



http://www.n-sharyo.co.jp/



NES SERIES

Diesel Engine Generator

Reliable technology, further evolution Earth-friendly green generators



First generator developed Development of DG model generator

(Japan's first portable diesel generator for construction, September 1960)



Paving the way to the future

The history and progress of diesel generator sets cannot be told without Nippon Sharyo, Ltd. We have defined the times by launching various power production facilities with new innovative

We continue to contribute to the environment and ergonomics through improving our products.

SPECIFICATIONS









○ NES25TK

○ NES25TKL

○ NES45TY3

		Item			NESZ	25TK	NES2	5TKL	NES45TY3		
	Fre	equen	су	Hz	50	60	50	60	50	60	
		0 1		kVA	20	25	20	25	37	45	
_	ase oe	Out	put	kW	16	20	16	20	29.6	36	
natc	pha- e typ	2001/	Voltage	V	200	220	200	220	200	220	
Alternator	Three-phase 4-wire type	200V	Current	Α	57.7	65.6	57.7	65.6	107	118	
⋖	다 4	400V	Voltage* 1	٧	400	440	400	440	400	440	
		4000	Current*1	Α	28.9	32.8	28.9	32.8	53.4	59.0	
	Type & Power Factor				Brushles	s Alternator, 3	-Phase, 4-Wire	, 4-Poles, Pow	er Factor 80%	Lagging	
	Eng	ine mo	del		KUBOTA V	2403-K3A	KUBOTA V	′2403-K3A	YANMAR 3	-4TNV98TG	
		Туре				Swirl char	mber type		Direct injection type	e with turbocharger	
	Cylinder	s - Bore	× Stroke	mm	4-87×	102.4	4-87×	(102.4	4-98>	×110	
	Disp	olacem	ent	l	2.4	34	2.434		3.319		
	Rated output		kW	19.1	23.7	19.1	23.7	37.9	45.6		
	Re	volutic	n	min ⁻¹	1500	1800	1500	1800	1500	1800	
ine	Fuel consumption		50% load <i>l</i> /	ℓ /H	3.1	3.8	3.1	3.8	4.2	5.3	
Engine	consumpt		% load	ℓ/Π	4.0	5.1	4.0	5.1	5.9	7.4	
	Engin	e oil vo	lume	l	9	9.7		9.7		.2	
		Battery			85D26L×1		85D26L×1		105D31L×1		
	Fuel t	ank cap	oacity	l	7	0	19	95	145		
		Fuel					Diese	el fuel			
	Oil gu Tota	iard cap al/Effec	oacity tive*5	l	70,	770	300)/95	245	/80	
ight	l	ength	*2	mm	15	40	15	40	17	40	
Dimensions and weight		Width		mm	70	00	7(00	88	30	
ns an	Height r		mm	11	25	14	-60	13	50		
ensio	Dry weight k		kg	64	15	7:	35	10	25		
Dim	Opera	iting w	eight/	kg	72	20	9	15	11	75	
So	ound p	ower I	evel*3	dB	9	0	8	8	8	8	
Sc	Sound level at 7 meters *4			dB	61	64	61	61	60	61	

^{*1 :} Bold borders indicate options.

 $[\]ensuremath{\star} 2$: Values in parentheses are dimensions excluding the rain cover.

^{*3}: Value at 60Hz with zero load.

^{*4}: Average sound pressure in 4 directions at no load.

^{*5:} Total capacity means the capacity of the oil guard itself. Effective capacity means the capacity considering the fuel tank and other components.









