

# Thor



**FERRARI**

# *Thor* by Ferrari

## **The best way to combine work and pleasure**

Over the past 30 years, we have followed the philosophy that puts customer needs first and foremost. In FERRARI we produce tractors characterized by unique features, exceptional performance, safety and comfort.

Every single component is designed by Ferrari and produced in our factory or under our strict control.

Ferrari tractors are at the top of their class combining high quality and reliability with optimal operating costs.

## **The beginning of a long relationship**

Choosing a Ferrari tractor you become part of an exclusive family of Ferrari owners and have a world-wide sales network, staffed by highly motivated people with a passion for our tractors, at your disposal. Our people are ready to help you choose the right tractor to meet your needs.

They are backed-up by a fully qualified service network, which is ready to help you at any time.

In the fully stocked spare parts department you will find original Ferrari parts to assure optimal performance of your tractor.





## **Your safety and comfort are guaranteed**

Our tractors are tested by independent authorities to assure that they are safe. In addition they are easy to operate and comfortable to minimize driver stress.

## **Protecting the environment**

At Ferrari we are actively working to protect our environment in many ways. We use recyclable materials where possible and modern, environmentally friendly production methods. Our tractors are designed to reduce noise pollution and are equipped with emission controlled engines that reduce the irritating smoke and toxic exhaust emissions.



# Thor

## Unique features

THOR 70, 80 and 90 are tractors with equal size wheels, which combine compact size and agility with strength and reliability. They are available in articulated "AR" and rigid "RS" (front wheel steering) versions. The special MT versions are ideal for hay making in mountainous regions.

With a low profile and exceptional stability THOR tractors have been designed specifically for use in vineyards, orchards, greenhouses and in the mountains. They are ideal for special crops where other tractors are too large or too heavy while being equally adapted for maintenance work in cities and green areas.

The comfortable driving position, the ergonomically positioned controls and the practical, easy to read instrumentation let you work without fatigue.



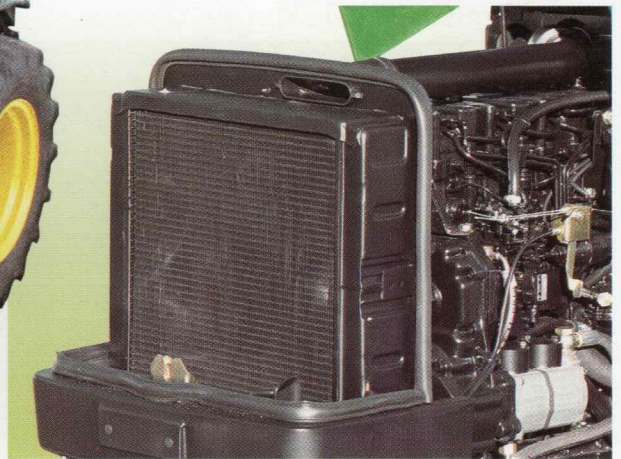
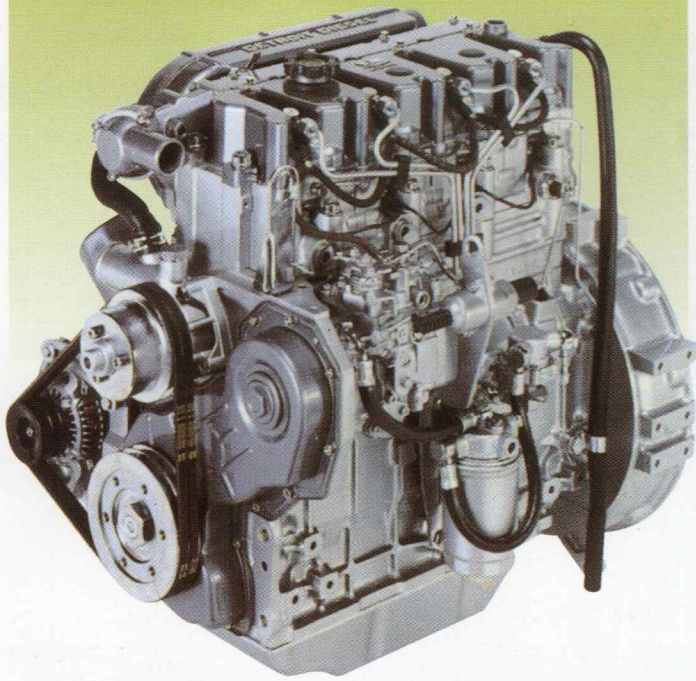
# Thor

## Modern, powerful emission controlled engines

The VM Series 700, water-cooled, diesel engines mounted in the THOR tractors are modern, reliable engines, which respect the environment and comply with the latest exhaust emission limits (EC, CARB and EPA). High output and high torque at low rpm with a low noise level and imperceptible vibration contribute to the joy of using a Thor. Not to mention the low fuel consumption and service and spare parts availability world-wide through the Detroit Diesel organization.

