

Punch Powertrain launches proprietary DCT invention in serial production

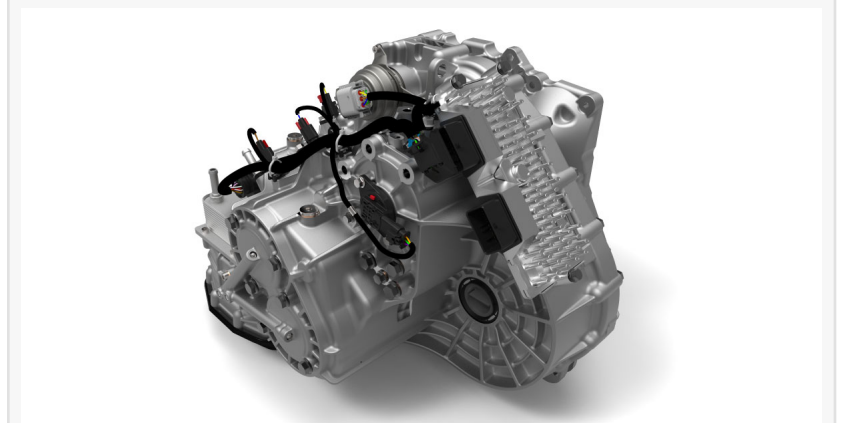
Affordable DCT technology, powered by Innovation

SINT-TRUIDEN, BELGIUM, March 23, 2022 /EINPresswire.com/ -- •New and patented way of realizing "dual clutch principle" with a single lay shaft resulting in world's most compact DCT; light weight and cost effective design rendering to be more sustainable technology and affordable for compact car segment

- Tata Motors is the pioneer to introduce this technology as part of its premium hatchback Altroz DCA, representing the "Gold Standard" in automatics in its segment
- The Altroz DCA launch marks a milestone in company's transformation towards DCT, soon launching hybridized and higher torque variants on road to affordable sustainability and electrification



Punch Powertrain Logo



Punch Powertrain DT1 Dual Clutch Transmission

[Punch Powertrain](#) launches its innovative DCT system with a revolutionary, more compact and affordable design. The [DT1](#) has been launched in India, debuting in the recent launch Altroz DCA by Tata Motors.

This ingenious design guarantees that DT1 offers reliable performance and improved driving comfort even under the most challenging conditions, such as extreme ambient temperatures, high altitudes, and challenging driving environment, such as uneven roads and stop-and-go driving.

Punch Powertrain's unique and patented new way of realizing the dual clutch principle offers

seamless comfortable DCT shifting, while using 35% less shifting components. In this unique design one of the two clutches represents an additional planetary gearset ratio that can be engaged between the engine and the transmission. This allows the unit to shift seamlessly up-to 7 forward ratios*, using only 4 gear pairs and only one layshaft. This results in a lighter, more compact powertrain, while offering a considerable cost reduction.

Through application of a wet-clutch design, the transmission offers excellent continued performance on inclines and in stop-and-go-traffic. This aligns with Punch Powertrain's vision to provide performant products at lower cost, or offer more functionality and performance at cost parity with competition. Thanks to its compactness and design features, the DT1 enables car manufacturers to offer additional benefits to drivers, unique to its segment and vehicle price range.

The DT1 is fitted with machine learning software that optimizes transmission behavior, based on its diagnostics and analysis of thousands of parameters at the speed of 100 times per second. The shift by wire ensures smooth shifting, while the software offers the additional benefit of automatic missing driver detection and activation of the park lock mechanism. Another asset is the self-healing technology that prevents the build-up of dust or debris through an automatic vibration system, decreasing the need of active maintenance. Because of the extensive in-house software expertise, Punch Powertrain is able to offer the most complete and smart solutions that combine robustness and comfort at no or limited extra costs.

The DT1 smart design strongly resonates with Tata Motors' constant efforts to offer 'The Gold Standard' in its Altroz line.

While the invention was created and developed in the company's R&D centers in the Netherlands and Belgium, the company will localize production and is establishing a solid support base for its local customer in India. This is in line with the company's 'local for local' strategy, ensuring short communication lines and agility towards the local markets of its global customers. The launch of its DCT technology in India signifies the entry into a new market for the company, largely widening its reach and potential, while further potential markets are investigated.

In addition to entering a new market, the DT1 signifies the first DCT in serial production for



TATA Motors Altroz DCA with Punch Powertrain DT1 Transmission

Punch Powertrain, helping car manufacturers meet the increasingly tightening CAFE norms for smaller vehicles. The compact design of this DCT and over 10 years of in-house expertise in the development of e-motors render the electrification a natural next step in its transition to electrified and fully electric propulsion systems. Within its expanding product range, the company will launch a higher torque hybrid DCT variant – DT2 – later this year for mid-segment vehicles on European and global markets, rendering the company the leading hybrid DCT supplier worldwide as of 2024.

With its inventor legacy in CVT technology, the new DCT marks the company's transformation towards new technologies as part of its sustainable solutions offering, such as hybrid and electric propulsion systems.

*OEM is free to use up-to 7 gears to make it a best fit with their application objective.

About Punch Powertrain

Punch Powertrain nv is an independent global automotive supplier of innovative and energy efficient drivetrains. The company builds on 50 years of excellence in the development and production of world-class transmission technologies, offering continuously variable transmissions (CVTs), dual clutch transmissions (DCTs), as well as hybrid and electric drivetrains for car makers worldwide. Punch Powertrain is headquartered in Sint-Truiden, Belgium, and has close to 1,600 employees. The company operates five R&D centers and three manufacturing facilities in Europe and China. For more information visit www.punchpowertrain.com.

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