

Standby generators liquid-cooled EGENX series



- Low oil pressure shutdown
- Low coolant level auto-shutdown
- Exercise time
- Vibration isolated from mounting base
- Oil drain extension
- Fan and belt guards
- Enclosed critical grade muffler
- Eaton's molded-case circuit breaker technology
- Operating temperature rise 120 °C above a 40 °C ambient
- NEMA® rated Class H insulation
- Natural gas or liquid propane fuel ①
- 5-year limited warranty ②
- Meets EPA emissions regulations ③
- UL® 2200 Listed

Gas engine generator sets

Continuous standby power rating

- EGENX25 (steel and aluminum) 25 kW
- EGENX30 (steel and aluminum) 30 kW
- EGENX36 (steel and aluminum) 36 kW
- EGENX45 (steel and aluminum) 45 kW
- EGENX60 (steel and aluminum) 60 kW

Standard features and equipment

- Multilingual controller
- Two-line LCD digital screen indicator, with external window for quick status
- Isochronous electronic governor
- Closed coolant recovery system
- Smart battery charger
- UV/ozone-resistant hoses
- ±1% voltage regulator

Enclosure

- Steel weather protective and AL roof (all units)
- Aluminum corrosion-proof options available
- Epoxy paint electrostatically textured for added durability
- Quiet test for low noise level exercise mode
- Rodent-proof construction
- Easy access for service maintenance
- Sound-attenuated acoustical enclosure
- Small, compact, eye appealing design

System overview

- Complete backup power system coupled with Eaton's full line of automatic transfer switches
- Exclusive national Eaton Certified Contractor Network (ECCN) contractors for residential and light commercial installation, maintenance, and service
- Local sales expertise and round-the-clock telephone pre/post-sales technical support

① 25–45 kW units suitable for field conversion from NG to LP. 60 kW units pre-built fuel specific only.

② USA and Canada. 3-year international warranty only.

③ 25, 30, and 45 kW SCQAMD models available. 35 and 60 kW not suitable for CA/MA.

EATON

Powering Business Worldwide

Engineering specifications

Table 1. Catalog number EGENX25, 30, 36, 45, and 60 kW

Description	Specification
Generator	
Type	Synchronous
Rotor insulation class	H
Stator insulation class	H
Telephone interference factor (TIF)	<50
Alternator output leads single-phase	4-wire
Alternator output leads three-phase	6-wire
Bearings	Sealed ball
Coupling	Flexible disc
Excitation system	Direct
Voltage regulation	
Type	Electronic
Sensing	Single-phase
Regulation	±1%
Electrical system	
Battery charge alternator	12 V, 15 A, 25 and 30 kW 12 V, 30 A, 36, 45 and 60 kW
Static battery charger	2 A
Recommended battery (not included)	Group 26, 525CCA
Rated synchronous RPM	3600

Table 2. Engine 25 and 30 kW

Description	Specification
Model	In-line
Cylinders	4
Displacement (liters)	1.5
Bore (in/mm)	3.05/77.4
Stroke (in/mm)	3.13/79.5
Compression ratio	11:1
Intake air system	Naturally aspirated
Lifter type	Hydraulic

Table 3. Engine 36, 45, and 60 kW

Description	Specification
Model	In-line
Cylinders	4
Displacement (liters)	2.4
Bore (in/mm)	3.41/86.5
Stroke (in/mm)	3.94/100
Compression ratio	9.5:1
Intake air system	Naturally aspirated (35 and 45 kW) Turbocharged/aftercooled (60 kW)
Lifter type	Hydraulic

Table 4. Engine Systems 25, 30, 36, 45, and 60 kW

Description	Specification
Lubrication system	
Oil pump type	Gear
Oil filter type	Full flow spin-on cartridge
Crankcase capacity (qt/l)	4/3.8—25, 30, 36, and 45 kW 5.25/4.96—60 kW
Cooling system	
Type	Closed
Water pump	Belt driven
Fan speed (rpm)	2484—25 and 30 kW 1865—36 and 45 kW 2100—60 kW
Fan diameter (in/mm)	17.7/449.6 (25 and 30 kW) 22/558.8 (36, 45, and 60 kW)
Fan mode	Pusher (25 and 30 kW) Puller (36, 45, and 60 kW)
Fuel system	
Fuel type	Natural gas, propane vapor
Carburetor	Down draft
Secondary fuel regulator	Standard
Fuel shut-off solenoid	Standard
Operating fuel pressure	5–14-inch water column/9–26 mm HG

