

**VACON**<sup>®</sup>

DRIVEN BY DRIVES



**VACON<sup>®</sup> NXP SYSTEM DRIVE**  
**COMPLEX SOLUTIONS MADE SIMPLE**



## VACON - THE BEST PARTNER FOR RELIABILITY AND PERFORMANCE

Customers in heavy industries, such as Marine, Metals and Pulp & Paper, need drive systems that excel in terms of reliable performance. If you can rely on your system, it leaves you with more time and money to spend on optimizing the rest of the application. Vacon recognizes this, which is why we've been at the forefront of the drive systems business for the past twenty years.

You can now be sure to receive a drive system that is unmatched in terms of quality and ready in a shorter space of time than ever before. That's because we have changed our production approach to bring it into line with what customers are after. VACON® NXP System Drive ensures that you receive an excellent level of quality and service, each and every time.

People – partners and employees alike – are what make Vacon. Nowhere is this truer than in the system drives business. These kinds of large-scale projects often feature many different components which are reliant upon communication on both sides to avoid technical problems anywhere down the line.

### DRIVEN BY DRIVES

Our ability to work around the challenges our customers face everyday, regarding efficiency and cost savings, is

the reason why we have reached where we are so quickly. As a company that's focused 100% on AC drives, we live by their performance. By choosing Vacon, you can be sure to receive a top-class drive system – nothing else will do. We also won't compete with system integrators for projects, unlike many other drive suppliers. This enables an atmosphere of mutual trust with our network of system integrators and end-users.

### COMPLEX SOLUTIONS MADE SIMPLE

It's essential that you receive a solution with a level of quality that's as consistent as it is excellent. VACON® NXP System Drive provides complex solutions which are simplified through standardization, resulting in a product that will easily integrate into the process. This doesn't prevent you from getting the exact solution you need – we can tailor some elements of the system in order to meet your requirements.





## WHY CHOOSE VACON?



### COST SAVINGS

- Traditionally, the design of a project-based enclosure accounts for up to 35% of the total cost.
- With VACON® NXP System Drive, this is reduced to around 5%.



### 100% FOCUS ON DRIVES

- We concentrate on drives so you can concentrate on the rest of the application.
- Vacon is always a non-competing partner for system integrators on projects.



### QUALITY AS STANDARD

- Standardized and pre-tested solutions.
- We support our customers by supplying them with complete drive systems.



### PROVEN TRACK RECORD

- We have been producing industry-leading AC drives since 1993.
- VACON® NXP Common DC Bus technology has been the ideal choice for drive systems for a number of years.

# VACON® NXP SYSTEM DRIVE - QUALITY AS STANDARD

## RELIABILITY IS KEY

VACON® NXP System Drive brings what customers need above all else – consistent and reliable quality guaranteed. We excel in delivering verified and tested solutions that combine VACON AC Drives, DC bus components and options. No need to worry about waiting for technical data, documentation or piloting – we've done all that before it reaches your premises.

## QUICK INSTALLATION

Aside from the quality delivered, VACON® NXP System drive is also easy to adapt. Engineered sections slot in alongside each other, allowing you to arrange integrated transport splits to save space. Alternatively, you can add extra transport sections to speed up installation. All larger modules have slide-out mechanics that facilitate setup and maintenance. This also enables late module delivery, which can be helpful if the system is to be installed in a harsh environment. All sections are grouped depending on their functionality, making it possible to plan each installation phase exactly how you wish.

## COST EFFICIENCY

Besides the peace of mind that comes with stress-free installation and setup, you'll also save a lot of time and money. This is because the setup is essentially formulated when you order it, meaning system integrators can get on with designing the rest of the application. The fact that the drive system's setup is uniform also means that it's far easier to provide spare parts.

## SAFETY AND SERVICE MEANS A LONGER LIFECYCLE

A complex and wide-ranging solution is not one you want to have to replace, which is why VACON® NXP System Drive is built to last. One of the cornerstones of Vacon's relationship with our partners is a commitment to drives performance that goes far beyond the point of purchase. Items such as busbar systems and high/low power devices are separated into individual compartments, away from each other. This means that, if things go wrong, the problem is compartmentalized and doesn't cause widespread failure. The fact that VACON NXP System Drive is easy to maintain also makes it safer. Service engineers are immediately familiar with the way the system is set up, meaning they can get straight to the focal point.

