Conveyor technology for material handling

Individual system solutions from Siemens

usa.siemens.com/materialhandling
Whether conveying, sorting, storing or picking and placing, the clear choice is Siemens. In conveyor technology, seamless and integrated productivity is a requirement for success. Siemens delivers flexible and future-oriented solutions tailored to your requirements — economical, precise, efficient, capable solutions packaged into the smallest footprint.

**Machine builders — your advantage**
- Economical, field-tested, comprehensive portfolio of standard and customized solutions.
- Free tools to support engineering, selecting, dimensioning components and energy-efficient systems.
- The solution — distributed systems, common DC bus, economical options for material handling.
- The result — lower installation and commissioning costs with increased flexibility and system uptime. Lower machine costs with economical options.
- Siemens solutions help protect your investment.

**End-users — your advantage**
- A complete solutions portfolio of automation, drives, motors, gear motors and controls designed for material handling.
- Fast commissioning = quicker machine startup and less machine downtime.
- System expandability and easy device replacement = minimized downtime and retrofit requirements.
- Comprehensive diagnostics = preventative maintenance and high product availability.
- Energy-efficient motors, gear motors, motor starters, drives and power management systems = high energy savings and increased profit.

Optimal solutions for every material handling application
The focus is on you —

We meet and exceed your requirements

Whether it involves drives, control systems, identification or power supplies — as your partner, Siemens provides you with a solution that meets and exceeds your needs.

- From drives and automation technology, through machine safety and all the way up to the power supply and circuit protection — we offer you the ideal products and systems for conveyor-related applications in the widest range of industries.
- Siemens partners with you, the customer, from the conceptual stages and throughout the entire lifecycle of your machines.
- When it comes to quality, reliability and safety, Siemens fulfills the highest standards — with products and services available around the globe.
- By partnering with Siemens, you have a true competitive advantage with pre- and post-sales technical support for every product, along with global service that’s locally-provided in over 130 countries.
Simple and economical
Solutions for roller, chain and belt conveyor systems

Central conveyor technology — conventional
Are you looking for a simple solution to basic conveyor systems? Siemens delivers simple, economical solutions:
- Low hardware costs
- Many drives in a small space (high drive density)
- Central electrical cabinet design
- Simple, conventional wiring (no fieldbus)

Further, Siemens offers you tailored solutions, for example:
- SIMOGEAR gear motors — two-stage units, 2% higher efficiency than competitor 3-stage gear units
- SIRIUS industrial switchgear — this means that devices that are harmonized and coordinated with one another (circuit breaker, contactor ...) can be quickly and easily combined to create a motor feeder
- SINAMICS G110 drives
  - compact design
  - the terminal locations are the same as conventional contactors
- SINAMICS G120 drives
  - modular design
  - capable of energy recovery
  - integrated safety technology
- SINAMICS V20 drives
  - economical
  - compact
  - simple
- Conventional control of the drive functions via the SIMATIC S7 PLC system
- SIMATIC Ident — RFID and code reading systems for product identification and tracking
Space-saving

Simple, yet complete design — the ideal solution for conveyors

Central / distributed conveyor technology — with PROFIBUS or PROFINET

Conveyor material handling applications demand flexible systems with global acceptance in a small footprint.

Siemens offer you a seamless and integrated solution —
- Electrical cabinet design (drives in an IP20 version) or distributed electrical enclosures
- Many drives in a small space (high drive density)
- Low space requirement
- High degree of flexibility and detailed diagnostics
- High degree of availability
- Optional safety technology

Siemens offers you the optimum solution, for example:
- SIMOGEAR gear motors, compact NEMA Premium® and NEMA energy efficient motors ease integration into the smallest spaces
- Motor starters (up to 7.5 kW) and converters (up to 4 kW), with the following features, integrated into the distributed SIMATIC ET 200s I/O system
  - modules can be exchanged without requiring tools (hot-swappable)
  - converters including energy recovery capability
  - only one bus address and 400V infeed for several drives
  - interface module with integrated CPU (optional)
- SIMATIC HMI — operator control and detailed diagnostics of the plant / system
- Safety Integrated is optionally available for all of the relevant components