Table 5. Power output voltage/kW—60 Hz

Size (kW)	Voltage / phase / pf	Liquid propane (gaseous)		Natural gas		CB size (both)
		kW	Amperes	kW	Amperes	
25	120/240 V, single-phase, 1.0 pf	25	104	25	104	125
	120/208 V, three-phase, 0.8 pf	25	87	25	87	100
	120/240 V, three-phase, 0.8 pf	25	75	25	75	90
30	120/240 V, single-phase, 1.0 pf	30	125	30	125	150
	120/208 V, three-phase, 0.8 pf	30	104	30	104	125
	120/240 V, three-phase, 0.8 pf	30	90	30	90	100
36	120/240 V, single-phase, 1.0 pf	36	150	36	150	175
	120/208 V, three-phase, 0.8 pf	36	125	36	125	150
	120/240 V, three-phase, 0.8 pf	36	108	36	108	125
	277/480 V, three-phase, 0.8 pf	36	54	36	54	60
45	120/240 V, single-phase, 1.0 pf	45	188	45	188	200
	120/208 V, three-phase, 0.8 pf	45	156	45	156	175
	120/240 V, three-phase, 0.8 pf	45	135	45	135	150
	277/480 V, three-phase, 0.8 pf	45	68	45	68	80
60	120/240 V, single-phase, 1.0 pf	60	250	60	250	300
	120/208 V, three-phase, 0.8 pf	60	208	60	208	250
	120/240 V, three-phase, 0.8 pf	60	180	60	180	200
	277/480 V, three-phase, 0.8 pf	60	90	60	90	100

Table 6. Surge capacity in amperes

Size (kW)	Voltage / phase	Voltage dip at <0.4 pf	
		15%	30%
25	120/240 V, single-phase	65	170
	120/208 V, three-phase	80	130
	120/240 V, three-phase	69	112
30	120/240 V, single-phase	75	180
	120/208 V, three-phase	96	155
	120/240 V, three-phase	83	134
36	120/240 V, single-phase	105	240
	120/208 V, three-phase	44	130
	120/240 V, three-phase	38	115
	277/480 V, three-phase	20	60
45	120/240 V, single-phase	105	240
	120/208 V, three-phase	44	130
	120/240 V, three-phase	38	115
	277/480 V, three-phase	20	60
60	120/240 V, single-phase	140	320
	120/208 V, three-phase	70	210
	120/240 V, three-phase	61	182
	277/480 V, three-phase	30	91

Table 7. Fuel consumption

Size (kW)		Natural gas		Liquid propane (gaseous)		
		(ft ³ /hr)	(m ³ /hr)	(gal/hr)	(l/hr)	(ft ³ /hr)
25	Exercise cycle	60	1.7	0.7	2.5	24
	25% of rated load	220	6.3	2.9	9.1	88
	50% of rated load	297	8.4	3.3	12.3	119
	75% of rated load	362	10.3	4	15	145
	100% of rated load	430	12.2	4.7	17.8	172
30	Exercise cycle	60	1.7	0.7	2.5	24
	25% of rated load	240	6.8	2.6	10	96
	50% of rated load	320	9.1	3.5	13.3	128
	75% of rated load	400	11.4	4.4	16.6	160
	100% of rated load	492	14	5.4	20.4	197
36	Exercise cycle	65	1.8	0.7	2.6	25
	25% of rated load	210	6	2.3	8.6	83
	50% of rated load	380	10.8	4.2	15.7	151
	75% of rated load	545	15.5	5.9	22.4	216
	100% of rated load	730	20.7	8	30.1	290
45	Exercise cycle	65	1.8	0.7	2.6	25
	25% of rated load	210	6	2.3	8.6	83
	50% of rated load	380	10.8	4.2	15.7	151
	75% of rated load	545	15.5	5.9	22.4	216
	100% of rated load	730	20.7	8	30.1	290
60	Exercise cycle	123	3.5	1.34	5.1	49.3
	25% of rated load	267	7.6	2.7	10.5	101
	50% of rated load	483	13.7	5	19	183
	75% of rated load	672	19.1	7	26.5	255
	100% of rated load	862	24.5	9	33.9	327

Altitude adjustments for power output

- Temperature deration: 3% for every 10 °C above 25 °C or 1.65% for every 10 °F above 77 °F
- Altitude deration (25, 30, 36, and 45 kW): 1% for every 100 m above 183 m or 3% for every 1000 ft above 600 ft
- Altitude deration (60 kW): 1% for every 100 m above 915 m or 3% for every 1000 ft above 3000 ft

Note: Fuel pipe must be sized for full load.

For BTU content, multiply ft³/hr x 2520 (LP) or ft³/hr x 1000 (NG).

For megajoule content, multiply m³/hr x 93.15 (LP) or m³/hr x 37.26 (NG).

