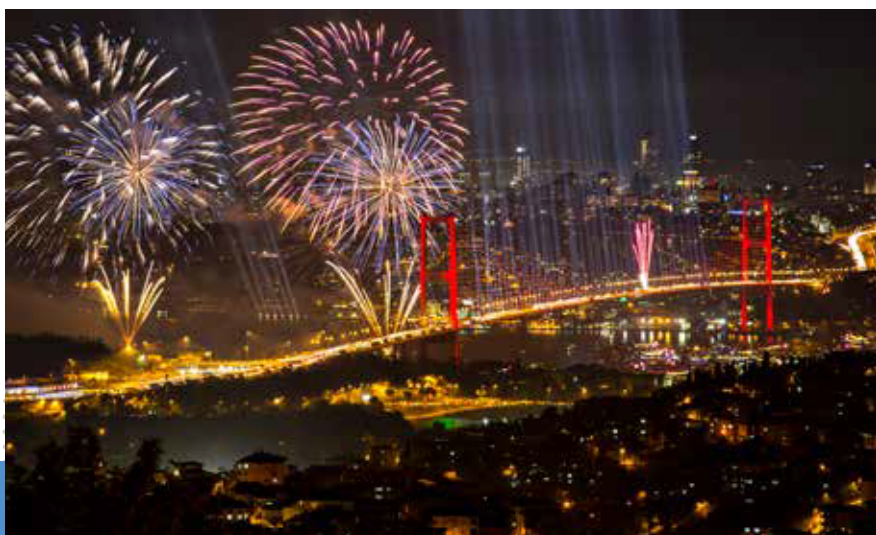


# FORTE



NEW GENERATION  
3-LEVEL TOPOLOGY **UPS**  
10-400 kVA



# FORTE

## SOMETIMES EVERYTHING YOU WANT, YOU GET

High Technology, Energy Saver,  
Smart Design, Environmental  
Friendly, Aesthetic Look...

New FORTE uninterruptible  
power supply series, designed to  
meet the highest expectations.

FORTE offers excellent protection against energy  
quality problems whilst using the latest technologies  
to improve performance and security.

Moreover, its user-friendly interface and touch  
screen LCD panel makes it simple to use and control.



**10-20kVA COMPACT**

**10-30kVA**

**40-60kVA**

**80-100kVA**



## ALL IN ONE

Inform engineers designed the FORTE series new UPS system to ensure the highest efficiency reducing the losses to minimum.

Result: Low operational cost,  
Increased reliability,  
Higher energy quality;  
A smart investment for your company.



**120-250kVA**



**300-400kVA**

# FORTE

## TECHNOLOGY GIANT

### New Generation 3-Level Topology

- FORTE offers ultra high efficiency thanks to the new generation 3-Level Inverter and Rectifier technology. Guaranteeing the lowest environmental impact and high power without compromising economy.
- FORTE with 3 level IGBT rectifier and inverter delivers up to 96% efficiency even at loads as low as 25%, a new power supply experience.

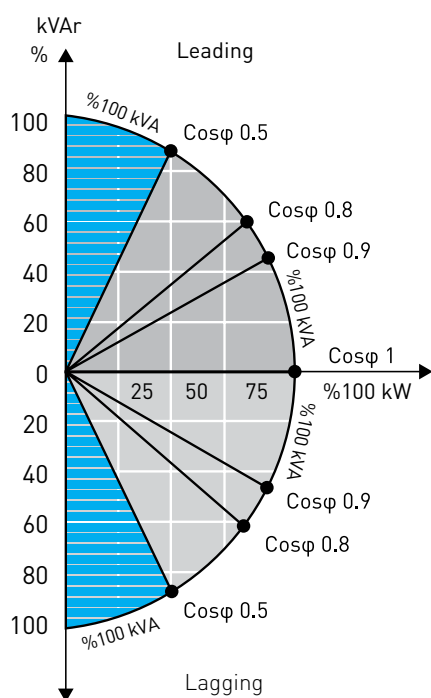
### TECHNICAL SPECIFICATIONS

- 3Level IGBT Rectifier & Inverter Topology
- Full Nominal Power: kW = kVA
- High efficiency: up to 96.8%
- Unity input power factor;  $\text{pf} > 0,99$
- Low input current Harmonics THDi  $< 4\%$
- Increased output energy quality THDv  $< 2\%$
- Transformerless design
- Symmetrical output Power Factor diagram
- Wide frequency and voltage tolerance
- Wide DC range, adjustable battery Qty availability
- Intelligent battery management system
- Parallel connection availability up to 8 units
- Compatibility with regenerative loads



