

SD300 & MD300 | 10.3L | 300 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating

300 kW, 375 kVA, 60 Hz



*Assembled in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories.

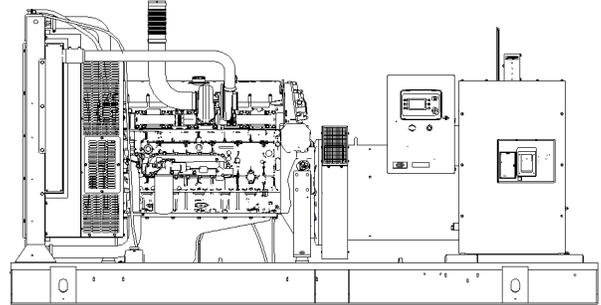


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Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.



UL2200, UL508, UL489, UL142



CSA C22.2



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



IBC 2021, IBC 2024, IBC 2027,
CBC 2022, CBC 2025, CBC 2028,
ASCE 7-16, ASCE 7-22

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac provides superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally for the most reliable engines to power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

STANDARD FEATURES**ENGINE SYSTEM**

- Oil Drain Extension
- Level 1 Fan and Belt Guards
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Block Heater

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- GENprotect™
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Permanent Magnet Excitation
- Sealed Bearing
- Automated Manufacturing (Winding, Insertion, Lacing, Varnishing)
- Rotor Dynamically Spin Balanced
- Amortisseur Winding
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Generac Link Connectivity Hardware
- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Extended Limited Warranty (Standby Rated Units)
- 1 Year Extended Limited Warranty (Prime Rated Units)

ENCLOSURE (IF SELECTED)

- Silencer Mounted in the Discharge Hood
- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (IF SELECTED)

- UL 142/ULC S601
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested - 2 psi
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM



DSE G8601 Controller

Key Features

- Advanced PLC Functionality
- Multi-Purpose PIDs
- Virtual Inputs
- On-Screen Mimic (SLDs)
- Multiple Application Support
- Multi-Level Pin Protected Front Panel Editor
- Integral LCD Display Heater
- Enhanced High-Resolution 240 x 128 Pixel Display
- Single Generator Control
- Latest ECU/ECM Support
- Touch Screen Panel PC Support
- Zero Sequence Voltage Protection
- Integral Gasket (IP65 protection)

Standard Protections

- Low Coolant Level
- High/Low Coolant Temperature
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency

- Over/Under Current
- Over Load
- Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I²T Algorithm)
- Ground Fault

Control Panel

- Auto/Off/Manual
- Indication Through Display Screen
- Audible Alarm and Silence
- Not in Auto Indication

Voltage Regulation

- Digital Control
- Three-Phase Sensing
- Negative Power Limit
- Loss of Sensing Protection
- Fault Protection (I²T Function)
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- $\pm 0.5\%$ Voltage Regulation

Governor Functionality

- Speed Control through ECM Integration
- Soft Start Ramping (Multiple Steps)

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -22 °F to +122 °F (-30 °C to +50 °C)
- Vibration Tested and Protected

Connections (Actual I/O May Vary Due to Configuration)

- 4 Analog Inputs
- 12 Digital Inputs
 - 9 Active Low Digital Outputs

Customer Ports

- Ethernet
- 2 RS-485
- 2 USB
- CANBus

Codes and Standards

- UL 6200
- CE
- NFPA 110 Capable

More Features

- Built-in Governor
- Digital AVR Support
- Multiple Language Support
- Three-Phase Generator Sensing and Protection
- Three-Phase Bus Sensing
- Generator Current, Protection and Power Monitoring
- Configurable Timers
- Integrated SNMP
- Data Logging
- PC Configuration
- DSENet[®] (Expansion Support)
- Flexible I/O (Inputs/Outputs)
- Automatic and Front Panel Breaker Control
- Power-Save Mode

PARALLELING CONTROLS

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection

- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System

- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Independent On Board Paralleling
- Shunt Trip and Auxiliary Contact

