

Voith Turbo

**VOITH**

## Voith DIWA® automatic transmissions in Neoplan city buses



**More than 150 000 buses world-wide have one thing in common: a DIWA automatic transmission.**

DIWA means economy as a result of superior technology. DIWA automatic transmissions are ideal for applications in all city and long-distance buses.

DIWA transmissions are optimally suited for the full range of modern combustion engines. They are adapted to the environmentally friendly, low-emission combustion engines per EURO-3/-4 norm.

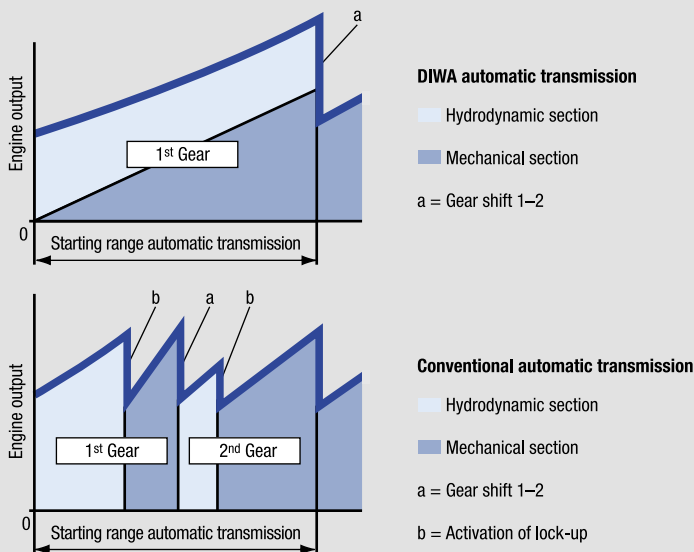
### **Your advantages:**

- High efficiency by mechanical-hydrodynamic power split
- High availability by superior cooling concept
- Low fuel consumption by automatic movement into neutral gear stage
- Series-fitted ANS: complete separation of transmission (including converter) and engine
- Optimum overdrive without compromise:
  - low engine speeds in city traffic
  - in long distance-traffic part-load on level routes, traction reserves on ascending roads
- Protection of the drive line by significantly reduced amount of gear-shifts, especially in the lower speed range
- Efficient retarder: always instantly available, no impairment by frequent downward shifts
- Maximum driving comfort by stepless acceleration
- Optimum maintenance back-up by PC-based diagnosis system
- Maximum gear-shifting comfort, even under extreme conditions
- Low maintenance costs by long maintenance intervals
- High reliability and long service life

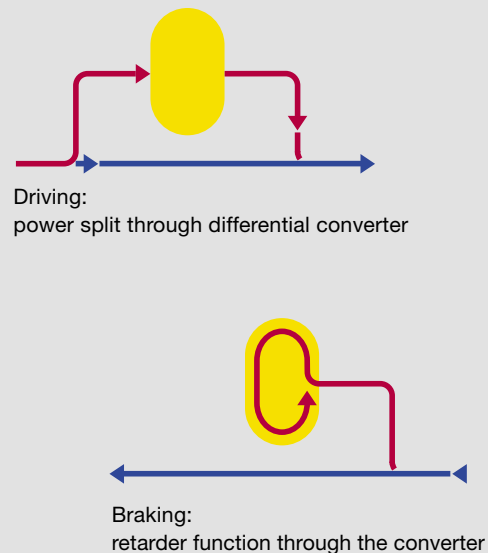
# DIWA®.5 – the evolution of modern bus transmissions

The proven DIWA power-split principle allows smooth acceleration, where other transmissions require two to three gear-shifts. This, plus the unique combination of transmission, E 300 electronic control and ALADIN diagnosis software, make DIWA.5 a byword for economical bus transmissions. Up to 50 % fewer gear-shifts reduce wear and increase driving comfort.

*Reduced wear and comfort become visible – one gear replaces two conventional gears*



*The Voith principle: driving and braking with one hydraulic circuit*



## DIWA.5 is the consistent further development of a technology that has proven itself world-wide

The shortening of the transmission, the elimination of external pipes or tubes for oil circulation, a heat exchanger that is integrated into the output and the further developed hydrodynamic converter are only a few characteristics of this new transmission. Operators benefit from even higher availability as well as further reduced maintenance and operating costs.

