

Power...

Anytime...

Anywhere...



# **C.R.I. DIESEL GENERATOR**

(WATER COOLED)





# Vision, Mission and Values

To be the industry leader providing best - in - class fluid management solutions to individual and institutional customers and societies in our chosen markets.

We will achieve this through our dedicated efforts to enhance the welfare of all our stakeholders and by living by our values of commitment, reliability and innovation.



# THEBEGINNING

of C.R.I., way back in 1961, was a resolute attempt to produce a few irrigation equipments using the limited facilities of an in-house foundry. Eventually the founder's dream was coming true as the small production unit he started kept growing rapidly. Now, after more than five eventful decades, it is an enormous, widely reputed organization, which produces more than 1000 varieties of perfectly engineered pumps and motors and sells its products in numerous countries spread across 6 continents.

# C.R.I.IS ONE AMONG

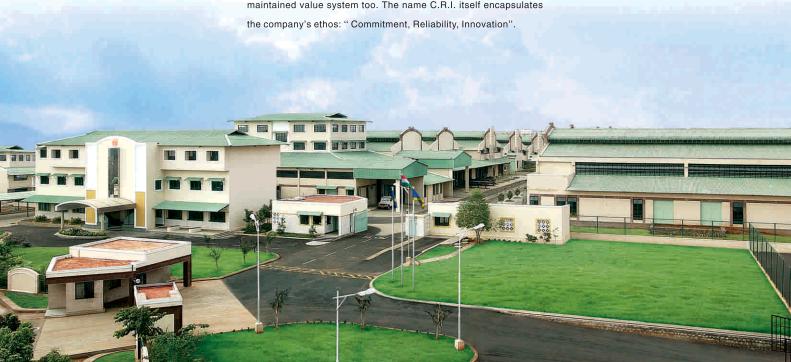
the few pioneers in the world to produce 100% stainless steel submersible pumps. Having achieved a record production capacity of over one million pumps per annum, today C.R.I. is rubbing its shoulders with the best brands in the world, with advanced technology and safety standards as its hallmarks.

## THEINFRASTRUCTURE

of C.R.I. is pretty comprehensive with state-of-the-art machineries and a high potential R&D wing, all within its own covered area of 150,000 square metres. The production environment is accredited with ISO 9001 & 14001 certifications. The R&D team always stays in tune with the changing scenario and seldom fails in coming up with outstanding solutions every time.

# NEEDLESS TO SAY,

behind this legendary growth lies the untiring, innovative, enthusiastic and dedicated team work. And, of course, a flawlessly maintained value system too. The name C.R.I. itself encapsulates





Power...

Anytime...

Anywhere...

Range: 50Hz - 10 to 250 KVA



## C.R.I. DIESEL GENERATOR

(WATER COOLED)

Diesel powered generator sets remain the alternative choice for standby and emergency power systems, worldwide, for various applications.

#### **DESCRIPTION**

I All are 1500 rpm, 50Hz, 415V. 0.8pf(lag), 3 Phase Generators I All are direct injection type, liquid cooled (with radiator) inline engines I All are fitted with engine tripping facility for low lube oil pressure and high water temperature I All are provided with emergency trip on canopy I Rotate anti clock wise when viewed from alternator end I Fuel Consumption figures are based on field reports, It is at 80% load, subject to +5% tolerence and 0.835 specific gravity I Sump capacity includes filters, hoses etc. Lube oil recommended is 15 W 40 I Cables are 31/2 or 4 core armoured aluminium (please check with your electrical inspectorate for sizes) I Alternators are normally single bearing, Brushless type I Class of insulation, enclosures vary for different makes of alternators I Ratings as per BS 5514 / ISO 3046 / ISO 8528 I Figures are as per standard reference conditions I AMF Panels, Special Panels, Single phase sets with Trailer Mounted sets supplied against specific orders.

#### **POWER SOURCE**

C.R.I. Diesel Generator comprising Ashok Leyland / other reputed engine and Stamford / Leroy Somer / other reputed Alternator. The sturdy, 4 & 6 cylinder, in-line-water cooled, four stroke Ashok Leyland range of diesel engines yield continuous power, enabling the generator to operate round the clock continuously at 80% load. The inherent construction design of the engines ensures easy service and maintenance, even inside an acoustic enclosure. The standard DG set unit comprises radiator mounted with standard control panel and suitable alternator.

