Generator Drive Applications

Diesel Engine Ratings

CONTENTS

Power Meets Progress

John Deere generator drive engines are built to perform in extreme conditions with reliable operation, low maintenance, long engine life, and exceptional fluid economy. They give you the power to meet any challenge.

Prime or standby power

John Deere generator drive engines are ready when and where you need them. They provide fast response for standby situations and exceptional load recovery in a wide variety of applications.

A smart choice

With John Deere, you get a wide range of configurations and accessories so you can specify the right engine that best fits your application. Our preconfigured options and innovative technologies can help save hours of engineering time and help you get machines to market faster.

Extensive integration network

You get expert integration assistance provided by John Deere engineers and distributors. OEMs can put our application engineering experience and know-how to work to help save development time and money.

Unparalleled customer support

With more than 9,000 John Deere service locations worldwide, you never have far to go to find expert assistance and advice. We support you not just at the beginning, but throughout the full lifetime of our products.

Ultimate uptime

Our distributors and dealers stock maintenance parts, as well as many other common replacement parts, to meet your service needs quickly. Our worldwide parts distribution system offers overnight delivery in most regions.

Engines for EU Stage V and EPA Final Tier 4 applications

Dual frequency 50 Hz/60 Hz

Node	Engine name	Type	Engine model	Power unit model*	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.	RoHS†
kVA prime					rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW		
DOC and DPF aftertreatment															
30	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1500	36	38	31	33	35	28	90	1.8	■	■
					1800	36	38	31	33	35	28	90	1.8		
40	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1500	48	51	41	44	46	37	90	2.4	■	■
					1800	48	51	41	44	46	37	90	2.4		
55	EWX 2.9L	3 cyl.	3029HG530	3029HP530	1500	55	59	47	50	53	43	90	2.8	■	■
					1800	55	59	47	50	53	43	90	2.8		
DOC, DPF, and SCR aftertreatment															
80	EWS 4.5L	4 cyl.	4045HG551	4045HP551	1500	83	91	73	76	82	66	92	4.2	■	■
					1800	86	94	75	78	85	68	92	4.3		
100	EWS 4.5L	4 cyl.	4045HG551	4045HP551	1500	103	113	90	94	102	81	92	5.2	■	■
					1800	106	116	93	96	105	84	92	5.3		
150	PVS 6.8L	6 cyl.	6068HG550	6068HP550	1500	165	182	146	150	165	132	93	8.3	■	■
					1800	180	199	159	164	180	144	93	9.0		
200	PSS 6.8L	6 cyl.	6068CG550	6068CP550	1500	202	223	178	184	202	162	93	10.1	■	■
					1800	216††	239	191	197	216	173	93	10.8		
275	PSS 9.0L	6 cyl.	6090CG550	6090CP550	1500	273	301	241	248	273	218	93	13.7	■	■
					1800	273	301	241	248	273	218	93	13.7		
300	PSS 9.0L	6 cyl.	6090CG550	6090CP550	1500	304	336	269	277	304	243	93	15.2	■	■
					1800	326	360	288	297	326	261	93	16.3		
500	JD14X	6 cyl.	6136CG550	—	1500	505	557	446	460	505	404	93	25.5	■	■
					1800	505	556	445	460	503	403	93	26.5		

* Power unit includes factory-mounted cooling package, air filter, and feet.

† The majority of John Deere Stage V engines comply with the European Union's Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU, as amended.

†† Rating at 241 kWm is also available.

