



LARGE DRIVES APPLICATIONS

Motors for every demand

The SIMOTICS HV family
[siemens.com/simotics-hv](https://www.siemens.com/simotics-hv)

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information



SIEMENS



Maximum plant availability, low operating cost, short time to market

There are good reasons why the SIMOTICS HV family is one of the leading portfolio in the global transnorm motor market. The comprehensive portfolio has the optimum motor for every high-rating drive application and sets new standards when it comes to flexibility, efficiency, time to market and plant availability.

The backbone of your process reliability

We know about the importance of our motors for the reliability of your plant and application. That's why we put every effort into quality and testing. The result: an optimized performance, and reliability and availability second to none, also in extreme environments. In addition the use of highly standardized components increases plant availability through simplified spare parts management. And: SIMOTICS HV motors are now integral part of SIDRIVE IQ, the digital platform for optimizing your drive systems. Thus SIMOTICS HV motors take advantage of digitalization to enter into a new dimension of availability, serviceability, productivity, and efficiency.

Maximum flexibility

Our motors are available in virtually any imaginable configuration and offer power ranges up to 100 MW and higher, speeds from 7 to 15,900 rpm and torques up to 2460 kNm. When you select your transnorm motor from our HV motor lineup, you gain considerable flexibility. This includes several cooling systems and degrees of protection as well as suitability for use in aggressive atmospheres and in potentially hazardous areas.

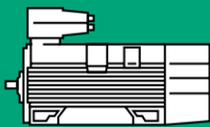
Low operating costs

Energy usage has an especially significant impact on the operating costs. To keep these low, SIMOTICS HV motors have an especially low-loss design: in some instances, they have efficiencies close to 99%. Beyond this, the low-maintenance concept reduces maintenance costs to a minimum.

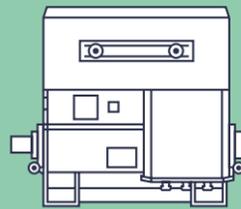
Shorter project execution times

SIMOTICS HV helps you cut on lead times with standardized production and test processes. The integration into standard tools such as Drive Technology Configurator shortens project planning times, and the tools also supports in configuring system components. However, SIMOTICS HV motors themselves play a role in significantly speeding up project execution: Their delivery times are extremely short and their small dimensions and low weight for the particular power rating, coupled with the installation-friendly design means that they can be very quickly integrated in the plant or system.

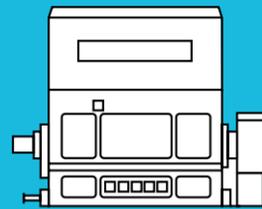
SIMOTICS HV
compact motors



SIMOTICS HV
modular motors



SIMOTICS HV
high-power motors



SIDRIVE IQ – our holistic solution and service to IIoT for drive systems

SIDRIVE IQ is an integral component of SINAMICS drives. SINAMICS drives are equipped with a connectivity module (SINAMICS CONNECT 500) so that they can be easily integrated into our digital, cloud-based solution.

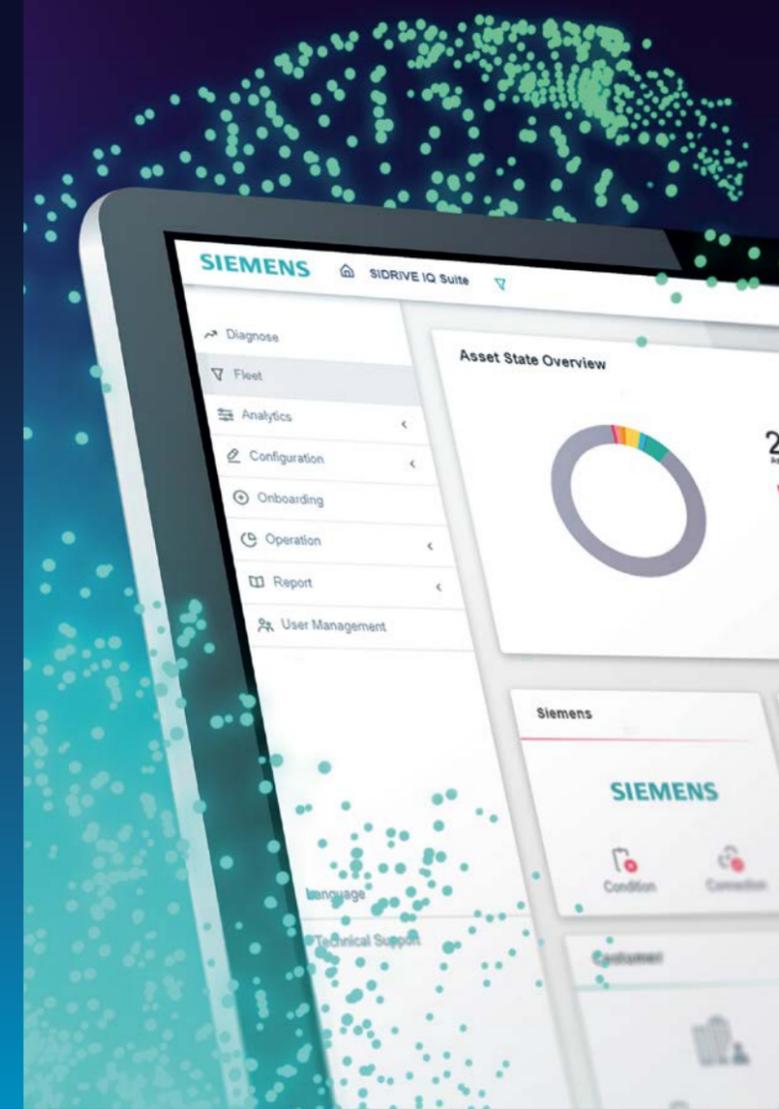
Condition data such as drive information, historic logs, parameters and fault logs are evaluated, processed and sent to our cloud for analysis. In addition to that it can be analyzed with our digital platform SIDRIVE IQ Suite. With SIDRIVE IQ Suite users can track and visualize various drive system conditions, show trends, error messages and generate reports.

