Funk™ Drivetrain Components

Selection Guide

Funk™ drivetrain components

Backed by a reputation of reliability and customer service, John Deere axles and Funk transmissions, pump drives, and planetary drives are designed to operate in a wide range of rugged off-highway conditions.

John Deere delivers an integrated drivetrain system that boosts performance, maximizes uptime, and lowers cost of operation.

Your equipment deserves nothing less

Staying true to our proven heritage, John Deere drivetrain components incorporate over 150 years of off-highway vehicle experience.

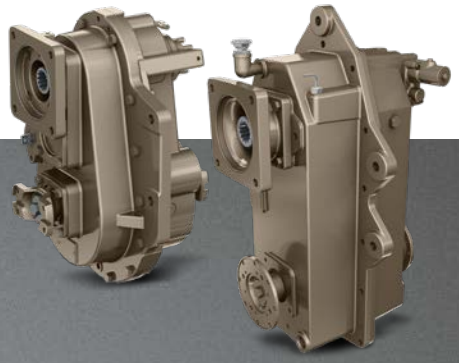
Our continued promise is to provide you with an array of robust designs to meet your demanding OEM needs. When you choose John Deere drivetrain components, you know you are getting the best combination of performance, reliability, and durability.

Inboard planetary axles

Model	Peak vertical load	Track width flange to flange	Reduction ratios		Peak output torque per axle shaft
Series 1200	240,000 N (54,000 lb)	1,300 mm (51.18 in) 1,700 mm (66.93 in) 1,953 mm (76.89 in)	15	Min. 4.333:1 Max. 33.429:1	35,000 Nm (310,000 in-lb)
Series 1400	300,000 N (67,000 lb)	1,700 mm (66.93 in) 1,953 mm (76.89 in)	12	Min. 16.208:1 Max. 32.914:1	47,400 Nm (420,000 in-lb)
Series 1400 SWEDA™	300,000 N (67,000 lb)	2,540 mm (100.00 in)	3	Min. 27.927:1 Max. 30.578:1	47,400 Nm (420,000 in-lb)

Specifications are subject to change.

HMD transmissions



Model	Speeds	Max input power	Max input no load speed	Max input torque	Motor adapters	Output fittings	Parking brake
18000	2	149 kW (200 hp)	4000 rpm	949 Nm (700 lb-ft)	SAE C, D	5C, 6C, 7C yokes or companion flange	Disc
12700	4	104 kW (140 hp)	2500 rpm	407 Nm (300 lb-ft)	SAE C, D	Adapts to Spicer 1500 and 1600 series, and Mechanics 7C U-joint flange yoke	Drum
33000	4	101 kW (135 hp)	2400 rpm	407 Nm (300 lb-ft)	SAE C, D	Adapts to Spicer 1500 and 1600 series, and Mechanics 7C U-joint flange yoke	Drum
23000	3, 4	75 kW (100 hp)	3000 rpm	271 Nm (200 lb-ft)	SAE C, D	Spicer 3-1-2181	Band
HS17000	2	93 kW (125 hp)	4300 rpm	1,017 Nm (750 lb-ft)	SAE C, D	6C, 7C yokes or companion flange	N/A

Specifications are subject to change.

⚠ WARNING VEHICLE RUNAWAY HAZARD
A transmission is not a braking system. Install transmission only if there is a braking system capable of stopping vehicle with dead engine, disengaged transmission, or loss of hydrostatic retardation. Otherwise, vehicle may roll freely, resulting in loss of control or serious or fatal injury.

Powershift transmissions

DFR engine-mounted PTO

The front housing of our DF150 and DF250 products is our DFR engine-mounted PTO, which can also be purchased as a stand-alone product. The DFR mounts to the engine and can be used to power the transmission, as well as a variety of external equipment.