Standby rating

Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

	25 kW	30 kW	36 kW	45 kW	60 kW
Engine cooling					
Air flow (inlet air including alternator and combustion air in cfm/cmm)	2490/70.5	2490/70.5	2725/77.2	2725/77.2	3280/92.9
System coolant capacity (gal/liters)	2/7.6	2/7.6	2.5/9.5	2.5/9.5	2.5/9.5
Heat rejection to coolant (BTU per hr/MJ per hr)	112,000/118.2	135,000/142.4	193,000/203.6	193,000/203.6	270,000/284.9
Maximum operation air temperature on radiator (°C/°F)	60/150	60/150	60/150	60/150	60/150
Maximum ambient temperature (°C/°F)	50/140	50/140	50/140	50/140	50/140
Combustion requirements					
Flow at rated power (cfm/cmm)	62/1.8	72/2	144/4.1	144/4.1	180/5.1
Noise levels ①					
Sound output in dBA at 23 ft (7 m) with generator in exercise mode	59	59	61	61	65
Sound output in dBA at 23 ft (7 m) with generator operating at normal load	72	73	70	73	72
Exhaust					
Exhaust flow at rated output (cfm/cmm)	203/5.7	237/6.7	300/8.5	420/11.9	494/14
Exhaust temperature at muffler outlet (°C/°F)	593/1100	610/1130	579/1075	593/1100	566/1050

① Sound level testing from the front of the unit. Field sound emissions testing results may vary depending on installation parameters, surround noise, physical conditions, etc.

Controller features

- Two-line plain text LCD display: simple user interface for ease of operation
- Mode switch:
 - Auto: automatic start on utility failure; 7-day exerciser
 - Off: stops unit; power is removed; control and charger still operate
 - Manual: start with starter control, unit stays on; if utility fails, transfer to load takes place
- Programmable start delay between 10 and 30 seconds: standard
- Engine start sequence: cyclic cranking—16 seconds on, 7 rest (90 seconds maximum duration)
- Engine warm-up: 5 seconds
- Engine cool-down: 1 minute
- Starter lock-out: starter cannot re-engage until 5 seconds after engine has stopped
- Smart battery charger: standard
- Automatic voltage regulation with overvoltage and undervoltage protection: standard
- Automatic low oil pressure shutdown: standard
- Overspeed shutdown: standard, 72 Hz
- High temperature shutdown: standard
- Overcrank protection: standard
- Safety fused: standard
- Failure to transfer protection: standard
- Low battery protection: standard
- 50 event run log: standard
- Future set capable exerciser: standard
- Incorrect wiring protection: standard
- Internal fault protection: standard
- Common external fault capability: standard
- Governor failure protection: standard

Accessories

Type	Model size	Description/features	Catalog number
Maintenance and general accessories			
Cold weather kit	25 and 30 kW (1.5 L)	Includes battery warmer. Built-in thermostat maintains battery in optimal temperatures for engine performance. Recommended in areas where temperature drops to 32 °F (0 °C) or below.	6175CH
	36, 45, and 60 kW (2.4 L)		5630CH
Extreme cold weather kits	25 and 30 kW (1.5 L engine)	Includes crankcase warmer. Built-in thermostat maintains engine block in optimal temperatures for ideal performance. Recommended in areas where temperature drops to 32 °F (0 °C) or below.	6174CH
	36, 45, and 60 kW (2.4 L engine)		5616CH
Maintenance kit	25 and 30 kW (1.5 L engine)	Includes all hardware and material necessary to perform schedule maintenance.	6176CH
	36 kW (2.4 L engine)		5984CH
	45 kW (2.4 L engine)		6172CH
	60 kW (2.4 L engine)		6171CH
Touch-up paint	All liquid-cooled models 22–60 kW	Bisque color—touch-up paint kit	EGENPAINT
Monitoring			
Mobile wireless remote monitor	All liquid-cooled models 22–60 kW	Most advanced wireless status monitoring system. Allows connectivity and settings programming via smart devices (laptops, smartphone, tablets, etc.). Sends automated emails and/or text messages to multiple users. Requires cell phone signal and subscription. Compatible with 2008 models or newer. Requires EGENKIT installation.	EGENMOBILE
		Adapter wire harness kit for EGENMOBILE monitor. Required for liquid-cooled generators only. Compatible with 2008 models or newer. U.S. and Canada only.	EGENKIT
In-house wireless monitor		Basic wireless local home monitor. In-house generator status basic monitoring system. No computer connectivity required. 600 ft radius of wireless coverage. Requires EGENinHOMEKIT installation.	EGENinHOME
		Adapter wire harness kit for EGENinHOME monitor. Required for liquid-cooled generators units only. Compatible with 2008 models or newer. U.S. and Canada only.	EGENinHOMEKIT

Installation drawings

Dimensions in mm (inches)

