CREATIVE ENGINEERS

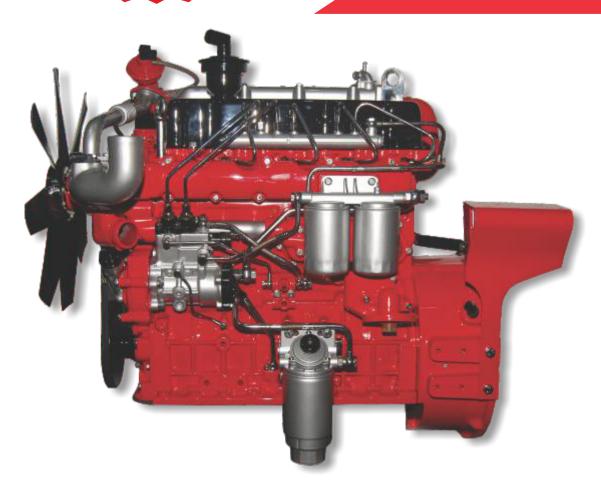


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MOST RELIABLE ENGINES FOR INDUSTRIAL APPLICATIONS





CREATIVE ENGINEERS



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Engines Division of TMTL is the fastest growing brand in India. In the past two years the company has grown by approximately 60% on volume basis in an otherwise stagnant market. We are one of the pioneers in manufacturing diesel engines in India with a heritage of over 55 years. Our engines which are currently used as prime mover for various applications such as Tractors, Generators, Agro industries, Marine & other Industrial Applications such as Front Loader, Bitumen Spray, Fire Fighting Pumps, Water pumps, Compressors, Mud Pump, Water Drill Rig etc., have their origin in German engineering and technology. Engines produced by TMTL are known for their long life, sturdiness, reliability, fuel efficiency, and low operational cost.



Our engines range starts from 12 hp and goes up to 160 hp. From 12 hp to 67 hp is the air-cooled range and from 49 hp to 160 hp is the liquid-cooled range. We are one of the few engine manufacturers in India that have developed all its engines in-house with the help of renowned technology partners such as Ricardo Engines and AVL from UK; and Sisu Diesel and Valtra of Finland. All our engines are turbo charged from 48 hp and above along with after cooler from 60 hp and above.

Our flagship engine of 160 hp is a technological marvel. The indigenously developed Common Rail Direct Injection engine, a first in India in this range, with isochronous governing, has the best fuel efficiency in the industry with field tests showing as much as 2 Ltr/hr difference with our nearest domestic competitor, which can translate up to ₹ 3 million savings in the life cycle of a generator.

Our engines are known for their long running hours at a stretch and yet have the longest life. Even though we assure life of 20,000 running hours, many of our engines are still running after having crossed 35,000 hours. Our engines ruggedness and robustness make them the first choice for use in the harshest climate as our engines work without any noticeable deration in the temperature range of -15° C to 55° C.

Apart from all these advantages, our engines are made from a single block, making them virtually leak-proof, and hence relatively maintenance free.

R&D CAPABILITIES

- Engine R&D center at Alwar, Rajasthan
- Exclusive team for engine application development
- Ability to design and develop Air-Cooled & Water Cooled engine for automobile and stationary applications
- Equipped with latest technologies such as Raw Exhaust Emission Analyzer, Particulate Matter Measurement System, Combustion Air Handling Unit
- Specialist engineers; top-of-the-line industry talent Associations with world leaders in Diesel engine technology

MANUFACTURING FACILITY

- Over 235,000 satisfied stationary engine customers, (other than tractor application)
- A base of over 1 million satisfied engine application users
- Engines well known for reliability and economics of performance
- Technological enhancement in consultation with AVL Austria

MANUFACTURING STRENGTH

- Pioneer in air-cooled technology
- Modern manufacturing facility equipped with CNC machines in Alwar, Rajasthan
- Engine assembly in dust proof ambience
- Stringent quality controls and manufacturing standards
- Operating on principles of TQM, TPM, SGA, Kaizen to meet global standards of quality and productivity
- Awarded National Productivity Council recognition thrice for productivity performance
- ISO 9001/14001 and TS 16949 certified plant

EMISSION COMPLIANT

TMTL Engines meet standards laid down by MOEF (Ministry of Environment & Forest) such as BS 5514, BIS, IS:10000, CPCB-II, BS-II, BSIII & CEV emission norms

TMTL Engines are best suited for customisations to meet customer requirements

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INDUSTRIAL ENGINES - VARIABLE SPEED