NES45TYL3

NES60TK2

○ NES60TKL2

		Item			NES4	STYL3	NES6	0TK2	NES60TKL2		
	Fre	equen	су	Hz	50	60	50	60	50	60	
		04		kVA	37	45	50	60	50	60	
7	Three-phase 4-wire type	Out	put	kW	29.6	36	40	48	40	48	
nate	-phi	200V	Voltage	>	200	220	200	220	200	220	
Alternator	ree-wir	2000	Current	Α	107	118	144	157	144	157	
4	 	400V	Voltage* 1	٧	400	440	400	440	400	440	
		4000	Current*1	Α	53.4	59.0	72.2	78.7	72.2	78.7	
	Type & Power Factor				Brushles	s Alternator, 3	-Phase, 4-Wire	, 4-Poles, Pow	er Factor 80%	Lagging	
	Eng	ine mo	del		YANMAR 3-	4TNV98TG	KUBOTA V380	00-DI-TI-K3A	KUBOTA V38	00-DI-TI-K3A	
		Туре			Direct injection type	e with turbocharger	Direct injection	on type with tu	ırbocharger ar	nd intercooler	
	Cylinder	s - Bore	× Stroke	mm	4-98	×110	4-100	×120	4-100	×120	
	Disp	placement ℓ 3.319		19	3.769		3.769				
	Rated output			kW	37.9	45.6	49.2	57.5	49.2	57.5	
	Re	volutio	n	min ⁻¹	1500	1800	1500	1800	1500	1800	
Engine	Fuel consumpti	50%	% load	ℓ /H	4.2	5.3	5.8	7.2	5.8	7.2	
Eng	consumpt	75%	% load	ℓ/Π	5.9	7.4	8.4	10.3	8.4	10.3	
	Engin	e oil vo	lume	l	11.2		13.8		13	3.8	
		Battery	•		105D	31L×1	105D31L×1		105D31L×1		
	Fuel t	ank cap	oacity	l	3:	30	18	30	400		
		Fuel					Diese	el fuel			
	Oil gu Tota	iard cap al/Effec	oacity tive*5	l	365,	/145	275/75		400/140		
ight	L	ength	*2	mm	17	40	20	50	20	50	
d we		Width		mm	88	30	93	30	93	30	
ıns an	Length*2		mm	16	50	13	90	16	00		
ensio			kg	10	90	11	60	12	35		
Dim	Operating weight kg			13	90	1335		15	95		
S	Sound power level*3			dB	8	9	9	0	90		
Sc	Sound level at 7 meters *4			dB	58	60	61	64	60	63	

^{*1 :} Bold borders indicate options.

 $[\]ensuremath{\star} 2$: Values in parentheses are dimensions excluding the rain cover.

^{*3}: Value at 60Hz with zero load.

^{*4}: Average sound pressure in 4 directions at no load.

^{*5:} Total capacity means the capacity of the oil guard itself. Effective capacity means the capacity considering the fuel tank and other components.









NES100TI2

○ NES125TI2

NES150TI

		Item			NES10	00TI2	NES12	25TI2	NES150TI		
	Fre	equen	су	Hz	50	60	50	60	50	60	
		0 1		kVA	80	100	100	125	125	150	
<u>_</u>	sse oe	Out	put	kW	64	80	80	100	100	120	
Alternator	Three-phase 4-wire type	2001/	Voltage	V	200	220	200	220	200	220	
Iter	ree	200V	Current	Α	231	262	289	328	361	394	
⋖	두 4	400V	Voltage* 1	٧	400	440	400	440	400	440	
		4000	Current*1	Α	115	131	144	164	180	197	
	Type & Power Factor				Brushles	s Alternator, 3	-Phase, 4-Wire	, 4-Poles, Pow	er Factor 80% I	_agging	
	Eng	ine mo	del		ISUZU BI	-4HK1X	ISUZU BI	-4HK1X	ISUZU BI	H-6HK1X	
		Туре				Direct injection	on type with tu	ırbocharger an	d intercooler		
	Cylinder	rs - Bore	× Stroke	mm	4-115	×125	4-115	×125	6-115	×125	
	Disp	olacem	ent	l	5.1	93	5.1	93	7.7	90	
	Rated output		kW	95.8	113.6	95.8	113.6	135.2	166.5		
			min ⁻¹	1500	1800	1500	1800	1500	1800		
ine	Fuel consumption		% load	ℓ/H	9.5	12.3	11.3	14.6	14.1	18.0	
Engine	consumpt	75%	% load	ℓ/H	13.6	17.4	16.5	20.8	19.9	24.5	
	Engin	e oil vo	lume	l	23	23.5		23.5		1	
		Battery			170F51×1		170F51×1		120E41R×2		
	Fuel t	ank cap	oacity	l	2!	50	25	50	250		
		Fuel					Diese	l fuel			
	Oil gu Tota	ıard ca _l al/Effec	oacity tive*5	l	265/	/215	265,	/215	390/	′280	
ight	l	_ength	*2	mm	27	20	27	20	34	80	
d we		Width		mm	11	30	11	30	11	80	
ns an		Height		mm	15	50	15	50	16	50	
Dimensions and weight	Dry weight		kg	19	00	19	40	27	20		
Dim	Operating weight		kg	21	50	21	90	29	90		
So	Sound power level*3			dB	9	1	9	3	9	2	
Sc	Sound level at 7 meters *4			dB	60	64	61	64	60	65	