NEMA Premium® is a certification mark of the National Electrical Manufacturers Association (US DOE CC# 032A).
Simple and reliable

Distributed drive and automation design for conveyor systems (IP65 protection)

Distributed conveyor technology — with AS-Interface

Are you looking for a distributed drive and automation concept with a high degree of protection for your system? Siemens can offer you an efficient solution —

- Distributed drive topology (high degree of protection)
- Simple installation and fast commissioning
- Simple-to-use and operate (usability)
- Standard functionality and diagnostics
- Maintenance-friendly (fast, simple replacement)

Experience-tailored solutions from Siemens, for example:

- Distributed SIRIUS M200D motor starters (up to 5.5 kW) and SINAMICS G110D drives (up to 7.5 kW)
- IP65 degree of protection
- AS-Interface for communication, parameterization and diagnostics
- manually-operated maintenance switch
- Quick-Stop function
- plugable connection system according to ISO 23570
- SIMATIC S7 controllers
- SIMATIC Ident — Identification with RFID and code reader systems for product identification and tracking
Flexible, powerful and complete
Solutions to meet or exceed every material handling demand

Distributed conveyor technology — with PROFIBUS or PROFINET

For demanding conveyor technology applications, which place high requirements on flexibility and availability, Siemens offers you distributed drive and automation concepts as solutions.

- Distributed drive architecture (high degree of protection)
- Simple installation and fast commissioning
- High degree of flexibility, functionality and detailed diagnostics
- Maintenance-friendly (fast, simple replacement)
- Optional safety technology

Siemens offers you a perfectly adapted and flexible solution, for example:

- SIMOGEAR uses the proven MODULOG modular principle. By means of mounting shafts, options such as brakes, separately driven fans and encoders can be mounted to the basic motor that always remains the same. This means that even after the motor has been installed, options can still be added.
- Distributed SIMATIC ET 200pro, SINAMICS G120D distributed drives (up to 7.5 kW), SIRIUS M200D motor starters (up to 5.5 kW):
  - flexibility through the IP65 degree of protection and modular design
  - PROFIBUS or PROFINET for communication, parameterization and diagnostics
  - plugable connection system according to ISO 23570
  - additional functionality in the converter, for example, energy recovery, free function blocks (logic), optional safety technology (STO, SS1 and SLS)
  - additional functionality in the motor starter for system monitoring, diagnostics and integrated conveyor-related functions such as Quick Stop and Quick Stop disable
- SIMATIC S7 controllers — operator control and detailed diagnostics
- SIMATIC Ident — RFID and code reading systems for product identification and tracking
- SCALANCE-X switches — ensuring high network availability, tailored for industrial applications
Increase your productivity

Simple and economical drive solutions with built-in logic functions (IP65 version)

Electric monorail systems for standard applications

Are looking for a drive and automation concept for trolleys in a simple electric monorail system with one traction drive? Siemens drive solutions are the answer.

- Simple installation and fast commissioning
- Just a few different travel speeds
- Low requirements on the control functionality
- Simple diagnostics
- Simple-to-use and operate (usability)

Siemens can offer you the optimum solution, for example:

- Distributed SINAMICS G120D drives (up to 7.5 kW)
- Plugable connection system according to ISO 23570
- Modular design, therefore lower costs for stocking spare parts
- Capable of energy recovery, therefore a braking resistor is not required
- Compact design in an IP65 degree of protection
- Integrated “freely assignable blocks” to implement logic functions
- Parameterizable fixed frequencies (16 different frequencies)
Electric monorail systems with vertical adjustable conveyor

The more complex the conveyor-related task, the more important a seamless and integrated solution is needed. Siemens offers you a control and drive solution for electric monorails.