The goal of SIDRIVE IQ is to:

- Boost your productivity
- Reduce service and maintenance costs
- Increase availability
- Shorten unplanned downtimes

SIDRIVE IQ – the holistic solution and service to IIoT for your drive system

[siemens.com/sidrive-iq](https://www.siemens.com/sidrive-iq)



SERENITY. SECURITY. SIDRIVE IQ

Trust every choice.

SIDRIVE IQ



Core Applications and Product Highlights



SIMOTICS HV C

Core Applications

Pumps, fans, blowers, compressors, extruders, agitators, mixers, mills, crushers, kilns, conveyor belt systems, thrusters, winches, refiners, winders etc.

Product Highlights

Revolutionary cooling concept –

Unique power density for minimum space requirements and easy plant integration.

Extremely rugged design –

Maximum reliability even under extreme conditions

Optimized temperature distribution –

Extended service intervals and extreme long lifetime

Variable terminal box position –

Increased flexibility in plants and systems and simplified installation

Minimized noise level –

Reduced noise damping measures and costs on-site



SIMOTICS HV Series H-compact

Core Applications

Pumps, fans, blowers, compressors, extruders, agitators, mixers, mills, crushers, kilns, conveyor belt systems, thrusters, winches, refiners, winders etc.

Product Highlights

Compact construction concept –

Low space requirements and low weight for easy plant integration.

Optimum efficiency –

Low operating cost

Designed for a high degree of reliability –

High plant availability and low service & maintenance cost

Low noise level –

Exceeds most customer and legislated safety requirements



SIMOTICS HV M

Core Applications

Compressors, pumps, fans, blowers, extruders, agitators, mixers, mills, crushers, kilns, thrusters, main propulsion, refiners, rolling mills etc.

Product Highlights

Highest power density – Small dimensions and low weight for simplified handling and easier plant integration.

High stiffness design – Higher reliability and lower vibrations, even under extreme conditions

Very flexible construction concept –

Accurately fitting solutions for the individual applications

Short delivery times and standardized engineering tools –

Simplified selection and configuration, shorter time to market

Noise damping design – Less noise emission and in compliance with governmental laws

Special motors for wide speed range (sub-critical motor design)



SIMOTICS HV Series A-compact PLUS

Core Applications

Pumps, fans, blowers, compressors, conveyors, main propulsion, thrusters

Product Highlights

Focused on features essential for high power, pumps and compressors –

Low lifecycle cost by proven quality.

Rugged design, low wear materials –

Reliable and long service lifetime

Extremely compact design –

Low space requirements, easy plant integration

Flexible regarding number of poles, voltage and cooling concept –

Accurately fitting solutions for the individual application

High-quality coating systems –

High availability even under rough environment conditions



SIMOTICS HV HP

Core Applications

High-power compressors for pipelines. LNG or air separation, IGCC compressors, large pipeline pumps, boiler fed pumps, blast furnace blowers, high-power mixers and extruders, high-power refiners etc.

Product Highlights

Unique grade of modularity and adaptability –

Tailor-made solutions also for a wide range of complex high-power applications.

Optimized baseframe –

High mechanical rigidity, low vibrations, low noise and noise protection

Standardized interfaces –

Fast implementation

Largely standardized components –

Increased plant availability due to fast and easy access to spare parts and optimized serviceability

Efficiency rates of close to 99% –

Low operation cost



SIMOTICS HV Specialized

Core Applications

High-speed compressor drives, injection pumps, rolling mills, mine hoists, mine winders, direct-driven conveyor systems, gearless ring drives for ore mills, gearless drives for excavators etc.

Product Highlights

Specifically optimized to meet specific requirements of very complex applications –

Tailor-made solutions also for extraordinary demands.

