

TTC Wärtsilä

JOVYSTAR COMPACT S/M/L

PRODUCT LEAFLET



The three-phase UPS systems of the TTC Wärtsilä JOVYSTAR COMPACT series cover a power range of 30 up to 200 kVA. The UPS systems of these series convince by its very high efficiency. An integrated control system is able to choose autonomously the optimal operation mode to ensure the perfect operating status. The intelligent battery-charging mode of the UPS systems can significantly lengthen the battery lifetime.

ONLINE UPS SYSTEMS

As online systems (Double Converter, Continuous Transducers Technology) TTC Wärtsilä JOVYSTAR COMPACT UPS systems protect against system interferences and failures of any kind in a secure and economic way..

HIGH EFFICIENCY BY INNOVATIVE TECHNOLOGY

UPS systems of the type TTC Wärtsilä JOVYSTAR COMPACT S offer performance ranges of 30, 40 and 50 kVA whereas the larger systems of TTC Wärtsilä JOVYSTAR COMPACT M are available in the ranges of 60, 80, 100, 125 and 160 kVA and the biggest systems of type TTC Wärtsilä JOVYSTAR COMPACT L offer 200 kVA. By mounting vertically all functional units only a small footprint is needed. The UPS systems of these series convince by a very high degree of efficiency. They dispose of a PFC rectifier with IGBT technology with a very high input voltage range and a performance factor of $\cos \phi \approx 1$. The performance factor of nearly 1 allows high cost savings when dimensioning the supply lines and possible emergency power systems. The

operation modes Online Mode, ECO MODE (COMPACT S,M,L) and UHE MODE (only COMPACT L) can be chosen manually via a user-friendly display or automatically via an integrated intelligent control system of the UPS. This integrated control optimises the operating mode autonomously and guarantees the best possible operating status of the UPS system. All systems of the TTC Wärtsilä JOVYSTAR COMPACT series are equipped with a self-diagnostic system and provide high dynamic in the event of load steps as well as have an extreme low noise level. The harmonic component (THDI) of the rectifier is below 4% in the rated operation. This low THDI allows a smaller dimensioning of emergency generators than with conventional rectifiers and Thyristor technology. For redundant operation (half-load parallel operation, n+1 operation) or for increased performance a parallel operation of up to 6 UPS systems is feasible without problems. During parallel connection of several systems active current sharing takes place and this takes into account not only the effective power, but also the reactive power during regulating.

TYPES TTC Wärtsilä JOVYSTAR COMPACT

	Dimensions W x H x D [mm]	Weight without / with battery [kg]	Autonomy times [min] (further autonomy times on request)
TTC Wärtsilä JOVYSTAR COMPACT S 30	505 x 1505 x 940	140 / 460	0 - 12* - 22 - 30 - 55 - 150
TTC Wärtsilä JOVYSTAR COMPACT S 40	505 x 1505 x 940	150 / 470	0 - 9* - 15 - 24 - 35 - 110
TTC Wärtsilä JOVYSTAR COMPACT S 50	505 x 1505 x 940	190 / 510	0 - 7* - 10 - 20 - 26 - 50
TTC Wärtsilä JOVYSTAR COMPACT M 60	560 x 1800 x 940	250 / 730	0 - 9* - 10 - 13 - 21 - 41 - 79
TTC Wärtsilä JOVYSTAR COMPACT M 80	560 x 1800 x 940	300 / 780	0 - 6* - 7 - 10 - 13 - 26 - 52
TTC Wärtsilä JOVYSTAR COMPACT M 100	660 x 1800 x 940	320	0 - 5 - 8 - 11 - 19 - 39
TTC Wärtsilä JOVYSTAR COMPACT M 125	660 x 1800 x 940	360	0 - 6 - 12 - 29
TTC Wärtsilä JOVYSTAR COMPACT M 160	660 x 1800 x 940	380	0 - 6 - 9 - 19
TTC Wärtsilä JOVYSTAR COMPACT L 200	850 x 1975 x 900	720	0 - 4 - 10 - 14 - 30

*with integrated batteries, the other autonomy times are realizeable with additional batteries and battery cabinets.

TECHNICAL DATA

	COMPACT S	COMPACT M	COMPACT L
Power	30 kVA / 27 kW 40 kVA / 36 kW 50 kVA / 45 kW (cos phi = 0,9)	60kVA/60kW; 80kVA/80kW; 100kVA/100kW; 125kVA/125kW; 160kVA/160kW (cos phi =1)	200 kVA / 200 kW (cos phi =1)
INPUT			
Voltage		Inverter: 3x400V/230V +15 % -20 %	
Phases		three phases (3:3)	
Frequency		50 Hz / 60 Hz ± 5 Hz	
Efficiency		>0,99	
THDI		<4 %	
Number of battery cells		360 / 372	
Battery charging voltage		812 V for 360 cells 840 V for 372 cells	
End-point voltage		620 V for 360 cells / 632 V for 372 cells	
Max. battery charging current	10 A / 8 A / 15 A	50 A	30 A
OUTPUT			
Voltage	3 x 380/220V / 3 x 400/230V / 3 x 415/240V ±1% static load / ±2% static, asymmetrical load / ±5% dynamic load (load step 20 % -->100 % --> 20 %)		
Frequency	50 Hz (60 Hz) / ± 0.001 Hz		
THDI	< 1 % (linear load), < 5 % (non-linear load)		
Overload capacity inverter	<125 % for 10 min, 125 %-150 % for 30 s, >150 % for 10 ms		
Overload capacity bypass	150 % permanent, 1000 % for 1 period		
Efficiency at nominal load			
Online Mode	>93 %	>95 %	>95 %
Battery operation	>96 %	>97 %	>97 %
ECO Mode	>98 %	>98 %	>98 %
UHE Mode	-	-	99%
SETTING			
Protection Degree	IP 20		
Classification	VFI SS 111		
Temperature	UPS: 0°C up to +40°C Battery: 0°C up to +25°C; optimal +20 °C		
Humidity	< 95 % (no condensation)		
Noise Level	<57 dB(A)	<60 dB(A)	65 dB(A)
COMMUNICATION			

All system data can be accessed via an RS 232 / USB interface - optional they can be transmitted via SNMP adapter, Modbus adapter, Profibus or via other bus systems

- **ONLINE UPS SYSTEM**
VFI /Double Converter Technology offers maximum safety for connected consumers/loads
- **HIGHEST PERFORMANCE IN COMPACT DESIGN**
Maximum Output Effective Power (KVA = KW)
- **LOW CURRENT RIPPLE**
and excellent Input Performance Factor
- **MAXIMUM COMPATIBILITY**
for each type of load and power supply
- **PRECISE BATTERY MANAGEMENT**
for maximum battery life
- **INTELLIGENT CONTROL**
The operation modes can be chosen manually or automatically via the integrated intelligent control system of the UPS system.

Fig.1 TTC Wäertsilä JOVYSTAR COMPACT M / S