The exhaust muffler is located below the engine protected by the frame. This keeps the exhaust fumes away from the operator and reduces the risk of accidental burns. In addition there is nothing to catch branches or foliage.

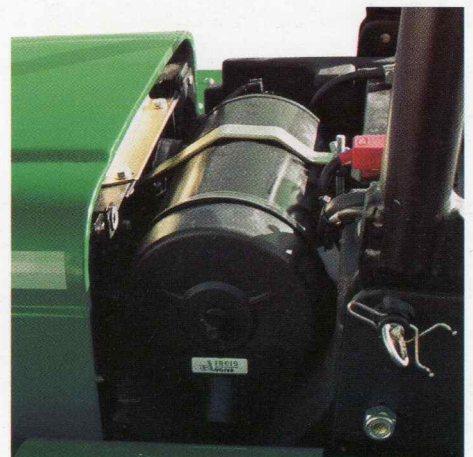
A large radiator with the "air-box" design keeps the engine cool even under the toughest conditions. The "air-box" is part of the new hood and assures that the radiator remains clean even in dusty conditions.



## Ease of maintenance is built in

The hood is a single unit and opens from the front to permit easy access to the engine even with front implements and/or front weights attached.

The air filter is located under the fixed part of the hood out of the way to avoid damage. It is easily accessible and does not protrude, so that the hood is smooth with nothing protruding to catch branches or foliage.



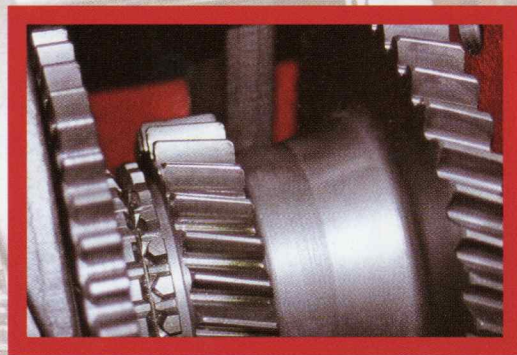
## Flexibility with the 32-speed transmission

The THOR series has a fully synchronized transmission with 32-speeds (16 FWD and 16 REV) and a synchronized reversing gear. The gears are helicoidal for quiet running and long life.

The gear ratios are optimized to provide the correct speed for any type of job.

The clutch of THOR tractors is a multi-disc wet type in an oil bath. It is hydraulically operated and requires very low force reducing driver fatigue and assuring smooth and gradual insertion. It is centrally located to reduce the length of the tractor. The front and rear differential locks have electro-hydraulic control. The transmission is mounted inside the chassis providing high ground clearance and very low center of gravity for utmost stability under all conditions.

The final drives are epicyclic type reducing the width of the tractor. They do not need maintenance.



# Thor



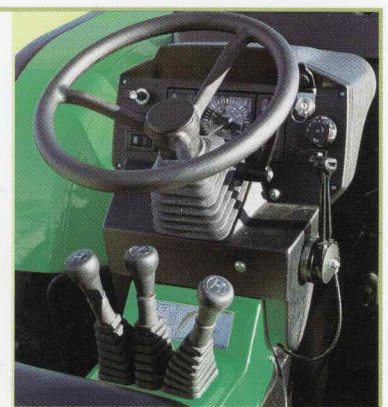
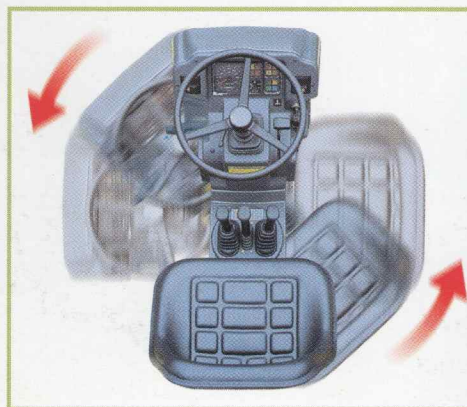


## The swinging chassis

Thor tractors with their equal size wheels have a short wheelbase, equal weight distribution and a tight turning radius making them extremely maneuverable on all types of ground. The central pivot allows the front end of the tractor to swing more than 15° in relation to the rear end so that the tractor can follow the irregularities of the ground while maintaining full stability and traction.

