

Streamlined production management solutions that meet the demands of your operation

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



Tightening Parameter Server (TPS)

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



TorqueNet

Information and fastening process data meets the industry-specific regulation requirements of safety-critical applications while accurately archiving for easy access.



Dashboard

Empowers with the ability to explore data through customized views.

DASHBOARD
add-on module
connecting with
TorqueNet

Software Solutions Overview



Production Benefits with the Cleco Software Solutions



Data Management

- Streamline enforcement of access, provisioning, and lifecycle management of parameters
- Provide complete and unified control over content, modification, users and security
- Provides easy access to collected production data via web browser



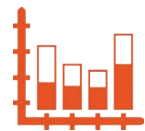
Production Optimization

- Remote management allows you to push changes to production from the software versus having to physically walk or go to the production line
- Convenient monitoring for use and location of all applications enables you to easily identify which tightening parameters are used in a given location



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 enabling in production



Quality Assurance

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

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



Tightening Parameter Server:

 Central Application Management

 Expanded Application Storage

 Parameter Usage Monitors

 Real-time Change Management

 Back-up, Compare and Restore Capabilities

Cleco TPS allows you to have full control of tightening applications used across a plant, or over multiple plants, effectively minimizing the opportunities for costly errors

Highlight an application to view additional application details

The screenshot shows the 'ADMINISTRATION' tab of the Cleco TPS interface. It features a table of applications with columns for Global#, Application Name, Revision#, Status, and Date. The application 'IWRSEQ30CW10NM' is highlighted in orange. Below the table, there are tabs for 'Stage Parameter: 1' through '6'. The 'Stage Parameter: 1' tab is active, showing a 'Parameter Set' with the following values:

Parameter Set	Value
Sequence:	30
Marking time:	0
Start Delay Time:	0
Start pulse suppression:	0
Fastening time:	4000
Speed (1/min):	0
Threshold Torque (Nm):	6,00

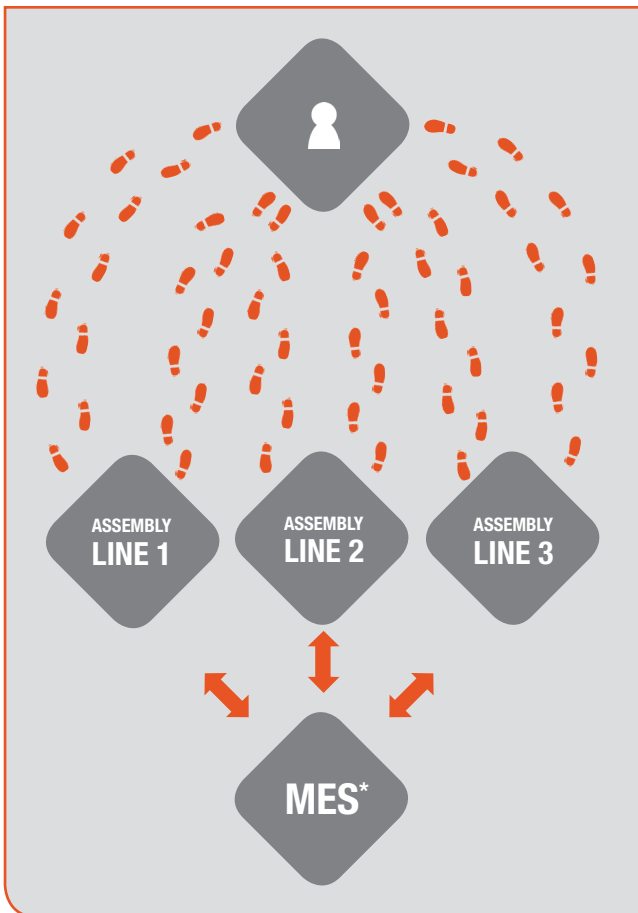
Select the relevant action to create/modify/release/retire an application

Click through each stage to view advanced details of the application

Tightening Parameter Solutions Overview

Traditional Application Management (without TPS)

Traditional production management 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 and inconsistencies.



