LIQUID COOLED
Standby Generators

BRIGGS&STRATTON
ENERGY SOLUTIONS

Fortress Liquid Cooled Line
Standby Generators

SPECIFICATIONS

OVERVIEW				
Brand	Fortress™			
Model Number	076880	076830	076850	076860
Rated Countries	US / Canada			
Rated AC Voltage (Volts)	120 / 240	120 / 240	120 / 240	120 / 240
Frequency (Hz)	60			
Generator Breaker (Amps)	125	150	200	250
Operating Ambient Temperature (°C / °F)	-28 - 40 / -20 - 104			
Running Amperage (Amps)	125	145 / 145	200 / 187	250 / 229
Running Watts[1] (NG / LP)	30 / 30	35 / 35	48/48 / 45/45	60/60 / 55/55
Phase	1			
Engine				
Engine Brand/Manufacturer	Briggs & Stratton	PSI		
Model Type	1.6L, 4-cycle	4.3L Industrial Powertrain, 4-cycle		5.7L Industrial Powertrain, 4-cycle
Aspiration	Naturally Aspirated			
Speed (RPM)	3600	1800		
Displacement (L / ci)	1.6 / 97	4.3 / 262		5.7 / 350
Compression Ratio	9.5:1	9.8:1		9.4:1
Rated Horsepower (gross hp)	49	51.5 LP / 51.5 NG	82 LP / 78 NG	113 LP / 104 NG
Governor Type	Electronic			
Bore & Stroke (mm / in)	81 x 77 / 3.19 x 3.03	101.6 x 88.0 / 4.00 x 3.48		
Number of Cylinders	4	6		8
Cylinder Arrangement	Inline 4	V6		V8
Start Type	Automatic			
Frequency Regulation Steady State, No Load to Full Load (%)	+/- 0.5			

30-60 kW

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Engine				
Frequency Regulation, No Load to Full Load	Isochronous			
Air Filter Type	Dry			
Low Oil Pressure Sensor	Yes			
Low Coolant Sensor	Yes			
Engine Block Heater	Yes			
Engine - Output Deratings				
Rated Temperature (°C / °F)	25 / 77			
Rated Altitude (Above Sea Level) (m / ft)	366 / 1200			
Temperature Derate	1.5% for every 5.6°C (10°F) above rated temp			
Altitude Derate	2.5% for every 305m (1000ft) above rated altitude			
Sound Rating[2]				
No Load dB(A)	66	68		70
Air Induction System				
Combustion Air (m^3/min / cfm)	2.2 / 79	3.2 / 112		4.9 / 173
Lubrication System				
Type	Full Pressure			
Oil Capacity (L / qt)	3.5 / 3.7	4.3 / 4.5		4.7 / 5.0
Oil Filter (Quantity / Type)	1 / Cartridge			
Cooling System				
Cooling System Type	Radiator, Closed-loop			
Coolant Capacity (System Total) (L / qt)	9.3 / 2.5	22.7 / 24		7.8 / 8.1
Heat Rejected to Cooling Water at Rated Load (kcal/sec / BTU/min)	5.7 / 1366	9.7 / 2300		13.1 / 3120
Water Pump Type	Centrifugal			
Electrical System				
Ignition System	Electronic	HVS Distributor		
Battery Quantity	1			
Battery Voltage (VDC)	12			
Battery CCA (Amps)	800	775		
Starter Motor Voltage (VDC)	12			
Battery Charging Alternator				
Ground (Negative / Positive)	Negative			
Nominal Voltage (VDC)	12			
Maximum Amperage (Amps)	90	70		

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Exhaust System				
Exhaust Manifold Type	Dry			
Exhaust Flow at Rated Load (m^3/min / cfm)	7.7 / 271	10.3 / 362		15.8 / 553
Exhaust Temperature at Rated Load (°C / °F)	693 / 1280	732 / 1350		
Maximum Allowable Back Pressure (kPa / in Hg)	11.9 / 3.5	10.2 / 3.0		
Fuel System				
Fuel Type	NG / LPV			
Fuel Supply Line Inlet	1" NPT			
Recommended Fuel, Lower Heating Value Minimum (MJ/m^3 / BTU/ft^3)	NG: 34.3 / 904 LPV: 87.1 / 2338			
Fuel Supply Pressure (mbar / in H_2O)	12-28 / 5-11	17-28 / 7-11		
Fuel Consumption[3]				
No Load, NG (BTU/hr)	146,000	181,000	181,000	264,000
No Load, NG (ft^3/hr)	146	181	181	264
No Load, NG (m^3/hr)	4.2	5.2	5.2	7.5
Half Load, NG (BTU/hr)	293,000	258,000	328,000	561,000
Half Load, NG (ft^3/hr)	293	258	328	561
Half Load, NG (m^3/hr)	8.3	7.3	9.3	15.9
Full Load, NG (BTU/hr)	444,000	405,000	511,000	753,000
Full Load, NG (ft^3/hr)	444	405	511	753
Full Load, NG (m^3/hr)	12.6	11.5	14.5	21.4
No Load, LP (BTU/hr)	154,000	137,000	165,000	264,000
No Load, LP (ft^3/hr)	62	55	66	106
No Load, LP (m^3/hr)	1.8	1.6	1.9	3
Half Load, LP (BTU/hr)	328,000	262,000	337,00	644,000
Half Load, LP (ft^3/hr)	132	105	135	258
Half Load, LP (m^3/hr)	3.8	3.0	3.9	7.3
Full Load, LP (BTU/hr)	483,000	409,000	533,000	875,000
Full Load, LP (ft^3/hr)	194	164	214	350
Full Load, LP (m^3/hr)	5.5	4.7	6.1	10
Alternator Specifications				
Alternator Type	Self-Excited, 4-Lead			
Alternator Manufacturer	Coliseum			
Alternator Model Number	30BSPP2-0	35BSPP-0	50BSPP-0	60BSPP-0
Frequency (Hz)	60			

