

The advertisement features a central display of various Siemens SINAMICS drive units, including a compact 120W model, a control panel with a screen and buttons, and several larger rack-mounted units. The background is a dark blue 3D environment with a grid floor and floating technical graphics. On the left, a transparent blue cube contains a 3D model of a motor. On the right, two line graphs are visible: the top one is labeled 'Frequency' with a y-axis from 60 to 80 and x-axis values 14.3 and 19.3; the bottom one is labeled 'Current' with a y-axis from 2 to 4 and x-axis values 14.3 and 19.3. A 'SLS' label is also present near the top right graph. The Siemens logo is in the top right corner.

SIEMENS

SINAMICS Drives

Bucuresti, 14.05.2019

www.siemens.com/sinamics

SINAMICS drive family

Overview of the portofolio

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SINAMICS

SINAMICS V – Basic performance

- SINAMICS V20
- SINAMICS V90



0.12kW – 30 kW

SINAMICS G – General performance

- SINAMICS G120, G130, G150
- SINAMICS G120X, G120C, G120D



0.37 kW – 6650 kW

SINAMICS S - High performance

- SINAMICS S120
- SINAMICS S210



0.55 kW – 5700 kW

SINAMICS V20

Convertizorul pentru aplicații de bază – ușor de utilizat, fiabil, economic.

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De la 0.12 kW la 30 kW

Mod de instalare simplu

- Design compact
- Ușor de instalat
- Modul de comunicare USS și Modbus RTU
- Compatibilitate electromagnetica (EMC)

Mod de utilizare simplu

- Incarcare parametri, fără alimentare cu energie
- Web Server
- Mod de funcționare continuă
- Gama largă de tensiuni, sistem avansat de răcire și acoperire PCB.



Mod de economisire

- Modul Eco și Hibernare
- Monitorizarea fluxurilor de energie și de apă
- Modul funcționare continuă (HO) și funcționare ciclică (LO)

Energy saving



SINAMICS V20 Smart Access

Noul modul server pentru punere in functiune si actionare de la distanta

SIEMENS

Modulul Web Server SINAMICS V20 Smart Access este un mic dispozitiv pentru acces mobil, care poate fi montat pe convertizorul SINAMICS V20. Acesta poate transforma telefonul mobil sau laptopul intr-un modul de operare virtual, realizand astfel o utilizare eficienta a convertizorului SINAMICS V20 in fiecare faza – de la punerea in functiune, la setarea parametrilor sau monitorizare.

▶ **Cu noul sistem SINAMICS V20 Smart Access poti avea acces foarte usor la toate functiile convertizorului.**



SINAMICS G120

The modular converter – space-saving, safe and rugged



SINAMICS G120

The converter from 0.55 to 250 kW for versatile applications.

With the second generation SINAMICS G120, Siemens presents a modular converter with higher power density and a space-saving frame size.

The redesigned converter series is now available in three voltage variants for connection to 200V, 400V and 690V power supply networks.

Performance ³⁾	Continuous motion			Discontinuous motion		
	Basic	Medium	High	Basic	Medium	High
Purpose						
Pumping/ventilating/compressing	Centrifugal pumps Radial/axial fans Compressors		Excentric worm pumps	Hydraulic pumps Dosing pumps		Descaling pumps Hydraulic pumps
Moving	Belt conveyors Roller conveyors Chain conveyors	Belt conveyor Roller conveyors Chain conveyors Vertical/horizontal material handling Elevators Gantry drives Ship's drives Cable railways	Elevators Container cranes Mine hoists Open cast mine excavators Test stands	Accelerating conveyors Roller conveyors Roller feeders	Accelerating conveyors Roller feeders Crosscutters Roll changers	Rack feeders Robotics Pick-and-place Indexing tables Crosscutters Roller feeds Engaging/disengaging
Processing	Mills Mixers Kneaders Crushers Agitators Centrifuges	Mills Mixers Kneaders Crushers Agitators Centrifuges Extruders Rotary furnaces	Extruders Winders/unwinders Leading/following drives Calenders Mechanical presses Printing machines	Tubular bagging machines Single-axis motion control I.e. • Positioning profiles • Path profiles		Servo presses Rolling mill drives Multi-axis machines I.e. • Multi-axis positioning • Cam discs • Interpolation
Machining	Main drives for • Turning • Milling • Drilling	Main drives for • Drilling • Sawing	Main drives for • Turning • Milling • Drilling • Gear cutting • Grinding	Axis drives for • Turning • Milling • Drilling	Axis drives for • Drilling • Sawing	Axis drives for • Turning • Milling • Drilling