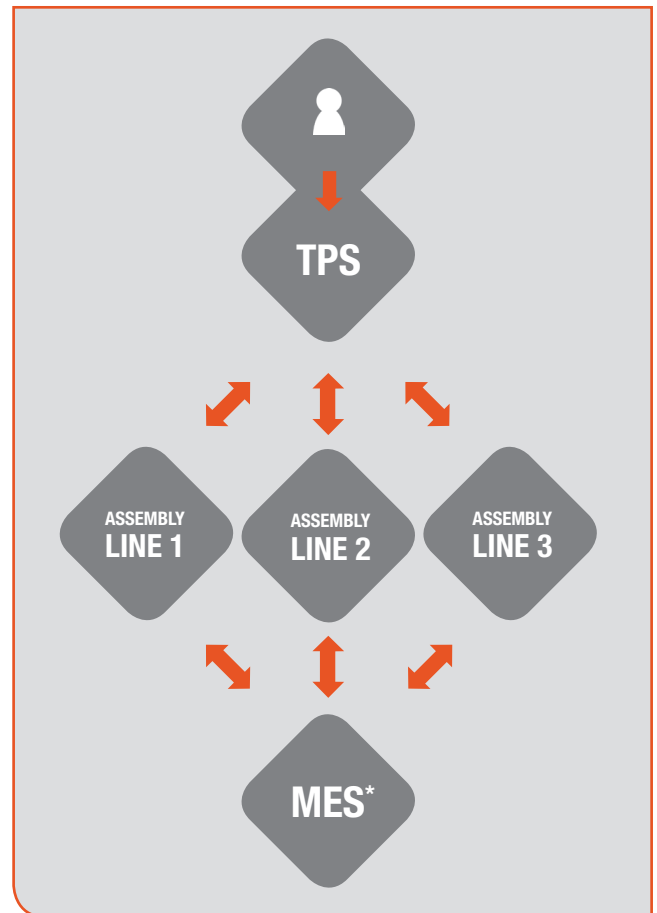
Traditional application management requires assembly lines to be manually updated

- 1) Engineer determines that an application change is required
- 2) Engineer walks to Assembly Line station
- 3) Engineer updates existing application parameters (at station)
- 4) Engineers test changes locally (at station)
- 5) Engineer saves changes and walks away from Assembly Line station
- 6) MES sends a “tool enable” command and application number to controller
- 7) Controller/Tool runs application and sends results back to MES

Steps 1-7 are repeated for each assembly line as changes are required

Streamlined Application Management (with TPS)

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.



Streamlined application management enables applications to be updated through an automated process

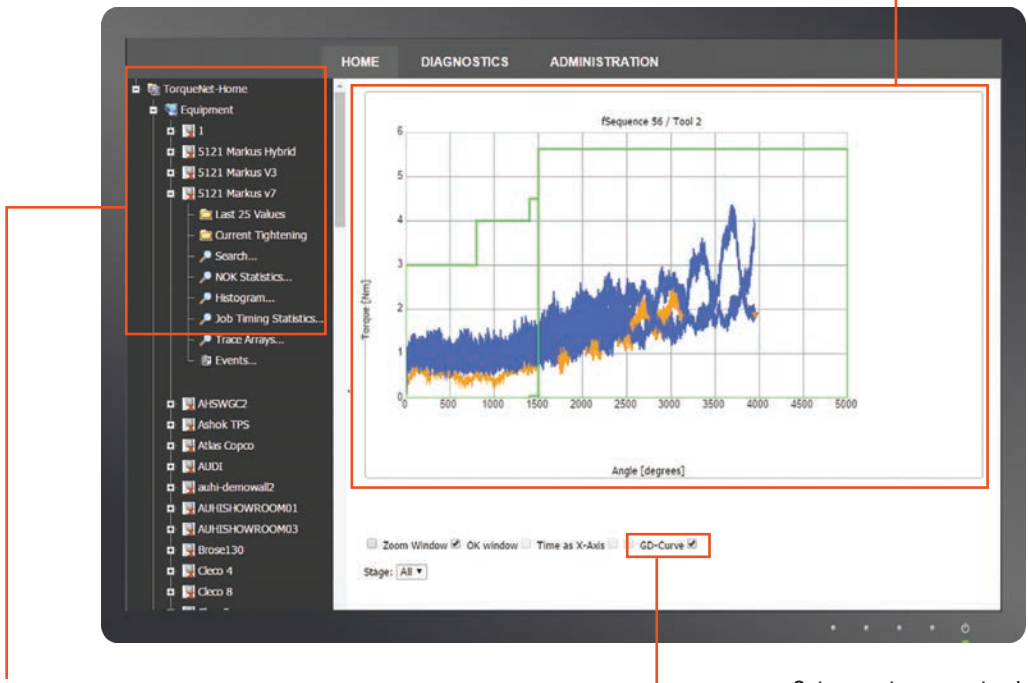
- 1) Engineer determines that an application change is required
- 2) Engineer makes change, tests and promotes change to “released status” in lab
- 3) TPS sends updated application revisions to all connected production controllers
- 4) MES sends a “tool enable” command and application number to controller from TPS
- 5) Controller/Tool runs application and sends results back to MES

TorqueNet is a Data Acquisition and Archiving System



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 location making critical production information accessible to all users working with the tightening process on the assembly line.