Engine Model	Nature of Cooling	No. of Cylinder	Bore	Stroke	HP	RPM	Aspira- tion	Max Torque (Nm)	Emission Compliance	Dry Weight	Engine Dimensions (In mm)		n mm)
										(In Kg)	L	W	Н
115 NC	Air	1	115	150	22	1650	NA	103	TREM III A	314	650	674	930
298 EI	Air	2	100	125	32	2150	NA	120	TREM III A	325	635	592	870
398 EDD	Air	3	100	125	38	2150	NA	142	TREM III A	370	780	703	880
398 ED	Air	3	100	125	43	2150	NA	160.7	TREM III A	370	780	703	880
320 D49	Water	3	108	120	49	2000	NA	194.2	TREM III A	380	725	564	910
398 E49	Air	3	100	125	49	2150	NA	187.3	TREM III A	370	780	703	880
320 DED	Water	3	108	120	49	2150	NA	189.4	TREM III A	380	725	543	910
421 ES	Air	3	100	125	50	2300	NA	193	Non Emissionised	410	767	848	1010
320 D59	Water	3	108	120	58.5	2150	TC	224	TREM III A	390	725	543	1031
422 TC	Air	3	100	125	66	2300	TC	240	Non Emissionised	470	855	731	1090
320 D75	Water	3	108	120	75	2200	TCI	300	Non Emissionised	390	725	634	940
320 D85	Water	3	108	120	85	2200	TCI	320	Non Emissionised	390	725	634	940
1001 ES	Water	4	108	134	100	2200	TC	400	Non Emissionised	456	920	670	1125
1301 ES	Water	4	108	134	130	2200	TC	548	Non Emissionised	456	920	670	1125

INDUSTRIAL ENGINES - FIXED SPEED

Engine Model	Nature of Cooling	No. of Cylinder	Bore	Stroke	HP@1500 RPM	HP@1800 RPM	HP@2000 RPM	HP@2150 RPM	Aspiration	Dry Weight	Engine Dimensions (In mm)		
										(In Kg)	L	W	Н
198 ES	Air Cooled	1	100	125	12	15		-	NA	250	732	609	916
222 ES	Air Cooled	1	115	150	20	-	-	-	NA	372	685	705	1058
323 ES	Air Cooled	2	100	125	26	30	-	-	NA	370	610	565	1025
421 ES	Air Cooled	3	100	125	-	-	-	50	NA	410	767	848	1860
422 ES	Air Cooled	3	100	125	34	43	-	-	NA	445	820	848	1860
422 TC	Air Cooled	3	100	125	46	56		-	TC	480	855	714	1108
422 TCI	Air Cooled	3	100	125	56	67	-	-	TCI	503	1018	725	1010
621 ES	Water Cooled	3	108	120	57	68	70	-	TCI	490	1160	791	946
881 ES	Water Cooled	3	108	120	80	92	-	-	TCI	490	1267	890	1199
1121 ES	Water Cooled	4	108	134	105	120	-	-	TCI	640	1471	985	1360
1401 ES	Water Cooled	4	108	134	128	150		-	TCI	640	1471	985	1360
1751 ES	Water Cooled	4	108	134	160	-	-	-	TCI	650	1471	985	1360

AGRO ENGINES - NON EMISSIONISED

Engine Model	Nature of Cooling	No. of Cylinder	Bore	Stroke	HP	RPM	Aspira- tion	Starting	Dry Weight	Engine Dimensions (In mm)		
										L	W	Н
142 HS / ES	Air Cooled	1	100	125	12	1500	NA	Handle / Electric	250	633	735	1063
222 HS / ES	Air Cooled	1	115	150	20	1500	NA	Handle / Electric	350	664	798	1288
321 ES	Air Cooled	2	100	125	32	2000	NA	Electric	320	607	848	1860
322 ES	Air Cooled	2	100	125	24	1500	NA	Electric	360	660	848	1860
323 ES	Air Cooled	2	100	125	26	1500	NA	Electric	370	733	891	1860
421 E S	Air Cooled	3	100	125	45	2150	NA	Electric	410	767	848	1860
422 ES	Air Cooled	3	100	125	38	1500	NA	Electric	445	820	848	1860
422 TC	Air Cooled	3	100	125	46	1500	TC	Electric	415	855	714	1108
422 TCI	Air Cooled	3	108	125	56	1500	TCI	Electric	503	1018	725	1010

SCOPE OF SUPPLY

- Air / Water Cooled Diesel Engine
- Fuel Filter
- Air Cleaner
- Lube Oil Filter
- Self Starter
- Wiring Harness
- Industrial Type Silencer
- 12V Elect. Starting System
- Battery Charging Alternator
- Flywheel & Flywheel Housing
- Engine Safeties
- * Low Lube Oil Pressure
- * High Cylinder Temp (Air Cooled Engine)
- * High Water Temp. (water Cooled Engine)

OPTIONAL ACCESSORIES

- Radiator
- Compressor
- Radiator Fan
- Hydraulic pump
- Cold Starting Kit
- Electric Solenoid
- Engine Instrument Panel
- 24V Electric Starting System
- Mechnical Gauges
 - * Lube Oil Temp.
 - * Lube Oil Pressure
- * RPM cum Hour Meter
- * Battery Charging Ammeter
- * Water Temp (Water Cooled Engine)
- * Cylinder Temp. (Air Cooled Engine)

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