^{*1}: Bold borders indicate options.

 $[\]ensuremath{\star} 2$: Values in parentheses are dimensions excluding the rain cover.

^{*3}: Value at 60Hz with zero load.

^{*4:} Average sound pressure in 4 directions at no load.

^{*5:} Total capacity means the capacity of the oil guard itself. Effective capacity means the capacity considering the fuel tank and other components.









◇ NES400TI

		Item			NES2	20TI	NES4	ООТІ	
	Fr	equen	су	Hz	50	60	50	60	
		04		kVA	200	220	350	400	
7	ase	Out	put	kW	160	176	280	320	
Alternator	Three-phase 4-wire type	200V	Voltage	٧	200	220	200	220	
Iter	ree	2000	Current	Α	577	577	1010	1050	
<	T 4	400V	Voltage* 1	>	400	440	400	440	
		4000	Current*1	Α	289	289	505	525	
	Type &	Power	Factor		Brushless Alterr	nator, 3-Phase, 4-Wire	, 4-Poles, Power Facto	or 80% Lagging	
	Eng	ine mo	del		ISUZU BH	-6UZ1X	ISUZU BH	-6WG1X	
		Туре			Direct	injection type with tu	irbocharger and inter	cooler	
	Cylinder	rs - Bore	× Stroke	mm	6-120	×145	6-147	′×154	
	Displacement			l	9.8	339	15.681		
	Rated output		kW	185.2	203.7	309	346		
			min ⁻¹	1500	1800	1500	1800		
Engine	Fuel consumpt		% load	ℓ/H	22.1	25.8	39.6	50.6	
Eng	Consump		% load	<i>ل</i> / ۱۱	32.4	36.5	55.9	67.6	
	Engin	e oil vo	lume	l	4	42		2	
		Battery	,		195G	51×2	195G51×2		
	Fuel t	ank cap	oacity	l	3'	90	490		
		Fuel				Diese	el fuel		
	Oil gu Tota	uard cap al/Effec	pacity tive*5	l	435,	/265	605,	/410	
ight	I	Length	*2	mm	38	35	4780(4490)	
nd we		Width		mm	12	90	15	00	
ons ar	Height		mm	17	90	22	00		
Dimensions and weight	Dry weight k			kg	36	50	55	20	
Dim	Operating weight kg			kg	40	50	6050		
S	ound p	ower l	evel*3	dB	9	4	9	7	
Sc	Sound level at 7 meters *4			dB	64	67	66	69	