SINAMICS G120

The optimum drive for every destination

SIEMENS

G120C



0,55 - 132 kW
The compact converter

G120



0,55 - 250 kW
The modulare system

G120X



0,37 – 630 kW
The specialist for
pumps, fans and
compressors

G110D/G120D



0.75 - 7.5 kW
The inverter for
distributed applications

SINAMICS G – converter family

Whether it's a matter of efficient pumping, ventilating and compressing, or precise movement, processing, or machining, the number of application areas for frequency converters is almost endless. So it's good that there is one family of drives for all of these areas that perfectly fulfills every requirement: SINAMICS. Our portfolio represents uniform engineering, extremely high efficiency and convenient operation.

Fully Integrated Drive Technology from a Single Source

Integrated Drive Systems advantages



TIA- Totally Integrated Automation

Enables full integration into the TIA Portal system diagnostics



Safety Integrated

Siemens is the leading converter company for integrated and certified safety functions



Ready to run standard applikationen

With SINAMICS G120 and SIMATIC, Siemens offers comprehensive solutions from a single source



Energy-efficient production

Intelligent functions of SINAMICS frequency converters, cost reduction through energy-saving



SINAMICS G120X offers comprehensive functionality and creates added value



Feature / Function	Benefits
<p>“Out-of-the-box” - Complete drive delivered together ready to switch on from 0.75kW - 630kW / 1- 700 HP</p>	<ul style="list-style-type: none"> • Reduced cost and efforts for: ordering (1 MLFB), delivery and commissioning
<p>Dedicated user interface with optimized SAM (webserver) and IOP-2</p>	<ul style="list-style-type: none"> • Faster commissioning with improved user friendly setup
<p>Optimized design: 3C3 coating¹ + extended operating temperatures -20°C to 45 ...60°C (with derating)³</p>	<ul style="list-style-type: none"> • Ability to work in harsh environments (e.g. corrosive gases)
<p>EMC compliant (C1 + C2) and integrated full DC-link choke</p>	<ul style="list-style-type: none"> • Grid friendly design with reduced harmonics and long cable length
<p>Safe Torque Off SIL 3 hardware</p>	<ul style="list-style-type: none"> • Reduced electromechanical components and standard compliant
<p>Compatible with SINAMICS connect and TIA Portal via GSD file</p>	<ul style="list-style-type: none"> • Fit for digitalization and for cloud based analytics • PLC connectivity as a standard
<p>Pluggable I/O terminal hardware and optional repair switch (for IP55/UL12²)</p>	<ul style="list-style-type: none"> • Simple installation, service and maintenance

IOP-2: Intelligent Operator Panel
 SAM: Smart Access Module

¹ Refer to the manual
² Available on 12/2019
³ max. 55 °C for Profinet version

“Discontinuous Motion” Portfolio

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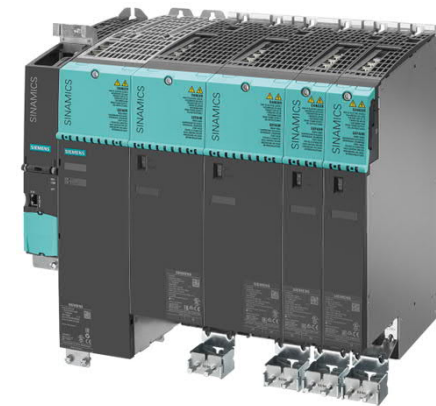
Basic: SINAMICS V90 Servo Drive System

Single axis AC/AC drive with **basic functionality** and connectivity for standard numeric and motion controllers



Midrange: SINAMICS S210 Servo Drive System

Single axis AC/AC drive with **high dynamic and performance** for motion applications in the mid range segment.



