

Tied Grid Inverters

4000-5000W

Product Name : **Growatt**
4-5k

Description :

- Maximum efficiency of 97.8% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- MTL – String



Specifications	Growatt 4000TL	Growatt 4400TL	Growatt 5000TL
Input data (DC)			
Max. DC power	4200W	4600W	5000W/5200W*
Max. DC voltage	580V	580V	580V
Start voltage	150V	150V	150V
PV voltage range	100V-580V	100V-580V	100V-580V
MPP work voltage range/ nominal voltage	120V- 580V/360V	120V- 580V/360V	120V- 580V/360V
Full load dc voltage range	250V-500V	250V-500V	250V-500V
Max. input current	20A	20A	20A
Max. input current per string	20A	20A	20A
Number of independent MPP trackers /strings per MPP tracker	1/3	1/3	1/3
Output (AC)			
Rated AC output power	3680W	4200W	4600W
Max. AC power	4000W	4400W	4600/5000W*

Max. output current	16A	21A	22.7A
AC nominal voltage; range	220,230,240V; 180Vac-280Vac	220,230,240V; 180Vac- 280Vac	220,230,240V; 180Vac-280Vac
AC grid frequency; range	50,60H; ±5 Hz	50,60H; ±5 Hz	50,60H; ±5 Hz
Power factor	1	1	1
THDI	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase
Efficiency			
Max. efficiency	97.8%	97.8%	97.8%
Euro weighted efficiency	97.4%	97.4%	97.4%
MPPT efficiency	99.5%	99.5%	99.5%
Protection devices			
DC reverse polarity protection	yes	yes	yes
DC switch rating for each MPPT	yes	yes	yes
Output over current protection	yes	yes	yes
Output over voltage protection- varistor	yes	yes	yes
Ground fault monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Integrated all - pole sensitive leakage current monitoring unit	yes	yes	yes
General Data			
Dimensions (W / H / D) in mm	406/406/192	406/406/192	406/406/192
Weight	21KG	21KG	21KG
Operating temperature range	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F
Noise emission (typical)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)
Altitude	2000m(6560ft) without derating		
Self-Consumption night	< 0.5 W	< 0.5 W	< 0.5 W
Topology	transformerless	transformerless	transformerless
Cooling concept	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65

Relative humidity	95%	95%	95%
Features			
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS485/RS232/Bluetooth / RF/Zigbee/Wifi	yes/yes/opt/ opt/opt/opt	yes/yes/opt/ opt/opt/opt	yes/yes/opt/ opt/opt/opt
Warranty: 5 years / 10 years	yes /opt	yes /opt	yes /opt
Certificates and approvals	CE、G83/1-1	CE、VDE 0126-1-1、DK5940、 G83/1-1、G59/2、RD1663、 EN50438、IEC-62109、ENEL- Guide	

3.8KW-5000W



Product Name : **Growatt 3.6-5k MTL**

Description :

- Maximum efficiency of 97.9% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- Multi MPP controller
- MTL - String
- Bluetooth / RF technology / ZigBee
- Sound control
- Easy installation