## Comfortable driving position

The comfortable driving position, the ergonomically positioned controls and the practical, easy to read instrumentation let you work without fatigue. The reversible driving position, which is available in some models, greatly increases the utility of the tractor. The complete driving unit (seat, steering wheel, dashboard) can be reversed in just 5 seconds without having to remove any connections. Pedals are duplicated so there is nothing to be done except lift the seat, which is automatically held in position, and turn the unit. All cables and hydraulic pipes are out of sight. The hand brake is designed to be easily operated from both directions.



## The steering

THOR tractors with their short wheelbase and a tight turning radius are particularly suitable when space is tight and precise and accurate maneuvering is required. Steering is power assisted and features twin hydraulic cylinders to assure accurate control even with wide track and large tires such as are used with the MT versions for hay making in mountainous areas.

The articulated models have hydraulic cylinders with limited travel and a steering angle of 4° more than previous models.

The hydraulic steering circuit is independent with a dedicated hydraulic pump.



### Steering radius for THOR AR

Type of tire	250/80-18	280/70-18	320/65-18	11.5/80-15.3	9.50-20	300/70-20	31x15.50-15	31x13.50-15
mm	2680	2700	2770	2710	2670	2740	2930	2910

### Steering radius for THOR RS

Type of tire	9.50-20	11/2-20	320/70-20	31x15.50-15	31x13.50-15	38/14-20
mm	3150	3200	3250	3360	3350	3280



### Steering radius for THOR FR

Type of tire	280/70-18	320/65-18	340/65-18
mm	3250	3280	3260

### Steering radius for THOR MT

Type of tire	31x15.50-15	38/14-20
mm	3360	3280

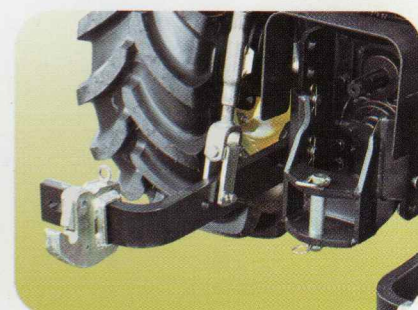
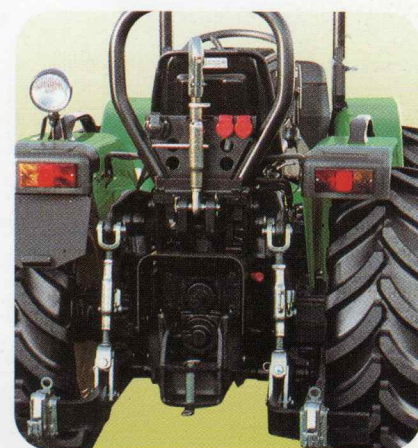
## Power lift and hydraulic connections

The rear hydraulic power lift on THOR tractors uses two (2) hydraulic rams and has a class 1 or 2 three-point linkage. A dual purpose control valve regulates the sink rate and when closed completely prevents implements from sinking during transport.

Hydraulic lift with position and draft control is optionally available. Dual, independent hydraulic circuits each with a dedicated pump, one for the steering and one for the hydraulic lift and accessories with the possibility to install up to 6 hydraulic connections. This division provides quicker lifting even at low engine rpm and limited temperature rise in heavy use.