- Simple-to-use and operate (usability)
- Simple installation and fast commissioning
- Flexible drive speeds and control functions
- Detailed and extensive diagnostics
- Integrated safety functionality

Experience customized solutions from Siemens, including:

- Distributed SINAMICS G120D drives
  - power ratings up to 7.5 kW for powerful hoisting gear
  - capable of energy recovery, therefore a braking resistor is not required
  - modular design, therefore lower costs for stocking spare parts
  - compact design in IP65 degree of protection
  - trolley control based upon SIMATIC ET 200S in IP20 degree of protection
- Can be expanded in a modular fashion, therefore can be flexibly adapted
- PROFINET or PROFIBUS or EtherNet / IP
- Communication via IWLAN and RCoax (leak wave cable)
- RFID identification systems for product identification and tracking
- Reliable and secure wireless communication with SCALANCE-W access points, also for high requirements
Siemens OEM partner program

Growing business together
In today's marketplace, all companies face issues of global competition, accelerated innovation and the escalating costs of operating a business. When you partner with Siemens, you can improve your competitive advantage to achieve your business growth goals.

Siemens OEM partners are provided the tools needed to accelerate design innovation for increased machine performance, efficiency and competitive value for their end-user customers. These include everything from engineering consultation on new designs, proof-of-concept offers, panel construction aids, to installation and commissioning assistance resulting in comprehensive solutions throughout the entire lifecycle of your investment.

OEM partner program services
An OEM is defined as a company with its primary business being that of building machines or equipment for resale. Each of the following services is offered on a non-exclusive, mutually-beneficial basis to both Siemens and the receiving OEM. Participation is determined through an evaluation conducted between Siemens and the OEM.

Machine conversion services
- Project management, engineering expertise, training for machine conversions to Siemens platforms

OEM tools and content
- Engineering software toolkits, extended warranty offers, application-specific examples and libraries, OEM industry references

Global coordination
- Worldwide support harmonization, International technical contacts, key end-user support programs

Co-marketing opportunities
- Event sponsorships, trade magazine coverage, executive end-user visibility and Siemens brand leverage

Emerging vertical industries
- Collaboration to increase OEM market pursuit in emerging verticals industries

For more information on the Siemens OEM partner program, please contact your local Siemens industrial sales representative.
Siemens enables OEM machine builders to expand their market reach through global access of technology solutions to improve productivity, efficiency and ultimately reduce costs.

Here is what some of our OEM customers are saying about the benefits of partnering with Siemens.

“Whether we are manufacturing here or abroad, Siemens has given us the service and support we need to succeed with the rollout of this controller, both at the local and corporate levels.”

**Cleaning Technologies Group**
Global manufacturer of industrial part cleaning machines

“Siemens components and their Totally Integrated Automation architecture, in particular, are our standard and preferred automation solutions because of their innovative technology, worldwide acceptance, long-term reliability and comprehensive global support.”

**Kuka AT**
Assembly and test system manufacturer for the automotive industry
Standard products and systems

More drive for every application

Gear motors

- Extensive portfolio of gear motors are available in the highest efficiencies
- Optimal low-speed capability from 0.1–1000 rpm and for high torque utilization
- Servo geared motors for high-dynamic performance applications
- Extremely flexible thanks to the various formats, mounting versions and modular principle
- Optimally-coordinated and harmonized with SINAMICS drives and SIRIUS motor starters
- RFID nameplates for quick identification