CONFIGURABLE OPTIONS**ENGINE SYSTEM**

- Forced Flow Block Heater
- Heavy Duty Air Cleaner
- Air Filter Restriction Indicator
- Oil Heater
- Exhaust Silencer - Shipped Loose (Open Set Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- Extended Factory Testing
- IBC Seismic Certification
- HCAI/OSHPD Seismic Certification
- 12 Position Load Center
- Spring Vibration Isolators
- Radiator Stone Guard (Open Set Only)
- Critical Silencer Flange - Shipped Loose (Open Set Only)

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch
- Enclosure Heater (with Motorized Dampers Only)

FUEL TANKS (SIZES ON LAST PAGE)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 10A Engine Run Relay
- Ground Fault Indication Annunciator
- 100 dB Alarm Horn
- 120 V GFCI Outlet
- Flush Mount Annunciator Kit
- Remote Communication - Modem
- Damper Alarm Contacts (with Motorized Dampers Only)

WARRANTY (STANDBY GENSETS ONLY)

- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

| | |
|------------------------------------|--------------------------|
| Make | Iveco/FPT |
| EPA Emissions Compliance | Stationary Emergency |
| EPA Emissions Reference | See Emission Data Sheet |
| Cylinder # | 6 |
| Type | In-line |
| Displacement - in ³ (L) | 628.54 (10.3) |
| Bore - in (mm) | 4.92 (125) |
| Stroke - in (mm) | 5.51 (140) |
| Compression Ratio | 16.5:1 |
| Intake Air Method | Turbocharged/Aftercooled |
| Cylinder Head | 4 - Valve |
| Piston Type | Aluminum |
| Crankshaft Type | Dropped Forged Steel |

Engine Governing

| | |
|-------------------------------------|------------------------|
| Governor | Electronic Isochronous |
| Frequency Regulation (Steady State) | ±0.25% |

Lubrication System

| | |
|---------------------------------|-------------|
| Oil Pump Type | Gear |
| Oil Filter Type | Full-Flow |
| Crankcase Oil Capacity - qt (L) | 24.8 (23.5) |

Cooling System

| | |
|------------------------|-------------------------|
| Cooling System Type | Closed Recovery |
| Water Pump Type | Pre-Lubed, Self Sealing |
| Fan Type | Pusher |
| Fan Speed - RPM | 2,250 |
| Fan Diameter - in (mm) | 30 (762) |

Fuel System

| | |
|----------------------------|---------------------------------|
| Fuel Type | Ultra Low Sulfur Diesel Fuel #2 |
| Fuel Specifications | ASTM |
| Fuel Filtering (Microns) | 5 |
| Fuel Inject Pump Make | Electronic |
| Fuel Pump Type | Engine Driven Gear |
| Injector Type | Common Rail |
| Engine Type | Direct Injection |
| Fuel Supply Line - in (mm) | 0.5 (12.7) NPT |
| Fuel Return Line - in (mm) | 0.5 (12.7) NPT |

Engine Electrical System

| | |
|----------------------------|------------------------------|
| System Voltage | 24 VDC |
| Battery Charger Alternator | Standard |
| Battery Size | See Battery Index 0161970SBY |
| Battery Voltage | (2) - 12 VDC |
| Ground Polarity | Negative |

ALTERNATOR SPECIFICATIONS

| | |
|-------------------------------------|-------------|
| Standard Model | K0350124Y21 |
| Poles | 4 |
| Field Type | Revolving |
| Insulation Class - Rotor | H |
| Insulation Class - Stator | H |
| Total Harmonic Distortion | <5% |
| Telephone Interference Factor (TIF) | <50 |

| | |
|------------------------------------|--------------------------|
| Standard Excitation | Permanent Magnet |
| Bearings | Single Sealed Cartridge |
| Coupling | Direct via Flexible Disc |
| Prototype Short Circuit Test | Yes |
| Voltage Regulator Type | Digital |
| Number of Sensed Phases | All |
| Regulation Accuracy (Steady State) | ±0.25% |

