

Fully automatic transmissions for commercial trucks

Founded in 1915, Allison Transmission is a world leader in the design, manufacture, and sale of commercial duty automatic, powershifting transmissions, and hybrid propulsion systems.

Allison transmissions are offered by over 250 vehicle manufacturers worldwide, and is trusted by more users and fleet managers than any other supplier of commercial duty automatic transmissions.



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A detailed close-up photograph of the internal components of an Allison automatic transmission, showing several large, interlocking metal gears. The gears are dark and have a fine, serrated texture. The lighting highlights the metallic surfaces and the complex arrangement of the gears. A large, semi-transparent red circle is overlaid on the left side of the image, partially obscuring the gears. The background is white.

Allison Transmission Ease and Efficiency

Allison designs, develops and manufactures the world's widest range of advanced, fully automatic transmissions for on and off road applications.

All our transmissions are reliable, efficient, easy to use and will meet your specific demands, whatever the application. That's why over 80 percent of the world's commercial vehicle automatic transmissions are Allison - because Allison is trusted by more manufacturers, fleets and drivers than any other supplier.

Designed to match the ratings of Euro 4 engines and beyond, the latest International Models bring benefits in productivity, durability and safety. For specific applications, customized transmissions are available to deliver exceptional performance and design flexibility.

The Allison International Series offers features and ratings specifically tailored to meet unique requirements of our customers outside North America.

Automatically Better

Whether carrying out stop/start operations in a quiet street, driving at speed along a highway or manoeuvring on a construction site, Allison transmissions will make a significant contribution to the effective and efficient operation of any truck.

Available in a wide range of ratings and configurations, Allison transmissions bring all the benefits of proven hydraulic torque converter powershifting gearboxes together with our advanced technology.

Allison 4th Generation Controls

Meeting the latest requirements of heavy-duty vehicle electronics systems, Allison's 4th Generation Controls help manufacturers and body builders precisely tailor the features and performance for any application. Integration with vehicle CAN systems, enhanced diagnostics and a simple driver interface improves efficiency and reduces operating costs.

Allison Advantage

Increased productivity - with constant drive to the wheels, an Allison equipped truck can complete its route faster. Tests have shown 10-15% productivity improvement over a manual or automated manual transmission.

Improved vehicle performance - multiplying engine torque through the converter and transferring smooth, uninterrupted power to the wheels quickly.

Greater efficiency - electronic control of shift points and early engagement of lock up, together with uninterrupted power during gear changes, enables optimum use of engine horsepower and torque.

Reduced whole life operating costs - high reliability and reduced workshop costs lead to better fleet utilization and lower capital requirements. An integral optional retarder takes it further, providing a significant increase in service brake life.

Increased safety - Medical tests prove it; less susceptible to stress, drivers keep both hands on the wheel, increasing control and improving manoeuvrability.

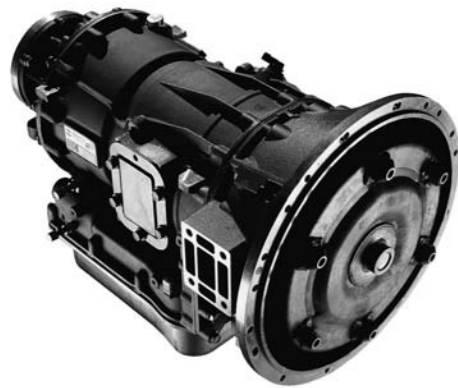




For customers who require efficiency, productivity, performance and high reliability

All Allison International Series transmissions feature:

- Advanced Allison 4th Generation Controls for precise shifting
- Fully automatic, uninterrupted powershifting for efficient use of engine power
- Available in five and six speed configurations, with overdrive
- Helical gearing for quiet operation
- Modular design for easy serviceability
- Torque converter that provides outstanding startability, even on challenging terrain
- Enhanced converter lock-up operation for maximum fuel economy
- Power Take Off provisions