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○ NES100EI

○ NES125EH

○ NES150EH

		Item			NESI	00EI	NES12	25EH	NES150EH	
	Fre	equen	су	Hz	50	60	50	60	50	60
				kVA	80	100	100	125	125	150
-	Three-phase 4-wire type	Out	put	kW	64	80	80	100	100	120
Alternator	-pha e tyj	2001/	Voltage	٧	200	220	200	220	200	220
Iter	ree	200V	Current	Α	231	262	289	328	361	394
<	두 4	400V	Voltage* 1	٧	400	440	400	440	400	440
		4000	Current*1	Α	115	131	144	164	180	197
	Type & Power Factor				Brushles	ss Alternator, 3	-Phase, 4-Wire	, 4-Poles, Pow	er Factor 80%	Lagging
	Eng	ine mo	del		ISUZU DI	0-6BG1T	HINO JO	8C-UD	HINO JO	08C-UD
		Туре			Direct injection type	with turbocharger	Direct injection	on type with tu	ırbocharger an	d intercooler
	Cylinder	rs - Bore	× Stroke	mm	6-105	×125	6-114	×130	6-114	×130
	Disp	olacem	ent	l	6.4	94	7.961		7.9	61
	Rated output		kW	73.6	91.2	118	140	118	140	
	Re	volutio	n	min ⁻¹	1500	1800	1500	1800	1500	1800
Engine	Fuel consumption		6 load	ℓ/H	9.8	12.6	11.8	14.7	14.1	17.6
Eng	consumpt		6 load	ℓ/Π	13.6	17.6	16.7	20.0	20.0	24.0
	Engine oil volume			l	20		24.5		24	.5
		Battery			95D31R×2		95D31R×2		95D31R×2	
	Fuel t	ank cap	oacity	l	20	0	250		250	
		Fuel					Diese	el fuel		
	Oil gu Tota	ıard ca _l al/Effec	oacity tive*5	l	_	_	_	_	_	-
ight	ı	Length	*2	mm	27	30	31	80	31	80
Dimensions and weight		Width		mm	10	50	11	30	11	30
ıns an		Height		mm	12	90	14	50	14	50
ensio	Dr	y weig	ht	kg	16	50	21	70	22	70
Dim	Opera	ating w	eight	kg	18	50	2420		25	20
So	Sound power level*3 dB			dB	9	3	9	4	9	5
Sou	Sound level at 7 meters(60Hz)*4			dB	6	5	6	6	6	7

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△ NES220EM

○ NES400EM

○ NES500EM

	Item				NES2	20 EM	NES4	00EM	NES500EM		
	Fre	equen	су	Hz	50	60	50	60	50	60	
		04		kVA	195	220	350	400	450	500	
J.	Three-phase 4-wire type	Out	.put	kW	156	176	280	320	360	400	
natc	-pha e tyl	200V	Voltage	٧	200	220	200	220	200	220	
Alternator	wir	200V	Current	Α	563	577	1010	1050	1299	1312	
A	두 4	400V	Voltage* 1	V	400	440	400	440	400	440	
		400 V	Current*1	Α	281	289	505	525	650	656	
	Type & Power Factor				Brushle	ss Alternator, 3	-Phase, 4-Wire	, 4-Poles, Pow	er Factor 80%	Lagging	
	Eng	ine mo	del		MITSUBISHI	6D24-TLE2B	MITSUBISHI S	6B3-E2PTAA-3	MITSUBISHI S	6A3-E2PTAA-1	
		Туре				Direct injection	on type with tu	ırbocharger an	d intercooler		
	Cylinder	ylinders - Bore × Stroke mm			6-130	×150	6-135	×170	6-150	×175	
	Disp	lacem	ent	l	11.94		14	.6	18	.56	
	Rated output			kW	181	199	309	346	405	467	
			min ⁻¹	1500	1800	1500	1800	1500	1800		
Engine	Fuel consumpt	50%	% load	ℓ/H	22.1	26.5	38.5	47.5	49.9	61.0	
Eng	consumpt	75%	% load	ι /Π	30.9	36.6	55.1	67.4	71.8	86.1	
	Engine oil volume		l	37		50		8	0		
	l	Battery	,		150F5	1×2	195G51×2		195G51×2		
	Fuelt	ank cap	oacity	l	37	'0	49	0	490		
		Fuel					Diese	l fuel			
	Oil gu Tota	ard cap II/Effec	oacity tive*5	l	-	-	_	_	_		
ight	L	ength.	*2	mm	38	40	45	50	5270(4790)	
ld we		Width		mm	12	90	14	15	16	50	
ins ar	Length*2 Width Height Dry weight Operating weight		mm	17	50	20	90	228	30		
ensic			kg	35	30	55	10	68	10		
Dim	Opera	ting w	eight	kg	39	10	6030		740	00	
S	Sound power level*3			dB	9	5	10)1	98	8	
Sou	ınd level at	7 meters	s(60Hz)*4	dB	6	7	7	1	68		