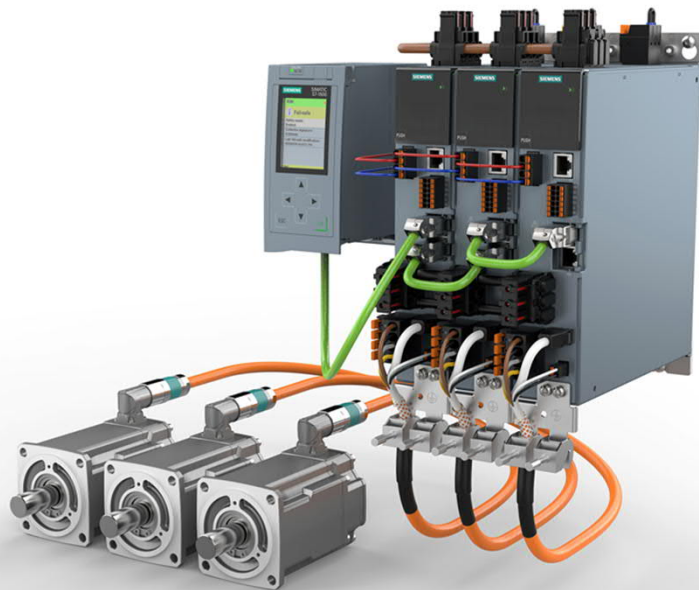
High-End: SINAMICS S120 Servo Drive

Modular DC/AC multi axis system with **most advanced drive based technology** and connectivity to high end numeric and motion controllers

SINAMICS S210 Servo Drive System

Features and Benefits: The top highlights of the System

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Feature / Function

- Dedicated S-1FK2 motors (CT/HD)
- Fast current controller (62,5 µs)
- PROFINET IRT (250 µs)
- Basic & **Extended Safety integrated** functions via PROFIsafe **NEW!**
- Integrated Webserver
- “One Button Tuning”
- **TIA Portal (V15.1) integriert**** **NEW!**
- **TIA Selection Tool integriert**
- One-Cable-Connection (OCC)
- Integrated EMC (C2) Filter
- Integrated Braking Resistor
- 1AC 230V (200-240V) 0.05 – 0.75kW
- **3AC 400V (200-480V) 0.4 – 7kW*** **NEW!**
- UL Certification

*) FSB 1.5/2.0kW (05/19); FSC 3.5/5.0/7.0kW (07/19)

***) 3AC as Version V15.1 update in 04/2019

Benefits

- ▶  High Dynamic • Increase performance
- ▶  • Fulfill high demands for safety
- ▶  • Easy engineering
- ▶  • Saves time on installation
- ▶  • Ready for world wide markets

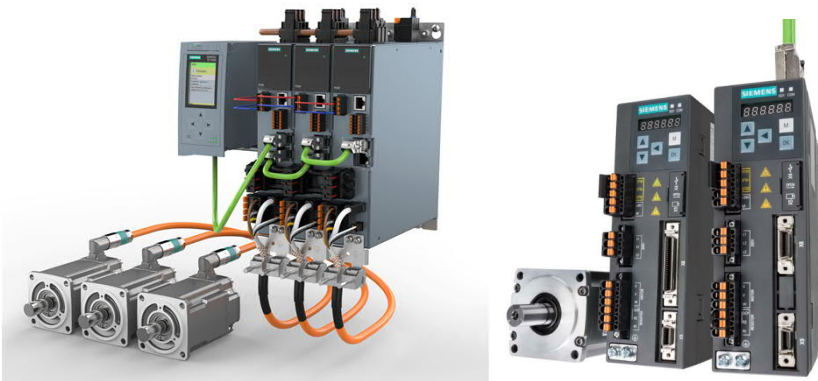
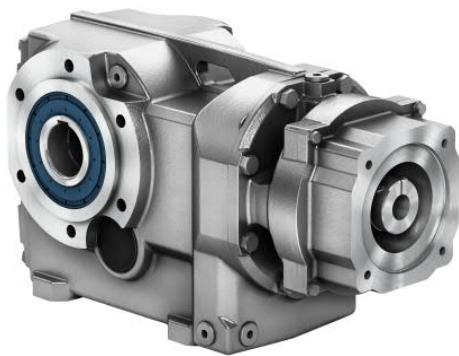
www.siemens.com/sinamics-s210