#### **ALTERNATOR**

To operate at 1500 RPM Rating 415 volts, 0.8 pf (Lag) for 50Hz, 3 Phase, 4 wire system, confirming to IS 4722 features including brushless alternator with self regulated AVR.

#### **FEATURES**

- Compact Machine
- Lowest maintenance expenses
- · Longest life for engines
- Trouble-free machines
- Lowest fuel/lube oil consumption

- · Easy to operate
- Economical spare parts
- Avaliability of spares
- Best suited for continuous operation
- Simple design

Note: DG Set above 250KVA can be supplied on request.

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

**C.R.I. DIESEL GENERATOR** 

## **TECHNICAL DATA**

SPECIFICATIONS	MODEL							
	DG10	DG15	DG20	DG25	DG30	DG40	DG45	DG62.5
Power Rating - kVA	10	15	20	25	30	40	45	62.5
Electrical Power - kW	8	12	16	20	24	32	36	50
Rated Current - AMP	14	21	28	35	42	56	63	87
Engine Max HP	24.8	24.8	32.5	36.9	48.3	53.2	53.2	84.0
Engine Rated HP	23.5	23.5	29.5	34.9	44.6	48.7	48.7	76.4
Engine Models (AL)	485G1	485G1	485TG2	485TAG3	4102G1	W04DMK1E4	W04DMK1E4	4DTG3
No. of Cylinders	4	4	4	4	4	4	4	4
Aspiration	NA	NA	TC	TCA	NA	NA	NA	TC
Governor				A1 Cla	ss / Mechan	ical		
Lub Oil Sump Capacity (in Itrs)	8.5	8.5	8.5	8.5	8.5	7.5	7.5	7.5
Lub Oil Consumption (in %)	≤ 0.15							
Bore & Stroke (in mm)	85 x 92	85 x 92	85 X 92	85 X 92	102 X 118	104 X 118	104 X 118	104 X 118
Displacement (in ltrs)	2.088	2.088	2.088	2.088	3.857	4.009	4.009	4.009
Compression Ratio	18:1	18:1	17.5:1	17.5:1	17.5:1	17.9:1	17.9:1	17.9:1
Fuel consumption (in ltr) approx. (based on field report)	2.5	2.5	3	3.5	4.0	5	5	8
Housing / Fly Wheel	SAE 3/10	SAE 3/10	SAE 3/10	SAE 3/10				
Starter Motor	PE	PE	PE	PE	PE	PE	PE	PE
Electric System	12V	12V	12V	12V	12V	12V	12V	12V
Battery Capacity (in AH)	88	88	88	88	88	88	88	120
Battery Qty	1	1	1	1	1	1	1	1
ALTERNATOR								
Туре	Brushless							
Enclosure	IP 23	IP 23	IP 23	IP 23				
Voltage Regulation	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%
Class of insulation	Н	Н	Н	Н	Н	Н	Н	Н
rpm / Frequency (Hz)	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50
Voltage	230 / 415	230 / 415	230 / 415	230 / 415	230 / 415	415	415	415
Efficiency	83%	83%	87%	87%	87%	88%	88%	88%

<sup>\*</sup> NA - Naturally Aspirated, TCI - Turbo charged intercooled, TC - Turbo charged, TCA - Turbo charged and after cooled. PE - Pre-engaged axial. In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