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○ NES610SM

○ NES800SM

	ltem -				NES	510SM	NES8	00SM	
	Fre	equen	су	Hz	50	60	50	60	
		01		kVA	554	610	700	800	
7	ase	Out	put	kW	443	488	560	640	
natc	-pha e tyl	200V	Voltage	V	200	220	200	220	
Alternator	Three-phase 4-wire type	200V	Current	Α	1599	1600	2021	2100	
4	두 4	400V	Voltage* 1	>	400	440	400	440	
		4000	Current*1	Α	800	800	1010	1050	
	Type &	Power	Factor		Brushless Alter	nator, 3-Phase, 4-Wire	e, 4-Poles, Power Facto	or 80% Lagging	
	Eng	ine mo	del		MITSUBISE	HI S6R-PTA	MITSUBISHI	S12A2-PTA	
		Туре			Direct	injection type with tu	urbocharger and interd	cooler	
	Cylinder	rs - Bore	× Stroke	mm	6-170	×180	12-150	×160	
	Disp	olacem	ent	l	24.5		33	.9	
	Rated output			kW	517	565	677	758	
	Revolution		min ⁻¹	1500	1800	1500	1800		
Engine	Fuel consumpt	50%	% load	ℓ/H	60.2	72.9	82.2	105	
Eng	Consump	75%	% load	£ / 1 1	84.0	99.2	113	141	
	Engine oil volume			l	92	2	130(+Sub	Tank 85)	
		Battery			195G5	51×2	195G51×4		
	Fuel t	ank cap	oacity	l	58	0	730		
		Fuel				Diese	el fuel		
	Oil gu Tota	ıard cap al/Effec	oacity tive*5	l	-	-	_	-	
ight	I	_ength	*2	mm	5173(4690)	6235(5600)	
d we		Width		mm	16	50	19	50	
ins ar	Height		mm	24	00	25	80		
Dimensions and weight	Dry weight			kg	81	90	110	000	
Dim	Operating weight kg				88	60	120	000	
So	Sound power level*3 dB				1()1	101		
Sou	Sound level at 7 meters(60Hz)*4				7	2	7	3	

^{*1}: Bold borders indicate options.

 $[\]ensuremath{\star} 2$: Values in parentheses are dimensions excluding the rain cover.

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The history and progress of diesel generator sets cannot be told without Nippon Sharyo, Ltd. We have defined the times by launching various power production facilities with new innovative concepts.

We continue to contribute to the environment and ergonomics through improving our products.

First generator developed

Development of DG model generator (Japan's first portable diesel generator for construction, September 1960)

Thanks to customers support, we have been successful for more than half a century in many locations of the world.

Both voltages, 200 V and 400 V, are available.









High insulation + alternator

The alternator winding is coated with varnish using dripping impregnation and vacuum impregnation to provide high insulation performance.



Weather resistant coating

Electrodeposition and weather-resistant baking finish are used on all models, providing high resistance to corrosion.



High-quality power supply

The FET-type AVR (Automatic Voltage Regulator) and high-performance damper winding provide high-quality power with a voltage regulation of ±0.5%.

In addition to working well with general linear loads, the generator also works well with nonlinear loads such as inverters.

Tough and durable

Tougeness and durability. We continue to create products that satisfy our customers.



Generators developed by NISSHA

All NISSHA generators, except for engine components, are developed and manufactured according to our

In particular, we have absolute confidence in our alternators due to our many years of experience. We will continue to respond to our customer's requests so that they can supply power to a wide variety of loads.