SIMOGEAR with KS-Adapter: Excellent fit with two Servo Drive Systems S210/1FK2 and V90/1FL6

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NEW

03/19



In DTK already included

Coupling adapter for servomotors

Features / Function

- Connection of servomotors with KS-Adapter
- **Back-lash free coupling** without feather key connection
- **4 different gear types** connectable (helical, parallel, bevel and helical-worm gear units)
- Replacement for KQ/KQS and KF- adapter
- Adapter KS03-KS05 made from aluminum

Benefits

- Gearbox with **SIMOTICS S-1FL6, S-1FK2 and S-1FK7 ***
- Higher **accuracy** and positioning precession
- The right gearbox for every application
- **Shorter design** and reduction of variants
- No additional painting needed

* for S-1FT7, M-1PH8 available in 05/19

SINAMICS S120

Modular drive system for high level applications

SIEMENS

The flexible, modular drive system for sophisticated and demanding applications

The modular converter system with different types of construction to address high performance and motion control tasks in single and multi-axis applications involving synchronous and induction motors.







Features

- Power range: 0.12 kW – 5700 kW
- Servo /vector control, V/f control
- Integrated safety and positioning functions
- Freely configurable logic and closed-loop control functions
- Additional motion control functions in conjunction with SIMOTION or SINUMERIK
- High degree of scalability, flexibility, combinability
- Energy efficiency as a result of the energy recovery capability and/or DC link
- Profibus /Profinet / Ethernet-IP
- Different cooling types: Air, liquid cooling
- Technology inside



The SINAMICS S120 drive system

The best perspectives for a productive future

SINAMICS S120 - versions					
Modular drive system for sophisticated single-/multi-axis applications					
AC/AC drive units for single-axis applications		DC/AC drive units for multi-axis applications			
Blocksize	Chassis	Booksize Compact	Booksize	Chassis	Cabinet Modules
					