## **TECHNICAL DATA**

SPECIFICATIONS	MODEL								
	DG82.5	DG100	DG125	DG140	DG160	DG180	DG200	DG250	
Power Rating - kVA	82.5	100	125	140	160	180	200	250	
Electrical Power - kW	66	80	100	112	128	144	160	200	
Rated Current - AMP	115	139	174	195	222	250	278	348	
Engine Max HP	109.4	134.0	167.6	196.8	224	247.7	277.2	341	
Engine Rated HP	103.2	122.0	152.8	179.0	203.8	225.2	252	310	
Engine Models (AL)	4DTIG2	6DTIGI	6DTIG2	680TAG2	680TAG3	615TAG2	615TAG1	GD61842D	
No. of Cylinders	4	6	6	6	6	6	6	6	
Aspiration	TCA	TCA	TCA	TCI	TCI	TCA	TCA	TCA	
Governor	A1 Class / Mechanical	A1 Class / Electronic	A1 Class / Electronic	A1 Class /	Mechanical	A1 Class / Electronic	A1 Class / Electronic	A1 Class / Electronic	
Lub Oil Sump Capacity (in Itrs)	7.5	12	16	26	26	27	27	27	
Lub Oil Consumption (in %)	≤ 0.3								
Bore & Stroke (in mm)	104 X 118	104 X 113	104 X 113	127 X 146	127 X 146	126 X 130	126 X 130	126 X 155	
Displacement (in ltrs)	4.009	5.759	5.759	11.1	11.1	9.726	9.726	11.59	
Compression Ratio	17.9:1	17.5:1	17.5:1	17:1	17.1	17:1	17:1	17:1	
Fuel consumption (in ltr) approx. (based on field report)	11	14	16.5	21	23	27	29	34	
Housing / Fly Wheel	SAE 3/10	SAE 3/10	SAE 3/10	SAE 1/14	SAE 1/14	SAE 1/14	SAE 1/14	SAE 1/14	
Starter Motor	PE	PE	PE	Axial	Axial	Axial	Axial	Axial	
Electric System	12V	24V	24V	24V	24V	24V	24V	24V	
Battery Capacity (in AH)	130	130	130	150	150	180	180	180	
Battery Qty	1	2	2	2	2	2	2	2	
ALTERNATOR		<u> </u>	<u> </u>		<u> </u>	<u> </u>			
Туре	Brushless								
Enclosure	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	
Voltage Regulation	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%	
Class of insulation	Н	Н	Н	Н	Н	Н	Н	Н	
rpm / Frequency (Hz)	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	1500 / 50	
Voltage	415	415	415	415	415	415	415	415	
Efficiency	90%	90%	90%	90%	90%	90%	90%	92.5%	

<sup>\*</sup> NA - Naturally Aspirated, TCI - Turbo charged intercooled, TC - Turbo charged, TCA - Turbo charged and after cooled. PE - Pre-engaged axial. In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

#### **CONTROL PANEL**

A reliable control system is provided with special sensors to safeguard the engine against low oil pressure and high water temperature.

#### STANDARD PANEL

Indicates						
Voltage	Water temperature					
Ampere	Battery voltage					
Frequency	DG set running					
Kilowatt	Load on DG set					
rpm and No. of hours run	Safety for Low Lube Oil Pressure					
Oil pressure	Hot water temperature tripping					



#### AMF (Auto Mains Failure) PANEL

The AMF Control Panel is a specially designed panel for standby generators. It consists of a state of the art microcontroller based AMF controller for monitoring, indicating and controlling the Mains and Generator for AMF operation.

High coolant temperature	Fault Indications
Low lube oil pressure	LOP - Low Lub. Oil Pressure
Over speed	HWT - High Water Temperature
Start fail	OL – Over Load
Emergency Stop	E. STOP - Emergency Stop
Over load	
	Operating keys on AMF Controller
Status LED Indications	START - Starts the Genset in Manual mode
Start Fail	E- STOP - Stops the Genset in Manual mode
Auto mode	
Manual mode	
Mains available	
Genset ON	



#### **MAINTENNACE**

C.R.I. Gensets are user friendly and simple to operate. To keep the machine in "ready to use" condition please do the following.

- I Clean the genset daily.
- I Check level, if necessary top up lube oil, coolant and battery water level (daily).
- I Check belt tension.
- I Run for half an hour and see if battery is getting recharged, if oil pressure is correct and coolant temperature is within limits.
- I Check the idling RPM-1560.
- I Check for any diesel or lube oil leak.
- I Check for diesel level in diesel tank.
- I Ensure proper earthing, exhaust and cable connections before commissioning.
- I Follow Service manual and carry out periodic checks.

