

TOYO

SINCE
1951

Generators

BRUSHLESS WITH AVR

AIR COOLED V-TWIN GASOLINE ENGINE



MODEL TSN-24TV



MODEL TSN-16V



Engine made in japan

 **TOYO DENKI INDUSTRIAL CO., LTD.**

Features

● **BRUSHLESS GENERATORS**

TOYO BRUSHLESS design eliminates carbon brushes and slip rings, so the GENERATOR is virtually maintenance-free.

● **ENGINE**

High-technology and compact VANGUARD 2-cylinder OHV engine.
Ensure low exhaust gas, low noise, low vibration and low fuel consumption as well as heavy-duty operation and long-life.

● **OPTIONAL ACCESSORIES**

4-Wheel

● **LARGE-CAPACITY FUEL TANK**

Large-capacity fuel tank as well as low fuel consumption provide long hours of operation.

● **SAFETY DEVICE**

Low lubrication oil pressure.

● **HIGH-PERFORMANCE**

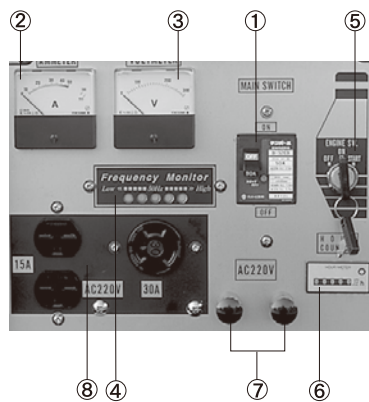
TOYO AVR (Automatic Voltage Regulation)
AVR maintains voltage stability within ± 1.5%.

Specifications

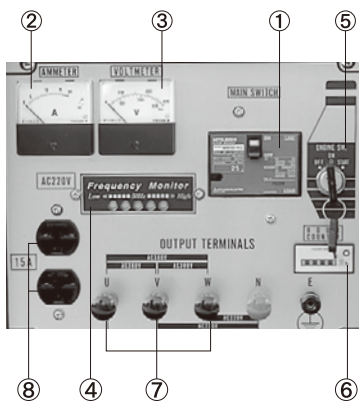
Model		TSN-13SV	TSN-16TV	TSN-16SV	TSN-20TV	TSN-19SV	TSN-24TV	
GENERATOR	Output	50Hz Stand-by	11.5kW	14.5kVA	14.4kW	18.0kVA	17.5kW	22.0kVA
		Prime	10.5kW	13.0kVA	12.8kW	16.0kVA	16.0kW	20.0kVA
	60Hz	Stand-by	12.8kW	16.0kVA	16.0kW	20.0kVA	19.2kW	24.0kVA
		Prime	11.5kW	14.4kVA	14.4kW	18.0kVA	17.2kW	21.5kVA
	Type	Revolving-field type AC Generator (Brushless)						
	Excitation	Brushless, self - excitation						
	Rated speed	50Hz/3000min ⁻¹			60Hz/3600min ⁻¹			
	Voltage regulation	AVR ± 1.5% at rated speed						
	Phase/wire	Single phase 2(4)wire	Three phase 4 wire	Single phase 2(4)wire	Three phase 4 wire	Single phase 2(4)wire	Three phase 4 wire	
	Voltage	※110-240V	※200-415V	※110-240V	※200-415V	※110-240V	※200-415V	
Power factor	1.0	0.8	1.0	0.8	1.0	0.8		
Class of insulation	F-class (both stator & rotor)							
Bearing	Single Bearing (direct coupling with engine)							
VANGUARD		385447		543477		613477		
Type	Air cooled 4-stroke OHV V-twin							
Max.rating Output	20.0HP(14.9kW)=3000min ⁻¹ 22.0HP(16.4kW)=3600min ⁻¹		27.0HP(20.1kW)=3000min ⁻¹ 31.0HP(23.1kW)=3600min ⁻¹		32.0HP(23.9kW)=3000min ⁻¹ 35.0HP(26.1kW)=3600min ⁻¹			
Cont.rating Output	18.0HP(13.4kW)=3000min ⁻¹ 20.0HP(14.9kW)=3600min ⁻¹		22.0HP(16.4kW)=3000min ⁻¹ 25.0HP(18.7kW)=3600min ⁻¹		25.5HP(19.0kW)=3000min ⁻¹ 29.0HP(21.6kW)=3600min ⁻¹			
Displacement	0.627 l		0.895 l		0.993 l			
Starting system	Electric starting motor (Recoil)		Electric starting motor		Electric starting motor			
Recommended fuel	Unleaded or regular gasoline; 86 pump octane(unleaded preferred)							
Fuel consumption(l/h)	4.5 l (h=3000min ⁻¹) / 6 l (h=3600min ⁻¹)		6.5 l (h=3000min ⁻¹) / 7.5 l (h=3600min ⁻¹)		7.5 l		8.5 l	
Fuel tank capacity	33 l				44 l			
Automatic safety shut down devices	Low lubricating oil pressure							
Dimensions(L×W×H) ※(l)=with wheel	940×630(810)×620(710)mm		980×660(845)×730(850)mm		1000×660(845)×730(850)mm			
Dry weight	164 kg		210 kg		220 kg			
Sound level(at7m)	50Hz=71dB/60Hz=77dB		50Hz=75dB/60Hz=80dB		50Hz=77dB/60Hz=81dB			

Control panel

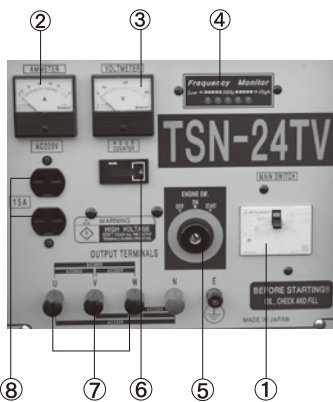
Model
TSN-13SV



Model
TSN-16TV



Model
TSN-16SV/20TV
TSN-19SV/24TV



- ① Main Switch
- ② Ammeter
- ③ Voltmeter
- ④ Frequency monitor
- ⑤ Engine Start / Stop Key
- ⑥ Hour Counter
- ⑦ Output Terminals
- ⑧ Output Receptacles

● We strive constantly to improve the quality of the product, so we can change photos and images at any time without notice.



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