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What are some recent models launched by you in the last year?

FY2022-23 witnessed significant advancements in introducing sustainable technologies in India. At Excon2022, we unveiled four innovative machines designed to meet emerging needs and technology demands. These include the Komatsu PC205-10MO Hydraulic Excavator, Komatsu PC500LC-10R Hydraulic Excavator, Komatsu PC210LC-10M0 Super Long Front, and Komatsu GD535-6 Motor Grader. These models incorporate Komatsu's advanced technology tailored to India's demanding applications and conditions, generating substantial buyer interest and earning praise for their productivity.

The Komatsu PC205-10M0 Hydraulic Excavator, known as the 'Earth Master,' is designed to suit applications in the Indian market. It addresses the urgent need for continuous earthwork excavation in urban India while offering unparalleled fuel efficiency and high performance at low initial and maintenance costs.

The Komatsu PC500LC-10R Hydraulic Excavator is a 50-ton class machine, perfect for mid-mining operations and overburden removal in coal mines. With its large buckets up to 3.7 Cum. , it is designed for continuous operations over extended work periods. Its versatility is further enhanced by its ability to accommodate a wide range of attachments, making it suitable for various applications.

The Komatsu PC210LC-10M0 Super Long Front offers a reach of 15 meters, making it an ideal machine for tasks requiring reach, power, and speed. It comes with a robust Komatsu engine, a positive load-sensing Hydraulic System, a specially designed SLF attachment, and a convertible counterweight, making it ideal for jobs such as river/canal de-silting, well digging, breaking, and slope compaction.

The next-generation Komatsu GD535-6 Motor Grader complies with CEV Stage-V emission standards and features Komatsu's newly developed 148 HP engine. It offers exceptional workability and environmental performance, with enhanced operator comfort and maintainability compared to the previous model, GD535-5.

At Komatsu and L&T, sustainability is a key focus, and these machines are designed to run on B20 Biodiesel. They deliver comparable power and productivity while using alternative energy, conserving fossil fuel and reducing greenhouse gas emissions.

Additionally, Komatsu and L&T have launched a series of biodiesel-compatible models for the mining industry, including the Hydraulic Excavator PC1250-8R, Dump Truck HD785-7, Wheel Loader WA900-8R, Crawler Dozer D275A-5R, Motor Grader GD825A-2, and Water Sprinkler HD465-7E0.

At bauma CONEXPO India, Komatsu and L&T showcased the 35-Ton Hybrid Excavator HB365LC-1, which is at least 20% more energy-efficient than traditional equipment. The PC300LC-8 Hydraulic Excavator, fitted with a Parallel Cabin and Orange Peel Grapple, is ideal for scrap handling - an industry poised for exponential growth following the introduction of the new automobile scrapping policy.

These state-of-the-art models are a testament to Komatsu's pioneering technology and are designed to withstand India's challenging applications and conditions. Their introduction has sparked interest among buyers, and they have received widespread recognition for their productivity.

What features have you incorporated that help the contractor derive higher productivity with lower operating costs?

Komatsu has made remarkable advancements in hydraulic excavator design and functionality. The patented HydrauMind hydraulic system is central to this. It optimises the balance between hydraulic and engine power according to the work attachment's demand. This innovation has led to a significant increase in fuel efficiency and productivity.

Furthering the commitment to innovation, Komatsu has released a new generation of excavators equipped with a unique series of engines, hydraulics, and the enhanced Komtrax system. The engines have been designed to minimise peripheral power loss, optimising the net HP output in line with the gross HP developed by the engines. This design ensures that every litre of fuel used by the engine is effectively utilised for productive work, achieving the highest productivity with the lowest fuel consumption in its category. Komatsu's Komtrax feature is a system that remotely monitors the machine's performance and health parameters. It provides continuous load and machine utilisation monitoring, offering valuable insights, contributing to energy-saving operations. This remote data-gathering capability has been instrumental in refining the design and performance of Komatsu machines, enhancing overall efficiency and productivity.

A testament to Komatsu's technological advancement is the precision engineering of hydraulic components. This precision allows for an oil change interval of 5,000 hours, one of the industry's most

extended. This achievement is due to the specialised metallurgy used in the hydraulic components, which minimises wear and extends component life. In addition, Komatsu has developed a new hydraulic filter using nanotechnology, extending the filter change interval from 1000 to 2500 hours. This innovation reduces maintenance costs and environmental pollution.

Komatsu established the KOWA lab (Komatsu Oil Wear Analysis) in Nagpur to support machine longevity and proactive maintenance. This facility analyses oil wear, an essential predictive maintenance aspect promoting high machine uptime.

Alongside these technological advancements, L&T has enhanced its manufacturing capabilities with capacity expansion, lean manufacturing, robotic welding, and multi-modal configuration. Special attention has been paid to the ergonomic design of Operator Cabins to ensure a comfortable and safe environment for operators.

Komatsu and L&T's 175 years of experience and technological developments have led them to extend the warranty on the PC210-10 machines to four years, reflecting their confidence in their reliability and performance.

To cater to specific operational needs, Komatsu has developed custom undercarriages. This includes a heavy-duty undercarriage with an Abrasion Impact-Resistant (AIR) Bushing for dozers, designed for the demanding requirements of Indian granite and quarry applications. Similarly, a special undercarriage for 30-ton hydraulic excavators has been developed to endure high travel time on rocky terrain. These undercarriages significantly increase lifespan and reduce operational costs for customers.

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