Engines for EPA Final Tier 4 applications

Dual frequency 50 Hz/60 Hz

Node kVA (kWE) prime	Engine name	Type	Engine model	Speed rpm	Standby ratings kWm	kVA	kWe	Prime ratings kWm	kVA	kWe	Generator efficiency %	Fan power kW	Dual freq.
DOC and DPF aftertreatment													
55 (40)	EWX 4.5L	4 cyl.	4045TFG03	1800	55	57	46	50	52	41	90	3.9	-
DOC and SCR aftertreatment													
60 (50)	PWL 4.5L	4 cyl.	4045HFG04	1500	68	72	57	62	65	52	90	4.4	■
				1800	68	71	57	62	64	51	90	4.8	
75 (60)	PWL 4.5L	4 cyl.	4045HFG04	1500	80	84	67	73	76	61	90	5.1	■
				1800	80	84	67	73	76	60	90	5.6	
95 (75)	PWL 4.5L	4 cyl.	4045HFG04	1500	80	85	68	73	77	61	92	6.3	■
				1800	99	106	85	90	96	76	92	6.9	
125 (100)	PSL 4.5L	4 cyl.	4045CG440	1500	112	121	97	102	109	87	92	7.1	■
				1800	128	138	111	117	126	101	92	7.7	
155 (125)	PVL 6.8L	6 cyl.	6068HFG05	1500	160	175	140	146	158	127	92	8.2	■
				1800	160	174	139	146	158	126	92	9	
190 (150)	PVL 6.8L	6 cyl.	6068HFG05	1500	165	180	144	150	163	130	93	9.9	■
				1800	192	211	169	175	191	153	93	10.8	
210 (170)	PSL 6.8L	6 cyl.	6068HFG06	1500	197	215	172	179	194	155	93	11.8	■
				1800	216	236	189	196	213	171	93	13	
235 (190)	PSL 6.8L	6 cyl.	6068HFG06	1500	197	214	171	179	193	154	93	13.1	■
				1800	240	262	210	218	237	190	93	14.4	
270 (215)	PSL 9.0L	6 cyl.	6090HFG06	1500	273	300	240	249	272	218	93	14.9	■
				1800	273	298	239	249	270	216	93	16.4	
320 (250)	PSL 9.0L	6 cyl.	6090HFG06	1500	300	328	262	273	297	237	93	17.8	■
				1800	326	356	285	297	322	258	93	19.6	
-	PSL 9.0L	6 cyl.	6090HFG06	1500	300	327	261	-	-	-	93	18.9	■
				1800	345	377	302	-	-	-	93	20.7	
500 (400)	JD14P	6 cyl.	6136CG440	1500	505	474	379	391	428	343	93	22.5	■
				1800	505	521	417	431	472	378	93	24.7	

Engines for EPA Tier 3 and New Source Performance Standards (NSPS) applications

60 Hz

Node	Engine name	Type	Engine model	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power
kVA (kWe) standby				rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW
35 (30)	M 2.9L	3 cyl.	3029TFG89	1800	35	37	30	31	32	29	90	2.2
50 (40)	M 2.9L	3 cyl.	3029HFG89	1800	46	49	39	42	44	35	90	2.9
60 (50)	M 4.5L	4 cyl.	4045TF290	1800	55	58	47	50	53	42	90	3.3
70 (55)	M 4.5L	4 cyl.	4045TF280	1800	63	69	55	57	62	50	90	1.9
80 (65)	M 4.5L	4 cyl.	4045HF280	1800	74	81	65	67	73	58	90	2.2
80 (65)	E 4.5L	4 cyl.	4045TF285	1800	74	77	62	67	70	56	90	5.2
100 (80)	E 4.5L	4 cyl.	4045HF285	1800	94	102	82	86	93	74	92	5.2
125 (100)	E 4.5L	4 cyl.	4045HF285	1800	118	128	103	107	116	92	92	6.5
160 (125)	Plus 4.5L	4 cyl.	4045HFG85	1800	147	162	129	134	147	117	92	6.5
160 (125)	E 6.8L	6 cyl.	6068HF285	1800	147	160	128	134	145	116	92	8.1
190 (150)	E 6.8L	6 cyl.	6068HF285	1800	177	192	154	161	174	139	92	9.8
230 (180)	E 6.8L	6 cyl.	6068HFG82	1800	212	232	185	193	210	168	93	12.6
255 (200)	Plus 6.8L	6 cyl.	6068HFG85	1800	235	257	205	214	232	186	93	14.1
275 (220)	E 9.0L	6 cyl.	6090HFG84	1800	258	278	222	235	251	201	93	18.9
310 (250)	E 9.0L	6 cyl.	6090HF484	1800	287	314	251	258	280	224	93	17.2
340 (275)	E 9.0L	6 cyl.	6090HF484	1800	315	344	275	287	312	249	93	18.9
345 (275)	Plus 9.0L	6 cyl.	6090HFG85	1800	315	347	278	287	315	252	93	16.1
380 (300)	E 9.0L	6 cyl.	6090HFG86	1800	345	379	303	-	-	-	93	19.3
440 (350)	E 13.5L	6 cyl.	6135HFG84	1800	401	44	358	-	-	-	93	16
440 (350)	Plus 13.5L	6 cyl.	6135HF485	1800	401	441	352	365	399	319	93	22
500 (400)	E 13.5L	6 cyl.	6135HFG84	1800	460	513	411	-	-	-	93	18.4
500 (400)	Plus 13.5L	6 cyl.	6135HF485	1800	460	505	404	419	458	366	93	25.3
620 (500)	E 13.5L	6 cyl.	6135HFG75	1800	563	628	503	-	-	-	93	22.5