## PROVEN AC DRIVE TECHNOLOGY FOR HEAVY INDUSTRY

Still need a reason to choose Vacon? How about the fact that VACON® NXP drives have been leading the way in the industry for the past decade. Aside from frequency converter units, Vacon can also deliver software and common DC bus components, which combine to make your personal solution. VACON® NXP Common DC bus technology has been the choice for our drive system customers for many years already – VACON NXP® System Drive simply ensures an optimal version of this solution, consistently and quickly.

## TYPICAL APPLICATIONS



### Marine & Offshore

- Cranes & Hoists
- Thrusters
- Deck machinery



### Metals

- Metal plane lines
- Melting and casting
- Rolling mill applications



### Pulp & paper

- Conveyors
- Sectional drives
- Debarking drums



## KEY BENEFITS

### Complete drive solutions

- Standardized products which fit all your application needs
- Modules can be delivered closer to start of the operation
- Minimized lifetime cost

### Premium quality

- Industry-leading VACON® NXP & VACON® Common DC bus solutions
- Safe, tested and verified design
- Comprehensive documentation available with each delivery

### Save on time and cost

- Modular design equipped with pull out feature for quick setup & maintenance
- Short setup time
- Easy to train onsite engineers





## VACON® NXP SYSTEM DRIVE CONFIGURATOR

Setting up VACON® NXP System Drive couldn't be easier — our online configuration tool guides you through the whole design process while providing you with the necessary documentation.

### THIS IS ALL ACHIEVED IN A NUMBER OF SIMPLE STEPS:

1

You enter all the standard process data you will need for the drive system to work as you want it to e.g. main network type, frequency, voltage, ambient temperature etc. Once you have selected all these, configuration will start automatically.

2

Now you can play around with the parts to ensure that they meet your needs. The dimensions (height x length x depth) are all listed so that you can ensure the setup fits into the space you have set aside for the system.

3

When everything is setup and is ready to go, VACON® Configurator will automatically provide you with the documentation you need for the initial system setup, including a technical description listing all the specifications.

Login

your logins to access the system

Log in

1

Base options | 2 Cabinets | 3 Summary

Select base option for the project

Mains network type: TN-C	Cabinet type: Rittal (TS8)
Mains voltage: 400V AC	Height: 2300mm
Frequency: 50Hz	Depth: 600mm
Mains max. current: 1500	Cabinet material: Powder coated steel
Busbar system: DC+, DC-, PE	Sheet steel parts inside enclosure: Without coating
Busbar system voltage: 400 VAC	Color: RAL 7035
Busbar system max. current: 630 A	Color (if chosen 'other'):
Short time current I <sub>tk</sub> : 30 kA	Ingress protection of enclosure: IP 21
PE design: 25 %	Protection barriers and covers: IP 00
Busbars and flexibars: (Red) copper	Ambient temperature: 35 °C
	Halogen free wire and ducts: NO
	Mimic diagram: NO
	Type of packing: Wooden pallet
	Application: Industry

2

Base options | 2 Cabinets | 3 Summary

DEMO (1-1)

Control

Search cabinet

ADS\_600 x1

panele\_2000\_auksio(+300p  
tuscio\_ploto)

Incoming power

Outgoing power

System dimensions: Height: 2300 mm, Width: 2800 mm, Depth: 600 mm.

3

Base options | 2 Cabinets | 3 Summary

Project saved successfully  
Project was saved successfully

DEMO (1-1)

Project base options (Edit options)

Technical offer | Price offer

Before make an order check your all parameters because of ORDERED order can't be collable!

Total system price: 0.00 EUR

Make an order

Order status: Opened

Change status: Choose

Mains network type: TN-C	Mains voltage: 400V AC	Frequency: 50Hz	Mains max. current: 1500	Busbar system: DC+, DC-, PE	Busbar system voltage: 400 VAC	Busbar system max. current: 630 A	Short time current I <sub>tk</sub> : 30 kA	PE design: 25 %	Busbars and flexibars: (Red) copper	Cabinet type: Rittal (TS8)	Height: 2300	Depth: 600	Cabinet material: Powder coated steel	Sheet steel parts inside enclosure: Without coating	Color: RAL 7035	Ingress protection of enclosure: IP 21	Protection barriers and covers: IP 00	Ambient temperature: 35 °C	Halogen free wire and ducts: NO	Mimic diagram: NO	Type of packing: Wooden pallet	Application: Industry
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As a user of VACON® NXP System Drive Configuration Tool, you will have your own profile page which lists all your configurations, drafts and technical history. This allows you to easily keep track of your settings so that you don't have to spend time looking around for mislaid papers.

