

# Transmissions

# T 3.0 Agricultural transaxle

- › Designed for tractors bound for the emerging markets for a power range up to 42 hp with a drop final reduction providing off-set wheel center axis
- › The two-axis design reduces dimensions, leaving ample room for the driver area
- › The basic version, with 8 forward plus 2 reverse speeds and constant mesh “collar shift” gears, allows massive cost savings, Premium option with synchro reverser provide the 8+8 transaxle version
- › The hydraulic lift draft, position and mixed control type, lift capacity 10,000 N, is designed for large attachments, thereby reducing job performance times
- › The mechanically operated “Ball & Ramp” wet brakes positioned close to the differential act before the reduction unit and are virtually maintenance free
- › The mechanical pedal-controlled differential locking ensures optimal grip even on difficult terrain
- › The optimal speed distribution between 2.6-32 Km/h allows smooth operation with the different attachments carried on the 3-point hitch or towed
- › 540 and 540/540E PTO speed controlled by a Single main clutch or with a double main clutch provide possibility to independently control the PTO versus the transmission
- › The SAE 4 clutch housing interfaces with different engine makes and satisfies the need for flexibility and image demanded by the various manufacturers

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## Advantages

- › Progressive gear change with the tractor on the go
- › The independent PTO at 540 rpm or 540/540E ideal for jobs with balers, rotary cultivators, etc
- › The independent PTO at 540 rpm or 540/540E allows for tractor stop during implement use

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## Options

- › The factory fitted “Rice paddy” seals allow to work in difficult environments
- › The facility for mechanical-control 4WD take-off will add further versatility to the transaxle

## T 3.0

### INPUT DATA

Maximum transmission input net power	<b>kW</b>	25,5
	<b>HP</b>	34,7
Max engine speed at rated power	<b>rpm</b>	2000
Maximum input torque	<b>Nm</b>	149

### CONFIGURATION

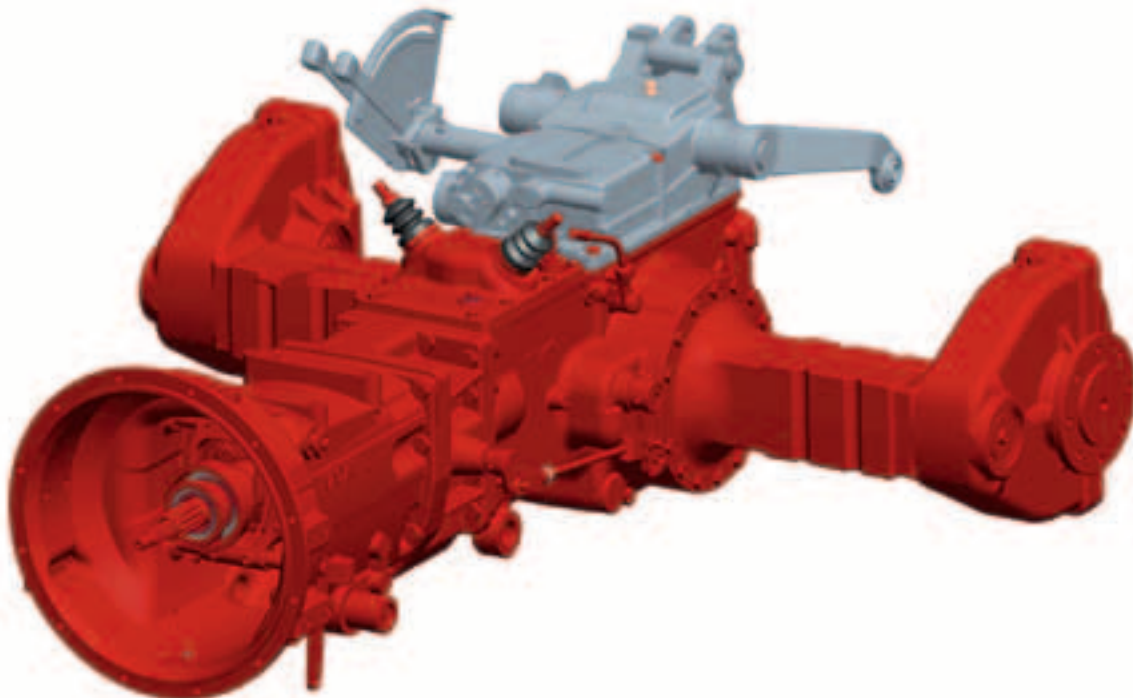
Total gear [fwd x rev]	8 x 2	8 x 8	16 x 4
Gear box forward split [gears x ranges]	4 x 2	4 x 2	4 x 2 x 2
Gear box shifting	Collar shift	Collar shift	Collar shift
Gear box reverse split [gears x ranges]	1 x 2	4 x 2	1 x 2 x 2
Reverse shifting	Constant mesh	Collar shift	Collar shift