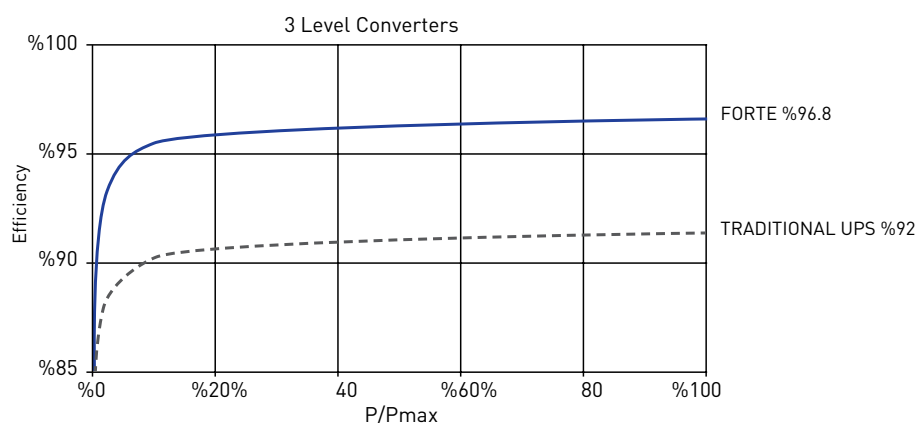
# FORTE

## KEY COMPETENCES



### High Efficiency, Real Economy

- High efficiency of up to 96.8%, reduces the operational cost and provides significant energy saving.
- Continuous Operation, Unique Operational Efficiency, Minimized occupied Installation Area, Maximum Power Delivery, Reduced Infrastructure Material Cost (cable, transformer, generator), Low Cooling Expenses, Optimized TCO (Total Cost of Ownership) features of FORTE guarantees fast return of your investment.



**%25  
MORE POWER**

### High Output Power Factor

- With PF: 1 (kVA = kW), FORTE provides **25%** more active power compared to the traditional uninterruptible power supplies.



# FORTE

LESS  
CONSUMPTION  
FOR A BETTER  
WORLD



Environment Friendly



Eco Mode



PF:1



## Low Carbon Footprint

FORTE's new generation architecture is designed to minimize the demand and consumption of air conditioning system by reducing energy and heat dissipation.

With its Online Mode providing up to %96.8, and Eco Mode up to %98,5 efficiency, FORTE reduces the CO<sub>2</sub> emission of companies.



