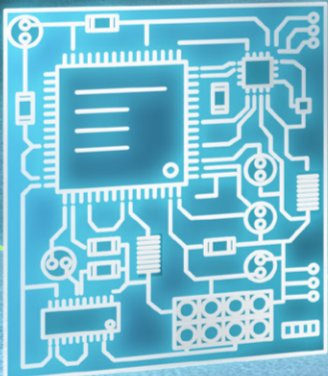
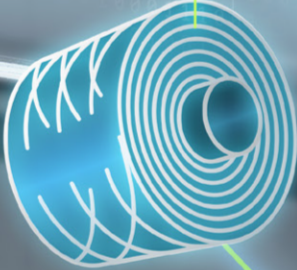
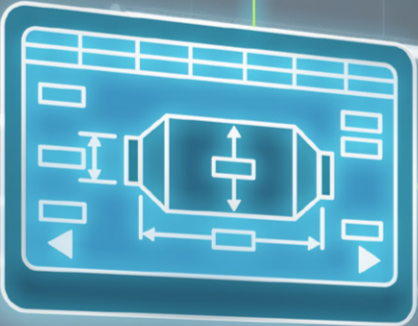


Nema

SSM digital suite



Leading technology for yarn processing and winding



SSM

SSM

OUTSTANDING

ADVANTAGES

Remote Monitoring, Anytime, Anywhere

Monitoring of key performance indicators of all connected machines, regardless of their geographical location

Near Real-time Machine Health Monitoring

Early detection of failures for quick action and thus minimized downtime

Secure Connection

Cloud-based solution with state-of-the-art security to protect data

Production Optimization

Graphical view of the performance of all connected machines to compare different production rates, identify and duplicate best practices

Nema

Nema

SSM digital suite

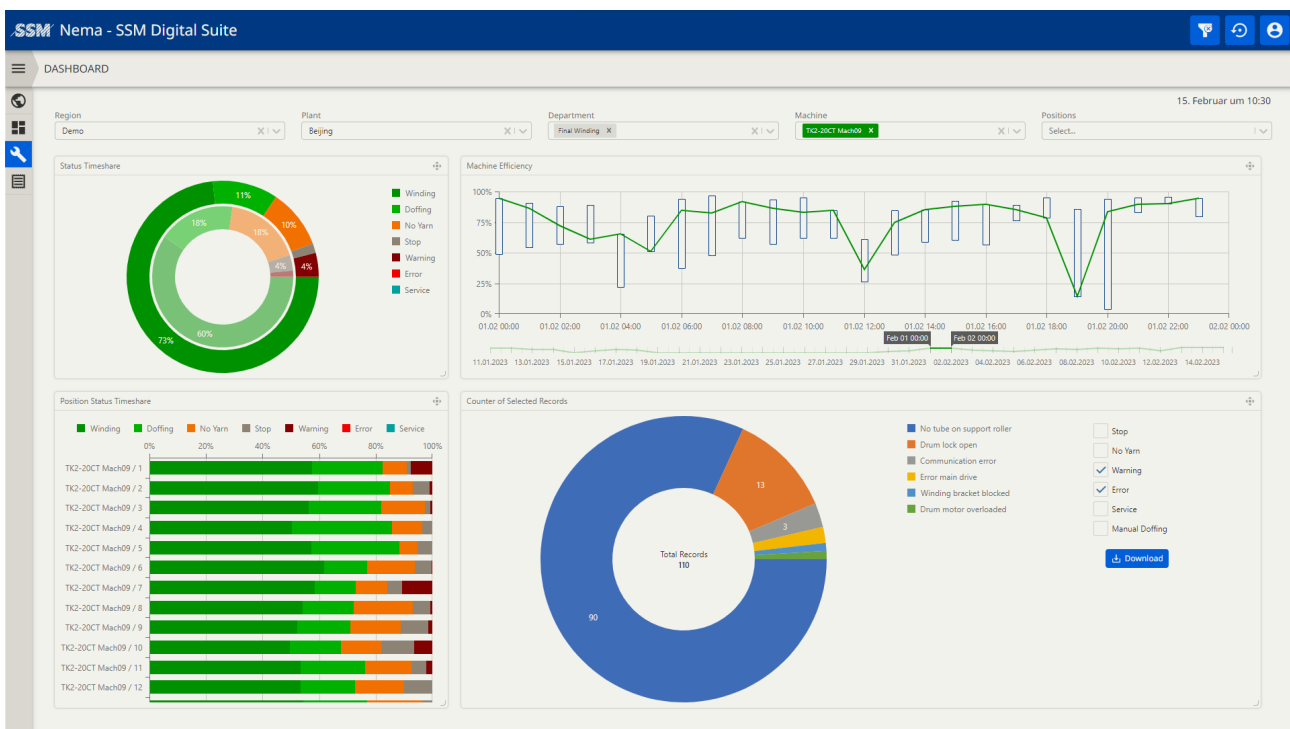
Nema, SSM digital suite, allows a near real-time monitoring of all connected machines, 24 hours a day, regardless of the machine location. A graphical dashboard gives a global vision and allows customers to compare key performance indicators at a glance. Best practices can easily be identified and duplicated to boost the entire production.

Production optimization

Nema tracks machine performance and helps to quickly identify any deviation. The dashboard makes all production data from all locations available at once. The conditions of the best performing machines can then easily be replicated to ensure a high production level, throughout the entire machine fleet.