### MAIN DATA

Flange to flange distance	<b>mm</b>	1368
Reference torque at rear axle	<b>Nm</b>	7800
Total tractor nallasted weight	<b>Kg</b>	1900
Maximum rear tire size		13.6 R 28
Rear tire index radius	<b>mm</b>	625
Rear lift capacity at lower link	<b>kN</b>	11
Total transaxle weight	<b>Kg</b>	470

### OPTIONS

1 or 2 PTO Speed, Gear synchro, Reverse sliding gear, 4WD



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## T 4.0 Agricultural transaxle

- › Designed for tractors bound for the emerging markets for a power range up to 45 hp with a epicyclic final reduction providing in line wheel center axis
- › The two-axis design reduces dimensions, leaving ample room for the driver area
- › The basic version has 8 forward plus 2 reverse speeds and constant mesh “collar shift” gears, Premium option with synchro reverser provide the 8+8 transaxle version
- › The hydraulic lift draft, position and mixed control type, lift capacity 10,000 N, is designed for heavy attachments
- › The wet oil brakes are ball and ramp type mechanically operated, located aside of differential unit and maintenance free
- › The transmission is equipped with 100% differential lock controlled by a pedal
- › The optimal speed distribution between 2.6-30 Km/h allows smooth operation with the different attachments carried on the 3-point hitch or towed
- › 540 and 540/540E PTO speed controlled by a Single main clutch or with a double main clutch provide possibility to independently control the PTO versus the transmission
- › The SAE 4 clutch housing enables to interface a large options of different engines

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### Advantages

- › Progressive gear change with the tractor on the go
- › The independent PTO at 540 rpm or 540/540E ideal for jobs with balers, rotary cultivators, etc
- › The independent PTO at 540 rpm or 540/540E allows for tractor stop during implement use

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### Options

- › The factory fitted “Rice paddy” seals allow to work in difficult environments
- › The facility for mechanical-control 4WD take-off will add further versatility to the transaxle

## T 4.0

### INPUT DATA

Maximum transmission input net power	<b>kW</b>	31
	<b>HP</b>	42,2
Max engine speed at rated power	<b>rpm</b>	2000
Maximum input torque	<b>Nm</b>	184