Model	Growatt 3600MTL	Growatt 4200MTL	Growatt 5000MTL
Specifications			
Input data(DC)			
Max. DC power	3800W	4400W	5000W/5200W*
Max. DC voltage	600V	600V	600V
Start voltage	150V	150V	150V
PV voltage range	100V-600V	100V-600V	100V-600V
MPP work voltage range/ nominal voltage	120V-600V/360V	120V-600V/360V	120V-600V/360V
Full load dc voltage range	190V-580V	175V-580V	175V-580V
Max. input current of tracker A/ tracker B	10A/10A	15A/15A	15A/15A
Max. input current per string of tracker A/tracker B	10A/10A	15A/15A	15A/15A
Number of independent MPP trackers / strings per MPP tracker	2/2	2/2	2/2
Output (AC)			
Rated AC output power	3600W	4200W	4600W/5000W*
Max. AC power	3600W	4200W	4600W/5000W*
Max. output current	18A	21A	25A
AC nominal voltage; range	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac
AC grid frequency; range	50,60H; ±5 Hz	50,60H; ±5 Hz	50,60H; ±5 Hz
Power factor	1	1	1
THDI	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase
Efficiency			
Max. efficiency	97.6%	97.9%	97.9%
Euro weighted efficiency	97%	97.4%	97.4%
MPPT efficiency	99.5%	99.5%	99.5%
Protection devices			
DC reverse polarity protection	yes	yes	yes
DC switch rating for each MPPT	yes	yes	yes
Output over current protection	yes	yes	yes
Output over voltage protection-varistor	yes	yes	yes
Ground fault monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Integrated all - pole sensitive leakage current monitoring unit	yes	yes	yes
General Data			
Dimensions (W / H / D) in mm	360/510/188	360/510/188	360/510/188
Weight	24KG	24KG	24KG
Operating temperature range	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F	-25°C ... +60°C (-13...+140°F) with derating above 50°C /122°F
Noise emission (typical)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)
Altitude	2000m(6560ft) without derating		
Self-Consumption night	< 0.5 W	< 0.5 W	< 0.5 W
Topology	transformerless	transformerless	transformerless
Cooling concept	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65
Relative humidity	95%	95%	95%
Features			
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)

AC connection	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces:RS485/RS232/ Bluetooth /RF/Zigbee/Wifi	yes/yes/opt/opt/opt/opt	yes/yes/opt/opt/opt/opt	yes/yes/opt/opt/opt/opt
Warranty: 5 years / 10 years	yes /opt	yes /opt	yes /opt
Certificates and approvals	CE、VDE0126-1-1、CGC、DK5940、G59/2、G83/1-1、RD1663、RD1699、EN50438、IEC-62109、ENEL-Guide、AS4777、AS/NZS 3100		

20KW



Product Name : **Growatt 10-20k-UE**

Description :

- DC input voltage up to 1000V
- Maximum efficiency of 98%
- Internal DC switch
- Transformerless
- Compact design
- Multi MPP controller
- MTL - String
- Bluetooth technology
- Sound control
- Easy installation
- Comprehensive Growatt warranty program

Model	Growatt 10000UE	Growatt 12000UE	Growatt 18000UE	Growatt 20000UE
Specification				
Input data				
Max. DC power	10500W	12500W	18700W	20800W
Max. DC voltage	1000V	1000V	1000V	1000V
Start Voltage (并网电压)	350V	350V	350V	350V
PV voltage range	180V-1000V	180V-1000V	180V-1000V	180V-1000V
MPP voltage range/ nominal voltage	300V- 1000V/600V	300V- 1000V/600V	300V- 1000V/600V	300V-1000V/600V
Full load DC voltage range	400V-800V	400V-800V	400V-800V	400V-800V
Max. input current	15A/15A	17A/17A	23A/23A	26A/26A
Max. input current per string	20A	20A	20A	20A

Number of independent MPP trackers/strings per MPP tracker	2/2	2/2	2/3	2/3
Output (AC)				
Rated AC output power	10KW	12KW	18KW	20KW
Max AC apparent power	10KVA	12KVA	18KVA	20KVA
Max. output current	16A	19A	28.6A	32A
AC nominal voltage; range	3/N/PE, 230V/400V 184~275V	3/N/PE, 230V/400V 184~275V	3/N/PE, 230V/400V 184~275V	3/N/PE, 230V/400V 184~275V
AC grid frequency; range	50/60Hz 44-55Hz/54-65Hz	50/60Hz 44-55Hz/54-65Hz	50/60Hz 44-55Hz/54-65Hz	50/60Hz 44-55Hz/54-65Hz
Power factor	0.8leading - 0.8laging	0.8leading - 0.8laging	0.8leading - 0.8laging	0.8leading - 0.8laging
THDi	<3%	<3%	<3%	<3%
AC grid connection type	Three phase	Three phase	Three phase	Three phase
Efficiency				
Max efficiency	98%	98%	98%	98%
Euro-eta	97.5%	97.5%	97.5%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
Protection devices				
DC reverse polarity protection	yes	yes	yes	yes
DC switch for each MPPT	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes
Output AC overvoltage Protection - Varistor	yes	yes	yes	yes
Ground fault monitoring	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes
Integrated all-pole sensitive leakage current monitoring unit	yes	yes	yes	yes
General Data				
Dimensions(W/H/D)	740/440/235 mm 29.1/17.3/9.3 inch	740/440/235 mm 29.1/17.3/9.3 inch	740/520/235 mm 29.1/20.5/9.3 inch	740/520/235 mm 29.1/20.5/9.3 inch
Weight	41kg/90.4lb	41kg/90.4lb	60kg/132.3lb	60kg/132.3lb