OPERATING DATA

POWER RATINGS

| Standby | | |
|--------------------------------|----------------|-------------|
| Three-Phase 120/208 VAC @0.8pf | 375 kVA/300 kW | Amps: 1,041 |
| Three-Phase 120/240 VAC @0.8pf | 375 kVA/300 kW | Amps: 902 |
| Three-Phase 277/480 VAC @0.8pf | 375 kVA/300 kW | Amps: 451 |
| Three-Phase 346/600 VAC @0.8pf | 375 kVA/300 kW | Amps: 361 |

MOTOR STARTING CAPABILITIES (SKVA)

| skVA vs. Voltage Dip | | | | | |
|----------------------|-------|----------------|-------|----------------|-------|
| 277/480 VAC 3Ø | 30% | 208/240 VAC 3Ø | 30% | 346/600 VAC 3Ø | 30% |
| K0350124Y21 | 1,001 | K0350124Y21 | 801 | L0350064N21 | 826 |
| K0400124Y21 | 953 | K0400124Y21 | 717 | L0400064N21 | 866 |
| K0600124Y23 | 1,560 | K0500124Y23 | 650 | L0600064N23 | 1,280 |
| | | K0600124Y23 | 1,120 | | |

FUEL CONSUMPTION RATES*

| Fuel Pump Lift - ft (m) | | Diesel - gph (Lph) | |
|--|--|--------------------|-------------|
| | | Percent Load | Standby |
| 3 (1) | | 25% | 7.6 (28.7) |
| | | 50% | 12.6 (47.7) |
| Total Fuel Pump Flow (Combustion + Return) - gph (Lph) | | 75% | 17.4 (65.9) |
| 31 (117) | | 100% | 22.1 (83.7) |

*Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

| Standby | | |
|---|-----------------------------|---------------|
| Coolant Flow | gpm (Lpm) | 95 (360) |
| Coolant System Capacity | gal (L) | 13 (49) |
| Heat Rejection to Coolant | BTU/hr (kW) | 814,783 (239) |
| Inlet Air | cfm (m³/hr) | 14,505 (411) |
| Maximum Operating Radiator Air Temperature | °F (°C) | 104 (40) |
| Maximum Operating Ambient Temperature (Before Derate) | See Bulletin No. 0199280SSD | |
| Maximum Additional Radiator Backpressure | in H2O (kPa) | 0.5 (0.12) |

COMBUSTION AIR REQUIREMENTS

| Standby | |
|------------------------------------|------------|
| Flow at Rated Power - cfm (m³/min) | 850 (24.1) |

ENGINE

| Standby | | |
|--------------------------|----------------|-------------|
| Rated Engine Speed | RPM | 1,800 |
| Horsepower at Rated kW** | hp | 480 |
| Piston Speed | ft/min (m/min) | 1,654 (504) |
| BMEP | psi (kPa) | 336 (2,318) |

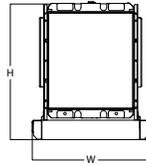
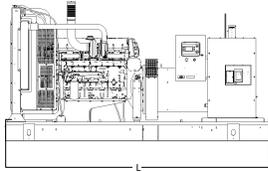
**Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

| Standby | | |
|--|--------------|---------------|
| Exhaust Flow (Rated Output) | cfm (m³/min) | 2,240 (63.4) |
| Maximum Backpressure (Post Silencer) | inHg (kPa) | 1.5 (5.1) |
| Exhaust Temperature (Rated Output - Post Silencer) | °F (°C) | 1,020 (548.9) |

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards. Standby - See Bulletin 0187500SSB

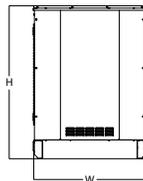
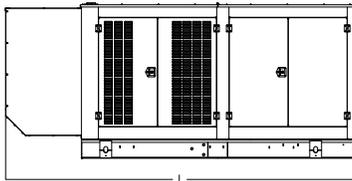
DIMENSIONS AND WEIGHTS*



