



SINAMICS för VA & infrastruktur

Översikt: Produkter och tools

2021-05-28

E. Ceder

SIEMENS

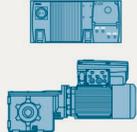
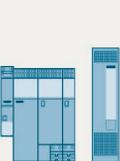
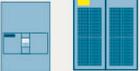
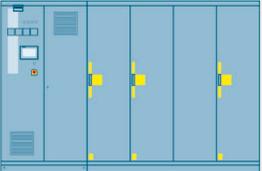
Agenda

- Översikt Sinamics
- Dimensionering Sinamics Selector App
- Demo av SinaSave
- Länkar & information
- Frågor & diskussion



Sinamics

Komplett och omfattande produktportfölj

Low voltage AC										Direct current DC	Medium voltage AC			
Basic Performance		General Performance							High Performance		For basic applications and demanding applications	For demanding applications with high power ratings		
														
SINAMICS V20	SINAMICS V90	SINAMICS G120C	SINAMICS G120P/G120P Cabinet	SINAMICS G120	SINAMICS G110D/G120D/G110M	SINAMICS G130/G150	SINAMICS G180	SINAMICS S110	SINAMICS S120/S120M	SINAMICS S150	SINAMICS DCM	SINAMICS GL150/SL150	SINAMICS SM120 CM / SM150/GM150	SINAMICS GH150/GH180 (cell-based)
V/f control	Servo control (speed and torque) with encoder	V/f control, vector control without encoder		V/f control, vector control with/without encoder	V/f control (G110D), sensorless vector control (G120D / G110M)	V/f control, vector control with/without encoder	V/f control, vector control with encoder	Servo control	V/f control, vector control with/without encoder, servo control with/without encoder		Speed control, torque control	V/f control, vector control		
0.12–30 kW	0.05–7 kW	0.55–18.5 kW	0.37–630 kW	0.55–250 kW	0.37–7.5 kW	75–2,700 kW	2.2–6,600 kW	0.55–132 kW	0.55–5,700 kW	75–1,200 kW	6 kW–30 MW	2.8–85 MW	0.8–31.5 MW	0.15–28.5 MW
Pumps, fans, compressors, conveyor belts, mixers, mills, spinning machines, textile machines	Handling machines, packaging machines, automatic assembly machines, metal-forming machines, printing machines, winders and unwinders	Pumps, fans, compressors, conveyor belts, mixers, mills, extruders	Pumps, fans, compressors, building technology, process industry, HVAC	Pumps, fans, compressors, conveyor belts, mixers, mills, extruders, single-axis positioning applications in plant and machinery construction	Conveyor technology, single-axis positioning applications (G120D)	Pumps, fans, compressors, conveyor belts, mixers, mills, extruders	Sector-specific for pumps, fans, compressors, conveyor belts, extruders, mixers, mills, kneaders, centrifuges, separators	Single-axis positioning applications in plant and machinery construction	Production machines (packaging, textile and printing machines, paper machines, plastics machines), machine tools, plants, process lines and rolling mills, ships and test stands	Test stands, cross cutters, centrifuges	Rolling mill drives, wire drawing machines, extruders and kneaders, cable railways and lifts, test stand drives	Pumps, fans, compressors, mixers, extruders, mills, rolling lines, mine hoist drives, excavators, test stands, ships' drives, conveyor belts, blast furnace blowers	Pumps, fans, test stands, ore conveying systems, ore mills, compressors, excavators, marine drives	Pumps, fans, compressors, mills, crushers, conveyor systems, retrofit projects
Engineering tools:										Drive Technology Configurator – selection and configuration SIZER – simple planning and engineering STARTER and SINAMICS Startdrive – for fast commissioning*, optimizing and diagnostics				

