BALDOR GENERATORS

IDLC30-3J

Diesel

Ratings Range – 60 Hertz Operation

Standby: kW 21 - 30
kVA 21 - 38

Prime: kW 20 - 25
kVA 20 - 31

Baldor generators are available in a variety of power ratings and installation styles to meet the energy needs of the smallest businesses and the largest manufacturing facilities. All generator sets are designed to meet the specifications to ensure the fastest startup and dependable long-term operation. Rely on Baldor generators to provide the clean, quiet and environmentally friendly electrical power when you need it most. Emergency backup, standby, prime power, peak shaving or for any of your day or night electrical power needs, you can count on a dependable Baldor generator to provide the peace of mind and security you desire.

Standby and Prime Power Features

- ✓ Heavy-duty industrial diesel engine that meets the latest EPA emissions levels
- ✓ Brushless synchronous alternators with dynamic balancing and four pole construction
- ✓ Fully featured microprocessor based controller that's easy to use and field programmable for customized installations
- ✓ Generator sets are prototype tested and production tested to ensure easy startup
- ✓ Gen-set accepts rated load in one step
- ✓ Heavy duty construction that's designed for use in prime or standby applications
- ✓ Manufactured in a dedicated and secure ISO-9001 certified facility
- ✓ Generator sets are backed by a world wide network of parts and service centers
- ✓ Optional agency approvals available including UL2200 and NFPA110
- ✓ Optional environmental enclosures available including weather resistant, sound attenuated, containerized, and walk-in models
- ✓ Full range of genset accessories and factory installed options available

Genset Ratings

Genset Model Number	Alternator	Voltage L-L / L-N	Phase	Hertz	150°C Rise Standby Rating		125°C Rise Prime Rating	
					kW / kVA	Amps	kW / kVA	Amps
IDLC30-3J	BCI184F-311	208 / 120	3	60	27 / 34	94	25 / 31	87
		(1) 240 / 120	3	60	27 / 34	81	25 / 31	75
		(1) 240 / 120	1	60	21 / 21	88	20 / 20	83
		240 / 139	3	60	30 / 38	90	25 / 31	75
		380 / 220	3	60	24 / 30	46	23 / 29	44
		480 / 277	3	60	30 / 38	45	25 / 31	38
	BCI184F-17	600 / 347	3	60	28 / 35	34	25 / 31	30
	UCI224C-311	208 / 120	3	60	30 / 38	104	25 / 31	87
		(1) 240 / 120	3	60	30 / 38	90	25 / 31	75
		(1) 240 / 120	1	60	30 / 30	125	25 / 25	104
		240 / 139	3	60	30 / 38	90	25 / 31	75
		380 / 220	3	60	30 / 38	57	25 / 31	48
		480 / 277	3	60	30 / 38	45	25 / 31	38
	UCI224C-17	600 / 347	3	60	30 / 38	36	25 / 31	30
	BCI184F-06	(1) 240 / 120	1	60	25 / 25	104	25 / 25	104

NOTES: (1) Alternator connections have two circuits available for low voltage.
Available current in each low voltage circuit is equal to high voltage current listed in table.
For ratings and voltages not listed above refer to the Genset Selector.
Standby ratings do not have an overload capability but can be used for the duration of the utility failure per ISO-3046, DIN6271 and BS5514.
Prime (Unlimited Running Time) ratings are continuous per DIN 6271 and ISO-3046 with 10% overload capacity.
Baldor reserves the right to implement specifications or design changes without notice.

Engine Application Data

Engine Specifications

Manufacturer	John Deere
Engine Model #	4024TF281
Engine Type	4 Cycle, 4 Cylinder
Induction System	Turbocharged
Displacement, L (in^3)	2.4 (149)
EPA Emissions Level	Tier 4 Interim
HP at Rated Speed, BHP (kW_m)	48 (36)
Rated RPM	1800
Bore and Stroke, in (mm)	3.4x4.1 (86x105)
Compression Ratio	20.5:1
Air Filter Type	Dry
Governor Type/Model	Electronic
Governor Manufacturer	Woodward
Freq Reg NL to FL	Isochronous
Freq Reg Steady State	+/- 0.5%

Engine Lubrication System

Oil Pan Capacity, gal (L)	1.8 (7)
Oil Pan w/Filter	2.1 (8)
Oil Filter Quantity	1
Oil Filter Type	Cartridge
Oil Cooler	Water Cooled
Recommended Oil	15W-40
Oil Press, psi (kPa)	43 (296)

Engine Cooling System

Genset Max Ambient Temp, °F (°C)	122 (50)
Engine Coolant Cap, qt (L)	2.7 (2.6)
Engine + Radiator System Cap, qt (L)	12.4 (11.7)
Water Pump Type	Centrifugal
Coolant Flow, gpm (Lpm)	24 (91)
Max Restriction of Cooling Air in H_2O (kPa)	0.5 (0.124)
Heat Rejected to Cooling Water @ Rated kW, BTU/min (kW)	1412 (25)