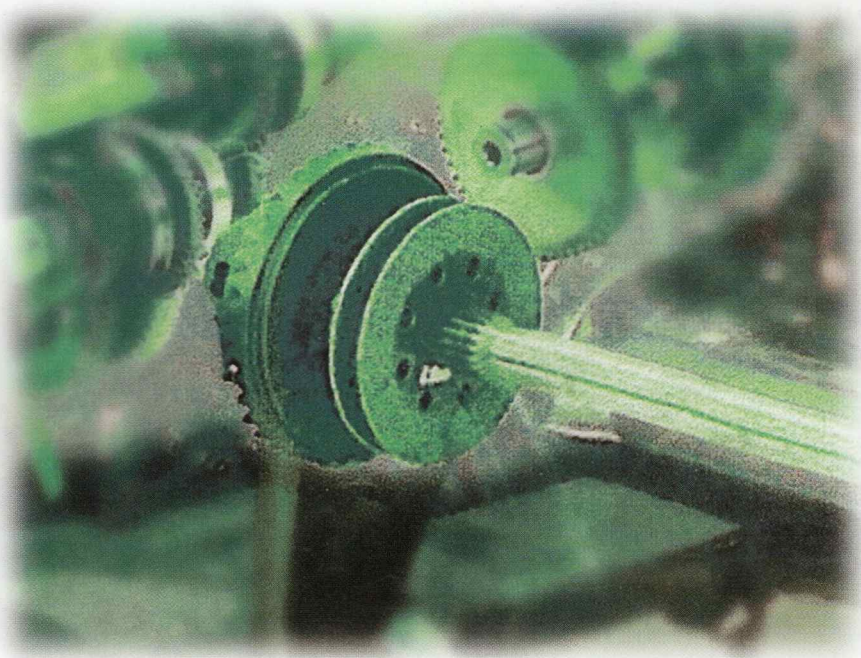
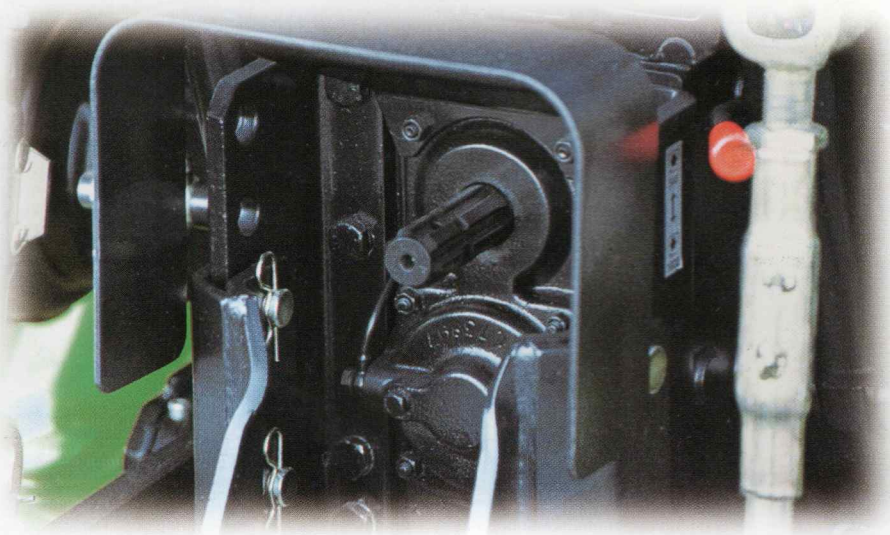
Independent filters without bypass but with blockage alarm prevent dirt from entering the hydraulic circuit.

Optional front lift with hydraulic connections for front implements.



## Power take-off

The Thor series has an independent PTO turning at 540/1000 rpm with a brake to prevent it turning when not inserted. The PTO is synchronized and proportional to all the transmission speeds. The multi disc wet clutch in an oil bath is electrohydraulically controlled reducing the wear and eliminating any need for adjustment. It provides smooth and gradual engagement. The PTO is located at the top of the transmission so that the universal joint connection is nearly horizontal reducing the stress on the universal joint and PTO shaft.



## Braking system

The multi disk brakes in an oil bath are mechanically operated needing no adjustment while ensuring the utmost safety and reliability.



## Protective roll bar and cabins

The protective roll bar of the THOR tractors is approved according to the stringent European norms. It can be easily folded down to allow the tractors to work under low plants.

The optional cabins have been designed with rounded corners and without protrusions so that they can be used in narrow places without damaging the plants.

The cabins are mounted on silent blocks for easy removal and have air filtration with large filters. Active charcoal filters, air conditioning and other options are available for special applications and to increase operator comfort under all kinds of conditions.

A four post safety frame (R.O.P.S.) with front and rear windows and a roof is standard with the MT tractors. A special low profile cabin (170 cm) is available for the FR versions without reversible driving position.



## A wide choice of tires

FERRARI offers a wide choice of tires and rims of variable track width for THOR tractors to meet your requirements.



**1.** 250/80-18 \* 280/70-18 \* 11.5/80-15.3 \* 320/65-18 \* 340/65-18 \* 9.50-20 \* 11.2-20 \* 300/70-20 \* 320/70-20 wheels

Wheels with the 'TRACTOR' profile suitable for typical agricultural use, soil work, towing or wherever wheels with an excellent grip are required to achieve the maximum lugging power from the vehicle.

