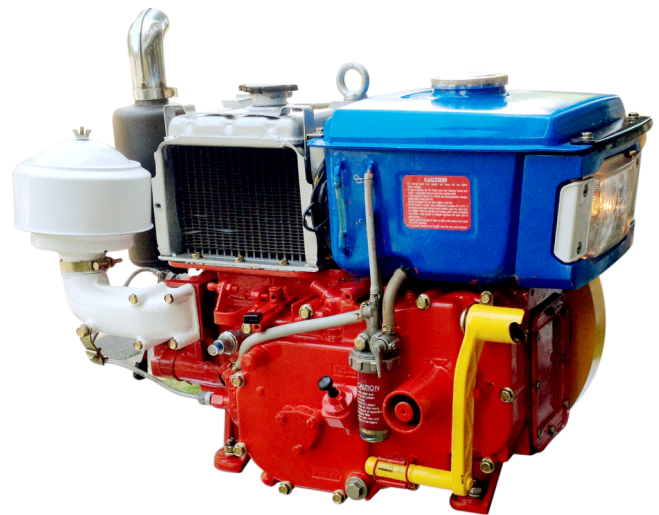


# 12-HORSEPOWER SINGLE CYLINDER ENGINE



for more information, please write, fax, call, or email:



**DEPARTMENT OF SCIENCE AND TECHNOLOGY  
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Small engines power various agricultural and industrial equipment. They provide portable power where and when it is needed. They significantly improve work. Not surprisingly, there is a high demand for small engines in the country. Despite the high demand, these engines are purchased only through importation because no local Filipino company is into the engine production business.

As an intervention, the Department of Science and Technology – Metals Industry Research and Development Center (DOST-MIRDC) spearheaded the localization of a 12-horsepower single cylinder. Project objectives are as follows:

1. To develop a single cylinder engine that costs 20% lower than the leading brand; and
2. To establish a set of local manufacturers and suppliers of parts and components to sustain the local production of the engine upon commercialization.



Single Cylinder Project Team at work.



AMTEC tests the prototype developed by DOST-MIRDC.

The 12-hp single cylinder diesel engine first prototype underwent laboratory testing at the Agricultural Machinery Testing and Evaluation Center (AMTEC). Below are the laboratory test results.

Performance Criteria	Standard	AMTEC Test
Maximum Power as Percentage of Rated Maximum Power, %	80	94.3
Continuous Power as Percentage of Rated Maximum Power, %	80	83.2
Maximum Noise Level (Continuous Running Test), dB(A)	92	90.4

The DOST-MIRDC's industry partners collaborated in the development of major cast components such as the flywheel, camshaft, engine block, and crankshaft including the gears. Actual field testing of additional engine units, coupled with different agricultural equipment, will be conducted at the Philippine Center for Postharvest Development and Mechanization (PHilMech) at the Science City of Muñoz, Nueva Ecija.