## KEY BENEFITS

- Engineering process is cut to a minimum
- Preferred configurations can be saved in customer profiles
- Prevents human mistakes from occurring during configuration
- Easy and efficient way to try out implementation options

## AVAILABLE SECTIONS

### AUXILIARY DEVICE SECTION (ADS)

The auxiliary device section includes the common line-up controls. This section can be customized for all application and segment needs. There is one ADS size available.

ADS type	Dimensions, W x H x D (mm)
ADS_600	600 x 2000 x 605

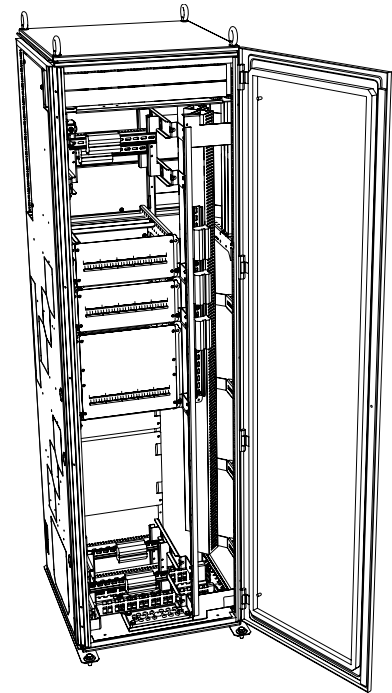
#### As standard the ADS section has the following equipment:

- Control for the circuit breaker with +ICB selected
- Indication of the mains status (fault, pre-charging and ON)
- Auxiliary power supply 24 V, 5 A
- Auxiliary Transformer, 2500 VA 1-phase supply (in bottom of cabinet)
- Terminals for control and monitoring

#### As pre-engineered standard options, we can provide the following:

- Emergency stop CAT0 (+PES)
- Emergency stop CAT1 (+PED)
- Insulation fault sensor (+PIF)
- Arc protection (+PAP)\*
- Cabinet heater (+ACH)
- Cabinet light (+ACL)
- Auxiliary voltage transformer 4000 VA (+AT4)
- Auxiliary voltage 110 VAC (+AT1)
- Auxiliary power supply 24 V, 10 A (+ADC)
- Cabling from the top (+CIT)
- Empty auxiliary 600 mm cabinet with door (+G60)
- UL approved design and components (+NAR)
- Customer specific option (+CSO)

\* +PAP will have sub units in selected sections if needed, please refer to the circuit diagrams.



### MAIN INCOMING SECTION (MIS)

The main incoming section includes the main incoming device. The main incoming device and size is dependent on the required current of the complete line-up.

MIS type	Input current	Dimensions, W x H x D (mm)
MIS_630	630 A	400 x 2000 x 605
MIS_1000	1000 A	600 x 2000 x 605
MIS_1250	1250 A	600 x 2000 x 605
MIS_1600	1600 A	600 x 2000 x 605
MIS_2500	2500 A	600 x 2000 x 605
MIS_3200	3200 A	800 x 2000 x 605
MIS_4000	4000 A	800 x 2000 x 605

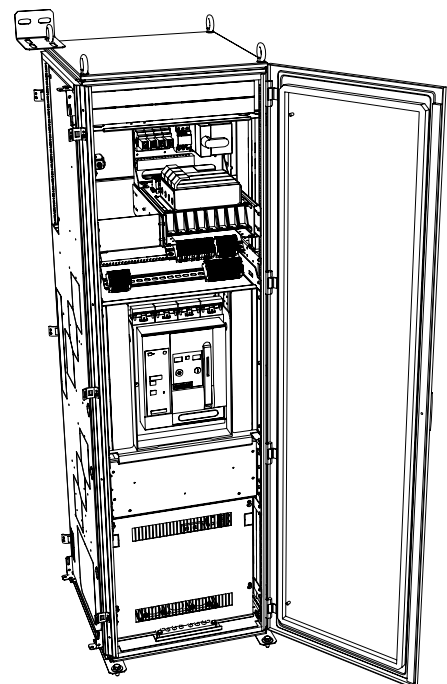
#### As standard the MIS section has the following equipment:

- Main incoming device, Load Switch
- Mains connections
- Emergency disconnect push button
- Digital multi instrument with field bus connection

#### As pre-engineered standard options we can provide the following:

- Air Circuit breaker (+ICB)
- Cabling from the top (+CIT)
- Earth Switch (+ILE)\*
- Current transducers (+ITR)
- UL approved design and components (+NAR)
- Arc protection (+PAP)
- Cabinet heater (+ACH)
- Cabinet light (+ACL)

\* +ILE requires an additional section.





**NON-REGENERATIVE FRONT-END SECTION (NFS)**

The non-regenerative front-end section (NFS) includes one or multiple NXN units from the VACON® product family. The NXN is a non-regenerative supply unit that can be utilized in 6-pulse, 12-pulse, 18-pulse and 24-pulse systems.

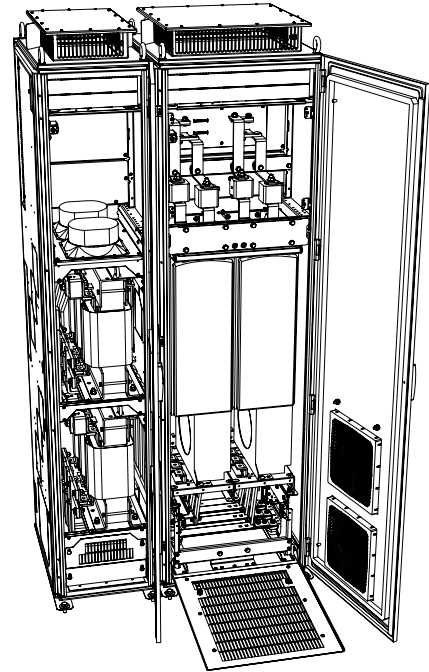
NFS type	Number of NXN units	Dimensions, W x H x D (mm)
NFS_1x	1	400 x 2000 x 605
NFS_2x	2	600 x 2000 x 605
NFS_3x	3	800 x 2000 x 605

**As standard the NFS section includes the following:**

- The NXN unit(s)
- Chokes
- Terminals for control and indication signals
- DC fuses for the Supply Unit
- AC fuses for the filter

**As pre-engineered standard options, we can provide the following:**

- UL approved design and components (+NAR)
- Arc protection (+PAP)
- Cabinet heater (+ACH)
- Cabinet light (+ACL)



**ACTIVE FRONT-END SECTION (AFS)**

The active front-end section includes an LCL-filter and an NXA unit from the VACON® product family. The active front-end provides low THD(I) and several units can be connected in parallel providing full or reduced redundancy.

AFS type	Drive size	Dimensions, W x H x D (mm)
AFS_9	FI9	800 x 2000 x 605*
AFS_10	FI10	800 x 2000 x 605*
AFS_13	FI13	1400 x 2000 x 605*

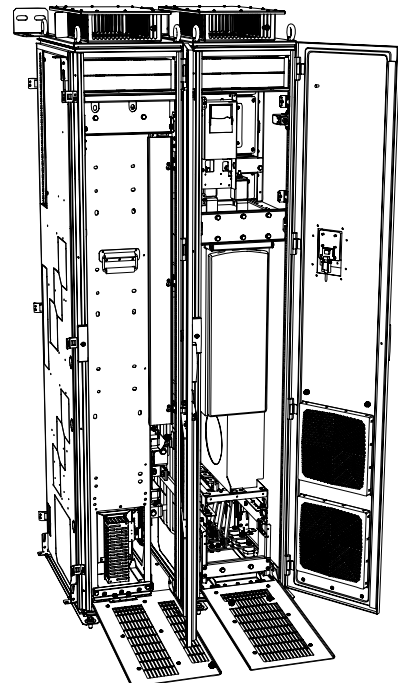
\* Dimensions including LCL

**As standard the AFS sections include the following:**

- LCL Filter
- The NXA unit
- Control unit
- Pre-charging components
- Terminals for control and indication signals
- DC fuses for the Supply Unit
- AC fuses for the filter

**As pre-engineered standard options we can provide the following:**

- UL approved design and components (+NAR)
- Arc protection (+PAP)
- Cabinet heater (+ACH)
- Cabinet light (+ACL)



## AVAILABLE SECTIONS

### INVERTER UNIT SECTION (IUS) DRIVE SIZES FR4-FR8

The inverter unit section (IUS) includes one or several smaller NXI drives from the VACON® product family. The inverter units are all VACON® NXP drives.