### CONFIGURATION

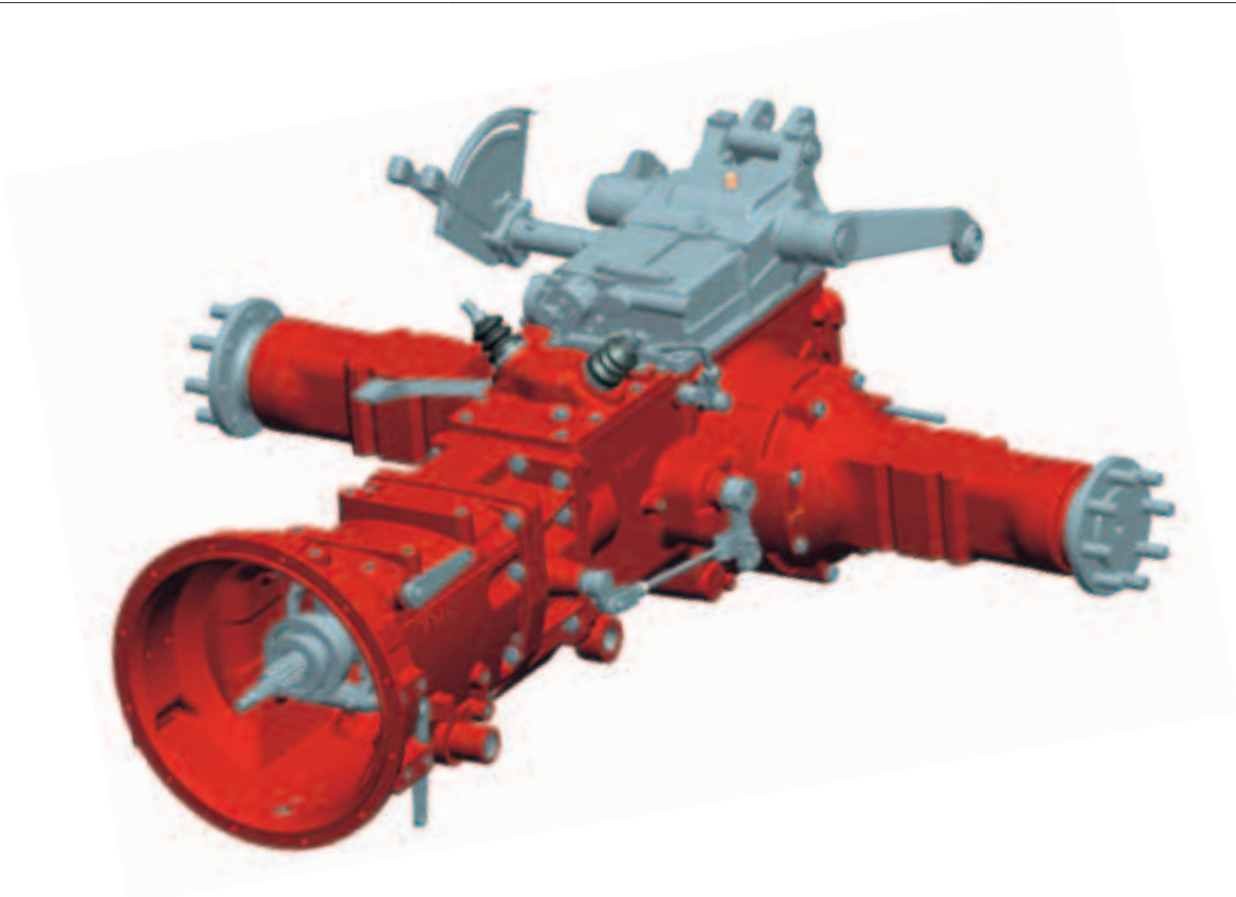
Total gear [fwd x rev]	8 x 2	8 x 8	16 x 4
Gear box forward split [gears x ranges]	4 x 2	4 x 2	4 x 2 x 2
Gear box shifting	Collar shift	Collar shift	Collar shift
Gear box reverse split [gears x ranges]	1 x 2	4 x 2	1 x 2 x 2
Reverse shifting	Constant mesh	Collar shift	Collar shift

### MAIN DATA

Flange to flange distance	<b>mm</b>	1368
Reference torque at rear axle	<b>Nm</b>	8584
Total tractor nallasted weight	<b>Kg</b>	2100
Maximum rear tire size		13.6 R 28
Rear tire index radius	<b>mm</b>	625
Rear lift capacity at lower link	<b>kN</b>	11
Total transaxle weight	<b>Kg</b>	470