Drives

SINAMICS — one family, one source, all applications

- Globally-accepted and recognized
- One commissioning tool for all SINAMICS drives of all power classes
- Central (IP20) or distributed (IP65)
- Space-saving, machine mount solutions include the SINAMICS G110D or G120D
- Economical solutions include the SINAMICS V20 and SINAMICS G120C
- Communications include PROFINET, PROFIBUS, EtherNet / IP and AS-Interface connectivity
- Capable of energy recovery and savings
- Safety Integrated functions built into the drive
- Simple engineering and commissioning using SIZER and STARTER software tools
- Can be used in the widest range of applications — from basic roller tracks up to multi-axis, high-bay racking units with a high-dynamic performance

www.usa.siemens.com/sinamics
Standard products and systems

More drive for every application

Motor starters

**SIRIUS and SIMATIC ET 200 motor starters**
The best choice when switching, protecting and starting motors
- Complete range of starting types include direct, reversing and soft starters
- From smooth, jerk-free starting — up to extremely high-torque motor starting
- Intelligent monitoring functions including preventive maintenance
- Safety Integrated functions and built-in distributed networking interfaces

**For use in the electrical cabinet**
- Simple contactor overload combinations
- Pre-wired SIRIUS 3RA1 load feeders
- Flexible SIRIUS 3RW soft starters
- Cost-effective SIRIUS 3RA6 compact load feeders

**For use as machine mount devices**
- The SIRIUS M200D motor starter for AS-Interface, PROFIBUS and PROFINET is the ideal solution for conveyor technology
- Space-saving motor starters installed into the backplane of distributed SIMATIC ET 200pro I/O
- Especially cost-effective SIRIUS MCU motor starters
- PROFInergy permits transparent energy acquisition and effective energy-saving

Controllers, I/O, software

**SIMATIC S7 controllers and I/O products**
SIMATIC S7 controllers and I/O products offer the functionality of a programmable automation controller (PAC) with the steadfast reliability of a programmable logic controller (PLC).

Only Siemens has more built-in capability within its framework, Totally Integrated Automation (TIA), and shares a core intelligence with over 100,000 automation products.
- SIMATIC modular controllers
- SIMATIC PC-based controllers

**www.usa.siemens.com/controllers**

**SIMATIC ET 200 distributed I/O**
- Ideal for distributed systems in conveyor, sorting and assembly applications
- Space-saving compact or modular form factors

**www.usa.siemens.com/et200**

**SIMATIC software**
- Includes operator control and monitoring systems
- One development environment and one software project for every automation task

**www.usa.siemens.com/tia**
Industrial identification and mechanical sensors

**SIMATIC Ident**

Automatic data acquisition using RFID or 1D / 2D codes fulfills the ever-increasing requirements relating to production and material flow control, asset management, tracking and tracing and supply chain management.

- Industrial RFID systems for reliable and cost-effective identification
- Code reading sensors for application-specific image processing

[www.usa.siemens.com/ident](http://www.usa.siemens.com/ident)

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Industrial PC

**SIMATIC IPC**

Reliable industrial PCs based on our Siemens designed motherboards are equipped with powerful Intel processors for quickly processing large amounts of data. They offer simple networking options and a high system availability. SIMATIC IPCs are available in various formats and with different levels of functionality:

- Wide selection of Rack PC, Box PC or Panel PC for every application need
- SIMATIC monitors and thin clients – for distributed operator control/visualization
- Specialty devices to meet special requirements, e.g. Panel PCs in IP65, in stainless steel, “Ex” certification and customized versions

[www.usa.siemens.com/ipc](http://www.usa.siemens.com/ipc)
Standard products and systems

More drive for every application

Operator control and visualization

SIMATIC HMI

The human machine interface (HMI) links the automation environment with the demands and requirements of the operator. SIMATIC HMI offers an extensive portfolio of innovative, as well as cost-effective products, for a wide range of operator control and visualization tasks:

- Simple operator panels with function keys
- Compact panels for operator control using a touchscreen and / or function keys
- Mobile operator devices, also for wireless use via IWLAN including safety functionality
- Flexible and scalable SCADA system for process visualization
- Specialty HMIs to meet demanding requirements, for example, displays in IP65, in stainless steel, “Ex” certification and customized versions

www.usa.siemens.com/simatic-hmi

Communication

SIMATIC NET

All machines in a plant should interact smoothly with one another. This is achieved through open, transparent communication, which not only takes place at the production level, but is also integrated into all company levels and business systems. Only then can isolated automation and IT solutions be avoided.