Up to 96,8%  
efficiency

## CO<sub>2</sub>

Prevents 950 tons  
of carbon dioxide  
emission per year

*inform*

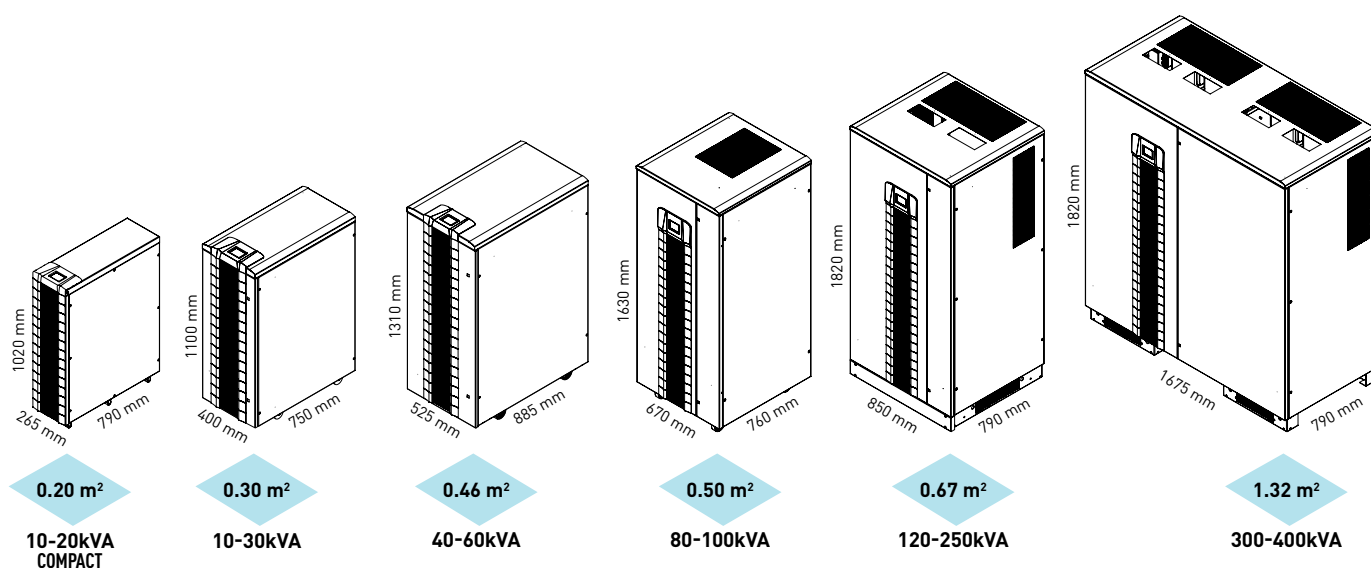


## FORTE BENEFITS

Reduced dimensions and increased power density, provides more power in a smaller area, whilst the higher input power factor and Soft Start technology allow you to choose smaller values of cable, switch, transformer and generators. FORTE plays a more economical and environmental role in your business by reducing energy consumption and carbon emissions with high efficiency.

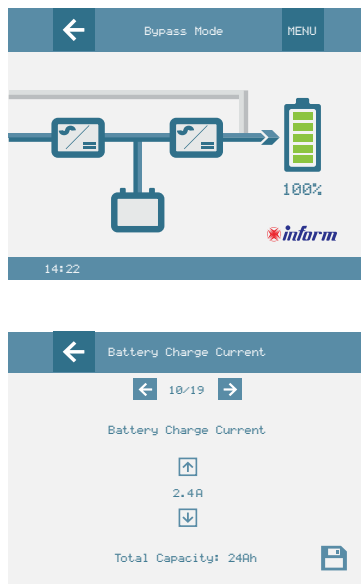
### Smallest Footprint (10-20kVA COMPACT Series)

FORTE Compact model offers optimum occupied space and cost saving with built-in battery availability providing maximum power delivery.





# FORTE MONITORING and MANAGEMENT



"As easy as using a cellphone."

## User Friendly Touch Screen Display

With FORTE's easy-to-use, user-friendly touchscreen panel, it's much easier to access and modify all controls.

After choosing your language among the multiple language options, you can display various measurements, view alarms, set the operation parameters from Setting Menu.

## Intelligent Battery Management

FORTE UPS increases the life time & performance of batteries with its temperature controlled smart charging system. Multi-Functional LCD Panel enables comprehensive control and management on batteries as battery quantity setting, battery cut off voltage determination, charge current selection which help FORTE having flexible structure for different configurations.

FORTE UPS has automatic battery test function where its test period is adjustable from LCD panel and this enables to test the battery status without cutting the energy of connected loads.

FORTE UPS also displays the actual remaining back up time information on LCD display panel.