Ratings
- Max input power: 224 kW (300 hp)
- Max input no load speed: 3000 rpm

Engine housing
- SAE 2 or 3

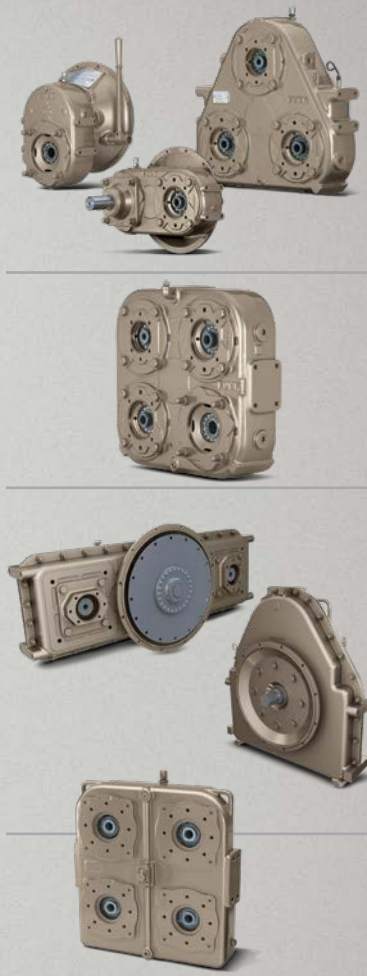
Options
- Direct-drive or converter
- Dual pump drive pads with a variety of yoke and flange outputs

Model	Input power	Max input no load speed	Max input torque	Drop	Mounting options	Gearings	Pump drives	Options
DF150	112 kW (150 hp)	3000 rpm	1,288 Nm (950 lb-ft)	500 mm (19.68 in)	Engine, midship, or remote	Constant mesh, in-line, high-contact ratio ground gears; 8 forward, 4 reverse speeds	Full range of SAE mounting options	– Magnetic pulse generator for speedometer – Internal engine-side axle disconnect – Caliper and disc or integral spring-applied, pressure-released parking brake – Torque converter or direct drive
DF250	186 kW (250 hp)	2600 rpm	1,898 Nm (1,400 lb-ft)	550 mm (21.65 in)	Engine, midship, or remote	Constant mesh, in-line, high-contact ratio ground gears; 11 forward, 4 reverse speeds	Full range of SAE mounting options	– Magnetic pulse generator for speedometer – Internal engine-side axle disconnect – Caliper and disc or integral spring-applied, pressure-released parking brake – Torque converter or direct drive
2000 Series	168 kW (225 hp)	3000 rpm	1,627 Nm (1,200 lb-ft)	244.6 mm (9.63 in) short drop 473.2 mm (18.63 in) long drop	Engine, midship, or remote	Constant mesh, in-line, high-quality spur gears	Full range of SAE mounting options	– Single-lever operator controller (includes neutral start and reverse warning alarm switch) – Magnetic pulse generator for speedometer – Integral engine side axle disconnect – Integral no-spin differential – Disc parking brake – Converter lock-up

Specifications are subject to change.

Modular pump drives

Model	Max input power*	Max input torque*	Max output torque per pump pad	Max input or output speed	Output rotation
28000 Single Direct drive	268 kW (360 hp)	881 Nm (650 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Enginewise
28000 Single w/ 5" gear centers	242 kW (325 hp)	780 Nm (575 lb-ft)	780 Nm (575 lb-ft)	3000 rpm	Anti-enginewise
28000 Double w/ 5" gear centers	268 kW (360 hp)	881 Nm (650 lb-ft)	780 Nm (575 lb-ft)	3000 rpm	Anti-enginewise
28000 Double w/ 6" gear centers	268 kW (360 hp)	1,017 Nm (750 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
28000 Triple	268 kW (360 hp)	1,017 Nm (750 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
59000 Double	522 kW (700 hp)	1,695 Nm (1,250 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
59000 Triple	522 kW (700 hp)	1,695 Nm (1,250 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
59000 Four	522 kW (700 hp)	1,695 Nm (1,250 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
59000 Four Wide	522 kW (700 hp)	1,695 Nm (1,250 lb-ft)	881 Nm (650 lb-ft)	3000 rpm	Anti-enginewise
56000 Double	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise
56000 Double w/ shaft drive	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise; except through shaft-drive enginewise
56000 Triple	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise
56000 Four	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise; except through shaft-drive enginewise
56000 Five	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,034 Nm (1,500 lb-ft)	2500 rpm	Enginewise
56000 Five Deep sump	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,034 Nm (1,500 lb-ft)	2500 rpm	Enginewise
57000 Four 14" centers	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise
57000 Four 16" centers	708 kW (950 hp)	2,712 Nm (2,000 lb-ft)	2,712 Nm (2,000 lb-ft)	2500 rpm	Anti-enginewise



Specifications are subject to change.