IUS type	Drive size	Maximum amount of units per section	Dimensions, W x H x D (mm)
IUS_4	FR4	3*	400 x 2000 x 605**
IUS_4/6	FR4/FR6	2	400 x 2000 x 605**
IUS_7	FR7	1	400 x 2000 x 605**
IUS_8	FR8	1	400 x 2000 x 605**

\* Only option board and fieldbus options

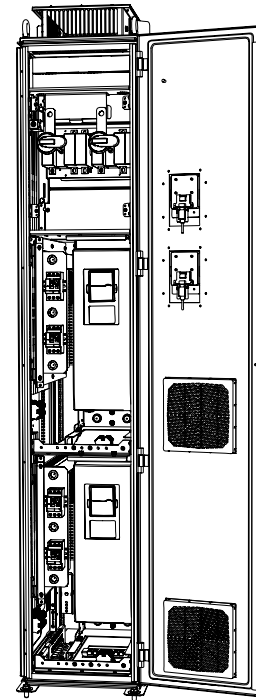
\*\* Top exit +400mm can be shared between two sections

#### As standard the IUS section includes the following:

- Input fuses (DC fuses)
- The NXI drive(s)
- Control box (integrated into the module)
- Terminals for control and indication signals

#### As pre-engineered standard options we can provide the following:

- dU/dt (+ODU)
- Common mode filter (+OCM)
- SINE filter (+OSI)
- Input Switch with charging (+ISC)
- Input Switch, DC-disconnect (+ISD)
- Arc detection (+ADU)
- Motor fan control (+AMF)
- Motor heater feeder (+AMH)
- Mechanical break control (+AMB)
- Section light (+SLT)
- Top cabling (+COT)
- UL approved design and components (+NAR)
- Arc protection (+PAP)
- Cabinet heater (+ACH)
- Cabinet light (+ACL)



## AVAILABLE SECTIONS

### INVERTER UNIT SECTION (IUS) DRIVE SIZES FI9-FI14

The inverter unit section (IUS) includes the largest NXI drives from the VACON® product family. The inverter units are all VACON® NXP drives.

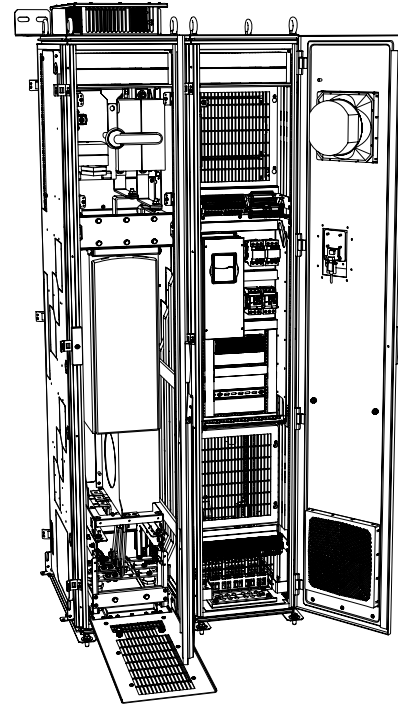
MIS type	Drive size	Dimensions, W x H x D (mm)	Dimensions, W x H x D (mm) with space optimization
IUS_9	FI9	800 x 2000 x 605	600 x 2000 x 605
IUS_10	FI10	800 x 2000 x 605	600 x 2000 x 605
IUS_12	FI12	1000 x 2000 x 605	Not available
IUS_13	FI13	1400 x 2000 x 605	Not available
IUS_14	FI14	2400 x 2000 x 605	Not available