OPEN SET

| Run Time - Hours | Usable Capacity - gal (L) | L x W x H - in (mm) | Weight - lbs (kg)** | |
|------------------|---------------------------|--|---------------------|----------|
| | | | Steel | Aluminum |
| No Tank | - | 137.5 (3,493) x 57.6 (1,357) x 67.8 (1,722) | 7457 (3,382) | |
| 8 | 183 (693) | 137.5 (3,493) x 57.6 (1,357) x 80.8 (2,052) | 8405 (3,812) | |
| 19 | 438 (1,658) | 137.5 (3,493) x 57.6 (1,357) x 92.8 (2,357) | 8717 (3,954) | |
| 31 | 693 (2,623) | 137.5 (3,493) x 57.6 (1,357) x 104.8 (2,662) | 9053 (4,106) | |
| 42 | 946 (3,581) | 208.3 (5,291) x 57.6 (1,357) x 108.8 (2,764) | 10482 (4,755) | |
| 59 | 1,325 (5,015) | 277.8 (7,056) x 57.6 (1,357) x 107.2 (2,723) | 11497 (5,215) | |

LEVEL 0 SOUND ATTENUATED ENCLOSURE

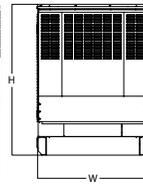
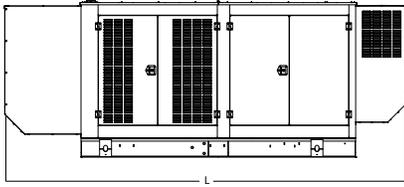


| Run Time - Hours | Usable Capacity - Gal (L) | L x W x H - in (mm) | Weight - lbs (kg)** | |
|------------------|---------------------------|--|---------------------|--------------|
| | | | Steel | Aluminum |
| No Tank | - | 174.7 (4,437) x 53 (1,346) x 77.8 (1,976) | 8979 (4073) | 8184 (3712) |
| 8 | 183 (693) | 174.7 (4,437) x 53 (1,346) x 90.8 (2,306) | 9927 (4503) | 9132 (4142) |
| 19 | 438 (1,658) | 174.7 (4,437) x 53 (1,346) x 102.8 (2,611) | 10239 (4644) | 9444 (4284) |
| 31 | 693 (2,623) | 174.7 (4,437) x 53 (1,346) x 114.8 (2,916) | 10575 (4797) | 9780 (4436) |
| 42 | 946 (3,581) | 208.3 (5,291) x 53 (1,346) x 118.8 (3,018) | 12004 (5445) | 11209 (5084) |
| 59 | 1,325 (5,015) | 277.8 (7,056) x 53 (1,346) x 117.2 (2,977) | 13019 (5905) | 12224 (5545) |

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings. Extended and not extended tank offerings vary. Contact dealer for options.

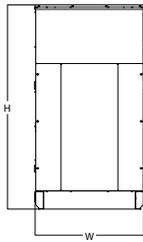
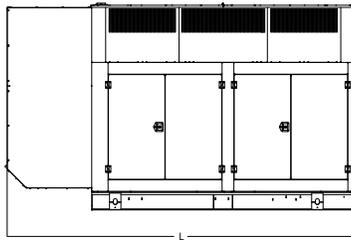
** Weights shown represent maximum configurations with heaviest available options installed.

