



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.





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.

DASHBOARD

with TorqueNet



TorqueNet

Accurately archives data for easy access while meeting industry-specific regulation requirements for safetycritical applications.

add-on module interconnecting



Dashboard

Empowers businesses with the ability to explore data through customized views, allowing you to dive deeper into your data than you normally can with TorqueNet alone.



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 versus 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) is a Central Application Management System



Tightening Parameter Server:

Central Application Management

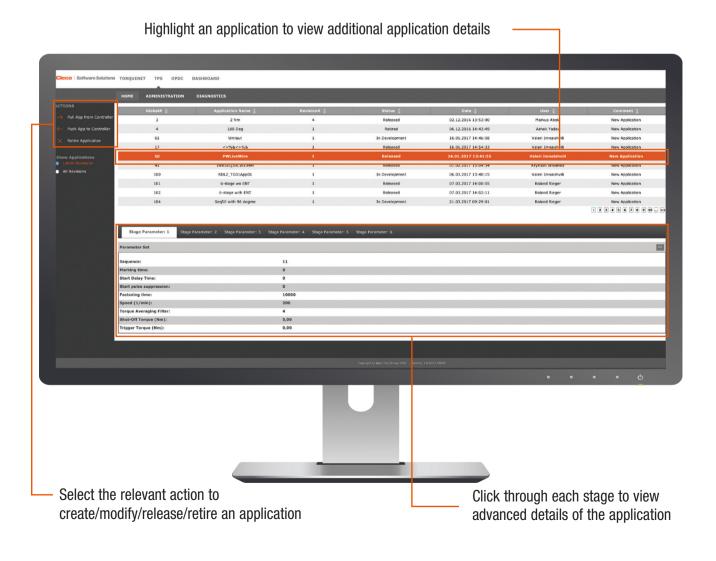
Expanded Application Storage

Product Performance Monitors

A Real-time Change Management

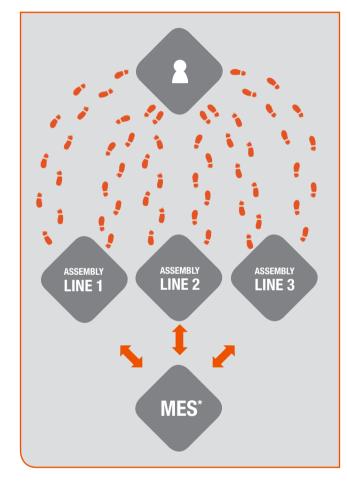
Back-up, Compare and Restore Capabilities

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



Traditional Application Management (without TPS)

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 and inconsistencies.



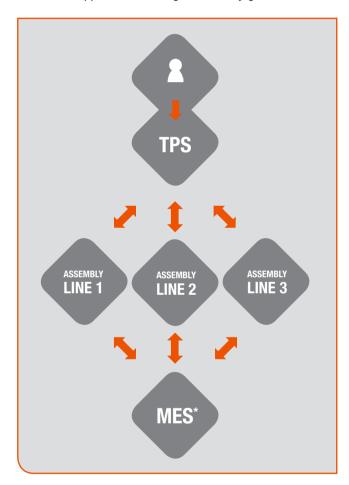
Traditional application management requires assembly lines to be manually updated

- 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
- 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 subscribed production controllers
- 4) MES sends a "tool enable" command and application name to controller from TPS
- 5) Controller/Tool runs application and sends results back to MES

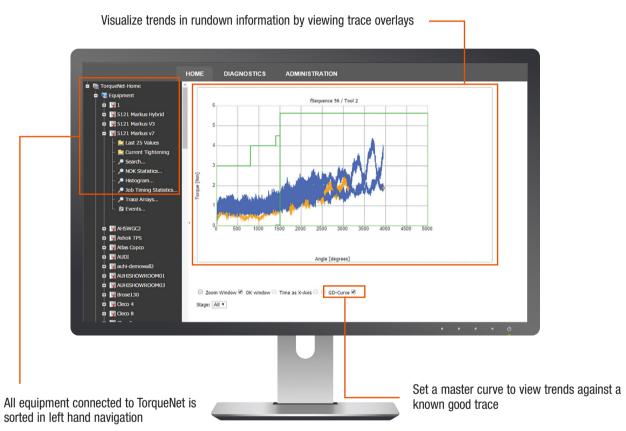
*Manufacturing Execution System



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 source making critical production information accessible by all roles working with the tightening process on the assembly line.



Event Monitor & Email Service	
Supports all Torque Units	
Competitive Data Collection	
Tightening Traces	

Tool Maintenance Indicator		
Preventative Maintenance		

Ø	Tool Calibration	Scheduling

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			~

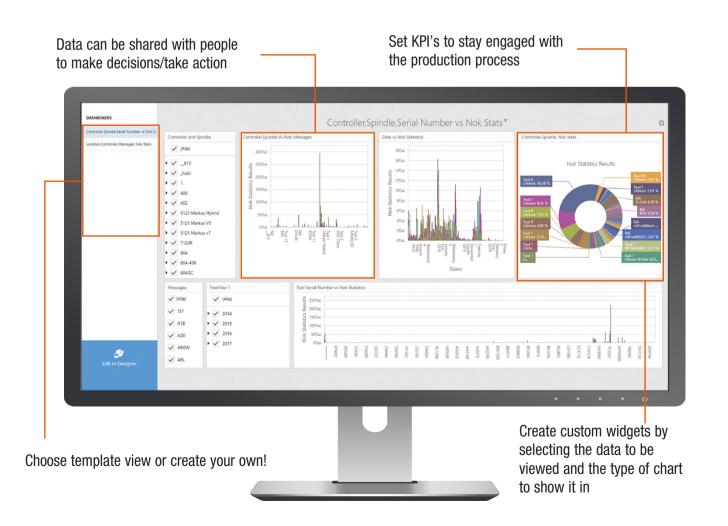
Dashboard add-on Module Enhances the Value of Standard TorqueNet Data



Cleco Dashboard improves analysis speed and performance while allowing managers to dive deeper into data that is critical to their operation. User-specific views enable 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:







STREAMLINED MANAGEMENT SOLUTIONS

Software Products

All software products come with a permanent license duration

PART NUMBER	Description	Price Method
S168171-ST-4	TorqueNet Standard	Per Spindle
S168171-PR-4	TorqueNet Professional	Per Spindle
S168171-NT-4	TorqueNet Enterprise	Per Spindle
S168689-ST-2	Tightening Parameter Server	Per Spindle
S168703-ST-1	Dashboard Manager	Per Spindle
S168171-SP-4	TorqueNet Upgrade Standard to Pro	Per Spindle
S168171-SE-4	TorqueNet Upgrade Standard to Enterprise	Per Spindle
S168171-PE-4	TorqueNet Upgrade Pro to Enterprise	Per Spindle
S168696-ST-1	Open Protocol Data Collector - TorqueNet Add-on	Per Instance

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	Per Spindle	1 Year

System Requirements

Physical Memory | 4GB Minimum

Virtual Memory | 8GB Minimum

Disk Space | 30GB Minimum*

Processor | 1.2GHZ Minimum (Dual Processor Recommended)

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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

The Americas

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