Engines for EU Stage III A and EPA Tier 3 applications

Dual frequency 50 Hz/60 Hz

Node	Engine name	Type	Engine model	Power unit model*	Speed	Standby ratings			Prime ratings			Generator efficiency	Fan power	Dual freq.	RoHS
kVA prime					rpm	kWm	kVA	kWe	kWm	kVA	kWe	%	kW		
30	M 2.9L	3 cyl.	3029TFG89†	3029TFU89†	1500	31	33	27	28	30	24	90	2	■	■
					1800	35	37	30	32	34	27	90	3.4		
40	M 2.9L	3 cyl.	3029HFG89†	3029HFU89†	1500	43	46	37	39	42	33	90	2.2	■	■
					1800	46	49	39	42	45	36	90	2.2		
60	M 4.5L	4 cyl.	4045HFG81	4045HFU81	1500	61	65	52	56	59	47	90	9.1	■	■
					1800	65	69	56	59	63	50	90	15.3		
80	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1500	83	89	71	76	80	64	90	9.1	■	■
					1800	86	92	74	78	83	67	90	15.3		
100	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1500	103	113	90	94	102	81	92	9.1	■	■
					1800	106	116	93	96	105	84	92	15.3		
120	E 4.5L	4 cyl.	4045HFG82	4045HFU82	1500	123	134	108	112	122	97	92	5.2	■	■
					1800	126	138	110	115	125	100	92	9.1		
150	E 6.8L	6 cyl.	6068HFG82	6068HFU82	1500	153	167	134	139	151	121	92	13.1	■	■
					1800	156	170	136	142	154	123	92	22.5		
200	E 6.8L	6 cyl.	6068HFG82	6068HFU82	1500	202	223	178	184	202	162	93	14.3	■	■
					1800	212	234	187	193	212	170	93	24.7		
250	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1500	253	279	224	230	253	202	93	17	■	■
					1800	258	285	228	235	258	206	93	29.4		
300	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1500	304	336	269	277	304	243	93	17	■	■
					1800	315	348	278	287	315	252	93	29.4		

*Power unit includes factory-mounted cooling package, air filter, and feet.
†50 Hz/60 Hz dual frequency is a customer-selectable option and meets EU Stage III A and EPA Tier 3 emissions regulations.