### OPTIONS

1 or 2 PTO Speed, Gear synchro, Reverse sliding gear, 4WD



## T 5.0 Agricultural transaxle

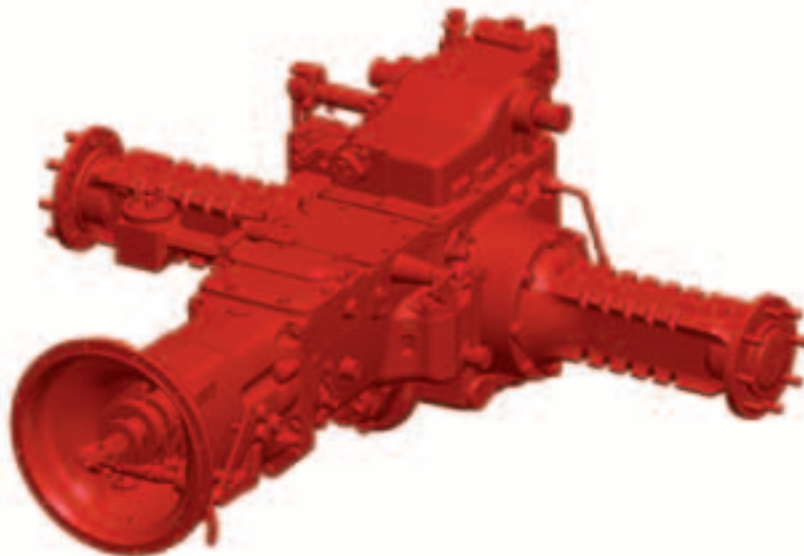
- › The 2-shaft design reduces gearbox size and provides ample room in the driver area, significantly enhancing ergonomics and comfort
- › The basic configuration offers synchronized reverser
- › The basic version complete with synchronized constant mesh gears 8 forward / 8 reverse gears ensures driving comfort and reliability
- › The wet service brakes are designed to be virtually maintenance free and to last as long as the tractor
- › The basic version control is manual/mechanical
- › The ground drive rear power take-off (GDPTO), allows the attachment of a motor trailer, improving versatility and traction on slopes or muddy terrain
- › The independent rear PTO ideal for Vineyard/Orchard tractors and light duty STD's which are mainly used with attachments
- › The SAE 3 clutch housing ensures connection to different makes of diesel engine and satisfies the flexibility and brand image requirements of the various manufacturers

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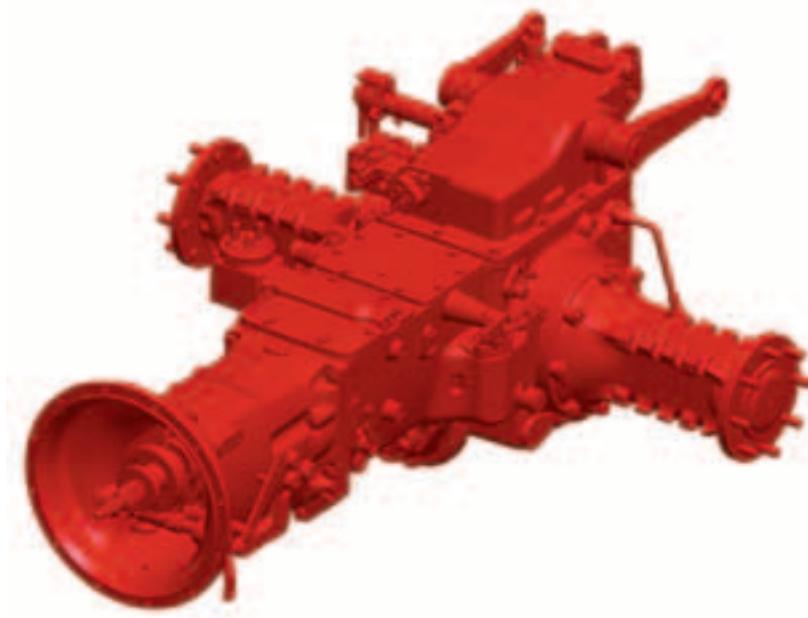
### Options

- › Hydraulic control is available on the version with suspended pedals for tractors with cabs, etc
- › 12 forward / 12 reverse or 24 forward /24 reverse gears, 30 km/h or 40 km/h
- › The central position 4WD box option incorporates the patented Easy-shift system and is available for the 40 km/h version
- › The rear PTO clutch disk can be supplied either in the “normally closed” or “normally open” version
- › The 540 rpm one-speed rear PTO is offered in the basic version, while the two speed 540/540E or 540/1000, available as an optional
- › The draft, position and mixed control hydraulic lift, together with descent speed and sensitivity control, is available as an optional
- › Clutch housing with special length and interface