1000 SERIES

- Designed for light commercial vehicles with gross weight up to 9,000 kg
- Close ratio gear gearing
- Turbine-driven PTO provision with optional neutral lock-up feature
- Parking pawl provision



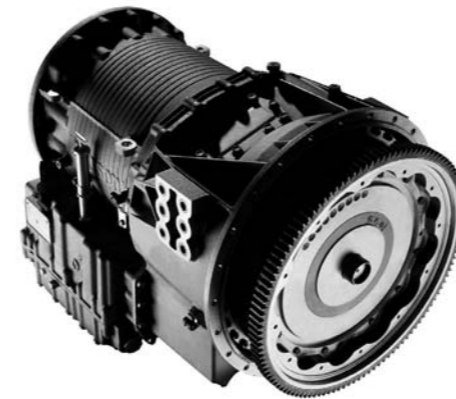
2000 SERIES

- Designed for commercial vehicles with gross weight up to 15,000 kg
- Close and wide ratio gearing available
- Turbine-driven PTO provision with optional neutral lock-up feature
- Parking pawl optional



3000 SERIES

- Designed for medium sized commercial vehicles
- Rating up to a maximum of 400 HP
- Close and wide ratio gearing available for a wide variety of on and off-road applications
- Engine-driven PTO provisions
- Optional integral output retarder provides enhanced vehicle braking while reducing brake wear
- Electronic Oil Level Sensor



4000 SERIES

- Designed for heavy duty commercial vehicles
- Rating up to a maximum of 700 HP
- Close and wide ratio gearing available for a wide variety of on and off-road applications
- 7 speed model available
- Engine driven PTO provisions
- Optional integral output retarder provides enhanced vehicle braking while reducing brake wear
- Electronic Oil Level Sensor

Speciality Series (SP)

- Developed for crane carriers and military vehicles
- Available in all International Model configurations
- Offers special ratings and features for specific applications

Off-Road Series (ORS)

- Developed for Articulated Dump, Rigid Dump and other off-road applications
- Available with the 3000 Series and 4000 Series
- Provides enhanced product ratings and unique hour-based product warranty coverage, tailored to meet the needs of customers operating primarily in severe off-road conditions

Oil Field Series (OFS)

- Specially designed seven-speed model for oil field applications
- Optional anodising for corrosion protection
- Custom software features
- Dual Mode for vehicle propulsion or Manual Mode for pumping
- Modified rapid acceleration/deceleration inhibit for control in Pump Mode
- Power Shift Mode provides fixed upshifts for oil pumping

Ratings and Specifications

Ratings and Specifications 1000/2000 Series

RATINGS							
MODEL	VOCATION	RATIO	PARK PAWL	INPUT POWER ¹ GROSS	INPUT TORQUE ¹ GROSS	GVW	GCW
				hp (kW)	N•m	kg	kg
1000	GENERAL	CLOSE	YES	300 (224)	780	9000	11,800
	REFUSE	CLOSE	NO	300 (224)	746	7500	N/A
1000SP	SPECIALTY	Contact your Allison representative for details					
2100	GENERAL	CLOSE	NO	300 (224)	780	12,000	12,000
	REFUSE	CLOSE	NO	300 (224)	746	11,000	N/A
2100SP	SPECIALTY	Contact your Allison representative for details					
2200	GENERAL	CLOSE	YES	300 (224)	780	11,800	11,800
2200SP	SPECIALTY	Contact your Allison representative for details					
2500	GENERAL	WIDE	NO	300 (224)	780	15,000	15,000
	REFUSE	WIDE	NO	300 (224)	746	11,000	N/A
2500SP	SPECIALTY	Contact your Allison representative for details					

¹ Gross ratings as defined by ISO 1585 or SAE J1995.

ENGINE SPEEDS			
MODEL	FULL LOAD GOVERNED SPEED	IDLE SPEED IN DRIVE	OUTPUT SHAFT SPEED
	Min-Max (rpm)	Min-Max (rpm)	rpm
1000	2200-3800 ¹	500-820	5000
2100/2200	2200-3800 ¹	500-820	4500
2500	2200-3800 ¹	500-820	3600

¹ Engines with full load governed speed greater than 3200rpm require Application Engineering review.