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Exciter Type - Primary Alternator	Self-Excited			
Insulation Rating (Class)	H			
Designed Temperature Rise (°C)	125			
Bearing (Quantity / Type)	1 / Sealed			
Coupling	Flexible Disk			
Amortisseur Windings	Full			
Number of Poles	2	4		
Voltage Regulator	Analog, 1-phase Sensing			
Voltage Regulation, No Load to Full Load (%)	+/- 1.0			
One-step Load Acceptance	100% of Rating			
Total Harmonic Distortion (THD), No Load to Full Load (%)	< 5.0			
Controls/Instrumentation				
Controller Manufacturer	Briggs & Stratton			
Controller	Briggs & Stratton			
Charger	Integrated			
Starting	AMF			
Alternator Frequency	Yes			
Real Time Clock	Yes			
Engine Hour Counter	Yes			
Engine Runtime Scheduler	Yes			
Other Features				
Battery Rack and Cables	Yes			
Electronic, Isochronous Governor	Yes			
Gas Fuel System	Yes			
Integral Vibration Isolation	Yes			
Oil Drain Extension	Yes			
Operation and Installation Manual(s)	Yes			
Sound Enclosure	Steel	Aluminum		
Accessories				
Switch, E-Stop Kit	6491			
Cold Weather Kit	6182	6343		
Battery Cable Lockout	6335			
Engine Communication Cable	6275	6350		
Maintenance Kit, Oil Change	6280	6514		6168

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Limited Warranty[4]				
Warranty: Generator, Domestic (Parts / Labor / Travel) (Years)	6			
Warranty: Generator, International (Parts / Labor / Travel) (Years/Hours)	N/A			
Warranty: Engine, Domestic (Parts / Labor / Travel) (Years)	6			
Warranty: Enclosure, Surface Rust and Corrosion (Parts / Labor / Travel) (Years)	1			
Warranty: Enclosure, Rust Through (Parts / Labor / Travel) (Years)	2	3		
Certifications				
UL	Yes			
cUL	Yes			
Weights & Dimensions				
Assembled Dimensions (Length x Width x Height) (in / mm)	71 x 32.3 x 37 / 1803 x 820 x 940	91 x 39.4 x 41 / 2311 x 1001 x 1041	91 x 39.4 x 41 / 2311 x 1001 x 1041	98 x 39.4 x 43 / 2489 x 1001 x 1092
Assembled Weight (lbs / kg)	1000 / 454	1541 / 699	1634 / 741	2020 / 916
Packaged Dimensions (Length x Width x Height) (in / mm)	75.8 x 35.9 x 43.7 / 1925 x 912 x 1110	103.9 x 48 x 50.4 / 2638 x 1219 x 1280	103.9 x 48 x 50.4 / 2638 x 1219 x 1280	103.9 x 48 x 50.4 / 2638 x 1219 x 1280
Packaged Weight (lbs / kg)	1086 / 493	1940 / 880	2033 / 922	2419 / 1097

[1] This generator is listed in accordance with UL (Underwriters Laboratories) 2200 (stationary engine generator assemblies) and CSA (Canadian Standards Association) standard C22.2 No. 100-14 (motor and generators).

[2] Per ISO 3744. Sound level measurement at other locations around generator may differ depending on installation, based on lowest microphone at 7m. Normal operation based on average household usage.

[3] Fuel consumption rates are estimated based on normal operating conditions. Generator operation may be greatly affected by elevation and the cycling operation of multiple electrical appliances — fuel flow rates may vary depending on these factors.

[4] See operator's manual or energy.briggsandstratton.com for complete warranty details.

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Briggs & Stratton has a policy of continuous product improvement and reserves the right to modify its specifications at any time and without prior notice

This standby generator is not for Prime Power applications.

Please visit energy.briggsandstratton.com for the latest information.

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BRIGGS & STRATTON
POST OFFICE BOX 702
MILWAUKEE, WI 53201 USA

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