	<b>T 5.0</b>			<b>T 5.5</b>				<b>VaryT 5.5</b>	
<b>INPUT DATA</b>									
Maximum transmission input net power	<b>kW</b>	50			60				60
	<b>HP</b>	68			81,6				81,6
Max engine speed at rated power	<b>rpm</b>	2300			2300				2300
Maximum input torque	<b>Nm</b>	272			324				324
<b>CONFIGURATION</b>									
Total gear [fwd x rev]		8 x 8	12 x 12	24 x 24	8 x 8	12 x 12	24 x 24	24 x 12	<b>VaryT</b>
Gear box configuration [gears x ranges]		4 x 2	4 x 3	2 x 4 x 3	4 x 2	4 x 3	2 x 4 x 3	2 x 4 x 3	
Gear box shifting		Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	
Gear box [hi-lo]		-	-	Synchro gear or Power shift	-	-	Synchro gear or Power shift	Power shift	
Gear box reverse shifting		Synchro gear	Synchro gear or Power shift	Synchro gear or Power shift	Synchro gear	Synchro gear or Power shift	Synchro gear or Power shift	Power shift	
<b>MAIN DATA</b>									
Flange to flange distance	<b>mm</b>	1540			1540				1540
Reference torque at rear axle	<b>Nm</b>	14900			17600				17600
Total tractor ballasted weight	<b>kg</b>	3240			3820				3820
Maximum rear tire size		16.9R30			16.9R30				16.9R30
Rear tire index radius	<b>mm</b>	700			700				700
Rear lift capacity at lower link	<b>kN</b>	26			26				26
Total transaxle weight	<b>kg</b>	725			725				725
<b>OPTIONS</b>									
1 or 2 PTO speed, Ground drive PTO / Mechanical or hydraulic: brakes actuation, rear diff lock actuation / Wet clutch PTO									



	<b>T 5.0 F</b>			<b>T 5.5 F</b>				<b>VaryT 5.5 F</b>	
<b>INPUT DATA</b>									
Maximum transmission input net power	<b>kW</b>	55			67			67	
	<b>HP</b>	74,8			91,2			91,2	
Max engine speed at rated power	<b>rpm</b>	2300			2300			2300	
Maximum input torque	<b>Nm</b>	297			360			360	
<b>CONFIGURATION</b>									
Total gear [fwd x rev]		8x8	12x12	24x24	8x8	12x12	24x24	24x12	<b>VaryT</b>
Gear box configuration [gears x ranges]		4x2	4x3	2x4x3	4x2	4x3	2x4x3	2x4x3	
Gear box shifting		Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	
Gear box [hi-lo]		-	-	Synchro gear or Power shift	-	-	Synchro gear or Power shift	Power shift	
Gear box reverse shifting		Synchro gear	Synchro gear or Power shift	Synchro gear or Power shift	Synchro gear	Synchro gear or Power shift	Synchro gear or Power shift	Power shift	
<b>MAIN DATA</b>									
Flange to flange distance	<b>mm</b>	1240			1240			1240	
Reference torque at rear axle	<b>Nm</b>	14100			16100			16100	
Total tractor ballasted weight	<b>kg</b>	3200			3650			3650	
Maximum rear tire size		16.9 R28			16.9 R28			16.9 R28	
Rear tire index radius	<b>mm</b>	675			675			675	
Rear lift capacity at lower link	<b>kN</b>	26			26			26	
Total transaxle weight	<b>kg</b>	700			700			700	
<b>OPTIONS</b>									
1 or 2 PTO Speed, Ground drive PTO / Mechanical or hydraulic: brakes actuation, Rear diff lock actuation / Wet clutch PTO									