With the products of the SIMATIC NET family, designed for industrial communication, you have the precise technology at your fingertips that is required to:

- Establish a distributed automation system
- Achieve data transparency from the field level, all the way up to the company supervisory level
- Utilize the technologies of mobile communications
- Integrate IT technologies
- Communicate across all bus levels — with PROFINET, PROFIBUS or AS-Interface

www.usa.siemens.com/networking
Safety technology

Safety Integrated safety products
- Unique, complete and seamless safety program from the sensor through the control down to the drives
- Tailored solutions for compact, and up to highly-flexible machines
- Extensive service and support
- Support when applying safety directives

www.usa.siemens.com/safety

Power distribution and power management

SIVACON switchgear, SENTRON switching
- Achieve efficient power distribution within the framework of Totally Integrated Power
- With type-tested SIVACON switchgear and busbar distributors for safe, reliable power transmission and reliable power distribution
- With the versatile and communication-capable SENTRON circuit breakers for reliable protection and switching of plants and loads
- With the SENTRON switch disconnectors that can be simply and quickly installed for reliable disconnection / switching plants and loads, with or without fuses
- With the SENTRON PAC3200 and SENTRON PAC4200 multi-function measuring devices to precisely acquire electrical measured values and energy
- With the innovative power management add-ons SIMATIC PCS 7 powerrate and SIMATIC WinCC powerrate for transparency and to monitor power distribution and costs

www.usa.siemens.com/powerdistribution
Conveyor technology references

Airport logistics and baggage handling —
integrated drive and automation technology

The challenge  With increased traffic and new airlines continually arriving on the scene, the rapidly growing aero industry places the highest demands on infrastructure and logistics — and on all of the associated technologies. Major airline hubs typically have a large number of gates, a high passenger volume and a high transfer quota. Whether short or long transfer times, there is demand for fast and high-performance baggage handling systems with high-capacity and precise sorting capabilities.

The solution  At the center of this solution, integrated drive systems from Siemens ensure reliable baggage handling and state-of-the-art technology designed for the industry.

After a piece of luggage has been checked-in and a corresponding barcode has been attached, it is then transported on an RFID-supported conveyor belt system to the Hold Baggage Screening (HBS) system. Moving at over 32 feet per second, the baggage is screened per specified safety regulations and then forwarded using a tray conveyor system. The trays allow baggage to be moved without subjecting it to excessive wear at especially high speeds. Baggage is then routed to the aircraft loading station via the sorter and slides.

All of this means that the baggage handling system places high demands on the drives that power them. To comply with these high demands, Siemens high-performance drive solutions combine low noise, high-torque geared motors with the matching drives or intelligent motor starters to handle 3000 starts-per-hour. The motors are linked to the central control of the baggage handling system via AS Interface and PROFIBUS. To conserve energy, the conveyor segments only operate when they are actually needed and the drives respond quickly and appropriately to the associated sensor signal inputs. In addition, the innovative power management add-on SIMATIC WinCC powerrate, in conjunction with the SENTRON PAC3200 and SENTRON PAC4200 multi-function measuring devices, ensure transparency and monitor the power distribution costs.

The advantages  The innovation and testing center, located in Fürth, Germany, proves how modern airports can efficiently lower their overall power consumption while simultaneously increasing their capacity. This solution is suited for all major airports seeking to prepare for increased passenger volumes and higher energy conservation requirements in the near and not too distant future.

Whether products, special system components or for the complete project, Siemens can leverage its decades of experience and competence in this area. They include: Hong Kong, Dubai, Munich, Seoul and Sydney.