Reduced time-to-action

Thanks to near real-time monitoring, Nema provides the right information, at the right time so challenges can be addressed in a timely manner. This contributes to keeping downtime to a minimum.



Machine health view

Near real-time machine health

Nema collects machine health-related data such as machine and spindle errors, warnings, etc. In a single view, customers can easily identify which machine needs to be checked. For further analyses and comparison, these data can be downloaded as a CSV file in one click.

360° view

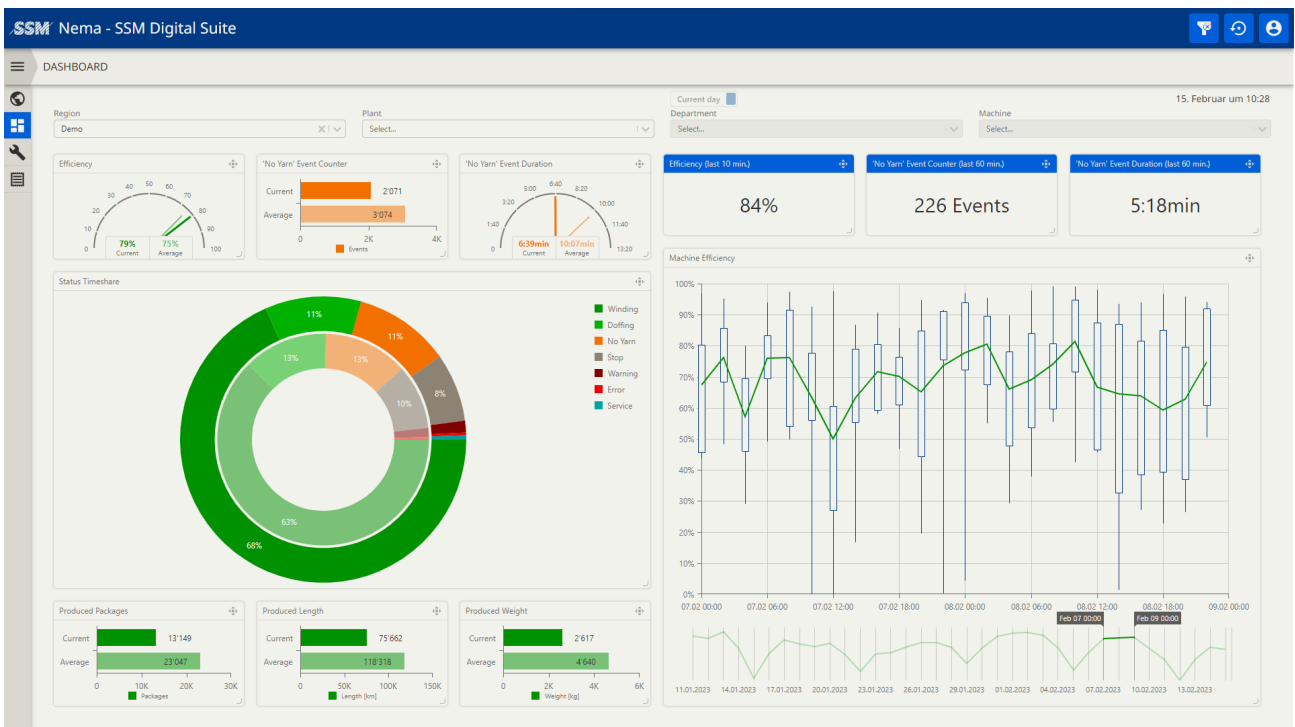
More than a global overview of the machine status, Nema also provides information on department and shifts. Users with the right permission can therefore assign machines to certain departments or manage shift plans.

Individual spindle performance

The data monitoring does not stop at the machine level. Nema also provides near real-time data for each spindle. As spindles usually have different settings, comparing data at the spindle level saves time by identifying which specific spindle needs to be checked.

Cloud-based solution

Nema features state-of-the-art security standards to ensure optimal data protection. The SSM digital suite is based on Microsoft Azure which provides flexibility, data security, process continuity, and the ability to work anywhere, anytime.



Operation view

User management

With Nema, customers can manage users, roles and permissions and grant the right access to the people who need it. Unlimited users can be added.

Nema

How it works

Responding to challenges with minimum delay and reducing expensive downtime require the right information to the right people at the right time. Nema provides key performance indicators, with near real-time data streams of machines, and enables improvement on efficiency and production.

Machine connection

To connect all machines to Nema, a connectivity kit is provided for each machine. The kit includes an edge device as well as login credentials to access Nema.

| Terminal type/production date | SSM machine platforms | Requirements |
|-------------------------------|---|--|
| MT8/2017 or later | XENO, DURO, TK2-20, DP5, FM1, X-Series, NEO | Connectivity kit MT8 software update |
| MT8/2016 or prior | XENO, DURO, TK2-20, DP5, GSX-3, FM1, X-Series | Connectivity kit Trizeps 7 upgrade on MT8 |
| Others | Any machine without MT8 as well as CWX | On a case-by-case basis |

Network connection

There are three ways to connect to Nema:

LTE (4G) connection: mobile data transmission without any integration in any LAN infrastructure. Service and support provided by SSM. Requirements: LTE signal of minimum 25ASU.

Ethernet connection as integrated device: machines connected to the internet over customers' own firewall. Services and support provided by the customer. Internet access under the responsibility of the customer.



Ethernet connection over physically separated IoT-LAN: machines connected to the internet via a separated IoT-LAN. LAN and support provided by the customer. Internet access under the responsibility of the customer.



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