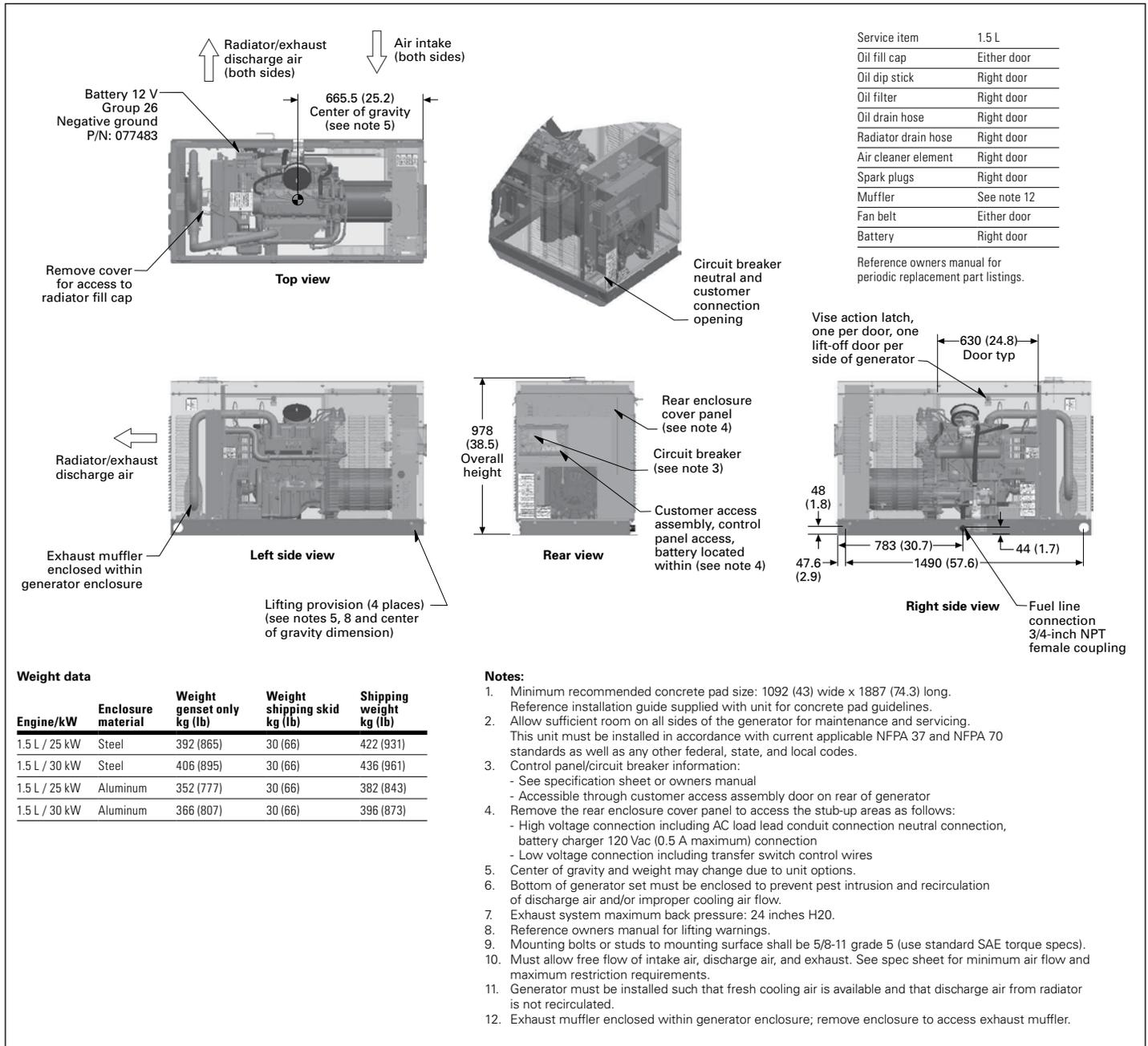


Figure 1. Catalog number EGENX25 and 30 kW

Dimensions in mm (inches)