As the comprehensive and innovative partner to these airports and more, Siemens understands what’s important — both today and tomorrow.
Distributed automation architecture shifts transmission assembly into high gear

The challenge  A Detroit-based automaker needed a turnkey modular manufacturing system capable of producing two types of front wheel drive transaxles. One transaxle type is a traditional clutch / planetary front-wheel drive unit; the other is a transaxle for hybrid vehicles. The manufacturing system had to be capable of producing a batch size of one with any product mix, and it needed flexibility to meet future manufacturing requirements.

The solution  Kuka selected a Siemens distributed automation architecture that enables the customer requirements for modular manufacturing. Every line segment and every station — whether manual or automatic — have these criteria in common:

- Each have their own automation system
- All integrate real-time control, safety and communication
- All communicate via the PROFINET protocol on an Ethernet network
- All integrate into a distributed architecture

The advantages  With the new automation system, Siemens didn’t have to pull wires and it didn’t have to re-terminate when it re-assembled at the site. This modular system design, with its distributed control plug-and-play architecture, saved about 60% of the installation time — a significant benefit for any OEM company. Additional time-savings were achieved during commissioning. When the system sections were put back together at the customer’s site, the automation components communicated instantly via PROFINET. Virtually everything worked right away, and had a node not responded correctly, the PROFINET network showed exactly where it was and what was wrong.

Modernizing conveyor technology optimizes truck production at IVECO Magirus

The challenge  While modernizing both of their truck assembly lines at their plant, Iveco wanted to upgrade the outdated contactor controls and drive system, and bring them up to state-of-the-art technology. Both of these production lines for 14-ton trucks and larger are roughly 1,600-feet long and divided into three sections. The conveyor must be able to run at variable speeds of approximately 1.5-feet-per-minute and 4.5 feet-per-minute.

The solution  Siemens helical and bevel helical geared motors, with 5100 Nm or 3000 Nm respectively, are operated using MICROMASTER 440 drives. These are linked to the SIMATIC S7-400 PLC automation system via PROFIBUS DP. Every sensor signal is collected at several stations of the distributed SIMATIC ET 200S I/O and transferred to the control or to the higher-level SIMATIC WinCC SCADA system. The 56 Emergency Stop switches distributed widely throughout the plant are connected to ASIsafe using safety K45 AS-i I/O modules.

The advantages  The comprehensive modernization of the drive and control technology resulted in a dramatic increase in plant availability — and with it, a jump in overall productivity and efficiency. In addition to the production area, the benefits especially extended to the maintenance of the assembly line networks. Previously, there were approximately 30 to 40 disturbances registered every day — today, there are only between five and six — and since this low number of incidents is now consistently and automatically logged in the process control system, it is possible to isolate and eliminate any recurring problems in the future.
Conveyor technology references

Innovative configuration and visualization in glass production at Rexam in Nienburg, Germany

The challenge  Rexam Glass produces more than 300,000 tons of glass annually at its Nienburg facility. In continuous production, after coating, glass bottles are transported to buffer sections and tables, which can buffer ongoing production for up to 20 minutes in the event of a disruption. However, Rexam did not want to use this option too often. Afterall, a company’s profitability rises and falls with the increased availability of its production facilities.

The solution  A crucial element of the comprehensive modernization measures — carried out on six production lines at the cold end — is a conveyor system that is approximately 3,300-feet long and equipped with 220V converter-based single-motor drives.

This solution was developed by the Miprotek company. It features especially user-friendly operator control-based upon the test-proof and heat-resistant SIMATIC PC 670 panel with IP65 degree of protection. A PLC-based conveyor concept developed by Miprotek ensures smooth operation. A SIMATIC S7-315-2DP PLC is installed on each line — it sets the speed and individual setpoint values for the various drives; reads out the updated, current actual values; and monitors, limits and compiles important process data. Furthermore, intelligent configuration and visualization software ensures maximum transparency in every process step. This software is based upon Visual Basic scripts that were implemented in ProTool / Pro.