Sinamics

Komplett och omfattande produktportfölj

Sinamics V



Sinamics G

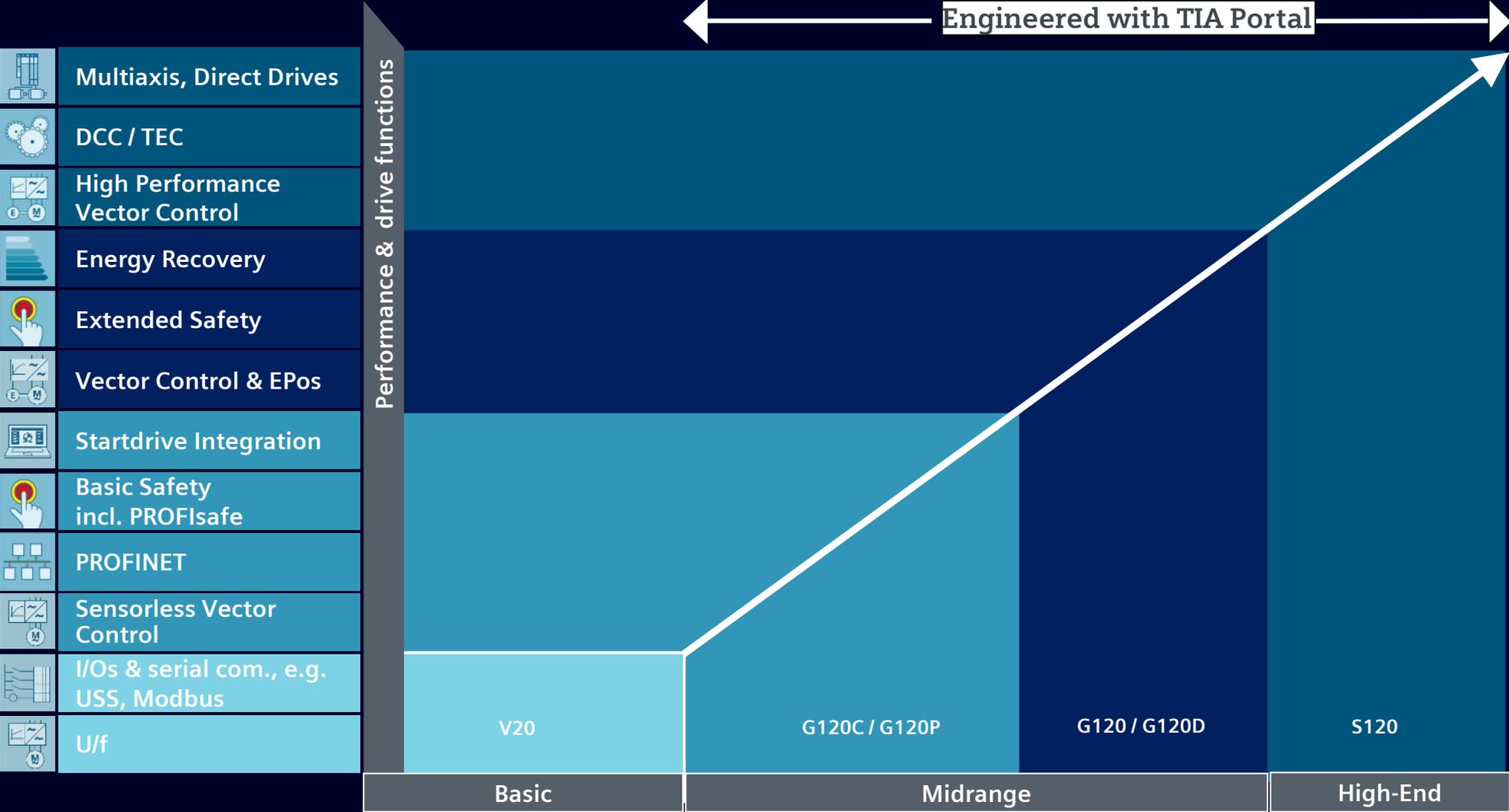


Sinamics S



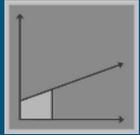
Sinamics

Komplett och omfattande produktportfölj



Standard Performance Converters

SINAMICS V20 – Cost-effective, reliable and easy-to-use



Continuous Motion
Basic Performance



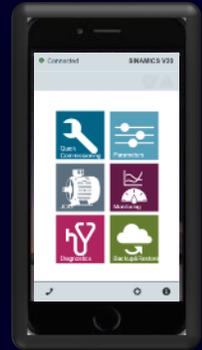
Moving



Processing



Pumping, Ventilating
Compressing



✓ Easy to install

- Flexible mounting
- EMC integrated filter (C1) for 1AC 230V
- Compact design

✓ Easy to use

- Smart Access Webserver Module (SAM)

✓ Easy to save money

- Eco and hibernation modes
- High and low overload modes



1AC (230V) 0.12 – 3kW
3AC (400V) 0.37 – 30kW



Integrated Braking
Chopper¹



USS
Modbus RTU

1) Only for frame size FSD/FSE, external braking chopper available for FSA, FSB and FSC

Standard Performance Converters

SINAMICS G120C – Versatile, user-friendly and compact



Continuous Motion
Medium Performance



Moving



Processing



Pumping, Ventilating
Compressing



Energy Efficient

Energy-saving functions as
ECO-mode



Compact frame size and side-by-side installation



TIA - Totally Integrated Automation



Safety functions

Safe Torque Off (STO)
integrated as a standard



3AC 0.55 – 132kW
(400V)



Integrated Braking
Chopper



PROFINET / Ethernet/IP
PROFIBUS DP
USS / Modbus RTU

Standard Performance Converters

SINAMICS G120 – Multifunctional, combinable and safe

-  Continuous Motion
High Performance
-  Discontinuous Motion
Basic Performance
-  Moving
-  Processing
-  Pumping, Ventilating
Compressing
-  Positioning



PM240-2
PM250

+



CU230P-2
CU240E-2
CU250S-2

+



BOP-2
IOP-2
SAM

=



-  **Technology**
Safety integrated basic and extended.
-  **Modularity**
Lower stock inventory and simple, fast service
-  **Interfaces**
Full TIA integration, building systems, third-party systems
-  **Energy efficiency**
Energy recovery and saving mode, etc.
-  **Ruggedness**
Reliable operation and a long service life



1/3AC 0.55 – 250kW
(200V, 400V, 690V)