Modularity for machine construction ✓

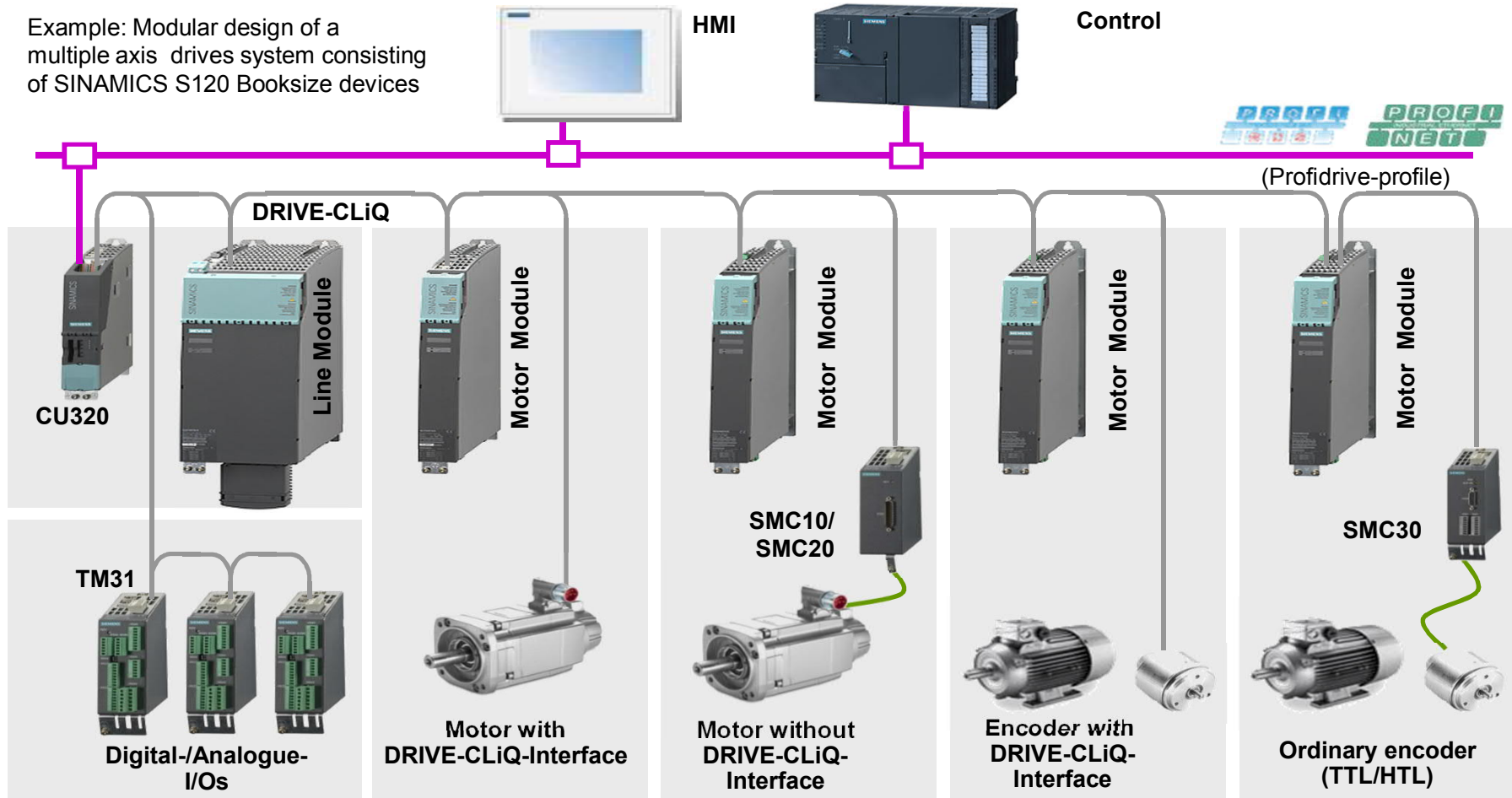
Flexibility for successful machine concepts ✓

Applications in machine and plant construction ✓

The answer to complex requirements ✓

SINAMICS S120 – scalability by modular system architecture

Example: Modular design of a multiple axis drives system consisting of SINAMICS S120 Booksize devices





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The image shows a complex industrial machine, possibly a pharmaceutical packaging line, with various rollers, belts, and mechanical components. Overlaid on the machine are several digital elements: a large blue semi-transparent box on the right side, a magnifying glass icon focusing on a specific part of the machine, and various data visualizations and graphs. A control panel with a screen and buttons is visible on the left. The overall aesthetic is futuristic and high-tech, with a dark background and blue light effects.

Digitalization in Motion Control Drive Technology

[siemens.com/motioncontrol](https://www.siemens.com/motioncontrol)

**It's more than the all-present incentives –
this is about your focal concerns!**

Increase
machine utilization!



How much energy do the drives
consume in our production process?

Improve
energy efficiency!



When does this extruder
really require a service?

Did we configure that
pump in its optimum
operating point?

Decrease
down-time!



Should we clean that
conveyor?

Will that winder last
another 200 hours or will
we need to change the
bearings first?