The advantages  While the SIMATIC PC 670 panel ensures trouble-free visualization, ProTool / Pro makes it much easier to program the installed drives. These drives are largely pre-configured, meaning that the ProTool / Pro user interface was easy to transfer to all six production lines at the cold end. This reduced the engineering costs by approximately 20%.

Modular electric overhead conveyor systems

The challenge  The automotive industry has always been the pacesetter for automation. With standardized automation and drive technology, as well as a patented suspension concept (URC, Universal Railguided Conveyor), Siemens created a uniform modular solution for electric monorail conveyors that sets new standards for overall costs, energy consumption, planning and commissioning. The modular system is based on Totally Integrated Automation (TIA) and comprises the monorail conveyor suspension and rail systems, including points and other elements such as a setting station, a maintenance jack, a stationary suspension rack opener and closer, and a 4-mast lifter. The modular system is designed for useful loads of up to 2.5 tons with overload capability.

The solution  The central conveyor components include SINAMICS G120D drives. They can be operated over a wide voltage range (380–500V AC) at 50 or 60 Hz; all variants enable the feedback of electrical energy. This eliminates braking resistors, which positively effects energy balance, lowers costs, and reduces space requirements and weight. The G120D is a modular drive with compatible power modules as well as a uniform, plug-on control unit. Safety Integrated serves to control the monorail vehicles. Every system is equipped with a failsafe SIMATIC F-CPU which takes over complete control of the sub-system.

The advantages  The modular system for electric monorail conveyors shows that only uniform, mechatronically-based engineering leads to an optimum system solution. The heart of the drive technology, the SINAMICS G120D, offers convenient feedback, elimination of braking components, as well as encoderless safety functions in accordance with EN 60204. An extremely efficient and compact drive package was created in combination with Siemens geared motors.
More efficiency in conveyor technology

Totally Integrated Automation
With Totally Integrated Automation (TIA), Siemens is the only manufacturer that can offer an extensive, integrated and unified range of products and systems for every automation task in every industry. Siemens solutions are perfectly-tailored to meet your requirements — from planning, through operation, and up to modernization — the unified approach to our products and systems guarantees your investment to the highest degree.

Totally Integrated Automation Portal
With its Totally Integrated Automation Portal (TIA Portal), Siemens has redefined engineering. The TIA Portal is, by far, the most intuitive, efficient and proven engineering framework, enabling you to optimally design all of your automation processes from a single computer and start driver screen along the entire value supply chain. From development, through installation and commissioning, up to maintenance and expanding automation systems — the framework reduces engineering time and costs. The TIA Portal perfectly supports STEP 7, WinCC and StartDrive.

Safety Integrated for automation and drives
Within the scope of Safety Integrated, safety-related functions are directly integrated into standard Siemens products. Within in the scope of Totally Integrated Automation (TIA), the individual products and safety technology can be integrated into the standard automation in a unified and user-friendly way.

Drives and motion control
Within Siemens drives and motion control expertise, flexibility and capability have few limits — capability ranging from fractional to high horsepower, and flexibility from basic speed functionality to multi-axis interpolated positioning. The Siemens family of drives and motion control is unmatched within the material handling industry and unparalleled across industries. Seamless integration of safety and bundled within the Totally Integrated Automation structure, drives and motion control are made easy and have become an inherent part of the system.

Service without limits
Whether shipping the drive as you’re precisely ordered — or whether delivery, installation, mounting, commissioning or even maintenance — our experts are always there for you — locally and in over 130 countries around the globe. This means that you benefit from short delivery times thanks to optimized Siemens logistics and production processes.
This brochure contains only general descriptions or performance features, which do not always apply in the manner described in concrete application situations or may change as the products undergo further development. Performance features are valid only if they are formally agreed upon when the contract is closed.

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