**T 5.0 V****VaryT  
5.0 V****INPUT DATA**

Maximum transmission input net power	<b>kW</b>	67	67
	<b>HP</b>	91,2	91,2
Max engine speed at rated power	<b>rpm</b>	2300	2300
Maximum input torque	<b>Nm</b>	360	360

**CONFIGURATION**

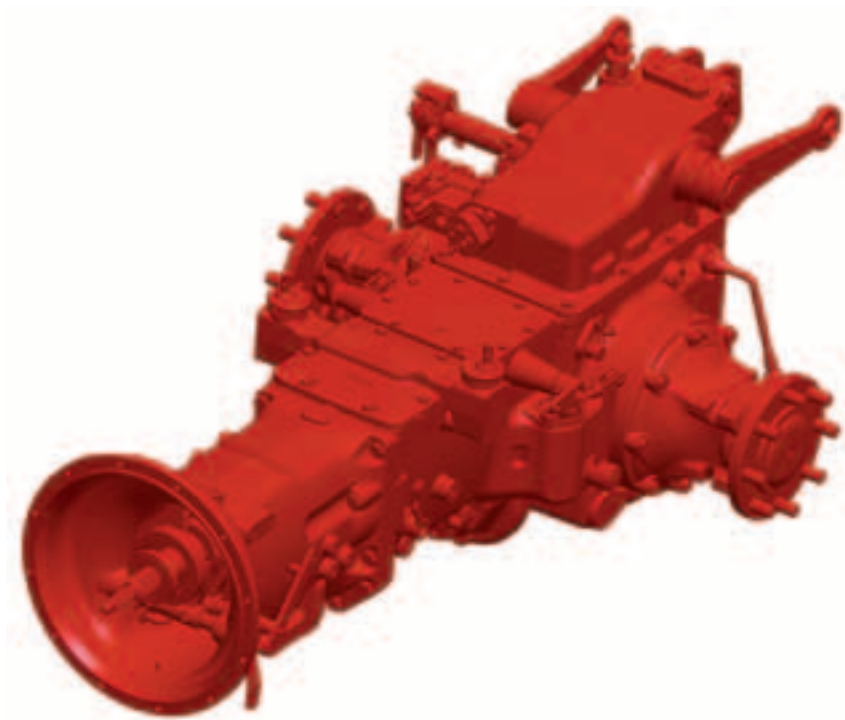
Total gear [fwd x rev]	12 x 12	24 x 24	24 x 12	<b>VaryT</b>
Gear box configuration [gears x ranges]	4 x 3	2 x 4 x 3	2 x 4 x 3	
Gear box shifting	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	
Gear box [hi-lo]	-	Synchro gear or Power shift	Power shift	
Gear box reverse shifting	Synchro gear or Power shift	Synchro gear or Power shift	Power shift	

**MAIN DATA**

Flange to flange distance	<b>mm</b>	890 or 970	890 or 970
Reference torque at rear axle	<b>Nm</b>	13080	13080
Total tractor ballasted weight	<b>kg</b>	3200	3200
Maximum rear tire size		13.6 R28	13.6 R28
Rear tire index radius	<b>mm</b>	625	625
Rear lift capacity at lower link	<b>kN</b>	26	26
Total transaxle weight	<b>kg</b>	680	680

**OPTIONS**

1 Or 2 pto speed, ground drive pto / Mechanical or hydraulic: brakes actuation, rear diff lock actuation / Wet clutch pto / Creeper speed from 0,5 km/h



# T 10.0 Agricultural Transaxle

- › The 2-shaft design reduces gearbox size and provides ample room in the driver area, significantly enhancing ergonomics and comfort
- › The basic configuration offers synchronized reverser ensuring easy and rapid reversal when manoeuvring in narrow spaces typical of orchards
- › The basic version complete with synchronized constant mesh gears 12 forward / 12 reverse gears ensures driving comfort and reliability, as well as significant tractor cost savings
- › The wet service brakes, situated near the differential and before the final reduction, are designed to be virtually maintenance free and to last as long as the tractor. The basic version control is manual/mechanical, while the hydraulic control is available as an optional on the version with suspended pedals for tractors with cabs, etc
- › The ground drive rear power take-off (GDP-TO), basic on the 12 forward / 12 reverse and 24 forward / 24 reverse gear versions, allows the attachment of a motor trailer, improving versatility and traction on slopes or muddy terrain
- › The independent rear PTO has been designed to transmit all the engine's power and is therefore ideal for Orchard tractors
- › The SAE 3 clutch housing ensures connection to different makes of diesel engine and satisfies the flexibility and brand image requirements of the various manufacturers