LIST OF OPTIONS

•:Standard O:Options are applicable at time of factory shipment

	Harris.	D					- '	NES	'''			,	притент
	Item	Page	25TK	25TKL	45TY3	45TYL3	60TK2	60TKL2	100TI2	125TI2	150TI	220TI	400TI
ning	Full-auto parallel running device	13	_	_	_	_	_	_	_	_	_	0	0
Parallel running	Manual synchronizing device	13	_		_	_	_	_	_	_	0	0	•
Paral	Percent power meter	_	_	_	_	_	_	_	_	_	_	0	0
Ħ	Dual voltages	_	•	•	•	•	•	•	•	•	•	•	•
Output	Single-phase 3-wire dedicated specification	_	_	_	_	_	_		0	0		_	_
	Energy-saving remote controller	15	_	_	_	_	_	_	0	0	0	0	0
ntrol	Slowdown device	15	_	_	_	_	_	_	_	_	1	0	0
Operation control	Auto idling device	_	_	_	_	_	_	_		_	_	_	0
eratic	Auto start/stop unit and charger	14	O*1	O*1	O*1	O*1	O*1	O*1	0	0	0	0	0
Ope	Battery charger	14	O*1	0	0	0	0	0	0	0	0	0	0
	Power switching panel*1	15	0	0	0	0	0	0	0	0	0	0	0
	Oil guard	12	•	•	•	•	•	•	•	•	•	•	•
<u></u>	Fuel tank three-way cock	15	•	_	•	_	•	_	•	•	•	•	0
Oil/fuel	Automatic oil supply unit	_	_	_	_	_	_	_	_	_	-	0	0
0	Oil drain pump	_	_	_	_	_	_	_		_	_	0	0
	Fuel supply device		_	_	_	_	_	_	_	_	_	0	0
	Muffler flange	_	O*2	O*2	O*2	O*2	O*2	O*2	0	0	0	0	0
	Leak detection set at 200mA	_	0	0	0	0	0	0	0	0	0	0	0
	Salt resistance	_	0	0	0	0	0	0	0	0	0	0	0
	Simple Salt damage	_	0	0	0	0	0	0	0	0	0	0	0
Others	Anti-theft cover*2	_	0	0	0	0	0	0	0	0	0	0	_
Ot	Skid* ²	_	0	0	0	0	0	0	0	0	0	0	0
	Panel door with key*2	_	0	0	0	0	0	0	0	0	0	0	0
	Fuel filler with key*2	_	•	0	0	0	0	0	0	0	0	0	0
	Output terminal rubber backing sheet*2	_	•	•	0	0	0	0	0	0	0	0	0

^{*1 :} External separate panel

Note: Please consult with Nippon Sharyo if you have a specific requirement for options or specifications other than the above. Some combinations of options are not available. Please consult with Nippon Sharyo for more information.

^{*2 :} Available after shipment.

●:Standard ○:Options are applicable at time of factory shipment

	Item	Page				N	ES			
	iteiii	raye	100EI	125EH	150EH	220EM	400EM	500EM	610SM	800SM
ning	Full-auto parallel running device	13				0	0	0	0	0
Parallel running	Manual synchronizing device	13	_	0	0	0	•	•	•	•
Paral	Percent power meter	_	_			0	0	0	0	0
ŧ	Dual voltages	_	0	•	•	•	•	•	•	•
Output	Single-phase 3-wire dedicated specification	_	0	0	_	_	_	_	_	_
	Energy-saving remote controller	15	_	0	0	0	0	0	0	0
ntrol	Slowdown device	15	_	_	_	0	0	0	0	0
100 U	Auto idling device	_	_	_	_	0	0	0	0	•
Operation control	Auto start/stop unit and charger	14	O*1	0	0	0	0	0	0	0
do	Battery charger	14	0	0	0	0	0	0	0	0
	Power switching panel*1	15	0	0	0	0	0	0	0	0
	Oil guard	12	_	_	_	_	_	_	_	_
	Fuel tank three-way cock	15	•	•	•	•	0	0	0	0
Oil/fuel	Automatic oil supply unit	_	_	_	_	0	0	0	0	•
0	Oil drain pump	_	_	_	_	0	0	0	0	0
	Fuel supply device		_	_	_	0	0	0	0	0
	Muffler flange	_	O*2	0	0	0	0	0	0	0
	Leak detection set at 200mA	_	0	0	0	0	0	0	0	0
	Salt resistance	_	0	0	0	0	0	0	0	0
	Simple Salt damage	_	0	0	0	0	0	0	0	0
Others	Anti-theft cover*2	_	•	0	0	0	_	_	_	_
Ot	Skid* ²	_	0	0	0	0	0	0	0	0
	Panel door with key*2	_	0	0	0	0	0	0	0	0
	Fuel filler with key*2	_	0	0	0	0	0	0	0	0
	Output terminal rubber backing sheet*2	_	0	0	0	0	0	•	•	•

^{*1 :} External separate panel *2 : Available after shipment.

