

FPT Industrial Unveils Its New R22 Engine For Industrial Applications

Turin, November 2013

FPT Industrial will further expand its agriculture and construction product offering, with the new R22 engine to be launched at Agritechnica, the upcoming exhibition for agricultural machinery and equipment in Germany.

Developed with long-time partner VM Motori S.p.A. at its Cento plant in Italy to FPT Industrial's standards, the R22 marks FPT's entry to the low displacement off-road sector. Compact and efficient, the three-cylinder, 2.2-litre unit delivers 33 to 52 kW, service intervals of up to 600 hours and meets Tier 4B / Stage IIIB emission regulations.

Joining the existing F5, S8000, NEF, Cursor and Vector Series engines, FPT's off-road line-up now includes options from 2.2 to 20.1-litres, spanning 33 to 606 kW.

"The R22 has been specifically developed to enhance our offering and represents our low displacement solution in the agricultural and construction fields," said Massimo Siracusa, FPT Industrial, Vice President Product Engineering.

"With technology such as high pressure Common Rail injection, the R22 combines impressive torque and power density with low maintenance and operating costs, and provides significant personalisation scope to suit our customers' requirements."

Suitable for machinery with a gross weight of 1.6 to 3.1 tonnes, the R22 has an in-line configuration with two valves per cylinder, and a fixed geometry turbocharger coupled with an aftercooler and Waste Gate to produce up to 250 Nm of torque.

The state-of-the-art Common Rail injection system, with 1,600 bar of pressure, optimises thermodynamic performance and ensures precise injection at all times, as part of the fuel efficient package.

Fuel efficiency and noise reduction are further improved by the specifically designed combustion chamber, by optimising the position of the multiple injection common rail injector, thus allowing to enhance the combustion process.



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The use of hydraulic tappets avoids the need for manual adjustments or servicing and an 'Antiphone' insulated sheet metal front cover minimises engine noise, improving the end user's working environment.

The specific requirements for applications up to 56 kW brought FPT to choose the adoption of the internal Exhaust Gas Recirculation (EGR) with Diesel Oxidation Catalyst (DOC), accompanied by a 'maintenance free' Particulate Matter Catalyst to meet relevant emission regulations. This compact and cost-effective solution puts, as always, at forefront the value to the customer and the particular operating requirements.

An extremely rigid, small and light tunnel block prevents the need for a structural sump, enabling dimensions of (length x width x height) 519 x 524 x 723 mm for maximum flexibility and reduced wheelbases and steering radii in agricultural equipment. Furthermore, this engine, which is the most compact in its segment, also features glow plugs for cold start.

With the intake and exhaust manifolds on the same side of the uniflow cylinder head, the presence of hoses and pipes around the engine is avoided, minimising installation constraints, while all components requiring maintenance are placed on the left side of the engine to improve the ease of servicing.

Versatile and suitable for a wide range of applications, the R22 can be customised to suit the needs of the customer, with wide scope including fan, alternator and transmission interface options, different starter motor and power take-off positions.

The R22 will be launched at Agritechnica in Hanover, Germany, on 12-16 November. For further information about FPT Industrial visit Stand 01H113 or www.fptindustrial.com.

FPT Industrial R22 Specifications

Architecture:	In-line, three cylinder engine
Injection:	Common Rail, up to 1,600 bar
Intake:	Waste Gate
Valves per cylinder:	Two
Engine displacement:	2,227 cm ³
Unitary cylinder displacement:	0.742 cm ³
Bore per stroke:	94 x 107 mm
Stroke/bore ratio:	1.14

Compression ratio:	17.5:1
Power Range:	45 to 71 hp / 33 to 52 Kw
Torque Range:	160 to 250 Nm
Dry weight:	210 kg
Service Interval:	600 h
Dimensions (l/w/h):	519 mm / 524 mm / 723 mm

***FPT Industrial** is a company of CNH Industrial dedicated to the design, production and sale of powertrains for on and off-road vehicles, marine and power generation applications. The company employs approximately 8,000 people worldwide, in ten plants and six R&D Centres. The FPT Industrial sales network consists of 100 dealers and over 1,300 service centres in almost 100 countries. A wide product offering, including five engine ranges from 31 kW up to 740 kW and transmissions with maximum torque from 200 Nm up to 500 Nm, and a close focus on R&D activities make FPT Industrial a world leader in industrial powertrains. For further information, visit www.fptindustrial.com.*