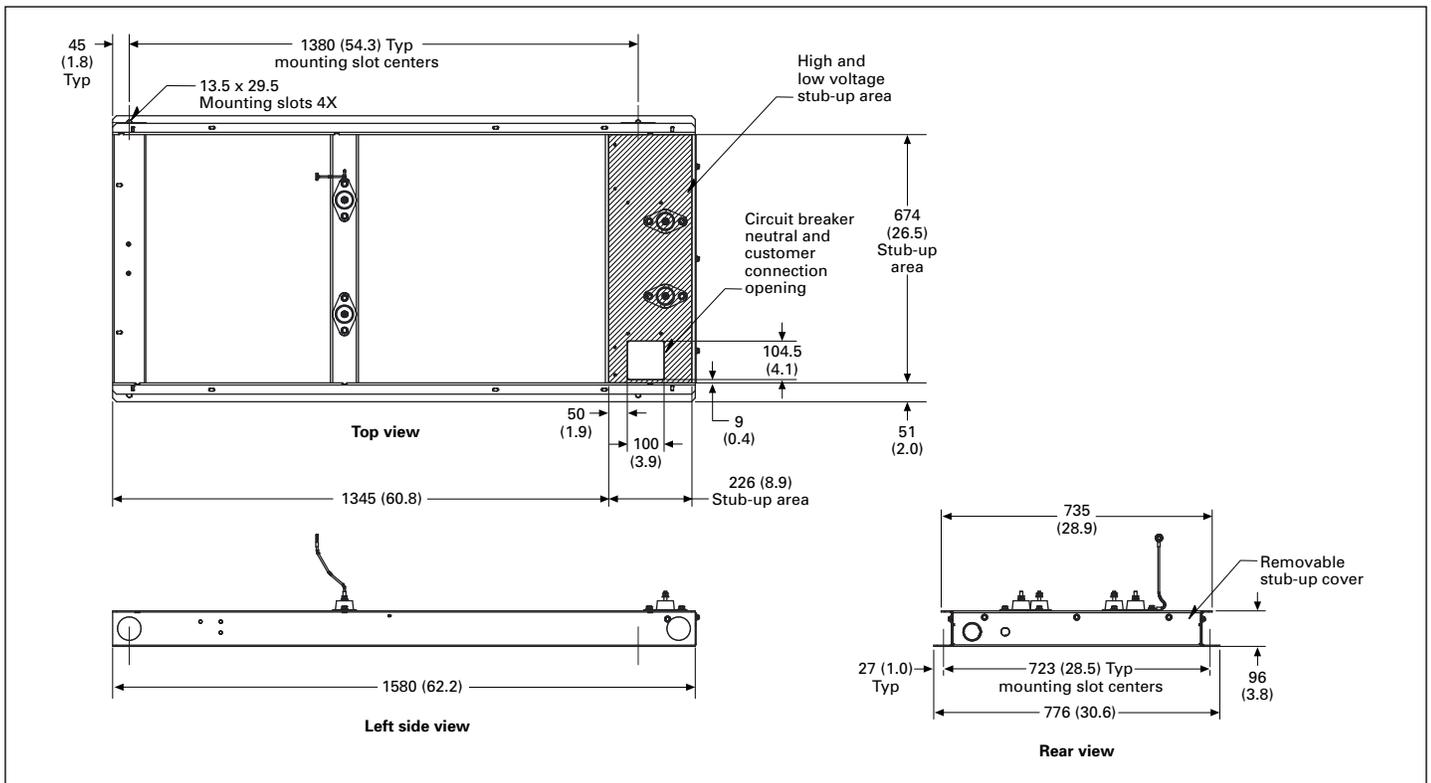


Figure 2. Catalog number EGENX25 and 30 kW

Dimensions in mm (inches)