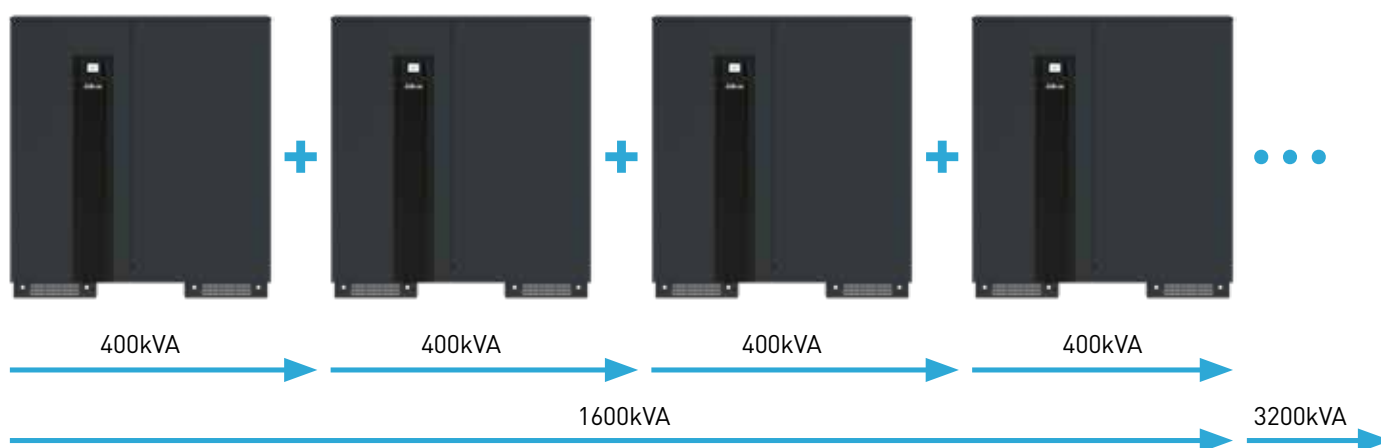
# FORTE

## SCALABLE & FLEXIBLE STRUCTURE

### Parallel Connection Feature: “Power Upgrade” or “Redundant” Operation Modes ( N+1 / N + x )

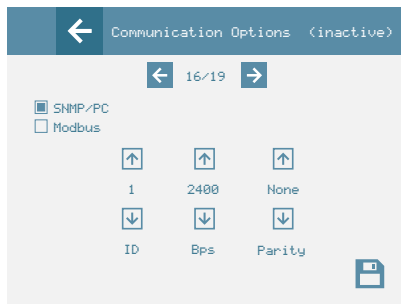
FORTE UPS parallel operation mode can be easily selected from LCD display panel as power upgrade or redundant operation.

FORTE UPS provides maximum flexibility with its on-site parallel connection feature up to 8 units.



# FORTE

## OPTIONS



### Single Input and Dual Input (Optional)

FORTE provides double security for critical loads with a dual input option.

### Isolation Transformer Option

Internal isolation transformer option up to 60kVA on request.

### Static and Maintenance Bypass Feature

FORTE, which provides continuous uninterruptible utility-inverter transfer with static bypass, also provides easy, fast and uninterrupted maintenance with the Maintenance Bypass feature.

### Wide Communication Options

Standard RS232&RS485 MODBUS, EPO & Generator Interface Ports. Optional SNMP (Internal / External) & 4pcs programmable dry contacts.

### Advanced Error Diagnosis

In order to maintain the continuity of the critical business and to determine maintenance need, FORTE constantly checks itself and informs the user.