Note: Please consult with Nippon Sharyo if you have a specific requirement for options or specifications other than the above. Some combinations of options are not available. Please consult with Nippon Sharyo for more information.

Oil guard

Oil guards that have passed leakage are provided as standard equipment in all models compliant on NES25 to **NES400TI** (P2~P5). These prevent fuel and oil leakage and protect the environment. Although all possible measures have been taken against rainwater, if rainwater nevertheless penetrates, it is removed by a dedicated drain cock.











Earth leakage protector

To prevent electric shock, highsensitivity, high-speed earth leakage relay is provided (detection in 0.1 seconds at 30mA).



30mA (standard)

Full-auto parallel running device

This controller includes auto start/stop, synchronizing, load sharing, controlling the number of operating units, and measurement and protection, allowing fully automatic parallel running of generators. The number of operating generators are automatically controlled so that the optimum number are in operation according to changes in the power load, therefore only the minimum necessary number of generators are in operation and the remaining generators are stopped and placed in a standby state, thus improving the operating efficiency of the generators and saving fuel.

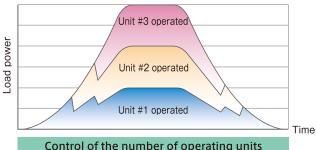
Features

- Compact unit that enables all-in-one control
- Full automatic control with a single switch
- Efficient operation for lower fuel consumption
- •Up to 8 generators can be connected
- Remote auto start-stop of one or more generators via contact input (can be applied as standard emergency generator for power failures)



Functions

- Auto start/stop
- 2 Auto synchronizing, load sharing
- Control for constant frequency and voltage
- 4 Auto control of the number of operating units Parallel running and disconnection are automatically controlled to run the optimum number of units according to changes in load power. (Generators are controlled by communications cables. Standard length of cables is 10m, with optional 99m cables available.)



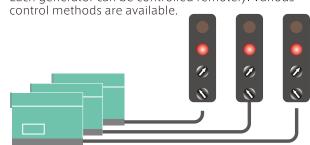
(Conceptual illustration for 3 units)

6 Control for heavy loads

The number of operating units can be increased in advance with a forced operation command, allowing heavy load equipment such as vibratory pile drivers, earth augers and tunnel excavators to be connected.

6 Remote control of auto start/stop

Each generator can be controlled remotely. Various



Provided with reverse power protection and measurement display

Notes on parallel running

Although parallel running involves procedures such as load sharing, as well as monitoring the operation state, it offers a number of benefits:

- Allows large power supply.
- The number of operating units can be easily set according to the load demand.
- Even if one generator fails, operation can be continued with other units.

Furthermore, an advanced power generation system can be built by controlling the number of operating units and using the remote start/stop.

	Start/stop	Synchronizing	Load sharing	No. of operating units	Remote control
Full-auto parallel running	Auto	Auto	Auto	Auto	Option
Manual synchronizing	Manual	Manual	Manual	Manual	Option

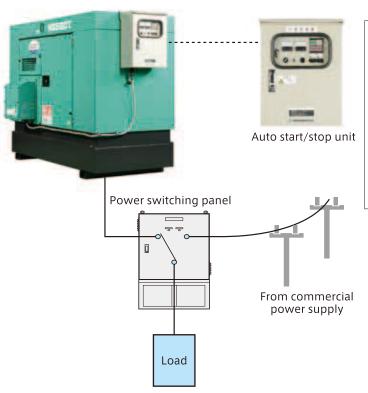
Note: This table shows the basic functions of parallel running.

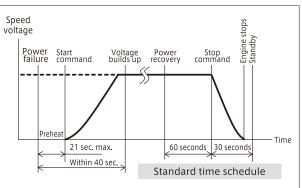


There are limitation of capacity depending on use. For details, please consult Nippon Sharyo.

AMF system

Although the NES series portable generators are basically designed to provide power supply at work sites, options are available for use as AMF generators that automatically supply power in the event of a power failure. These options include the auto start/stop unit, battery charger and power switching panel, and an AMF generator can be configured using simple optional equipment.