**Clutch-rating dependent.*

Planetary gear drives

Series model	Output torque Nm (lb-ft)		Ratio range[1]	Max input speed rpm continuous[2]	Max radial load kgf (lb)[3]	Max input power kW (hp)	Approx. weight kg (lb)[4]
	Intermittent	Continuous					
F9R	12,880 (9,500)[5]	8,135 (6,000)	3.27 – 117:1	2800	14,287 (31,500)	27 (36)	100 – 181 (220 – 400)
F12R	16,948 (12,500)	10,168 (7,500)	13.2:1 – 81.3:1	2800	14,287 (31,500)	35 (48)	91 – 122 (200 – 270)
F25R	33,895 (25,000)	18,710 (13,800)	5.0:1 – 54.6:1	2800	28,570 (63,000)	71 (95)	215 – 263 (475 – 580)

Specifications are subject to change.

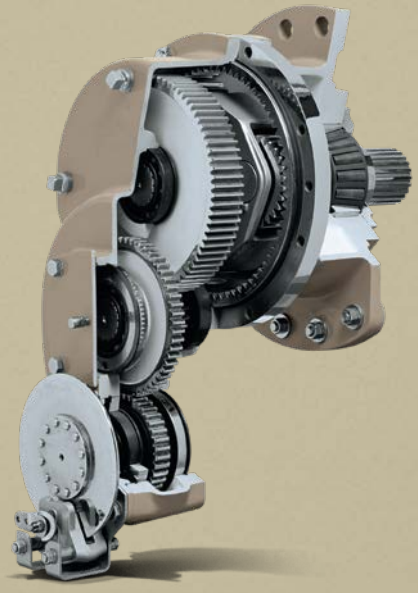
[1] Actual ratio is dependent on the drive configuration.

[2] Maximum input speed related to ratio and maximum output speed.

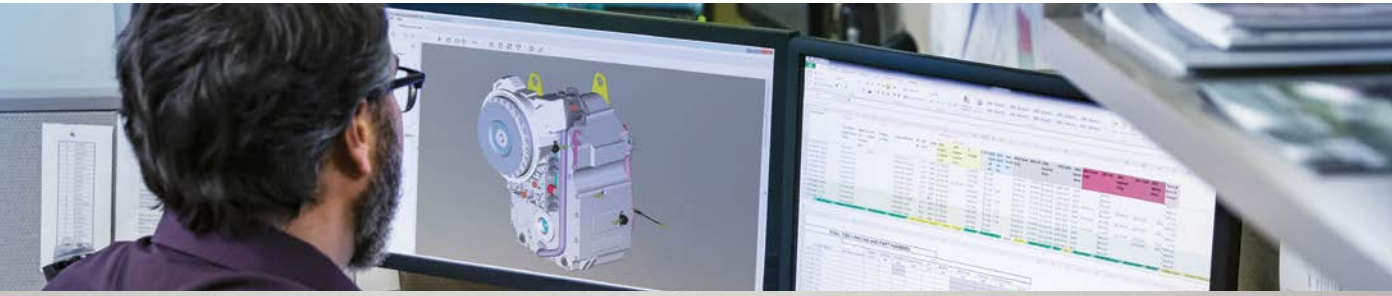
[3] Maximum radial load placed at optimum load position.

[4] Weight varies with configuration and ratio selected.

[5] Requires tapered roller planet bearings (not available with all ratios).



Customer support



Application integration support

John Deere Power Systems is one of the few companies that integrates entire powertrain systems — from the engine and electronics to the drivetrain components. Our highly trained distributors have experience integrating engines, drivetrain components, and electronics into a wide variety of applications. We also provide equipment manufacturers with product and engineering support to maximize performance and fuel economy while meeting emissions regulations.

Our application engineers are ready to assist you in selecting the options that best fit your needs. We also offer dedicated OEM service and long-term aftermarket support.

To see the value we can add to your equipment, call us today at 800-533-6446.

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