GEAR RATIOS - TORQUE CONVERTER MULTIPLICATION NOT INCLUDED								
MODEL	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	REVERSE
1000	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1*	-	-4.49:1
2100/2200	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1*	-	-4.49:1
2500	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1*	-	-5.09:1

* Sixth speeds available July 06 for specific vehicle configurations.

POWER TAKE OFF PROVISION - CONTINUOUS OPERATION					
SERIES	MOUNTING PAD POSITIONS VIEWED FROM REAR	DRIVE GEAR RATING WITH ONE PTO	DRIVE GEAR RATING WITH TWO PTOS	PTO DRIVE GEAR	DRIVE
		N•m	N•m		
1000	3 AND 9 O'CLOCK	339	271	64 TOOTH	TURBINE
2000	3 AND 9 O'CLOCK	339	271	64 TOOTH	TURBINE

TORQUE CONVERTER SPECIFICATIONS		
SERIES	TORQUE CONVERTER	NOMINAL STALL TORQUE
1000	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58
2000	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58

PHYSICAL DESCRIPTION				
MODEL	LENGTH ¹	DEPTH ² W/DEEP OIL PAN/SUMP	DEPTH ² W/SHALLOW OIL PAN/SUMP	DRY WEIGHT
	mm	mm	mm	kg
1000 SERIES				
- SAE NO. 3 MOUNTING	729	284.9	272.0	150
- SAE NO. 2 MOUNTING	739	284.9	272.0	150
2000 SERIES				
- SAE NO. 3 MOUNTING	729	284.9	272.0	150
- SAE NO. 2 MOUNTING	739	284.9	272.0	150

¹ Length measured from flywheel housing to end of output shaft. ² Depth measured below transmission centerline.

OIL SYSTEM				
SERIES	SUMP	CAPACITY ¹	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER
		litres		
1000			SPIN-ON CANISTER	N/A
	DEEP	18		
	SHALLOW	16		
2000			SPIN-ON CANISTER	N/A
	DEEP	18		
	SHALLOW	16		

Recommended oil types for all models are TranSynd™ or Dexron®-III.

¹ Transmission only. Does not include cooler, hoses or fittings.

