



PI Model	Hz/rpm*	Voltage	Continuous	Prime	Standby
PI 78D	50/1500	400/230	66.2 kVA 52.9 kWe	74 kVA 59.2 kWe	78.2 kVA 62.5 kWe
PI 89D	60/1800	480/220	75.0 kVA 60.0 kWe	79.4 kVA 63.5 kWe	89.4 kVA 71.5 kWe

Applicable Standard and References: ISO 8528-1; ISO 3046-1; BS 5514-1  
The above given ratings are at 0.8 power factor (PF)

Engine Technical Data				Alternator Technical Data			
Engine Make & Model		Deutz BF4M2012 C		Alternator Make & Model		Leroy Somer TAL 044 B	
No. of Cylinders		4 In-line		No. of Poles		4	
Cycle		4		WINDING LEADS		12	
Aspiration		Turbocharged, Charged Air Cooled		No. of Bearings		Single	
Cooling Method		Water		Insulation Class/ Temp Rise		Class H /163 <sup>0</sup> K-27 <sup>0</sup> C	
Governing Type		Mechanical (Std)/Electronic (Opt.)		Winding Pitch		TWO THIRDS	
Governing Class		ISO 8528 Part 1 G2		Ingress Protection Rating		IP-23	
Compression Ratio		18.4:1		Excitation System		SHUNT	
Displacement (L)		4		AVR Model		R120	
Bore/Stroke (mm)		101/126		<b>Alternator operating Data</b>			
Battery Charger, Ampere		12 Volts DC, 45 Amp		Overspeed (RPM)		2250	
<b>Air System</b>				Voltage Regulation		± 1 %	
Air Filter Type		Dry Element (replaceable)		Wave Form NEMA = TIF		<50	
Combustion Air Flow m <sup>3</sup> /min (cfm)	Standby	N.A		Wave Form IEC = THF		<3.5%	
	Prime	4.45 (157.3)	6.2 (487)	Total Harmonic Content LL/LN		<5%	
Radiator Air Flow		78.3 (2765)	96.6 (3412.2)	Radio Interference		Standard EN61000-6-2:2001	
<b>Cooling System</b>				Cooling Air Flow m <sup>3</sup> /sec(cfm)		0.25 (529)	N.A
Cooling System Capacity (L)		15.9		<b>Controller Technical Data</b>			
Water Pump Type		Centrifugal Engine Driven		Controller Make & Model		DSE 6120 or Eq.	
Radiator Fan Load kW (hp)		4.9 (6.5)	8.3 (11.1)	Operation mode		Auto Main Failure (AMF)	
Heat Radiation to Room kW (BTU/min)	Standby	N.A		Display		large back-lit LCD display	
	Prime	7.5 (426.5)	9.0 (526.5)	Ingress Protection Rating		Sealed front face(IP65)	
<b>Lubrication system</b>				Binary Inputs/Outputs		4 / 6	
Oil Filter Type		Spin on full flow filter		Analog inputs		4	
Total Oil Capacity I (US gal)		8.5 (2.24)		Measurement		Vac, A, Hz, kVA, kW, Vdc, kV Ar, pf	
Oil Pan I (US gal)		N.A		Event Log		Alarms log, Hours log	
Oil Type		TRO 199-99-1217		Communication (Optional)		USB, RS232, RS485, GSM, ETHERNET	
Cooling Method		N.A		<b>Gen-set Enclosure Specification (optional)</b>			
<b>Fuel System</b>				Enclosure Type		Acoustic and Weather Proof	
Fuel Filter Type		Spin on fuel filters with water separator		Anticorrosive Protection		Polyester Powder Coated Galvanized Sheet	
Recommended Fuel		Class A2 Diesel		Ingress Protection rating		Weather Proof IP23	
Fuel Consumption: l/hr (US gal/hr)		Prime	Standby	Prime	Standby	Transportation	
	110%	N.A	N.A	N.A	N.A	ISO standard lifting	
	100%	18.5(4.8)	N.A	20.3(16.6)	N.A	Noise level	
	75%	13.6(3.5)	N.A	15.1(12.4)	N.A	70 dbA @ 7 meters	
	50%	9.1(2.4)	N.A	10.3(8.5)	N.A	Emergency	
						External Emergency Push Botton	
						Canopy RAL color	
						RAL 2000	
						Chassis RAL color	
						RAL 9011	
<b>Exhaust System</b>				<b>Dimensions</b>		<b>Open Type</b>	<b>Enclosure</b>
Silencer Size & Model		(3") Industrial		Length (mm)		2111	3350
Silencer Noise Reduction Level		11-15 dBA		Width (mm)		1143	1150
Max. Back Pressure kPa (in. Hg)		3.0 (0.88)		Height (mm)		1473	1760
Exhaust Gas Flow m <sup>3</sup> /hr (cfm)	Standby	N.A		Weight (kg)		1020	1450
	Prime	829 (487)	1071 (630)	Fuel Tank Capacity (L)		390	390
Exhaust Gas Temperature °C (°F)	Standby	N.A					
	Prime	600 (1112)	540 (968)				

- Notes:
- 1) Warranty: one year or (1000) hours which comes first.
  - 2) Continuous Power: No time limitation, plus 10% additional power for governing purpose only.
  - 3) Prime Power: Average power output ≤ 80%, no time limitation, plus 5% additional power for governing purpose only.
  - 4) Limited Time Running Power: For up to 500 h/year, thereof a maximum of 300 h/year continuous running.
  - 5) The above rating is based on ISO 8528-5 standard ambient condition. Deration is applicable for higher temperature; Contact PI.
  - 6) Referring to our company policy of continuous development, PI reserves the right to change specification without notice.

N.A. - Not Available  
N/A - Not Applicable to this Engine  
TBD - To Be Determined