# FORTE

## TECHNICAL SPECIFICATIONS

MODEL	FORTE 33010	FORTE 33015	FORTE 33020	FORTE 33030	FORTE 33040	FORTE 33060	FORTE 33080	FORTE 33100	FORTE 33120	FORTE 33160	FORTE 33200	FORTE 33250	FORTE 33300	FORTE 33400
Power [kVA]	10	15	20	30	40	60	80	100	120	160	200	250	300	400
Active Power [kW]	10	15	20	30	40	60	80	100	120	160	200	250	300	400
INPUT														
Phase	3Ph+N+PE													
Nominal Voltage	380V / 400V / 415V													
Voltage Range [%100 Load]	[-15%] [+20%]													
Voltage Range [%50 Load]	[-45%] [+20%]													
Nominal Frequency (Hz)	50 or 60													
Frequency Range [Online Mode]	45-65Hz													
Input Current THD*	<4%													
Input Power Factor	0,99													
OUTPUT														
Output Power Factor	1													
Phase	3Ph+N+PE													
Nominal Voltage	380V / 400V / 415V [adjustable via display]													
Static Voltage Regulation @ %100 Linear Load	<%1													
Output Voltage THD* [Online&Battery Mode]	< % 2 (Linear Load)													
Crest Factor	3:1													
Frequency (Hz)	50 Hz / 60 Hz													
Frequency Range	± %0.01 (Battery Mode)													
Overload	Online – Battery Mode: <%125 Load 10 min, <%150 Load 1 min Bypass Mode: <%200 continuous													
Efficiency*	96% [Online], 98,5% [ECO MODE]										96,8% [Online], 98,5% [ECO MODE]			
STATIC BYPASS LINE														
Phase	3Ph+N+PE													
Bypass Voltage Range	380V / 400V / 415V [adjustable via display: -%15 +%12]													
Bypass Frequency Range	47 Hz - 53 Hz [adjustable]													
BATTERY														
Type	Maintenance Free Lead Acid Battery													
Charge Current [A]	Nominal Charge Current x 0,1 [adjustable via display]													
Battery QTY STANDARD	60													
Internal Battery QTY STANDARD	60pcs 12V 7-9Ah													
Battery QTY COMPACT	20 - 52	30 - 52	36 - 52											
Internal Battery QTY COMPACT	Maximum 36 x 12V 7-9Ah													
Battery Protection	Deep Discharge Protection with Auto Cut off, Temperature controlled battery charging													
Battery Test	Standard [Automatic & Manual]													
DISPLAY														
Color Graphic Touch Screen TFT	Load %, Input / Output / Bypass Voltage, Output Power [W & VA], Output Current, Output Power Factor, Battery ± Voltage, Input / Output Frequency, DC Bus ± Voltage, Back-up Time, Internal Temperature													
Event Log	500pcs (details can be checked via display)													
COMMUNICATION														
Interface [Communication Port]	RS232 & RS485 MODBUS & SNMP [optional]													
Dry Contact Signals [ Optional]	4pcs Relays configurable to; " General Alarm", "Input Failure", "Battery Failure", "Output Failure", "Bypass Active", "Output Overload", "High Temperature" Dry contact signals													
Others as standard	Emergency Power Off [EPO], Generator interface													
ENVIRONMENTAL														
Storage Temperature [°C]	-25°C - +70°C [15 - 40°C recommended for longer battery life time]													
Operating Temperature [°C]	0 - 40°C [20 - 25 °C recommended for longer battery life time]													
Relative Humidity	0-%95 (non-condensing)													
Operating Altitude (maximum m.)	1000 m													
Protection Class	IP20													
Standards	EN 62040-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance), EN 60950													
PHYSICAL SPECIFICATIONS	FORTE 33010	FORTE 33015	FORTE 33020	FORTE 33030	FORTE 33040	FORTE 33060	FORTE 33080	FORTE 33100	FORTE 33120	FORTE 33160	FORTE 33200	FORTE 33250	FORTE 33300	FORTE 33400
Dimensions [WxDxH] [cm] - STANDARD	40 x 75 x 110				52 x 89 x 131		67 x 77 x 165		85 x 80 x 185				168 x 80 x 182	
Weight [w/o battery] kg - STANDARD	100	114	116	122	180	202	253	285	405	522	570	600	700	710
Dimensions [WxDxH] [cm] - COMPACT	27 x 80 x 103													
Weight [w/o battery] kg - COMPACT	75	79	81											
OPTIONS														
Parallel Kit, Internal/External SNMP, Split Bypass, Remote Monitoring Panel, Isolation Transformer, Battery Cabinet														

\* May vary depending on UPS power & Load & Environmental Conditions.



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