**2.** 31x15.50-15 STG \* 38x14.00-20 STG wheels

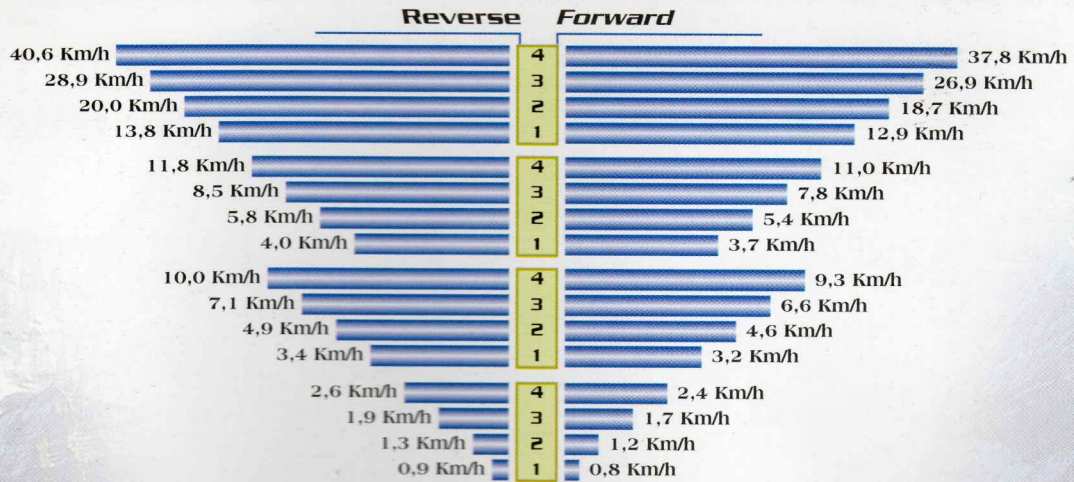
**3.** 31x15.50-15 XTC wheels

Wheels that minimize the compaction of the soil and are particularly suitable for ground care work, forage crops or applications where the soil must be protected without losing grip, even on slopes or irregular ground.

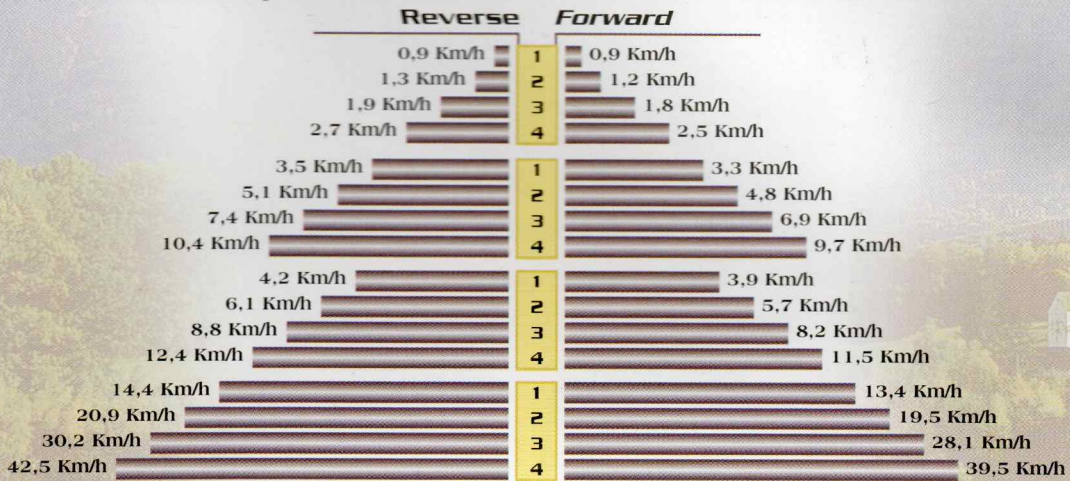
**4.** 31x13.50-15 e 38x14.00-20 Soft-Track wheels

Wheels that do not compact the soil any more than necessary, essential for ground care work on lawns where the grass must not be crushed.

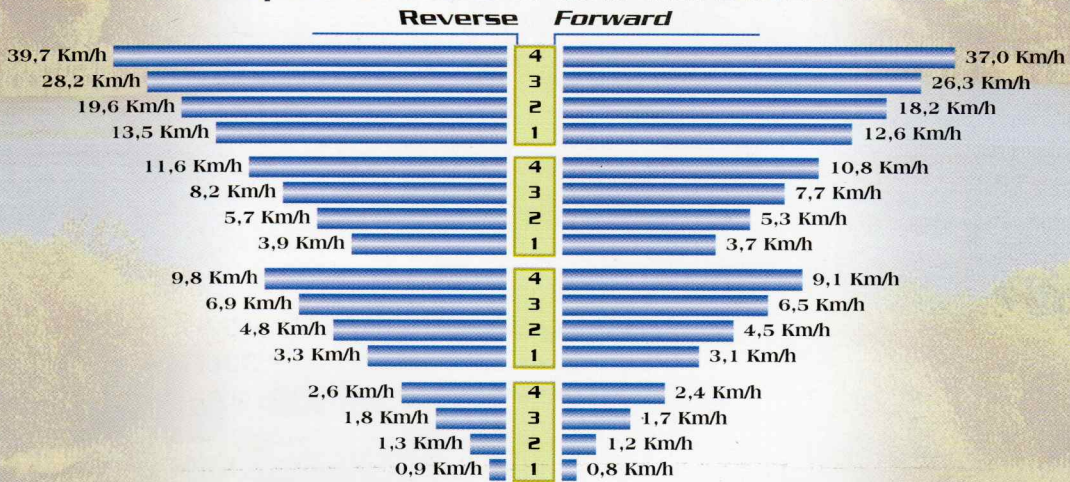
### THOR AR - Speed of tractor in km/h with 300/70-20 wheels