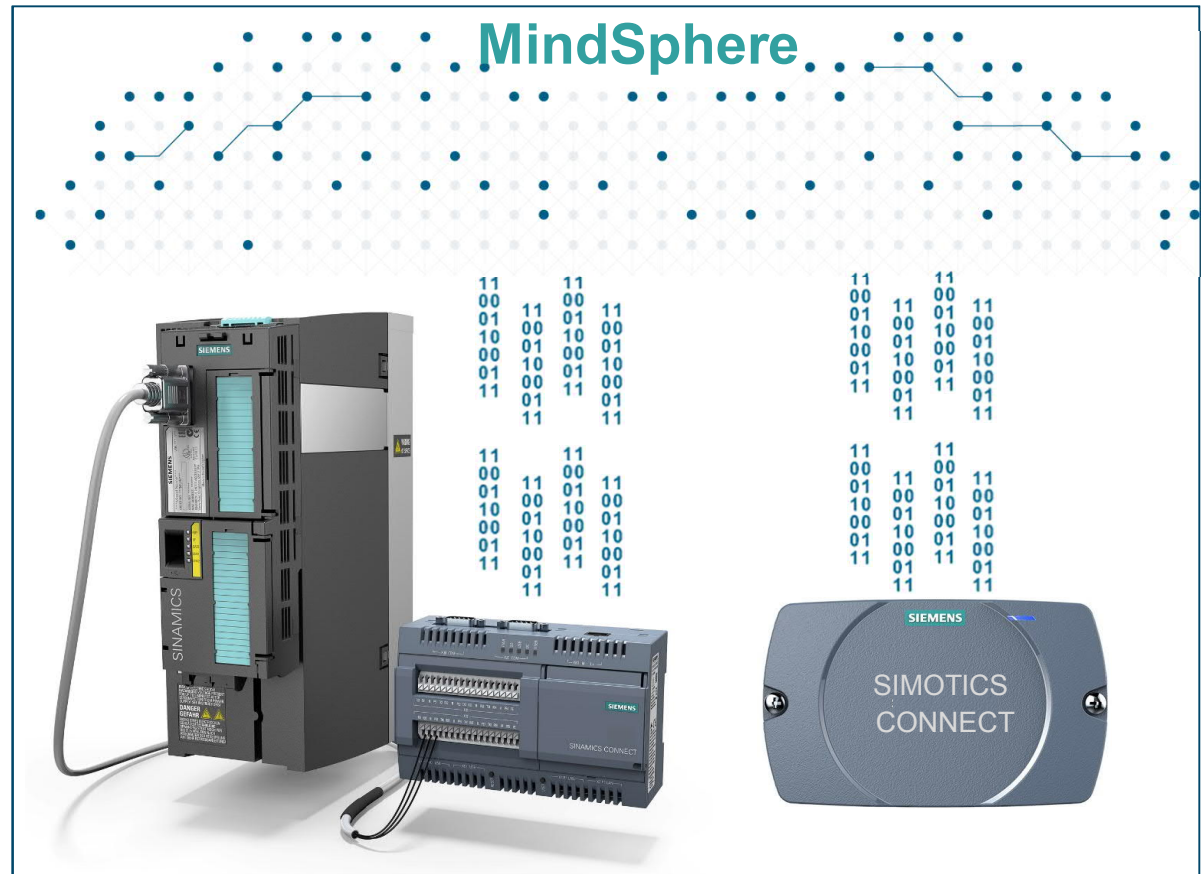


Connecting your SIEMENS drives and motors is simple as can be even in brown field installations



Effortlessly connecting your drive train to MindSphere

- **SIMOTICS CONNECT**
 - Connect Direct-Online-Motors
 - Detect vibrations
 - Monitor rotor speed
 - measure temperature
- **SINAMICS CONNECT**
 - Connect up to 8 frequency converters
 - Measuring operational drive parameters (e.g. current, speed, output voltage, torque, temperature etc.)
 - Reading recent faults and status of drives



SIMOTICS CONNECT 400 and SIDRIVE IQ Top Highlights

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Simple data transmission

- No further hardware required
- Automated data transfer
- Locate motor fleet globally
- Real-life dynamic operation data via MindSphere cloud