Visualize trends in rundown information by viewing trace overlays



All equipment connected to TorqueNet is sorted in left hand navigation

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

- Event Monitor & Email Service
- Supports all Torque Units
- Competitor Data Collection
- Tightening Traces
- Tool Maintenance Advisory Preventative Maintenance

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 & Email Notifications		✓	✓
TPS Link		✓	✓
Parameter Change History			✓
Tool History			✓

TorqueNet & Dashboard Overview

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



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

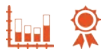
Upgrade the analysis power of TorqueNet by adding a new interface where you can:



Use pre-defined or standard views



Share data with people to make decisions/take action



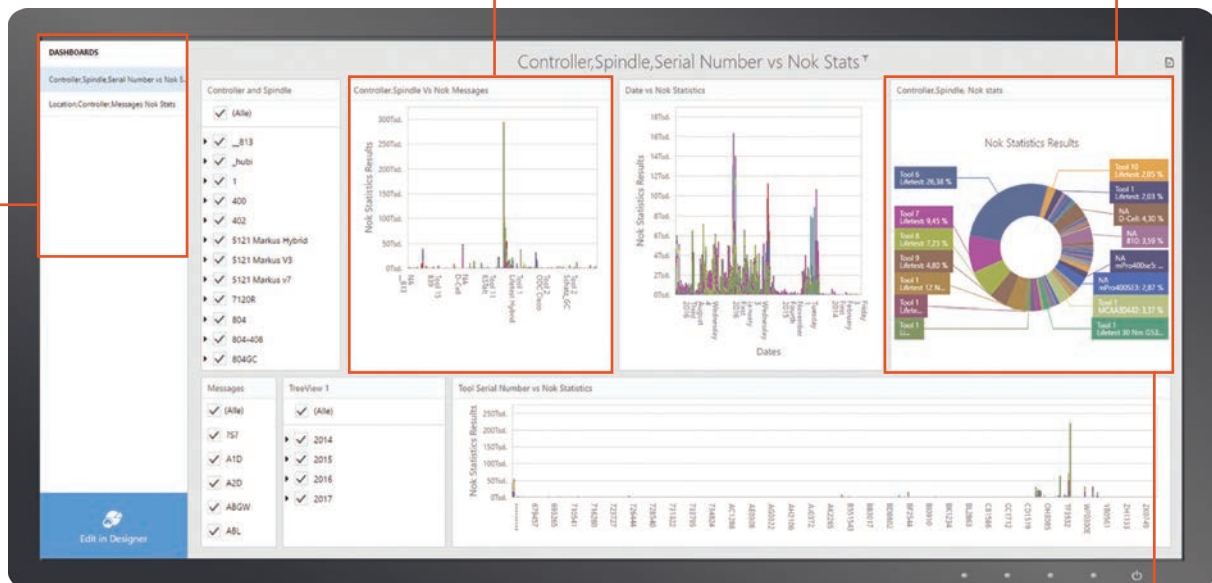
Create customized views



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

Data can be shared with 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

All software products come with a permanent license duration

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

Support Packages

Paid Maintenance Packages:

- Product Updates included
- Priority Phone Support
- Remote Desktop Support

Maintenance and Support Products include:

PART NUMBER	Description	Price Method	Expiration
S168171-MA-0	TorqueNet Support Agreement*	Per Server & Spindle / Tool	1 Year
S168689-MA-0	Tightening Parameter Server Maintenance	Per Server & Spindle / Tool	1 Year
S168703-MA-0	Dashboard Mgr Maintenance	Per Server & Spindle / Tool	Installation Only

*TorqueNet Support Agreement

With the Support Agreement you ensure the functionality and support in all matters relating to the use and operation as well as in case of error.

- Online / phone support Monday to Friday 8:00-17:00h CEST (public holidays are not included)
- Exclusive standby number with priority switching
- Creation of failure reports
- Provision of SW updates (Service releases)
- Performing SW updates (via remote services)
- Reaction Time max. 2 hours

System Requirements

Physical Memory | **4GB Minimum**

Virtual Memory | **8GB Minimum**

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 | South America

Apex Tool Group
670 Industrial Drive
Lexington, SC 29072
Phone: +1 (803) 951 7510
Fax: +1 (803) 996 2400
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

Apex Tool Group
Ind. Com. Ferram. Ltda.
v. Liberdade, 4055
Zona Industrial Iporanga
Sorocaba, São Paulo
CEP# 18087-170
Brazil
Tel: +55 15 3238 3820
Fax: +55 15 3238 3938

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