Ratings and Specifications 3000/4000 Series

RATINGS							
MODEL	VOCATION	RATIO	INPUT POWER ¹ GROSS	INPUT TORQUE ¹ GROSS	GVW	GCW	
			hp (kW)	N•m	kg	kg	
3000	GENERAL	CLOSE	330 (246)	1261	N/A ³	N/A ³	
	REFUSE, CONCRETE MIXER	CLOSE	320 (239)	1186	28,123	N/A	
	FIRE TRUCK, EMERGENCY	CLOSE	350 (261)	1424	N/A	N/A	
3000SP	SPECIALTY	CLOSE	335 (250)	1322	N/A	N/A	
	MILITARY	CLOSE	Contact your Allison representative for details				
3200	GENERAL	CLOSE	370 (276)	1491	N/A	N/A	
	REFUSE, CONCRETE MIXER	CLOSE	370 (276)	1491	28,123	N/A	
	FIRE TRUCK, EMERGENCY	CLOSE	400 (298)	1695	N/A	N/A	
3200ORS	ARTICULATED DUMP	CLOSE	300 (224)	1100	44,500	N/A	
	RIGID DUMP	CLOSE	300 (224)	1100	44,500	N/A	
3200SP	SPECIALTY	CLOSE	370 (276)	1627	N/A	N/A	
	MILITARY	CLOSE	Contact your Allison representative for details				
3500	GENERAL	WIDE	300 (224)	1085	N/A ³	N/A ³	
	FIRE TRUCK, EMERGENCY	WIDE	330 (246)	1335	N/A	N/A	
	REFUSE, CONCRETE MIXER	WIDE	300 (224)	1085	N/A	N/A	
	ARTICULATED DUMP	WIDE	300 (224)	1100	44,500	N/A	
3500ORS	RIGID DUMP	WIDE	300 (224)	1100	44,500	N/A	
	SPECIALTY	WIDE	310 (231)	1268	N/A	N/A	
3500SP	MILITARY	WIDE	Contact your Allison representative for details				
	GENERAL, CONSTRUCTION	CLOSE	550 (410)	2400	N/A	N/A	
4000	REFUSE	CLOSE	500 (373)	2100	N/A	N/A	
	FIRE TRUCK, EMERGENCY, CRASH TRUCK	CLOSE	600 (447)	2508	N/A	N/A	
	HEAVY EQUIPMENT TRANSPORTER	CLOSE	600 (447)	2508	N/A	N/A	
	ARTICULATED DUMP	CLOSE	480 (358)	2203	68,500	N/A	
4000ORS	RIGID DUMP	CLOSE	480 (358)	2100	57,000	N/A	
	SPECIALTY	CLOSE	600 (447)	2508	N/A	N/A	
4000SP	MILITARY	CLOSE	Contact your Allison representative for details				
	ARTICULATED DUMP	CLOSE	480 (358)	2305	81,000	N/A	
4200ORS	4500	GENERAL, CONSTRUCTION	WIDE	550 (410)	2237/2400 ²	N/A	N/A
	4500	HIGHWAY	WIDE	550 (410)	2237/2400 ²	N/A	N/A
		REFUSE	WIDE	500 (373)	2100	N/A	N/A
		FIRE TRUCK, EMERGENCY, CRASH TRUCK	WIDE	600 (447)	2400/2508 ²	N/A	N/A
		HEAVY EQUIPMENT TRANSPORTER	WIDE	600 (447)	2237/2508 ²	N/A	N/A
4500ORS	ARTICULATED DUMP	WIDE	480 (358)	2100/2203 ²	68,500	N/A	
	RIGID DUMP	WIDE	480 (358)	2100	57,000	N/A	
4500SP	SPECIALTY	WIDE	600 (447)	2400/2508 ²	N/A	N/A	
	MILITARY	WIDE	Contact your Allison representative for details				
4600ORS	ARTICULATED DUMP	WIDE	480 (358)	2100/2305 ²	81,000	N/A	
4700	GENERAL, CONSTRUCTION	WIDEST	550 (410)	2400	N/A	N/A	
	REFUSE	WIDEST	500 (373)	2100	N/A	N/A	
	CRASH TRUCK	WIDEST	600 (447)	2508	N/A	N/A	
	HEAVY EQUIPMENT TRANSPORTER	WIDEST	600 (447)	2508	N/A	N/A	
4700OFS	OIL FIELD SERIES	WIDEST	600 (447)	2508	N/A	N/A	
4700SP	SPECIALTY	WIDEST	600 (447)	2508	N/A	N/A	
	MILITARY	WIDEST	Contact your Allison representative for details				
4800	CRASH TRUCK	WIDEST	700 (522)	2576	N/A	N/A	
4800SP	SPECIALTY	WIDEST	600 (447)	2576	N/A	N/A	
	MILITARY	WIDEST	Contact your Allison representative for details				

1 Gross ratings as defined by ISO 1585 or SAE J1995. 2 Dual Ratings for lower and upper ranges. 3 Limited to 36,287 kg for Spotter and Tow Tractor.

ENGINE SPEEDS			
SERIES	FULL LOAD GOVERNED SPEED	IDLE SPEED IN DRIVE	OUTPUT SHAFT SPEED
	Min-Max (rpm)	Min-Max (rpm)	rpm
3000	2000-2800	500-800	3600 ²
4000	1700-2300	500-800	-

1 Engines with full load governed speed greater than 3200rpm require Application Engineering review. 2 Retarder-equipped models only.