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## Options

- › The wide range of optionals available, such as 8/12/24 gears, 30 km/h or 40 km/h and creeper, are designed to satisfy the needs of state-of-the-art, high productivity tractors
- › The central position 4WD box option, designed for 4WD front axles with central differential, incorporates the SAHR wet clutch which provides shifting on-the-go and under load, so as to obtain automatic braking on the four wheels when the brake pedals are engaged. The mechanical easy shift is also available as option
- › The twin dry disk central clutch control completes the supply
- › The differential lock achieved with an hydraulically-controlled wet multidisc clutch is available
- › The 540 rpm one-speed rear PTO is offered in the basic version, while the two speed 540/540E or 540/1000, available as an optional, enhances cost-convenience and versatility
- › The clutch housing with special length and interface can be supplied on request to satisfy specific vehicle architecture requirements

**T 10.0****VaryT  
10.0****INPUT DATA**

Maximum transmission input net power	<b>kW</b>	77	77
	<b>HP</b>	104,7	104,7
Max engine speed at rated power	<b>rpm</b>	2200	2200
Maximum input torque	<b>Nm</b>	426	426

**CONFIGURATION**

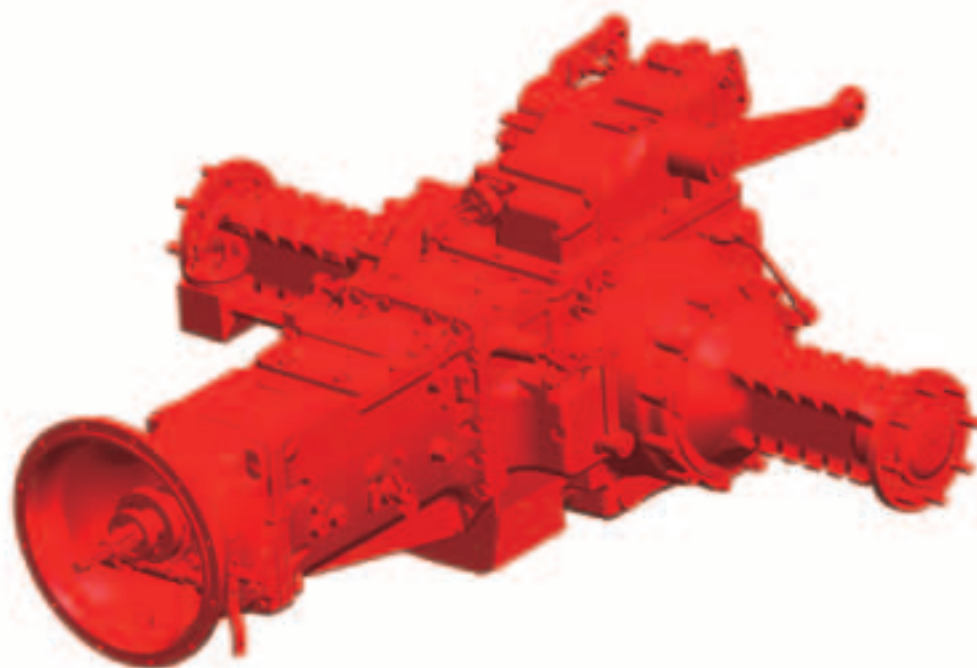
Total gear [fwd x rev]	12 x 12	24 x 24	24 x 12	<b>VaryT</b>
Gear box configuration [gears x ranges]	4 x 3	2 x 4 x 3	2 x 4 x 3	
Gear box shifting	Synchro gear / Collar shift range	Synchro gear / Collar shift range	Synchro gear / Collar shift range	
Gear box [hi-lo]	-	Synchro gear or Power shift	Power shift	
Gear box reverse shifting	Synchro gear or Power shift	Synchro gear or Power shift	Power shift	