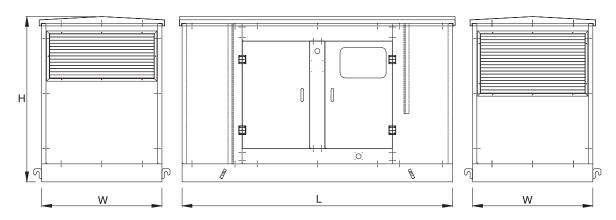
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<sup>\*</sup> AMF Panel will be supplied on request.

#### **ENCLOSURES**

The enclosures have been manufactured with specially procured CRCA sheet and using CNC machines for obtaining precision finish. The powder coated enclosures with specially designed lifting hooks meet the latest CPCB norms of 75dBA @ 1 mt distance and as per the testing guideline CPCB. The compactness of the enclosure makes it an ideal choice of customers having space constraints.

## DIMENSIONAL DRAWING (WITH ENCLOSURE)



## **DIMENSIONAL DATA (WITH ENCLOSURE)**

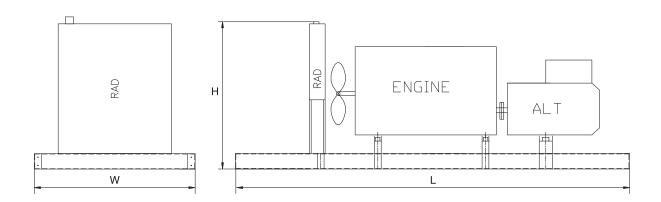
	MODEL							
	DG10	DG15	DG20	DG25	DG30	DG40	DG45	DG62.5
Length	1860	1860	2400	2400	2700	2700	2700	3100
Width	900	900	1050	1050	1200	1200	1200	1350
Height	1110	1110	1265	1265	1470	1470	1470	1575
Base Height	180	180	180	180	180	180	180	180
Total Height of the Canopy (without silencer)	1290	1290	1445	1445	1650	1650	1650	1755
Approx. Weight (kg)	650	650	770	770	1100	1100	1100	1400
DIESEL TANK DIMENSION AND CAPACITY								
Length	800	800	800	800	940	940	940	1080
Width	670	670	760	760	870	870	870	900
Height	150	150	150	150	150	150	150	150
Capacity (in ltr)	80	80	90	90	125	125	125	145

<sup>\*</sup> All Dimensions (Approx.) are mm.

 $In \ view \ of \ continuous \ developments, \ the \ information \ / \ descriptions \ / \ specifications \ / \ illustrations \ are \ subject \ to \ change \ without \ notice.$ 

<sup>\*</sup> Dimension details of open DG set will be provided on request.

# DIMENSIONAL DRAWING (OPEN DG SET)



# DIMENSIONAL DATA (WITH ENCLOSURE)

	MODEL							
	DG82.5	DG100	DG125	DG140	DG160	DG180	DG200	DG250
Length	3100	3600	3600	4100	4100	4400	4400	4400
Width	1350	1450	1450	1550	1550	1550	1550	1550
Height	1575	1695	1695	1785	1785	1785	1785	1785
Base Height	180	180	180	150	150	150	150	150
Total Height of the Canopy (without silencer)	1755	1875	1875	1935	1935	1935	1935	1935
Approx. Weight (kg)	1400	2100	2100	2500	2500	3200	3200	3200
DIESEL TANK DIMENSION AND CAPACITY								
Length	1080	1125	1125	1370	1370	1370	1370	1370
Width	900	600	600	600	600	700	700	700
Height	150	275	275	250	250	250	250	250
Capacity (in ltr)	145	185	185	205	205	240	240	240

<sup>\*</sup> All Dimensions (Approx.) are mm.

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<sup>\*</sup> Dimension details of open DG set will be provided on request.

# WINNING WAYS

When you have a good thing going it is quite in the fitting of things that recognitions come our way. Several prestigious awards, which decorate our shelf, say it all. These rewards not only acknowledge our position as a leader in the water pump industry but also serve as reminders about what the customer expects from a winner. And we, as ever, have our ears perfectly tuned to customer expectations.





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