I-Shift ATO2612D is a 12-speed electronically controlled splitter and range-change transmission with overdrive designed for automatic gearchanging, with the possibility of manual shifts. It is dimensioned for 2600 Nm of torque.

I-Shift is characterised by a fast gearchanging system featuring minimum interruption in torque delivery during gearchanging. Because the gearbox has such a large ratio span, it has capacity for both high starting traction and high average speeds. I-Shift has advanced software with well-adapted gearchange strategies.

I-Shift ATO2612D is approved for gross combination weights of up to 60 tonnes. This makes it suitable for long-haul operations, construction applications and regional and urban transportation duties.

An oil cooler, power take-off, compact retarder and emergency power steering pump can be fitted to the transmission. With the selectable oil cooler programme, it is possible to adjust cooling to suit the current driving mode and road conditions.

I-Shift ATO2612D has long intervals between oil changes, which promotes low operating costs and less environmental impact. With special oil, filter and oil changes take place after a maximum of 400,000 km or every third year.

**FEATURES AND BENEFITS**

- A fully automated gearchanging system allows high comfort and fuel-efficient driving.
- With overdrive on the top gear, the engine’s economy rev band can be better exploited, leading to fuel savings and quieter operation.
- The program package adapts the gearchanges to the prevailing transport conditions.
- Possibility of manual gearchanging and locking of the current gear promotes high driving flexibility.
- Low weight with base unit, range-change housing and clutch housing made of aluminium.
- I-Shift is suitable for transport applications in all segments, including special applications such as refuse trucks and refrigerator trucks.
Electronic control and ergonomic consideration

The gear selector and lever are integrated in the driver’s seat for comfortable and safe operation. The gear lever has no mechanical contact with the transmission, but instead activates a number of sensors in the gear selector.

When the vehicle is at a standstill, the gear lever can be folded forward to aid movement inside the cab.

Fast gearchanging system with short torque interruption

I-Shift is a very flexible gearchanging system. In Auto mode, gears change automatically even with the cruise control engaged.

In sensitive driving conditions, the driver can switch to the Manual mode that locks the current gear. In M, the driver changes gear manually using a button integrated into the gear lever. Since clutch operation is regulated by the gearchanging system, there is no clutch pedal.

Driving program for optimum efficiency

In Automatic mode, the driver can choose between the “Performance” and “Economy” programmes. Gears are changed via a button on the gear selector. This function offers different gearchange strategies depending on the road conditions. Economy mode provides good fuel economy. The “Performance” mode provides more aggressive gearchanging, and is used when extra engine power is needed.

With a program package that is selected to suit the specific transport application, it is possible to tailor the transmission’s properties and functions via the software. The programs are designed to provide the best gearchanging strategy for each situation, with an added bonus in the form of fast gearchanges.

Shown on the display:
1. Driving program 2. Selected gear 3. Available gears (down/up) 4. Lever position

Three base ratios, splitter, range and reverse gears

The base unit contains three base ratios, an integrated splitter gear and reverse gears. In the range housing, there is a range gear of planetary type. The splitter and range gears are synchronised, while the base unit has no mechanical synchromesh. Speed synchronisation takes place electronically with the help of the engine and transmission control units, after which the gear is changed.

Strong and dependable components

All the shafts, bearings and gears are sturdily dimensioned for high operating reliability and long service life. All the gears are made of special steel that has been case-hardened to provide considerable strength. Helical gears in both the base unit and range-change section mean that more gear surface is in mesh at any given time, promoting quiet operation and high reliability.

A flange-mounted CVU (Clutch Valve Unit) and integrated CCA (Concentric Clutch Actuator) including position sensor replace the externally mounted clutch cylinder.

The clutch valve unit on the transmission’s right side is integrated into the gearchanging system.

SPECIFICATION

Type designation .................................................. ATO2612D
Max incoming torque ........................................ 2600 Nm
Max gross combination weight .......................... 60 tonnes
Weight without oil ........................................... 271 kg
Type .................................................. Automatic splitter/range-change transmission
Number of forward gears ................................ 12
Number of reverse gears .................................... 4
Gear selector positions:
R ................................................................. Reverse
N ................................................................. Neutral
A ................................................................. Automatic
M ................................................................. Manual
Driving programs:
E ................................................................. Economy
P ................................................................. Performance program
B ................................................................. Braking program (option)
L ................................................................. Limp Home function
Oil-change volume ......................................... approx. 13 l
inl. oil cooler with normal capacity ...................... approx. 13 l
inl. oil cooler with high capacity ........................ approx. 16 l