**MAIN DATA**

Flange to flange distance	<b>mm</b>	1540	1540
Reference torque at rear axle	<b>Nm</b>	29271	29271
Total tractor ballasted weight	<b>kg</b>	5775	5775
Maximum rear tire size		18,4 R34	18,4 R34
Rear tire index radius	<b>mm</b>	775	775
Rear lift capacity at lower link	<b>kN</b>	45	45
Total transaxle weight	<b>kg</b>	1150	1150

**OPTIONS**

1 or 2 PTO speed, ground drive PTO / Mechanical or hydraulic: brakes actuation, Rear diff lock actuation / Wet clutch: PTO, MFWD, differential lock / Creeper speed from 0,5 km/h



## T 15.0 Agricultural Transaxle

- › Transmission with Dual Clutch architecture: the even gears are connected to one of the two clutches, and the odd gears to the other. When changing gear the electronic control pre-selects the required gear by means of the synchroniser, and therefore inverts the clutch transmitting the power.
- › Standard speeds range from 1.6 to 40 km/h. Maximum speed can be taken to 50 or 60 km/h simply by acting on the electronic control.
- › Possibility of changing 8 gears smoothly in Powershift mode with 4 robotised ranges, thereby avoiding range changes and clutch use in almost all field work.
- › The Power Reverse clutch, housed in the central part of the transmission, allows for a fully-automatic change of direction, without gear changes, thereby reducing repeated actions and cycle times.
- › Independent rear PTO, designed to transmit full engine power, resulting in speeds of 540/540E/1000 revs./min.
- › The electronic control uses an electrical-hydraulic clutch to manage the full transmission, guaranteeing the 4 drive wheels during braking and in any working conditions, as well as the differential locking.
- › The hydraulic system connected to the transmission can be open centre or closed centre, with a sensitive line. In both cases, significant oil flows, pressure and lifting capacity are obtained.
- › The rear axle contains two oil-cooled multi-disc brake units and a hydraulic actuator with power brake.
- › Electronic control lifter with dual external cylinders guaranteeing lifting capacity of 7500 kg.

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### Options

- › The Supercreeper option allows for tractor use at speeds starting from 0.2 km/h. The specific overlay of the ranges also allows for the reaching of top speeds of 40 km/h, at just 1460 revs./min.
- › Ground speed PTO, available on an extra axis, with a rotation regime proportional to tractor speed and allowing for the connection of a motorised cart. This improves versatility and traction on uneven or rugged ground.

**DueT 15.0****VaryT  
15.0****INPUT DATA**

Maximum transmission input net power	<b>kW</b>	110	110
	<b>HP</b>	149,6	149,6
Max engine speed at rated power	<b>rpm</b>	2200	2200
Maximum input torque	<b>Nm</b>	677	677

**CONFIGURATION**

Total gear [fwd x rev]	24 x 24	32 x 32	<b>VaryT</b>
Gear box configuration [gears x ranges]	4PS x 3 x 2	8PS x 4	
Gear box shifting	Power shift gear (dual clutch design) / Robotized gear synchro ranges	Power shift gear (dual clutch design) / Robotized gear synchro ranges	
Gear box [hi-lo ranges]	Collar shift	-	
Gear box reverse shifting	Power shift	Power shift	

**MAIN DATA**

Flange to flange distance	<b>mm</b>	1890	1890
Reference torque at rear axle	<b>Nm</b>	47211	47211
Total tractor ballasted weight	<b>kg</b>	8250	8250
Maximum rear tire size		20.8 R38	20.8 R38
Rear tire index radius	<b>mm</b>	875	875
Rear lift capacity at lower link	<b>kN</b>	75	75
Total transaxle weight	<b>kg</b>	1980	1980

**OPTIONS**

3 PTO speed, Ground drive PTO / Super creeper speed from 0,2 km/h