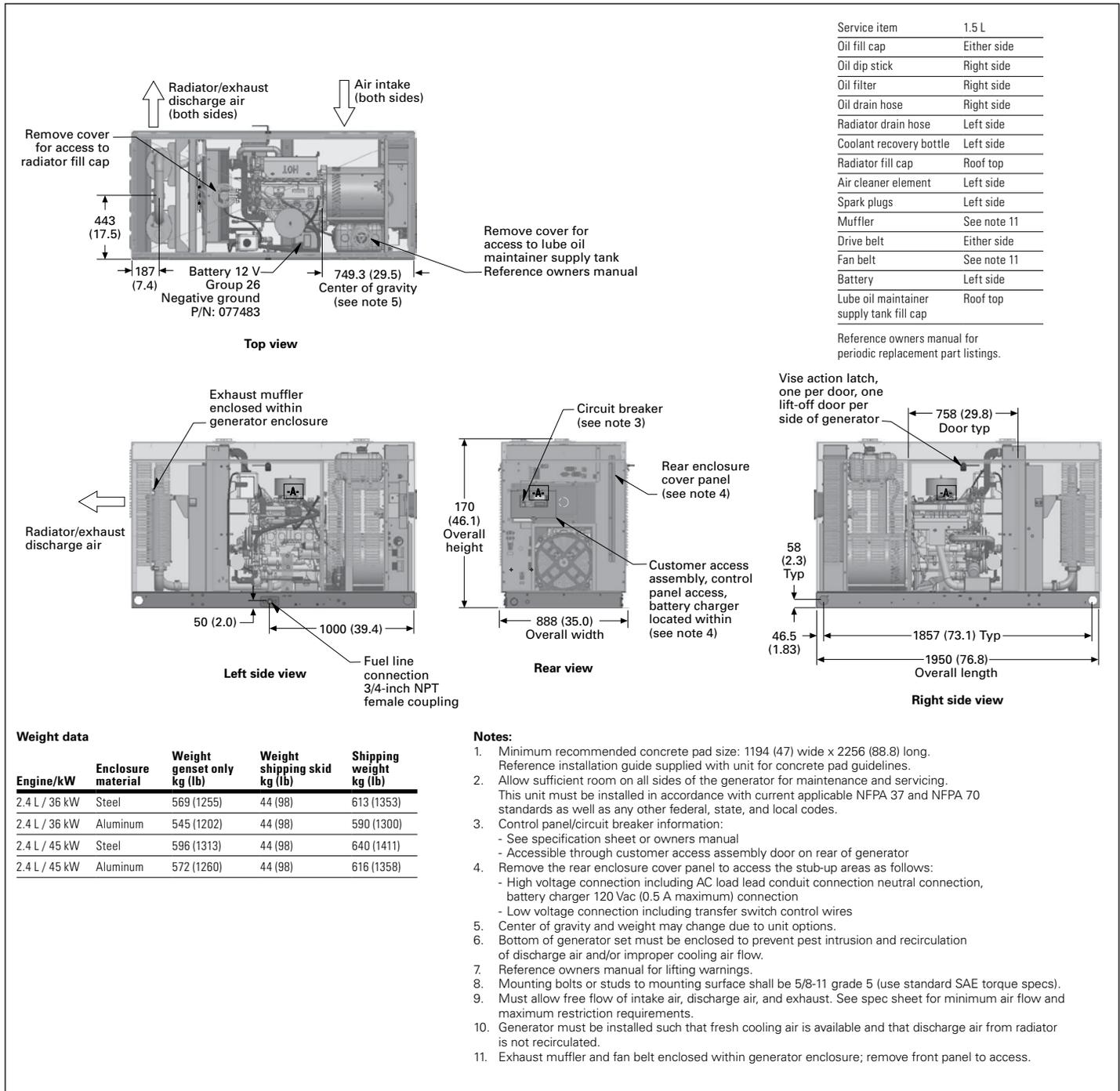


Figure 3. Catalog number EGENX36 and 45 kW

Dimensions in mm (inches)