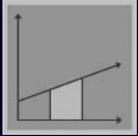
Int. Braking Chopper
(PM240-2)
Energy recovery
(PM250)



PROFINET / EtherNet/IP
PROFIBUS DP
USS / Modbus RTU
CANopen

Industry Specific Converters

SINAMICS G120X – The specialized solution for Pump & Fan applications



Continuous Motion
Medium Performance



- ✓ **Industry 4.0**
Realized via SAM and SINAMICS connect 300
- ✓ **Simple setup** and optimized user interface
- ✓ **Grid friendly**
Integrated full **DC-link choke** assures reduced harmonics
- ✓ **EMC compliant** and **long cable lengths** without output chokes
- ✓ **Robust and reliable**
3C3 coating, and Safety functions STO SIL3 HW

 **1/3AC (200V) 0.75 – 55kW**
3AC (400V) 0.75 – 560kW
3AC (690V) 3 – 630kW

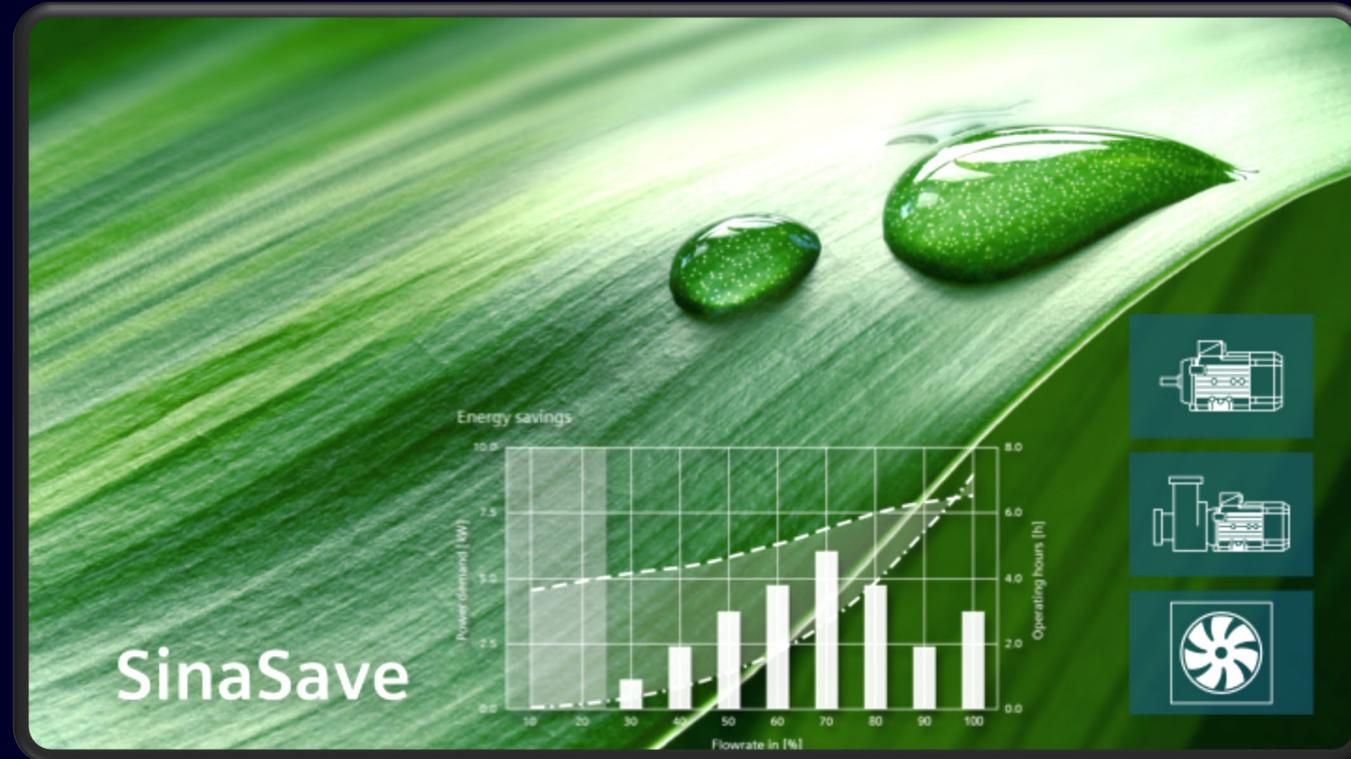
 **Integrated DC-link choke**

 **PROFINET / EtherNet/IP**
PROFIBUS DP
BACnet MS/TP / USS /
Modbus RTU

Sinamics Selector App: 30kW pumpdrift 690V PB STO



SinaSave demo: Investing 690V 30kW pump, DOL eller FRO?



SinaSave

Länkar & information

- ✓ <http://www.siemens.com/>
- ✓ <http://www.siemens.com/sinamics>
- ✓ <https://www.sinasave.siemens.com/>
- ✓ <https://support.industry.siemens.com/>
- ✓ Teknisk supporten i Sverige nås på telefon 0200-28 28 00
- ✓ Internetbutiken IndustryMall nås via <https://mall.industry.siemens.com/>



I Diskussion & frågor

