

## Software-free Variable Frequency Drives

for motor control

### Efficient motor control via software-free Variable Frequency Drives (VFD)

#### Challenge

The change of electrical motor speed of 1E systems is an important feature for regulations based on process requirements and required for efficient plant operation.

The qualification of software-based Variable Frequency Drive solutions presents a challenge throughout the entire development process.

Develop a software-free Variable Frequency Drive solution for high power range applications suitable for 1E applications.

#### Solution

A hard wired design for Variable Frequency Drive was developed, tested and qualified for 1E applications.

Framatome's nuclear qualified and software-free Variable Frequency Drives are suitable for 1E applications in nuclear power plants and permit an efficient and safe operation of the connected motors.

The operation e.g. for HVAC fans and pumps in PWR's and BWR's.

Qualification in accordance with all nuclear regulations is possible or already performed:

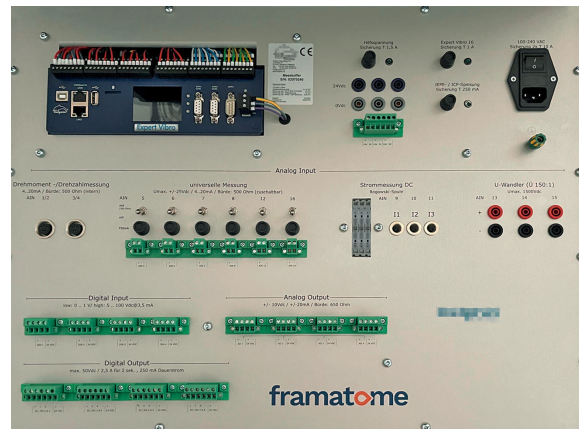
- KTA (performed)
- RCC-E (ongoing)
- TBE / KBE (planned)
- CSA-listed (ongoing)

#### Exemplary equipment / cabinet



#### Mock-up

A mock-up (with exemplary power part) is available and can be provided to simulate on-site conditions and training.



#### Technical information

Power range up to	200 kW	Software-free References:
extendable up to	>1 MW	• Control of BWR and PWR pumps
Voltage up to	400 V	• Control of HVAC motors
extendable up to	690 V	

#### Customer benefits

- High reliability VFD
- Readily qualified VFD
- Energy saving potential for systems and processes
- Reduction in house load
- Customized solution possible

Your performance is our everyday commitment

#### Key figures

Software-free, 1E application, nuclear qualified

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