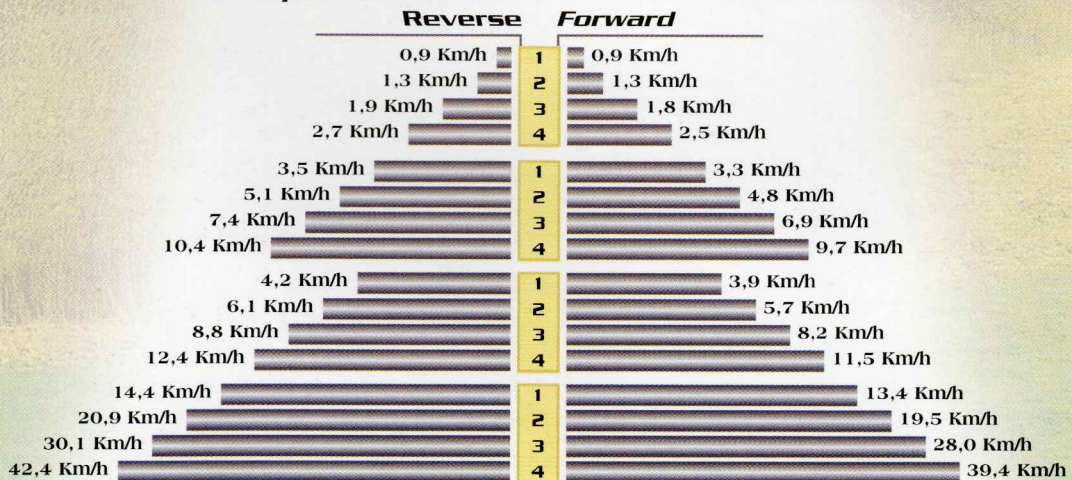
### THOR RS - Speed of tractor in km/h with 300/70-20 wheels



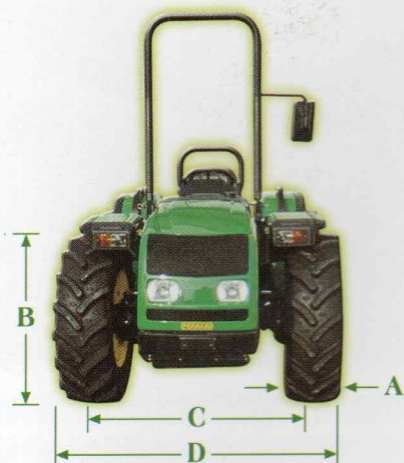
### THOR FR - Speed of tractor in km/h with 340/65-18 wheels



### THOR MT - Speed of tractor in km/h with 38/14-20 wheels



## Width of the tractor with various wheels



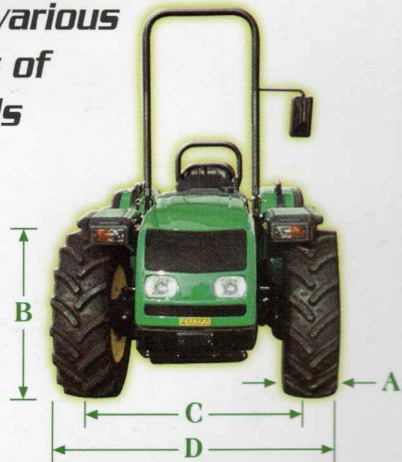
### THOR AR

Type of tire and rim	A Tire width mm	B Tire height mm	C Track min/max mm	D Width min/max mm
250/80-18 with adjustable rim	240	879	912 - 1214	1152 - 1454
280/70-18 with adjustable rim	282	858	912 - 1214	1194 - 1496
320/65-18 with adjustable rim	320	873	1002 - 1214	1322 - 1534
11.5/80-15.3 with fixed rim	290	845	922 - 1196	1212 - 1486
9.50-20 with adjustable rim	245	937	880 - 1334	1125 - 1579
300/70-20 with adjustable rim	286	942	986 - 1334	1272 - 1620
31x15.50-15 XTC or STG with fixed rim	390	800	1256	1646
31x13.50-15 GARDEN with fixed rim	350	782	1256	1606

