



## Powershift Transaxles ZF TERRAPOWER

The new generation of ZF's powershift transmissions offers full automation. Moreover, it is setting class standards with an overdrive being able to reduce the engine speed at 50km/h to less than 1500 rpm.

ZF-transaxles with 6-speed Powershift are available in the models TPT 16 and TPT 20, the power range is between 150 and 210 hp. The smaller and larger models TPT 11 as well as TPT25 and TPT28 offer the well-proven 4-speed Powershift transmission. Here in total, there are 32 (24) forward and 32 (24) reverse gears available as well as four PTO speeds. These ZF transaxles cover the power range from 70 to 115 HP as well as 210 to 280 HP.

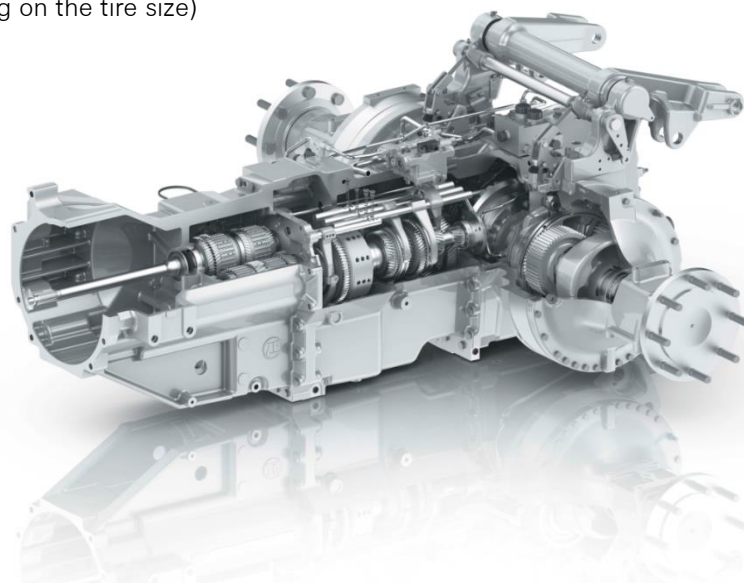
The new TERRAPOWER generation provides a choice between the favorably priced standard version with manually actuated Powershift or the completely Automatic Powershift APS with optional electro-hydraulic range shift IRS (Intelligent Range Shift).

Furthermore, the automated transmission functions can be integrated into a driveline management system via CAN bus. The transmission control offers full diagnostic capabilities. Automatic reverse shifting (Power Shuttle) and a great variety of options make the TERRAPOWER series widely adaptable transaxles in the medium and upper power class.

A unique stand-alone feature of TPT 16/20 is the high overdrive capability. 50km/h transport operations are possible at only 1500 rpm. 40km/h even at 1200 rpm (depending on the tire size)

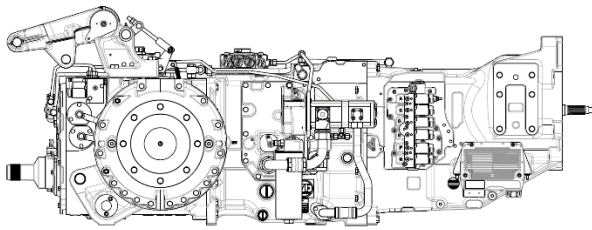


- Tractor power range between 70 and 270 hp
- Quick-response 4-speed/6-speed Powershift
- Range gearbox with optional automatization (IRS)
- Smoothly acting forward/reverse shuttle shifting
- Smooth PTO-clutch engagement
- Four PTO-speeds
- Overdrive (50 km/h at 1500 rpm, 40 km/h at 1200 rpm)
- Automated parking brake

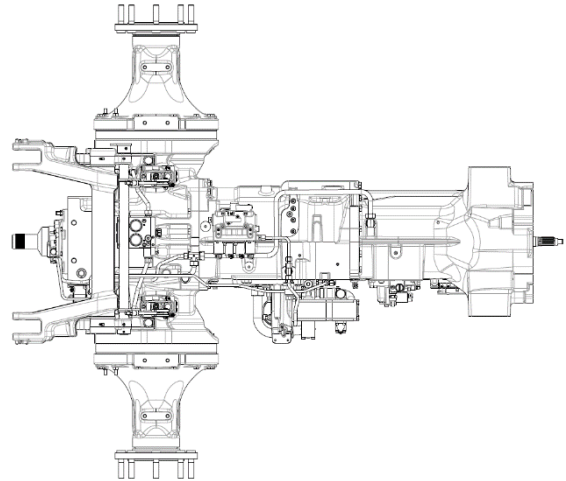


TPT 20

TERRAPOWER TPT 20 side view



TERRAPOWER TPT 20 top view



Technical Data	TPT – Powershift Transmission					
	TPT 11	TPT 14	TPT 16	TPT 20	TPT 25	TPT 28
Vehicle Data						
Engine power max.	86/117*	112/152*	126/171*	151/205*	182/248*	209 / 284*
[kW/HP] acc. ISO 14396 @ ~1900 rpm						
Engine Speed (nominal)	2,000 – 2,200					
Vehicle speed max. [km/h]	40	50/60	50		40 / 50	36
Gross vehicle weight [kg]	8.000	10.000	11.500	13.000	14.000	14.000
SRI max. [m]	0.800	0.825	0.875	0.925	0.975	0,975
Max. Tractionforce [kN]	78	98	113	128	137	137
ZF-Transaxle Data						
Transmission input power max regular curve [kW/HP] @ ~1900 rpm	83/113*	106/144*	116/157*	140 / 190*	167/224*	191 / 260*
Transmission Input torque max. regular [Nm] @ ~1300 ~ 1400 rpm	463	603	670	790	964	1050
Number of gears	32F + 32R	30F + 15R	30F + 15R [24F + 12R]		24F + 24R	24F +24R
Power Shift gears	4V/4R	6V/3R			4V/4R	
PTO stages	4: (540/E/1000/E)				3: (540E/1000/E)	
Transaxle weight [kg]	1.200	1.400	1.600	1.700	2.100	2.400
max.rear lift capacity [kg]**	5.300	7.600	9.200	9.600	11.000	12.000

\*Power increase with boost depending on transmission type between 8 – 12%

\*\*at hitch point; pending on OEM rear lift kinematics