Operating temperature range	-25 °C ... +60 °C (-13 °F ... +140 °F) With derating above 45 °C(113 °F)	-25 °C ... +60 °C (-13 °F ... +140 °F) With derating above 45 °C(113 °F)	-25 °C ... +60 °C (-13 °F ... +140 °F) With derating above 45 °C(113 °F)	-25 °C ... +60 °C (-13 °F ... +140 °F) With derating above 45 °C(113 °F)
Noise emission (typical)	≤ 55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)
Altitude	2000m(6560ft) without derating			
Self-consumption night	<0.5 W	<0.5 W	<0.5 W	<0.5 W
Topology	transformerless	transformerless	transformerless	transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP65	IP65	IP65	IP65
Relative humidity	0...95% Non-condensing	0...95% Non-condensing	0...95% Non-condensing	0...95% Non-condensing
Features				
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD	LCD
Interfaces: RS232/RS485/Bluetooth/ RF /Zigbee/Wifi	yes/yes/opt/opt /opt/opt	yes/yes/opt/opt /opt/opt	yes/yes/opt/opt /opt/opt	yes/yes/opt/opt /opt/opt

Warranty: 5 years / 10 years	yes /opt	yes /opt	yes /opt	yes /opt
Certificates and approvals	VDE-AR-N4105, CEI 0-21, CE, VDE 0126-1-1, IEC 62109, RD 1663/2000, G59/2, EN50438, AS4777, AS/NZS 3100			

100KW

Product Name : Growatt CP100

Description :



- High conversion efficiency of 98.6% deliver more energy
- powerful grid management functions (including LVRT)
- active power continuous adjustment (0-100%)
- reactive power adjustable ,PF range 0.9 lagging-0.9 leading
- friendly touch monitoring interface, easy installation maintenance procedure
- design for max. ROI: newest generation IGBTs and advanced MPPT Algorithms
- auxiliary electrical heating (optional)
- comprehensive protection for overvoltage, islanding, short-circuit, overload, overheat etc.
- Certificate and approvals including CE, CGC, VDE 0126, BDEW etc.

Technical Data	
Inverter Model	CP100
Input (DC)	
Max. DC Power	115kW
Max. DC Voltage	1000V
DC Voltage Range	450...1000V
MPPT Voltage Range	450...820V
Rated Input Voltage	600V
Start Voltage/Power	500V/1000W
Maximum Input Current	250A
Number of Independent MPPT	1
Number of DC Inputs	2