Motor Solutions with extreme low speed (7 rpm),

high speed (15,900 rpm) and high torque up to 40,000 kNm are available –

Almost no limits concerning speed and torque

Motor power ratings of 100 MW and more are possible –

Perfect solutions for applications such as all electric LNG plants

Wide range of direct drive solutions – For various gearless applications especially in oil & gas and mining an optimum solution can be provided



SIMOTICS HV ANEMA

Core Applications

Compressors, pumps, fans, blowers, extruders, agitators, mills, crushers, kilns, conveyor belt systems, thrusters, winders, main propulsion, refiners, winders, rolling mills etc.

Product Highlights

Tailored to the customers specifications –

Reduced engineering time and increased reliability.

Maximum availability and efficiency –

Low total cost of ownership

Rugged and low maintenance –

Maximum productivity due to minimum downtimes.

Perfect fulfilment of all NEMA specifications –

Tailor-made motor solution for the American market

Features	SIMOTICS HV C	SIMOTICS HV Series H-compact	SIMOTICS HV M	SIMOTICS HV M Slipring motors	SIMOTICS HV Series A-compact PLUS	SIMOTICS HV HP	SIMOTICS HV Specialized	SIMOTICS HV ANEMA
Differentiating Features	⊕ Revolutionary cooling concept	⊕ High degree of standardization	⊕ High performance with low operating costs	⊕ Designed for heavy starting under rough ambient conditions	⊕ Focused on the essentials	⊕ Extremely flexible concept	⊕ Customer-specific design	⊕ Specific for NEMA standard
	⊕ Best-in-class power density	⊕ Huge installed base	⊕ High power density for a wide range of applications	⊕ Perfect for cement and mining applications	⊕ Proven quality	⊕ Maximum quality and availability	⊕ Tailor-made according to customer requirements	⊕ High performance design
	⊕ Highest degree of flexibility	⊕ Sleeve bearings over the whole range available	⊕ Optimized for converter operation	⊕ Competitive slipring design	⊕ Flexible and robust design	⊕ Efficiency close to 99%	⊕ High speed up to 15,900 rpm in the Megawatt range	⊕ API standard designs



Medium-Voltage Drive Compatibility

No drive or motor is perfect for every application or challenge. In addition to our SIMOTICS HV high-voltage motors portfolio, Siemens also offers you the most extensive portfolio of medium-voltage drives from the SINAMICS family that have been crafted to work seamlessly with our high-voltage motors.

A different drive may be required for each motor depending on the operational requirements, motor type selected and any preference of drive technology. This table should provide you with a basic view of which drives and motors are compatible.

SINAMICS Medium-Voltage Drives	SIMOTICS HV C	SIMOTICS HV Series H-compact	SIMOTICS HV M	SIMOTICS HV Series A-compact PLUS	SIMOTICS HV HP	SIMOTICS HV Specialized	SIMOTICS HV ANEMA
SINAMICS PERFECT HARMONY GH180	●	●	●	●	●	●	●
SINAMICS PERFECT HARMONY GH150			●		●	●	●
SINAMICS GM150	●	●	●		●	●	●
SINAMICS GL150					●	●	
SINAMICS SM120 CM	●	●	●		●	●	●
SINAMICS SM150	●	●	●		●	●	●
SINAMICS SL150					●	●	

Application Compatibility

Below you will find many of our most commonly supported applications, but we are experienced and able to support numerous other low- and medium-voltage applications that are not listed here.

Motor capabilities can differ based on their configurations and the options selected so there may be exceptions to the suitability of the motor assignments listed here.

	SIMOTICS HV C	SIMOTICS HV Series H-compact	SIMOTICS HV M	SIMOTICS HV M Slipring motors	SIMOTICS HV Series A-compact PLUS	SIMOTICS HV HP	SIMOTICS HV Specialized	SIMOTICS HV ANEMA
Pumps	●	●	●	●	●	●	●	●
Fans	●	●	●	●	●	●	●	●
Blowers	●	●	●		●	●	●	●
Compressors	●	●	●		●	●	●	●
Extruders	●	●	●			●		●
Agitators / mixers	●	●	●					●
Crushers	●	●	●	●				●
Mills	●	●	●	●	●		●	●
Gearless mills							●	
Excavators	●	●	●				●	
Conveyors	●	●	●	●	●		●	●
Refiners	●	●	●			●		●
Winders	●	●						●
Kilns	●	●	●					●
Rolling mills	●	●	●				●	
Main propulsion			●	●	●			●
Thrusters	●	●	●	●	●			●
Winches	●	●						●
Boiler fed pumps			●			●	●	●
Large ID fans			●			●		●
Large IGCC compressors			●			●	●	●
Blast furnace blowers						●	●	
Injection pumps						●	●	
Mine winders							●	
High-speed compressor drives							●	
Reciprocating compressors	●		●					
LNG starter / helper							●	





**Published by
Siemens AG**

Large Drives Applications
Vogelweiherstr. 1–15
90441 Nuremberg
Germany

For the U.S. published by

Siemens Industry Inc.
100 Technology Drive
Alpharetta, GA 30005
United States

Article No.: PDL-D-Y10129-01-7600
Dispo 00000 MD 000-000000
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