#### As standard the IUS section includes the following:

- Input fuses (DC fuses)
- The NXI drive
- Service platform/module removal
- Outlet for power (for PC etc.)
- Control section and fixed external terminals, 70 pcs

#### As pre-engineered standard options we can provide the following:

- dU/dt (+ODU)
- Common mode filter (+OCM)
- SINE filter (+OSI)
- Input Switch with charging (+ISC)
- Input Switch, DC-disconnect (+ISD)
- Arc detection (+ADU)
- Motor fan control (+AMF)
- Motor heater feeder (+AMH)
- Mechanical break control (+AMB)
- Section light (+SLT)
- Top cabling (+COT)
- UL approved design and components (+NAR)
- Arc protection (+PAP)
- Cabinet heater (+ACH)
- Cabinet light (+ACL)

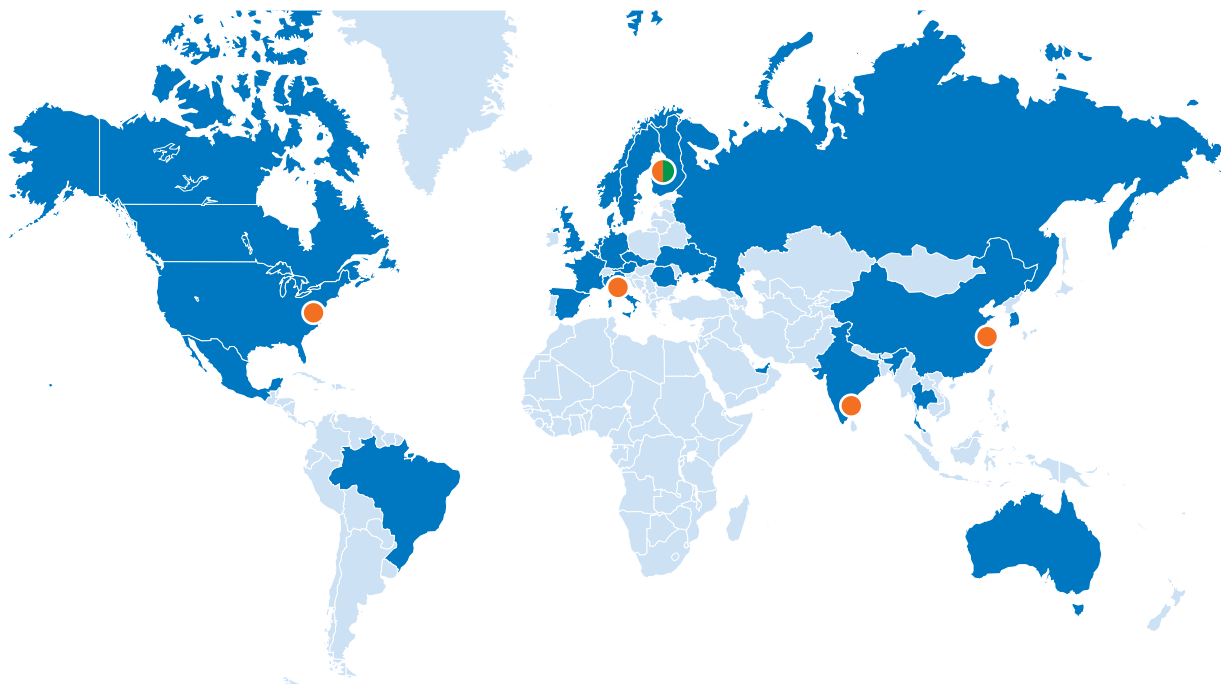




## VACON AT YOUR SERVICE

Vacon is driven by a passion to develop, manufacture and sell the best AC drives and inverters in the world - and to provide customers with efficient product life-cycle services. Our AC drives offer optimum process control and energy efficiency for electric motors. Vacon inverters play a key role when energy is produced from renewable sources. Vacon has production and R&D facilities in Europe, Asia and North America, and sales and service operations in nearly 90 countries.

## VACON - TRULY GLOBAL



● Production and R&D   ● Vacon PLC   ■ Vacon own sales offices   ■ Served by Vacon partner

**MANUFACTURING**  
and R&D on 3 continents

**VACON SALES AND SERVICE**  
in nearly 30 countries

**SALES AND SERVICE PARTNERS**  
in 90 countries



Vacon partner

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