

# 30-60 kW

**LIQUID COOLED**  
Standby Generators



## Fortress Liquid Cooled Line Standby Generators



### SPECIFICATIONS

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

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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 <sup>2</sup>			
No Load dB(A)	66	68	70
Air Induction System			
Combustion Air (m <sup>3</sup> /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 <sup>3</sup> /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 <sup>3</sup> / BTU/ft <sup>3</sup> )	NG: 34.3 / 904 LPV: 87.1 / 2338			
Fuel Supply Pressure (mbar / in H <sub>2</sub> O)	12-28 / 5-11	17-28 / 7-11		
Fuel Consumption <sup>3</sup>				
No Load, NG (BTU/hr)	146,000	181,000	181,000	264,000
No Load, NG (ft <sup>3</sup> /hr)	146	181	181	264
No Load, NG (m <sup>3</sup> /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 <sup>3</sup> /hr)	293	258	328	561
Half Load, NG (m <sup>3</sup> /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 <sup>3</sup> /hr)	444	405	511	753
Full Load, NG (m <sup>3</sup> /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 <sup>3</sup> /hr)	62	55	66	106
No Load, LP (m <sup>3</sup> /hr)	1.8	1.6	1.9	3
Half Load, LP (BTU/hr)	328,000	262,000	337,000	644,000
Half Load, LP (ft <sup>3</sup> /hr)	132	105	135	258
Half Load, LP (m <sup>3</sup> /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 <sup>3</sup> /hr)	194	164	214	350
Full Load, LP (m <sup>3</sup> /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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<b>Exciter Type - Primary Alternator</b>	Self-Excited			
<b>Insulation Rating (Class)</b>	H			
<b>Designed Temperature Rise (°C)</b>	125			
<b>Bearing (Quantity / Type)</b>	1 / Sealed			
<b>Coupling</b>	Flexible Disk			
<b>Amortisseur Windings</b>	Full			
<b>Number of Poles</b>	2		4	
<b>Voltage Regulator</b>	Analog, 1-phase Sensing			
<b>Voltage Regulation, No Load to Full Load (%)</b>	+/- 1.0			
<b>One-step Load Acceptance</b>	100% of Rating			
<b>Total Harmonic Distortion (THD), No Load to Full Load (%)</b>	< 5.0			
<b>Controls/Instrumentation</b>				
<b>Controller Manufacturer</b>	Briggs & Stratton			
<b>Controller</b>	Briggs & Stratton			
<b>Charger</b>	Integrated			
<b>Starting</b>	AMF			
<b>Alternator Frequency</b>	Yes			
<b>Real Time Clock</b>	Yes			
<b>Engine Hour Counter</b>	Yes			
<b>Engine Runtime Scheduler</b>	Yes			
<b>Other Features</b>				
<b>Battery Rack and Cables</b>	Yes			
<b>Electronic, Isochronous Governor</b>	Yes			
<b>Gas Fuel System</b>	Yes			
<b>Integral Vibration Isolation</b>	Yes			
<b>Oil Drain Extension</b>	Yes			
<b>Operation and Installation Manual(s)</b>	Yes			
<b>Sound Enclosure</b>	Steel		Aluminum	
<b>Accessories</b>				
<b>Switch, E-Stop Kit</b>	6491			
<b>Cold Weather Kit</b>	6182		6343	
<b>Battery Cable Lockout</b>	6335			
<b>Engine Communication Cable</b>	6275		6350	
<b>Maintenance Kit, Oil Change</b>	6280		6514	6168

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### Limited Warranty<sup>4</sup>

<b>Warranty: Generator, Domestic (Parts / Labor / Travel) (Years)</b>	6			
<b>Warranty: Generator, International (Parts / Labor / Travel) (Years/Hours)</b>	N/A			
<b>Warranty: Engine, Domestic (Parts / Labor / Travel) (Years)</b>	6			
<b>Warranty: Enclosure, Surface Rust and Corrosion (Parts / Labor / Travel) (Years)</b>	1			
<b>Warranty: Enclosure, Rust Through (Parts / Labor / Travel) (Years)</b>	2		3	

### Certifications

<b>UL</b>	Yes			
<b>cUL</b>	Yes			

### Weights & Dimensions

<b>Assembled Dimensions (Length x Width x Height) (in / mm)</b>	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
<b>Assembled Weight (lbs / kg)</b>	1000 / 454	1541 / 699	1634 / 741	2020 / 916
<b>Packaged Dimensions (Length x Width x Height) (in / mm)</b>	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
<b>Packaged Weight (lbs / kg)</b>	1086 / 493	1940 / 880	2033 / 922	2419 / 1097

<sup>1</sup> 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).

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> See operator's manual or [energy.briggsandstratton.com](http://energy.briggsandstratton.com) for complete warranty details.

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](http://energy.briggsandstratton.com) for the latest information.

BS1156 - 10-17-24



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