GEAR RATIOS - TORQUE CONVERTER MULTIPLICATION NOT INCLUDED								
MODEL	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	REVERSE
3000/3200	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	-	-5.03:1
3500	4.59:1	2.25:1	1.54:1	1.00:1	0.75:1	0.65:1	-	-5.00:1
4000	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-	-4.80:1
4500/4600	4.70:1	2.21:1	1.53:1	1.00:1	0.76:1	0.67:1	-	-5.55:1
4700/4800	7.63:1	3.51:1	1.91:1	1.41:1	1.00:1	0.74:1	0.64:1	-4.80:1

POWER TAKE OFF PROVISION - CONTINUOUS OPERATION					
SERIES	MOUNTING PAD POSITIONS VIEWED FROM REAR	DRIVE GEAR RATING WITH ONE PTO	DRIVE GEAR RATING WITH TWO PTOS	PTO DRIVE GEAR	DRIVE
		N•m	N•m		
3000	4 AND 8 O'CLOCK (Standard)	660	930	68 TOOTH	ENGINE
	1 AND 8 O'CLOCK (Optional) Fire and Emergency	660 910	930	83 TOOTH	ENGINE
4000	1 AND 8 O'CLOCK (Optional)	930	1595	97 TOOTH	ENGINE

1 Intermittent rating to 1068 N•m

TORQUE CONVERTER SPECIFICATIONS		
SERIES	TORQUE CONVERTER	NOMINAL STALL TORQUE
3000	TC-411	2.71
	TC-413	2.44
	TC-415	2.35
	TC-417	2.20
	TC-418	1.98
	TC-419	2.02
4000	TC-421	1.77
	TC-521	2.42
	TC-531	2.34
	TC-541	1.90
	TC-551	1.79
	TC-561	1.58

PHYSICAL DESCRIPTION				
MODEL	LENGTH ¹	DEPTH ² W/DEEP OIL PAN/SUMP	DEPTH ² W/SHALLOW OIL PAN/SUMP	DRY WEIGHT
	mm	mm	mm	kg
3000/3200/3500				
- BASIC MODEL	740	327.7	282.7	243
- WITH PTO ONLY	846	327.7	282.7	261
- WITH RETARDER ONLY	740	327.7	282.7	279
- WITH PTO & RETARDER	846	327.7	282.7	298
4000/4500				
- BASIC MODEL	793	374.7	334.6	377
- WITH PTO ONLY	866	374.7	334.6	405
- WITH RETARDER ONLY	793	374.7	334.6	411
- WITH PTO & RETARDER	866	374.7	334.6	439
4700/4800				
- BASIC MODEL	1049	378.2	-	493
- WITH PTO ONLY	1122	378.2	-	521
- WITH RETARDER ONLY	1049	378.2	-	527
- WITH PTO & RETARDER	1122	378.2	-	555

1 Length measured from flywheel housing to end of output shaft. 2 Depth measured below transmission centerline.

OPTIONAL RETARDER PROVISION		
SERIES	TORQUE CAPACITY	POWER CAPACITY
	N•m	HP (kW)
3000		
- HIGH	2170	600 (447)
- MEDIUM	1760	500 (373)
- LOW	1490	400 (298)
4000 ¹		
- HIGH	2710	600 (447)
- MEDIUM	2170	600 (447)
- LOW	1760	500 (373)

1 Only medium-capacity available on 4700 model and 4800 model.

OIL SYSTEM					
SERIES	SUMP	CAPACITY ¹	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER	ELECTRONIC OIL LEVEL SENSOR
		litres			
3000			INTEGRAL	INTEGRAL	STANDARD
	DEEP	28			
	SHALLOW	25			
4000			INTEGRAL	INTEGRAL	STANDARD
	DEEP	48			
	SHALLOW	41			
4700/4800	DEEP	51	INTEGRAL	INTEGRAL	STANDARD ²

Recommended oil types for all models are TranSynd™ or Dexron®-III.

1 Transmission only. Does not include cooler, hoses or fittings. 2 4700/4800 retarder model must use deep sump without OLS