## E 300 – New-generation transmission control: From failure to events storage

- Recognises topography and axle ratio
- Optimises gear-shifting points
- Minimises fuel consumption
- Easy failure localisation and elimination
- Supports preventive maintenance and early failure detection
- Operating data recording of the second generation

## ALADIN – the quantum leap in diagnosis technology

- Comprehensive range of functions, low complexity
- Can be integrated into diagnosis system of vehicle manufacturer
- Intuitive operation
- Detailed operating data evaluation

# Success needs reliable partners

**Benefit from our close partnership with vehicle manufacturers and our overall systems competence.**



## **Further advantages of DIWA automatic transmissions**

- Choice of several gear-shifting programmes as standard
- Transmission delivered ex works with oil filling (part-synthetic oil)

## **With the Voith Turbo service programme you are on the safe side**

Across the entire service life of your transmissions, we accompany you with our comprehensive DIWA service package – starting with the joint configuration of your vehicles over the optimisation of daily operation up to maintenance and repair.

*We are here for you – no matter when and where you need us*



# DIWA transmissions in Neoplan city buses

Vehicle type	Engine type	Output/ Nominal speed (kW/rpm)	Version	Transmission type	Tyre size	Vx in km/h			
						Axle ratio			
						4.54	5.13	5.74	6.2
DIWA®.5									
N 4516, N 4516 P	D0836 LUH	176/2400 206/2400	Euro 3 Euro 4	D 854.5	275/70 R22.5			104	97
N 4516, N 4516 P	D0836 LUH	176/2400 206/2400	Euro 3 Euro 4	D 854.5	455/45 R22.5			107	99
N 4516, N 4516 P	D2866 LUH	191/1900	Euro 3 Euro 4	D 854.5	275/70 R22.5	100	89	79	73
N 4516, N 4516 P	D2866 LUH	228/1900 265/1900	Euro 3 Euro 4	D 864.5	275/70 R22.5	100	89	79	73
N 4516, N 4516 P	E2866 DUH	180/2200	Euro 3	D 854.5	275/70 R22.5	116	103	92	85
N 4516, N 4516 P	E2876 LUH	228/2000	Euro 3	D 864.5	275/70 R22.5	106	93	83	77
N 4516, N 4516 P	G2876 DUH	200/2200	Euro 3	D 854.5	275/70 R22.5	116	103	92	85
N 4516 T	D0836 LOH	176/2400 206/2400	Euro 3 Euro 4	D 854.5	455/45 R22.5			107	99
N 4521 (18 m) N 4522 (18.75 m)	D2866 LUH	191/1900	Euro 3 Euro 4	D 854.5	275/70 R22.5	100	89	79	73
N 4521 (18 m) N 4522 (18.75 m)	D2866 LUH	228/1900 265/1900	Euro 3 Euro 4	D 864.5	275/70 R22.5		89	79	73
N 4521 (18 m) N 4522 (18.75 m)	E2866 DUH	180/2200	Euro 3	D 854.5	275/70 R22.5			92	85
N 4521 (18 m) N 4522 (18.75 m)	E2876 LUH	228/2000	Euro 3	D 864.5	275/70 R22.5		93	83	77
DIWA®.3E									
N 4407, N 4409, N 4411	D0836 LOH	206/2400	Euro 3	D 851.3E	275/70 R22.5		82	74	
N 4407, N 4409, N 4411	OM 906 LA	205/2500	Euro 3	D 851.3E	275/70 R22.5		86	77	72
N 4411	D0836 LOH	206/2400	Euro 3	D 854.3E	275/70 R22.5			105	97
N 4411	OM 906 LA	205/2500	Euro 3	D 854.3E	275/70 R22.5			109	101
N 4416 Ü	D2866 LUH	228/1900	Euro 3	D 864.3E	275/70 R22.5	100	88	79	73
N 4426	OM 501 LA	260/2000 300/2000	Euro 3	D 864.3E	275/70 R22.5	105	93	83	77
N 4426	OM 501 LA	260/2000 300/2000	Euro 3	D 864.3E	295/80 R22.5		101	90	83