DIMENSIONS AND WEIGHTS*



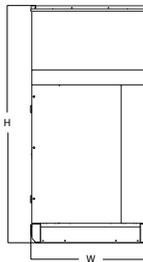
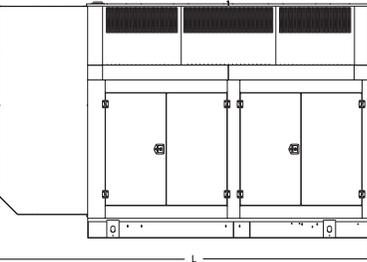
LEVEL 1 SOUND ATTENUATED ENCLOSURE

| Run Time - Hours | Usable Capacity - Gal (L) | L x W x H - in (mm) | Weight - lbs (kg)** | |
|------------------|---------------------------|--|---------------------|--------------|
| | | | Steel | Aluminum |
| No Tank | - | 200.2 (5,085) x 57.5 (1,461) x 90.8 (2,306) | 9442 (4283) | 8384 (3803) |
| 8 | 183 (693) | 200.2 (5,085) x 57.5 (1,461) x 103.8 (2,637) | 10390 (4713) | 9332 (4233) |
| 19 | 438 (1,658) | 200.2 (5,085) x 57.5 (1,461) x 115.8 (2,941) | 10702 (4854) | 9644 (4374) |
| 31 | 693 (2,623) | 200.2 (5,085) x 57.5 (1,461) x 127.8 (3,246) | 11038 (5007) | 9980 (4481) |
| 42 | 946 (3,581) | 208.3 (5,291) x 57.5 (1,461) x 131.8 (3,348) | 12467 (5655) | 11409 (5175) |
| 59 | 1,325 (5,015) | 277.8 (7,056) x 57.5 (1,461) x 130.2 (3,307) | 13482 (6115) | 12424 (5635) |



LEVEL 2 SOUND ATTENUATED ENCLOSURE

| Run Time - Hours | Usable Capacity - Gal (L) | L x W x H - in (mm) | Weight - lbs (kg)** | |
|------------------|---------------------------|--|---------------------|--------------|
| | | | Steel | Aluminum |
| No Tank | - | 180.7 (4,590) x 57.5 (1,461) x 107.3 (2,725) | 10015 (4543) | 8630 (3915) |
| 8 | 183 (693) | 180.7 (4,590) x 57.5 (1,461) x 120.3 (3,056) | 10963 (4973) | 9578 (4345) |
| 19 | 438 (1,658) | 180.7 (4,590) x 57.5 (1,461) x 132.3 (3,360) | 11275 (5114) | 9890 (4486) |
| 31 | 693 (2,623) | 180.7 (4,590) x 57.5 (1,461) x 144.3 (3,665) | 11611 (5267) | 10226 (4638) |
| 42 | 946 (3,581) | 208.3 (5,291) x 57.5 (1,461) x 148.3 (3,767) | 13040 (5915) | 11655 (5287) |
| 59 | 1,325 (5,015) | 277.8 (7,056) x 57.5 (1,461) x 146.7 (3,726) | 14055 (6375) | 12670 (5747) |



LEVEL 2 SOUND ATTENUATED ENCLOSURE WITH DAMPERS

| Run Time - Hours | Usable Capacity - Gal (L) | L x W x H - in (mm) | Weight - lbs (kg)** | |
|------------------|---------------------------|--|---------------------|--------------|
| | | | Steel | Aluminum |
| No Tank | - | 180.7 (4,590) x 57.5 (1,461) x 114.5 (2,908) | 10228 (4639) | 8844 (4012) |
| 8 | 183 (693) | 180.7 (4,590) x 57.5 (1,461) x 127.5 (3,239) | 11176 (5069) | 9792 (4442) |
| 19 | 438 (1,658) | 180.7 (4,590) x 57.5 (1,461) x 139.5 (3,543) | 11488 (5211) | 10104 (4583) |
| 31 | 693 (2,623) | 180.7 (4,590) x 57.5 (1,461) x 151.5 (3,848) | 11824 (5363) | 10440 (4736) |
| 42 | 946 (3,581) | 208.3 (5,291) x 57.5 (1,461) x 155.5 (3,950) | 13253 (6011) | 11869 (5384) |
| 59 | 1,325 (5,015) | 277.8 (7,056) x 57.5 (1,461) x 154 (3,912) | 14268 (6472) | 12884 (5844) |

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings. Extended and not extended tank offerings vary. Contact dealer for options.

** Weights shown represent maximum configurations with heaviest available options installed.