Engine Exhaust System

Exhaust Manifold Type	Dry
Exhaust Flow @ Rated kW, cfm (cmm)	283 (8)
Exhaust Temp (dry manifold), °F (°C)	1026 (552)
Min Back Pressure in, H_2O (kPa)	0 (0)
Max Back Pressure in, H_2O (kPa)	30 (7.5)
Exhaust Outlet Diameter, in (mm)	2.5 (63.5)
Exhaust Outlet Type	O.D. Tube

Engine Electrical System

Charging Alternator Volts, DC	12
Charging Alternator Amps	70
Grounding Polarity	Negative
Starter Motor Volts, DC	12
Battery Recommendations	
Battery Volts, DC	12
Min Cold Cranking Amps	750
Quantity Required	1

Ventilation Requirements

Cooling Airflow, scfm (cmm)	2901 (82)
Combustion Airflow, cfm (cmm)	106 (3)
Heat Rejected to Ambient	
From Engine, Btu/min (kW)	409 (7.2)
From Alternator, Btu/min (kW)	205 (3.6)
Recommended Free Area Intake Louver Size, ft^2 (m^2)	7.0 (0.65)

Engine Fuel System

Recommended Fuel	#2 Diesel
Fuel Line at Engine	
Supply Line Min ID, in (mm)	0.44 (11)
Return Line Min ID, in (mm)	0.25 (6)
Fuel Pump Type	Engine Driven
Fuel Pump Max Lift, ft (m)	10 (3)
Max Flow to Pump, gph (Lph)	26.1 (98.8)
Fuel Filter	
Secondary Filter	5µm @ 98%Eff
Secondary Water Separator	Included
Primary Filter	User Supplied
Primary Water Separator	User Supplied

Fuel Consumption – Standby Rating

100% Load, gph (Lph)	2.8 (10.6)
75% Load, gph (Lph)	2.1 (7.9)
50% Load, gph (Lph)	1.4 (5.3)
25% Load, gph (Lph)	0.9 (3.2)

Fuel Consumption – Prime Rating

100% Load, gph (Lph)	2.5 (9.5)
75% Load, gph (Lph)	1.9 (7.2)
50% Load, gph(Lph)	1.2 (4.5)
25% Load, gph(Lph)	0.6 (2.3)

Engine Output Deratings - Standby

Rated Temp	77ºF
Rated Altitude	1,000 ft
Max Altitude	10,000 ft
Temperature Derate	-1% / 20ºF
Altitude Derate	-1% / 2000 ft

Alternator Specifications

Alternator Type	4-Pole, Rotating Field
Exciter Type	Brushless
Excitation System	
Shunt Connection	Standard
PMG	Optional for UCI224C
Insulation	per NEMA MG1
Material	Class H
Standby Temp Rise	150˚C
Prime Temp Rise	125˚C
Lead Connection	12 Lead, Reconnectable
Stator Pitch	2/3
Amortisseur Winding	Full
Bearing	Single, Double Shielded
Drive Coupling	Flexible Disk
Unbalanced Load	20% of Standby Rating

Automatic Voltage Regulator	
Wound Field	SX460
PMG	Opt MX321 for UCI224C
Voltage Regulation	No Load to Full Load
Std Regulator	+/- 1.5%
PMG Regulator	+/- 0.5%
Load Acceptance	100% of Rating, One Step
Subtransient Reactance	
480V, Per Unit	12%
TIF (1960 Weighting)	<50
Line Harmonics	5% Maximum
Motor Starting kVA	30% Max Voltage Dip
Alt @ 480V SkVA	BCI184F-311 - 70 kVA
Alt @ 480V SkVA	UCI224C-311 - 132 kVA

Genset Controller Specifications

Baldor InteliLite NT Features

Large back-lit graphical LCD Display
- 64x128 pixel resolution

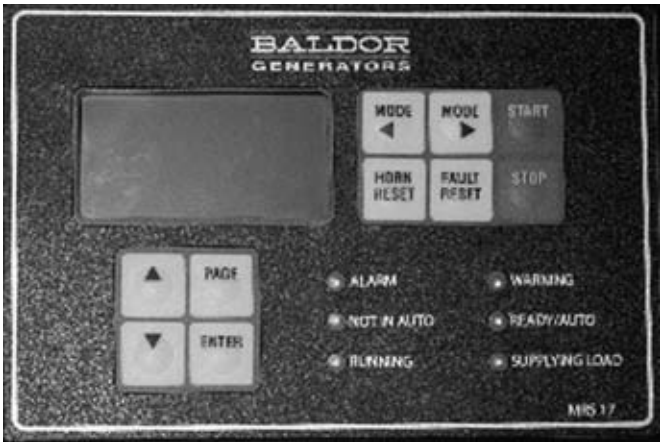
6 LED Genset Status Indicators

Alarm	Red LED
Not In Auto	Red LED
Warning	Yellow LED
Running	Green LED
Ready / Auto	Green LED
Supplying Load	Green LED

Sealed Membrane Panel to IP65

Push Buttons for Simple Control
- Start, Stop, Fault Reset, Horn Reset, Mode, Page, and Enter Keys