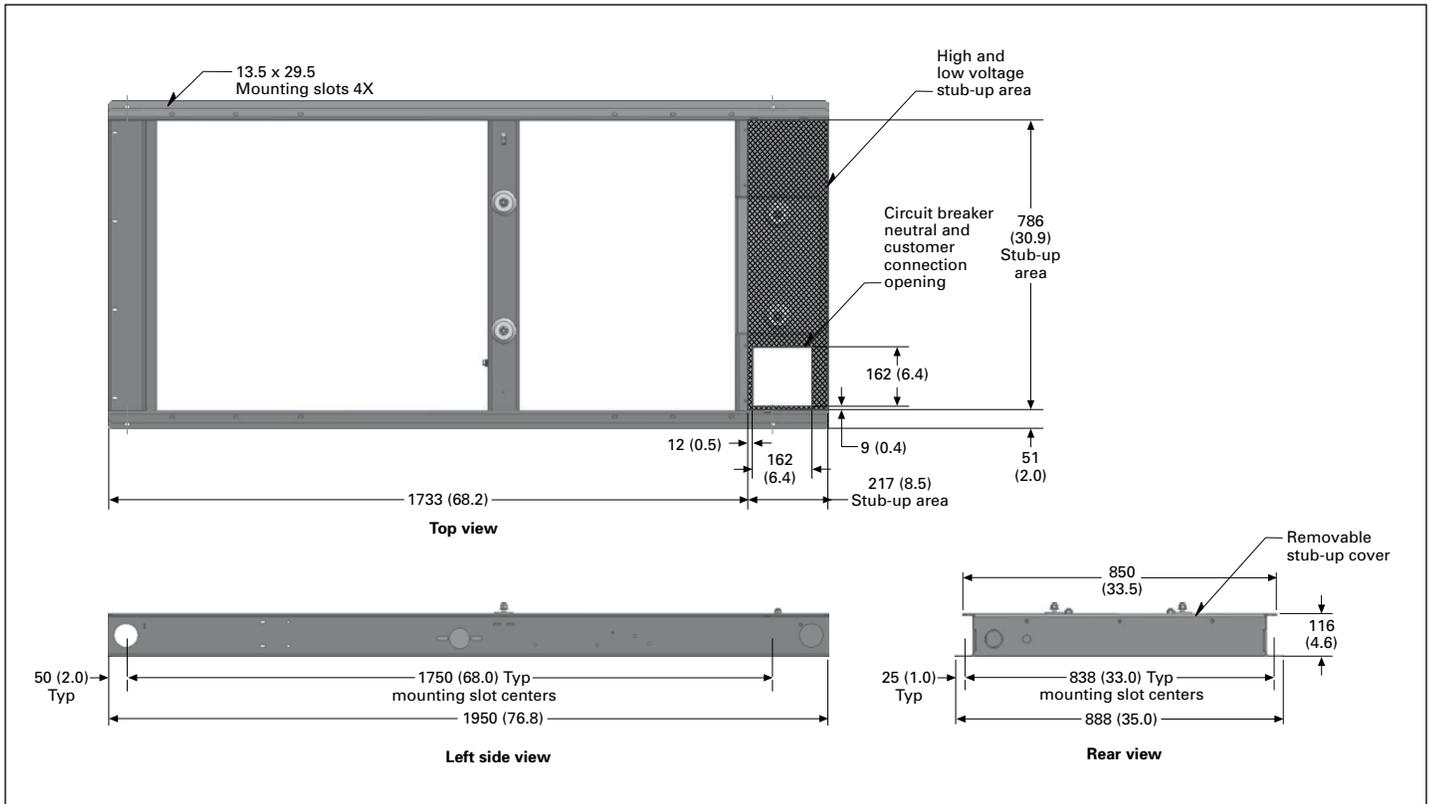


Figure 4. Catalog number EGENX36 and 45 kW

Dimensions in mm (inches)

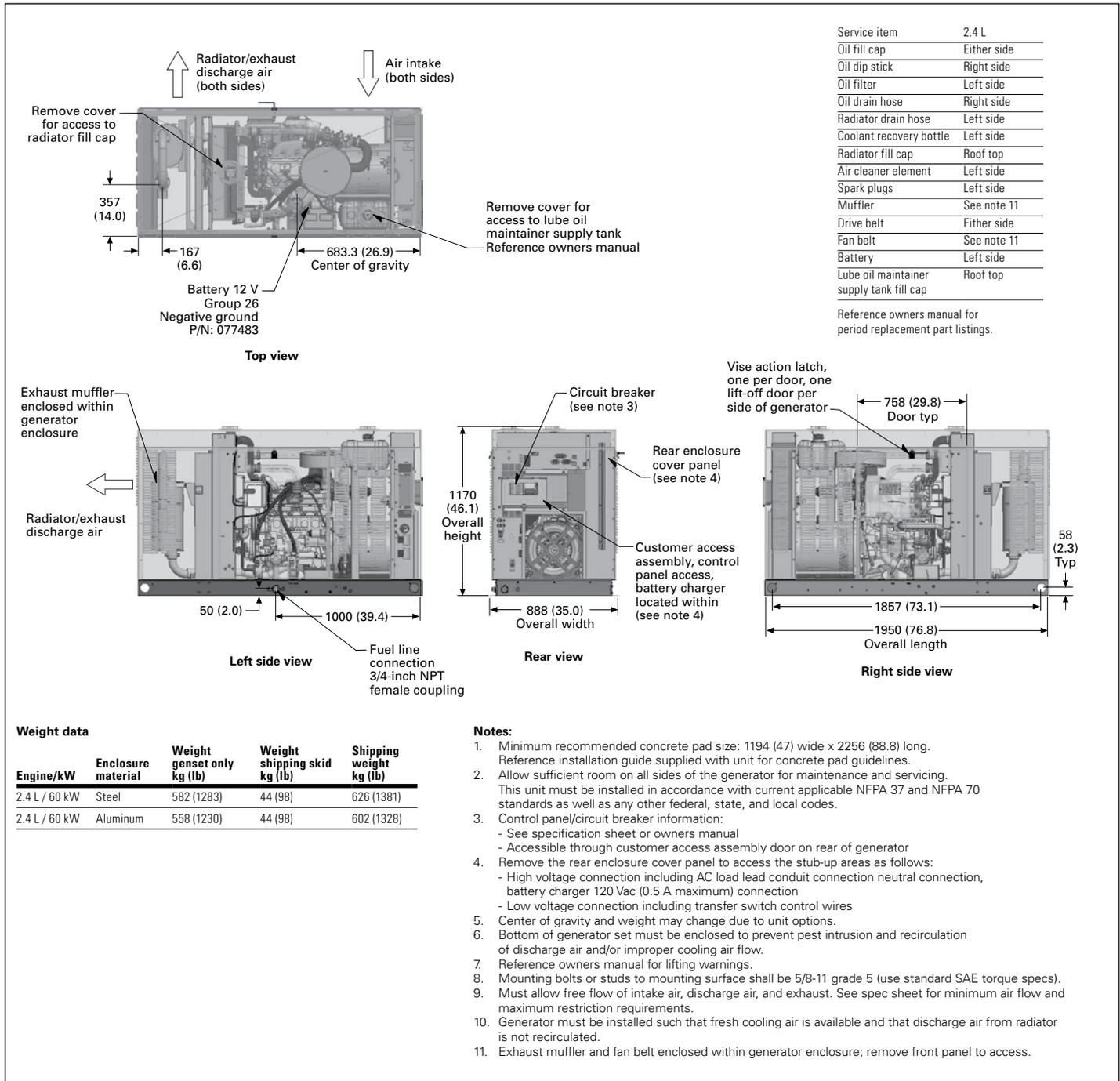


Figure 5. Catalog number EGENX60

Dimensions in mm (inches)