Auto start/stop unit



This unit automatically starts/stops a generator according to the commercial power state. The generator starts automatically when commercial power fails, and stops automatically after cooling down when commercial power is restored.

The unit is provided with an auto/manual switch to select auto or manual operation in the event of a power failure, as well as a test switch to check if the generator starts automatically.

Battery charger



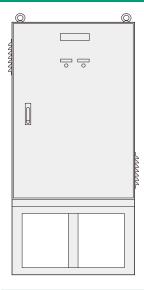
This unit charges the battery used for starting the generator engine. The battery slowly discharges to supply stand-by power even when the generator is not operating. The battery charger is indispensable, preventing the battery from running down for an emergency generator that is equipped with an auto starting start/stop unit and maintaining a stand-by state at all times in case of emergencies. The charger uses commercial power to charge the battery while the generator is in a stand-by state.

Model	Auto start/stop	unit and charger	Battery charger			
Model	Built in NES unit	Separate board	Built in NES unit	Separate board		
NES25TK	_	0	_	0		
NES25TKL, NES45, NES60, NES100EI	_	0	0	0		
NES100T12, NES125 - NES800	0	0	0	0		

Power switching panel

This panel incorporates a switch to toggle between commercial power and generator output. The design is similar to a distribution board.

Various models are available to meet your requirements for voltage, current and indoor/outdoor use.



Power switching panel (Conceptual illustration) Standard size of power switching panel (Indoor type)

Voltage	Current	Dimensions(W×H×D)	Method	
	200A	700×1000×300	Wall-	
	400A	700~1000~300	mounted	
200V	600A	800×1650×500		
system	800A	800×1850×500	Free-	
	1000A	800×1950×500	standing	
	1200A	800×1950×500		
	200A	700×1000×300	Wall-	
	400A	700×1000×300	mounted	
400V	600A	800×1650×500		
system	800A	800×1850×500	Free-	
,	1000A	900×1050×500	standing	
	1200A	800×1950×500		

Note: * Please consult with Nippon Sharyo for special requirements such as incorporating an auto start/stop unit in the power switching panel. *Please consult Nippon Sharyo about outdoor specifications.

Energy-saving remote controller and slowdown device

The energy-saving remote controller and slowdown device remotely control engine operation for better fuel economy. Both are wired remote controllers.

○:Available

Remote control	Energy-saving remote controller	Slowdown device
Idling/ rated speed	0	0
Start/stop	_	0
Cable length	10m	30m

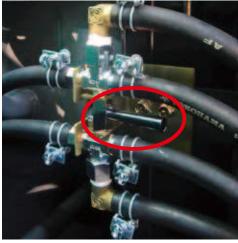




Fuel tank three-way cock

A single-lever, fuel tank changeover cock for switching between the internal and external tanks is provided to allow for long time operation. The cock is easy to operate and prevents mistakes switching.

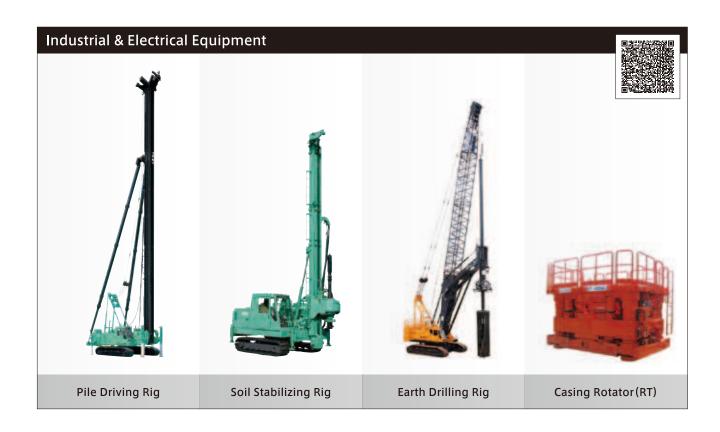
(Provided as standard equipment on NES25 to NES220 and as an option for NES400 to NES800; not available for NES25TKL, NES45TYL3, and NES60TKL2.)



Three-way cock of fuel tank (standard)



NES400 and later (optional)



Manufacturer



http://www.n-sharyo.co.jp/



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