Serial motor functionality

- Ex works on 1LE5.0 motor line
- No additional hardware cost
- Works directly on any Wi-Fi
- Plug & play commissioning of connectivity



Alarm notification

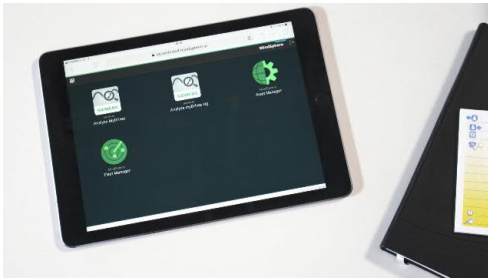
- Set notification thresholds
- Differentiate between alarm and warning
- Track value curves

Productivity in motor Serviceability

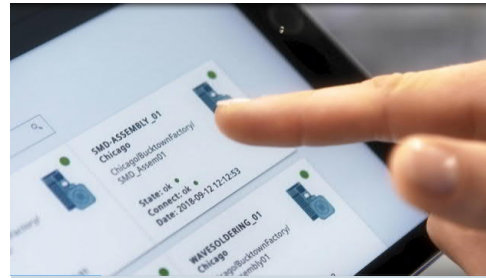
- Event-based service scheduling
- Remote monitoring of motor operation

Analyze MyDrives MindSphere Application for Drive Train Analytics

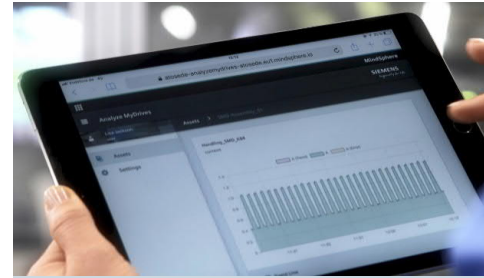
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Analyze MyDrives: Simple Monitoring of drive train



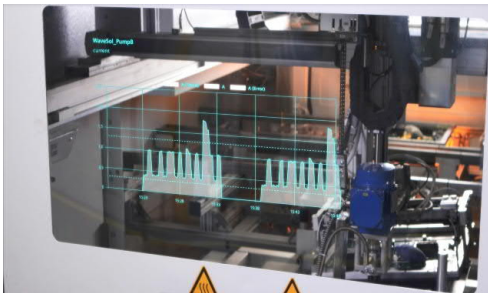
All assets at a glance



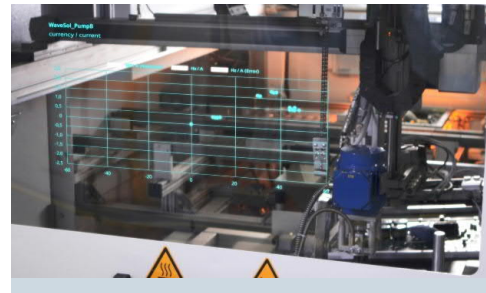
Visualization of the drive parameters as timeline



Representation of the digital twin of performance



Threshold monitoring and active notification



Scatter plots illustrate long-term trends and relationships



The drive train as powerful sensor



Analyze MyDrives improves machine utilization!

Example: Marketing our offerings

Customer perspective - Value proposition



	machine	depreciation	productivity	license
SINAMICS CONNECT 300	Average cost of typical production machine in focus of offering: EUR 300,000	Annual depreciation: EUR 30,000	Estimated productivity increase generated by respective offering: EUR 1,500 (5%)	One-time: EUR 350 recurring: EUR 0
Analyze MyDrives				One-time: EUR 250 recurring: EUR 400

Underlying qts. framework:
 "CONNY" → up to 8 drives
 "AMD" → maximum 160 charts

- Reduced number of service cases
- Reduced service efforts (analysis)
- Preventive measures
- Reduced down time

EUR 1,800 over 3 consecutive years
 → we share 40% productivity gain w/ customer.

Contact

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Andrei Secelean

DI MC Drives & Motors

E-mail: andrei.secelean@siemens.com