### THOR RS

Type of tire and rim	A Tire width mm	B Tire height mm	C Track min/max mm	D Width min/max mm
9.50-20 with adjustable rim	245	937	1046 - 1588	1291 - 1833
11/2-20 with adjustable rim	277	982	1134 - 1588	1411 - 1865
320/70-20 with adjustable rim	316	988	1134 - 1588	1450 - 1904
31x15.50-15 XTC or STG with fixed rim	390	800	1510	1900
31x13.50-15 GARDEN with fixed rim	350	782	1510	1860
38/14-20 STG or GARDEN with adjustable rim	355	990	1240 - 1588	1595 - 1943

**Width of the tractor  
with various  
types of  
wheels**



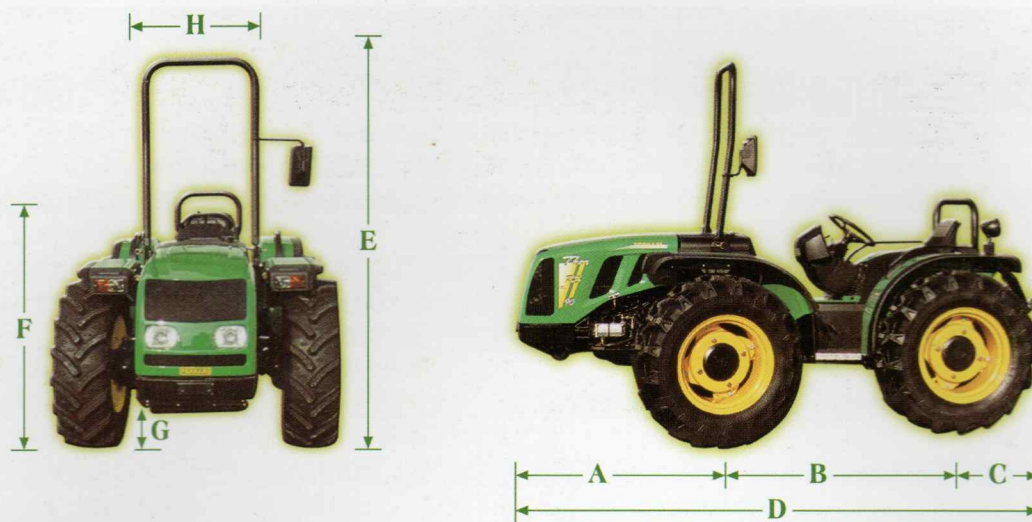
**THOR FR**

Type of tire and rim	A Tire width mm	B Tire height mm	C Track min/max mm	D Width min/max mm
280/70-18 with adjustable rim	282	858	1064 - 1456	1346 - 1738
320/65-18 with adjustable rim	320	873	1166 - 1468	1486 - 1788
340/65-18 with adjustable rim	343	899	1166 - 1468	1509 - 1811

**THOR MT**

Type of tire and rim	A Tire width mm	B Tire height mm	C Track min/max mm	D Width min/max mm
31x15.50-15 XTC o STG with fixed rim	390	800	1510	1900
38/14-20 STG with adjustable rim	355	990	1240 - 1588	1595 - 1943





### Tractor dimensions

THOR AR	A	B	C	D	E Min Max	F Min Max	G Min Max	H
70 mm	1075	1450	823	3348	2082 2168	1101 1235	236 320	675
80 - 90 mm	1142	1450	823	3415	2082 2168	1101 1235	236 320	675

THOR RS	A	B	C	D	E Min Max	F Min Max	G Min Max	H
70 mm	1075	1450	823	3348	2082 2186	1101 1255	236 340	675
80 - 90 mm	1142	1450	823	3415	2082 2186	1101 1255	236 340	675

THOR FR	A	B	C	D	E Min Max	F Min Max	G Min Max	H
70 mm	1075	1450	823	3348	2121 2141	1140 1210	275 295	675
80 - 90 mm	1142	1450	823	3415	2121 2141	1140 1210	275 295	675

THOR MT	A	B	C	D	E Min Max	F Min Max	G Min Max	H
70 mm	1075	1450	823	3348	2030 2133	1101 1254	236 339	920
80 - 90 mm	1142	1450	823	3415	2030 2133	1101 1254	236 339	920

