenance	Per Spindle	1 Year
S168689-MA-0	Tightening Parameter Server Maintenance	Per Spindle	1 Year
S168703-MA-0	Dashboard Mgr Maintenance	Hour	Installation Only

System Requirements

Physical Memory | **4GB Minimum**

Virtual Memory | **Double amount of RAM**

Disk Space | **30GB Minimum***

Processor | **1.2GHZ Minimum**
(Dual Processor Recommended)

Operating System | **Windows Server 2008-2012**
Windows 7 / 10

Database | **Oracle / MS SQL**

* Additional disk space may be required depending on total number of spindles

North America

Apex Tool Group
670 Industrial Drive
Lexington, SC 29072
United States
Phone: +1 (800) 845 5629
Phone: +1 (919) 387 0099
Fax: +1 (803) 358 7681
www.apexpowertools.com

Apex Tool Group
Manufacturing México
S. de R.L. de C.V.
Vialidad El Pueblito #103
Parque Industrial Querétaro
Querétaro, QRO 76220
Mexico
Tel: +52 (442) 211 3800
Fax: +52 (800) 685 5560

Europe | Middle East | Africa

Apex Tool Group GmbH
Industriestraße 1
73463 Westhausen
Germany
Phone: +49 (0) 73 63 81 0
Fax: +49 (0) 73 63 81 222

Apex Tool Group S.A.S.
25 rue Maurice Chevalier
B.P. 28
77831 Ozoir-la-Ferrière
Cedex, France
Tel: +33 1 64 43 22 00
Fax: +33 1 64 43 17 17

Apex Tool Group
Hungária Kft.
Platánfa u.2
9027 Győr
Hungary
Tel: +36 96 66 1383
Fax: +36 96 66 1135

Asia Pacific

Apex Power Tool Trading
(Shanghai) Co., Ltd
2nd Floor, Area C
177 Bi Bo Road
Pu Dong New Area, Shanghai
China 201203 P.R.C.
Phone: +86 21 60880320
Fax: +86 21 60880298

Apex Power Tools India
Private Limited
Gala No. 1, Plot No. 5
S. No. 234, 235 & 245
Indialand Global Industrial Park
Taluka-Mulsi, Phase I
Hinjawadi, Pune 411057
Maharashtra, India
Phone: +91 020 66761111

Latin America

Apex Tool Group
Ind. Com. Ferram. Ltda.
Av. Liberdade, 4055
Zona Industrial Iporanga
Sorocaba, São Paulo
CEP# 18087-170
Brazil
Tel: +55 15 3238 3870
Fax: +55 15 3238 3938