Output (AC)	
Rated AC Power	100kVA
Rated AC Voltage	400V
AC Voltage Range	310...450V
Rated Frequency	50/60Hz
Frequency Range	45...55Hz/55...65Hz
Maximum Output Current	160A
Power Factor (cosφ)	0.9lagging...0.9leading
Total Harmonic Distortion	<3%(@Pac,r)
Efficiency	
Maximum Efficiency	97.1%
Euro Efficiency	96.5%
MPPT Efficiency	99.9%
Protection	
DC Disconnection Device	DC circuit breaker
AC Disconnection Device	AC circuit breaker
DC Overvoltage Protection	Surge arrester type II
AC Overvoltage Protection	Surge arrester type II
Grid monitoring/Management	Yes/Yes
Ground monitoring	Yes
Over Temperature Protection	Yes
Insulation monitoring	Yes
General Data	
Dimensions(W/H/D)	1100/1890/850mm
Weight	1000kg
Operating Temperature Range	-25...+55°C
Relative Humidity	0...95%
Degree of Protection	IP20
Noise Emission	65dB(A)@1m
Maximum Operating Altitude	6000m(Derating over 3000m)
Standby consumption	<100W
Cooling	Air Forced
Topology	Low Frequency Transformer
Display	Touch screen LCD
Communication Interface	RS485/Ethernet
Certificates and Approvals	CE/CGC/TUV/LVRT

500-700KW

Product Name : Growatt CP 500TL&630 TL

Description :



- High conversion efficiency of 98.6% deliver more energy
- powerful grid management functions (including LVRT)
- active power continuous adjustment (0-100%)
- reactive power adjustable ,PF range 0.9 lagging-0.9 leading
- transformer-less inverter for direct connection to MV transformer
- friendly touch monitoring interface, easy installation maintenance procedure
- design for max. ROI: newest generation IGBTs and advanced MPPT Algorithms
- auxiliary electrical heating (optional)
- comprehensive protection for overvoltage, islanding, short-circuit, overload, overheat etc.
- Certificate and approvals including CE, CGC, VDE 0126, BDEW etc.

Technical Data		
Inverter Model	CP500TL	CP630TL
Input (DC)		
Max. DC Power	575kW	725kW
Max. DC Voltage	1000V	1000V
DC Voltage Range	450...1000V	450...1000V
MPPT Voltage Range	450...820V	500...820V
Rated Input Voltage	600V	600V
Start Voltage/Power	500V/5000W	500V/6300W
Maximum Input Current	1270A	1450A
Number of Independent MPPT	1	1
Number of DC Inputs	2*6	2*6
Output (AC)		
Rated AC Power	500kVA	630kVA
Rated AC Voltage	270V	315V
AC Voltage Range	210...310V	250...362V
Rated Frequency	50/60Hz	50/60Hz
Frequency Range	45...55Hz/55...65Hz	45...55Hz/55...65Hz
Maximum Output Current	1200A	1296A

Power Factor (cosφ)	0.9lagging...0.9leading	0.9lagging...0.9leading
Total Harmonic Distortion	<3%(@Pac,r)	<3%(@Pac,r)
Efficiency		
Maximum Efficiency	98.6%	98.7%
Euro Efficiency	98.3%	98.5%
MPPT Efficiency	99.9%	99.9%
Protection		
DC Disconnection Device	DC circuit breaker	DC circuit breaker
AC Disconnection Device	AC circuit breaker	AC circuit breaker
DC Overvoltage Protection	Surge arrester type II	Surge arrester type II
AC Overvoltage Protection	Surge arrester type II	Surge arrester type II
Grid monitoring/Management	Yes/Yes	Yes/Yes
Ground monitoring	Yes	Yes
Over Temperature Protection	Yes	Yes
Insulation monitoring	Yes	Yes
General Data		
Dimensions(W/H/D)	2000/2200/850mm	2000/2200/850mm
Weight	1600kg	1600kg
Operating Temperature Range	-25...+55°C	-25...+55°C
Relative Humidity	0...95%	0...95%
Degree of Protection	IP20	IP20
Noise Emission	65dB(A)@1m	65dB(A)@1m
Maximum Operating Altitude	6000m(Derating over 3000m)	6000m(Derating over 3000m)
Standby consumption	<100W	<100W
Cooling	Air Forced	Air Forced
Topology	Transformerless	Transformerless
Display	Touch screen LCD	Touch screen LCD
Communication Interface	RS485/Ethernet	RS485/Ethernet
Certificates and Approvals	CE/CGC/TUV/LVRT	CE/CGC/TUV/LVRT