Display Metering and Protection
- Oil Pressure Warning / Shutdown
- High / Low Coolant Temperature Warning
- High Coolant Temperature Shutdown
- Low Fuel Level Warning / Shutdown
- Over Speed Protection
- Battery Voltage Over / Under Warning
- Running Hour Meter
- Generator Under/Over Volts Warn / Shutdown
- Generator Under/Over Freq Warn / Shutdown
- Generator Over Current Shutdown
- Generator Output Metering for V1-V3, I1-I3, Hz, kW, kWh, kVAr, kVAh



NFPA110 Compliance
- An optional Remote Annunciator is available to meet NFPA110 applications

Remote Annunciator Features – RA15
- 15 LED Indicators with Function Labels
- Horn Reset and Lamp Test keys
- CAN Bus Connection for up to 600 Feet

Additional Standard Genset Features

- ✓ Formed Steel Sub-Base
- ✓ Integral Vibration Isolation
- ✓ Sub-Base Lifting Eyes
- ✓ Unit Mounted Radiator
- ✓ Engine Mounted Fan
- ✓ Radiator Core and Fan Guards
- ✓ Battery Charging Alternator
- ✓ Battery Rack and Cables
- ✓ Unit Mounted Control Panel
- ✓ Spin-On Filters for Oil and Fuel
- ✓ Enamel Finish
- ✓ One Set - Operation / Maintenance Manual
- ✓ Factory Tested Prior to Shipment
- ✓ Limited Warranty

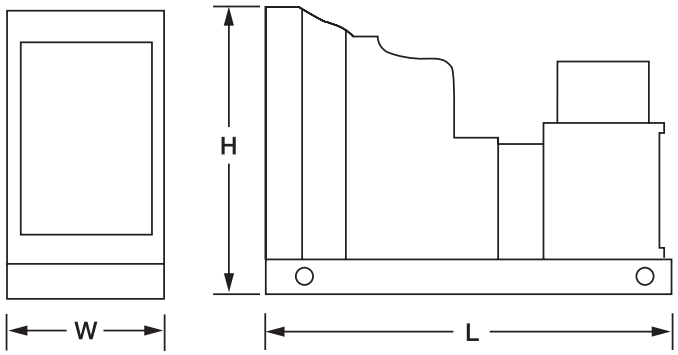
Optional Agency Approvals

- ❒ UL2200 (Review Option Availability)
- ❒ NFPA110 (Request Remote Annunciator)

Weight and Dimensions (Open Unit)

Weight – Wet lb(kg)	1618 (629)
Overall Dimensions	Length x Width x Height
inches	72 x 42 x 40
mm	1829 x 1067 x 1016

Note: Drawing is provided for reference only. Use engineering outline for installation planning



Available Accessories and Options

Open Unit

- ❒ Industrial Silencer
- ❒ Residential Silencer
- ❒ Critical Silencer
- ❒ Super Critical Silencer
- ❒ Exhaust Flex Pipe
- ❒ Rain Cap
- ❒ Radiator Duct Flange

Enclosed Units

- ❒ Weather Resistant Enclosure
- ❒ Sound Attenuated w/Internal Critical Silencer
- ❒ Container
- ❒ Walk-In Enclosure

Alternator Accessories

- ❒ PMG Exciter and AVR Upgrade
- ❒ Alternator Space Heater
- ❒ Exciter Field Circuit Breaker
- ❒ Alternator Drip Shield

Genset Accessories

- ❒ Voltage Adjust Potentiometer
- ❒ Starting Battery

Battery Charger ❒ Auto/Float

Auto/ Float Equalize Timer ❒ Manual ❒ Automatic

- ❒ Battery Heater
- ❒ Engine Coolant Heater
- ❒ Oil & Coolant Drain Valves (Engine/Radiator)
- ❒ Oil & Coolant Drain Extended to Base

Main Output Breaker ❒ Wall Mount ❒ Unit Mount

Transfer Switch ❒ Manual ❒ Automatic

Control Panel

- ❒ Remote Annunciator
- ❒ Remote Communications
- ❒ Remote E-Stop

Fuel System and Sub-Base Fuel Tank

Sub-Base Tank ❒ Single Wall ❒ Double Wall

- ❒ UL142 Double Wall with Containment

Tank Run Time @ 100% Load

❒ 12-16 Hours ❒ 24-36 Hours

- ❒ Flex Fuel Line
- ❒ Primary Fuel / Water Separator

Vibration Isolators

Location ❒ Under Tank ❒ Between Tank

❒ Elastomer Isolator ❒ Pad Isolator

❒ Standard Spring ❒ Spring for Seismic Zone 4

BALDOR GENERATORS
WORLD HEADQUARTERS

Baldor Electric Company • P. O. Box 2400 • Fort Smith, AR 72902-2400 U.S.A.
Phone (479) 646-4711 • Fax (479) 648-5792 • International Fax (479) 648-5895
www.baldor.com

© Baldor Electric Company

FM24543J

Printed in U.S.A.
7/09 FARR 2000