Engines for non-emissions regulated applications

Dual frequency 50 Hz/60 Hz

Node kVA prime	Engine name	Type	Engine model	Power unit model*	Speed rpm	Standby ratings kWm	kVA	kWe	Prime ratings kWm	kVA	kWe	Generator efficiency %	Fan power kW	Dual freq.	RoHS
30	M 2.9L	3 cyl.	3029DFG20	3029DFU20	1500	31	33	27	28	30	24	90	1.6	■	■
					1800	35	38	30	32	34	27	90	1.8		
40	M 2.9L	3 cyl.	3029TFG20	3029TFU20	1500	42	45	36	39	41	33	90	2.1	■	■
					1800	48	51	41	44	46	37	90	2.4		
60	M 2.9L	3 cyl.	3029HFG20	3029HFU20	1500	58	62	49	55	58	47	90	3.1	■	■
					1800	67	71	57	62	66	53	90	3.6		
80	M 4.5L	4 cyl.	4045TFG20	4045TFU20	1500	85	92	74	79	86	68	92	4.1	■	■
					1800	97	106	84	89	96	77	92	4.7		
100	M 4.5L	4 cyl.	4045HFG20	4045HFU20	1500	103	113	90	96	105	85	92	5.1	■	■
					1800	115	125	100	105	114	91	92	5.7		
120	M 4.5L	4 cyl.	4045HFG20	4045HFU20	1500	122	133	107	112	122	97	92	6.1	■	■
					1800	133	145	116	121	131	105	92	6.8		
150	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1500	157	172	137	144	157	125	92	7.7	■	■
					1800	164	179	143	150	163	130	92	8.5		
180	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1500	184	201	161	170	185	148	92	9.2	■	■
					1800	196	213	171	179	194	155	92	10.5		
200	M 6.8L	6 cyl.	6068HFG20	6068HFU20	1500	202	223	179	184	202	162	93	10.1	■	■
					1800	210	232	186	191	210	168	93	10.5		
225	E 6.8L	6 cyl.	6068HFG25	-	1500	225	249	199	205	225	180	93	11.3	■	-
					1800	236	261	209	215	236	189	93	11.8		
250	E 6.8L	6 cyl.	6068HFG55	6068HFU55	1500	250	276	221	228	250	200	93	12.5	■	■
					1800	260	287	230	237	260	208	93	13.0		
300	E 9.0L	6 cyl.	6090HFG84	6090HFU84	1500	304	336	269	277	304	243	93	15.2	■	-
					1800	315	348	278	287	315	252	93	15.8		
350	E 13.5L	6 cyl.	6135HF475	-	1500	355	392	314	323	355	284	93	17.8	-	-
					1800	360	398	318	328	360	288	93	18.0		
400	E 13.5L	6 cyl.	6135HF475	-	1500	405	447	358	369	405	324	93	20.3	-	Exempt
					1800	420	464	371	382	420	336	93	21.0		
450	E 13.5L	6 cyl.	6135HF475	-	1500	456	504	403	415	456	365	93	22.8	-	Exempt
					1800	460	508	406	419	460	368	93	23.0		
500	E 13.5L	6 cyl.	6135HFG75	-	1500	-	-	-	-	-	-	-	-	-	Exempt
					1800	563	622	497	-	-	-	93	28.2		

*Power unit includes factory-mounted cooling package, air filter, and feet.

Definitions and conversions

Prime power is the nominal power an engine is capable of delivering with a variable load for an unlimited number of hours per year. This rating conforms to ISO 3046 and SAE J1995.

Standby power as defined in ISO 8528-1 is the maximum engine power available at varying load factors for up to 200 hours per year. This rating conforms to ISO 3046 and SAE J1995. The calculated generator-set rating range for standby applications is based on minimum engine power (nominal -5 percent) to provide 100 percent meet-or-exceed performance for assembled standby generator sets.

Generator drive rating (kWe)

[Engine power - Fan power loss] x Generator efficiency

Note:
DFM, TFM, AFM, and SFM generator drive ratings do not have fan power loss.

Power factor (PF)

kWe & kVA = Real power / Apparent power
PF constant = 0.80

Formulas

Standby power = Prime power x 110% overload capacity
kVA rating = kWe rating / 0.80
hp = kW x 1.34

Estimated electrical power is calculated from the typical generator efficiency and fan power percentages shown. Applications may vary.

Notes

Notes

JOHN DEERE

DSWT39 (23-12)

JohnDeere.com/JDPower