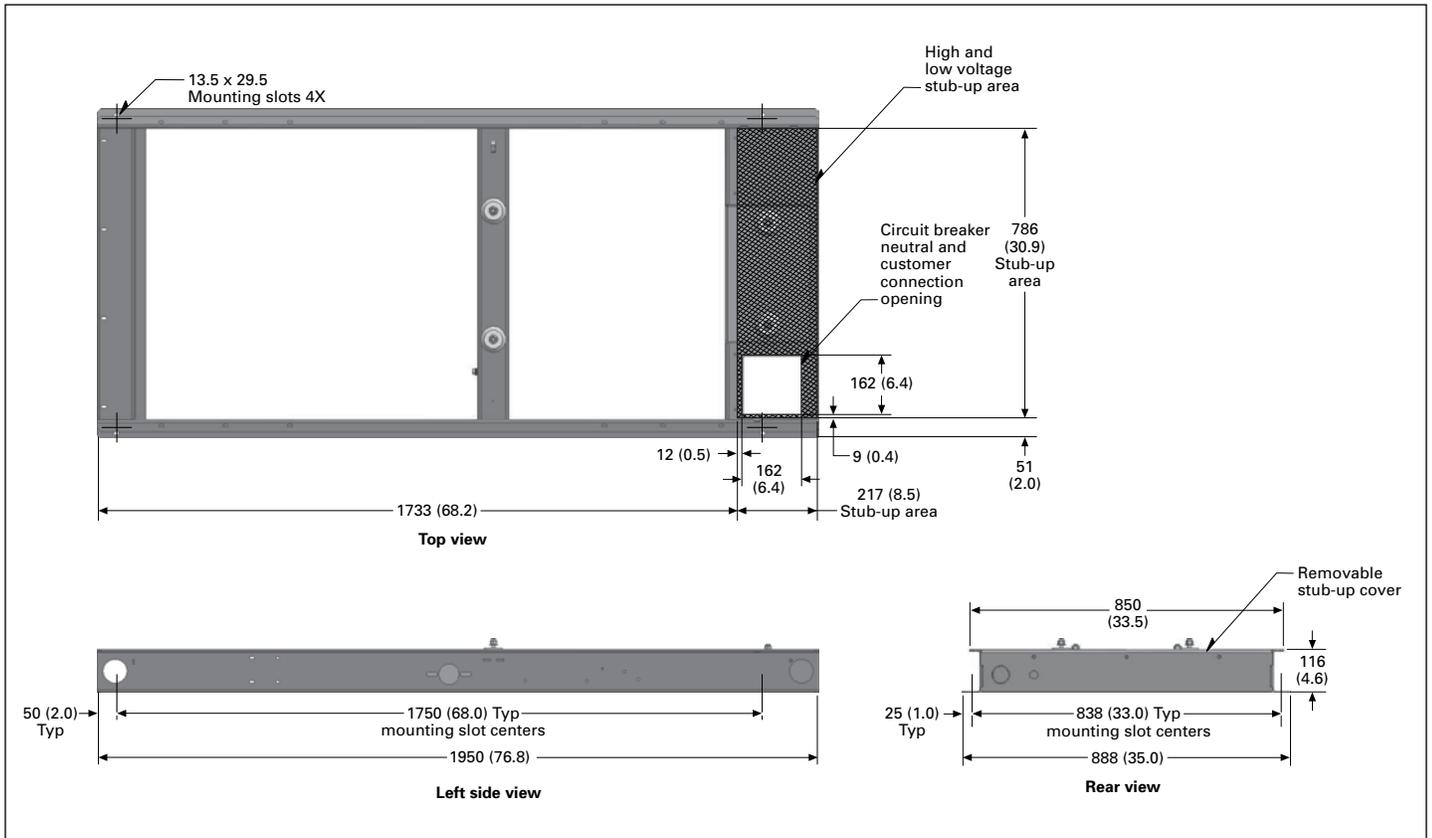


Figure 6. Catalog number EGENX60

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

© 2016 Eaton
All Rights Reserved
Printed in USA
Publication No. TD016003EN / Z18034
April 2016



Eaton is a registered trademark.

All other trademarks are property
of their respective owners.