Specifications	THOR 70 AR	THOR 80 AR	THOR 90 AR
CHASSIS	Swinging integral chassis with central articulation		
DRIVE	Four permanently engaged driving wheels		
ENGINE	4-stroke Diesel with direct injection complying with Norms CEE 97/68, CEE 2000/25 and U.S. EPA		
Manufacturer	VM		
Model	D703 TE1 - Turbo	D754 E1	D704 LTE - Turbo
No. of cylinders	3	4	4
Displacement - cm <sup>3</sup>	2082	2970	2776
Output rating - kW/HP	50/68	50/68	61/83
Maximum rpm	2600		
Maximum Torque (Nm/rev)	220/1400	214/1400	290/1400
Cooling	Water		
Pre-heating	Standard		
TRANSMISSION	Synchronized gearbox with 32 speeds: 16 FWD and 16 REV with synchronized inverter		
MAIN CLUTCH	Multi disc clutch in oil bath		
PTO CLUTCH	Multi disc clutch in oil bath		
DIFFERENTIAL LOCK	Front and rear with electro-hydraulic control		
DRIVING POSITION	Mono-directional: Large platform with front protection according to EC norms Reversible: Rotating platform with dual pedals for quick reversal (5 seconds). Large platform with front protection according to EC norms		
AXLES	Front and rear with epicyclic final drives		
POWER TAKE-OFF	Rear, independent at 540/1000 rpm and synchronized with advancement. Electro-hydraulic control with brake when not inserted		
REAR HYDRAULIC LIFT	Standard: Two external rams    Optional: Draft and position control		
Three point linkage	Cat. 1 and 2. Adjustable width lower arms with quick connects		
Lifting capacity - kg.	2300		
MAIN BRAKES	Multi disc in oil bath		
PARKING BRAKE	Act on the main brakes		
STEERING	Power steering with 2 cylinders and automatic flow switching for reversible models		
HYDRAULIC SYSTEM	Dual hydraulic circuits with independent pumps		
HYDRAULIC CONTROLS	Standard: 1 single acting control valve and 2 double acting control valves with block and free return Optional: 1 single acting control valve, 1 double acting control valve with block and 1 double acting floating control valve with free return OR 1 double acting control valve and 2 double acting control valves with block and free return		
ROLL BAR	Front, folding type		
TIRES	Standard: 250/80-18 - Optional: 280/70-18* 320/65-18* 11.5/80-15.3* 9.50-20* 300/70-20* 31x15.50-15 with XTC or STG tread * 31x13.50-15 GARDEN		
TOW HITCH	Standard: Front and rear tow hitches    Optional: Rockinger or Scharmueller rear tow hitches		
WEIGHT - kg	1780	1840	1850
OPTIONS	Mud guard extensions, cyclone pre-filter with external air inlet, oil cooler, Bostrom seat, front hydraulic lift with protection and 2 double acting control valves, digital instrumentation, front ballast weight and ballast weights for the wheels		



Specifications	THOR 70 RS	THOR 80 RS	THOR 90 RS
CHASSIS	Swinging integral chassis with steering wheels		
DRIVE	Four permanently engaged driving wheels		
ENGINE	4-stroke Diesel with direct injection complying with Norms CEE 97/68, CEE 2000/25 and U.S. EPA		
Manufacturer	VM		
Model	D703 TE1 - Turbo	D754 E1	D704 LTE - Turbo
No. of cylinders	3	4	4
Displacement . cm <sup>3</sup>	2082	2970	2776
Output rating - kW/HP	50/68	50/68	61/83
Maximum rpm	2600		
Maximum Torque (Nm/rev)	220/1400	214/1400	290/1400
Cooling	Water		
Pre-heating	Standard		
TRANSMISSION	Synchronized gearbox with 32 speeds: 16 FWD and 16 REV with synchronized inverter		
MAIN CLUTCH	Multi disc clutch in oil bath		
PTO CLUTCH	Multi disc clutch in oil bath		
DIFFERENTIAL LOCK	Front and rear with electro-hydraulic control		
DRIVING POSITION	Mono-directional: Large platform with front protection according to EC norms Reversible: Rotating platform with dual pedals for quick reversal (5 seconds). Large platform with front protection according to EC norms		
AXLES	Front and rear with epicyclic final drives		
POWER TAKE-OFF	Rear, independent at 540/1000 rpm and synchronized with advancement. Electro-hydraulic control with brake when not inserted		
REAR HYDRAULIC LIFT	Standard: Two external rams Optional: Draft and position control		
Three point hitch	Standard: Cat. 1 and 2 Optional: Adjustable width lower arms with quick connects		
Lifting capacity kg.	2300		
MAIN BRAKES	Multi disc in oil bath		
PARKING BRAKE	Act on main brakes		
STEERING SYSTEM	Power steering with 2 cylinders and automatic flow switching for reversible models		
HYDRAULIC SYSTEM	Dual hydraulic circuits with independent pumps		
HYDRAULIC CONTROLS	Standard: 1 single acting control valve and 2 double acting control valves with block and free return Optional: 1 single acting control valve, 1 double acting control valve with block and 1 double acting floating control valve with free return OR 1 double acting control valve and 2 double acting control valves with block and free return		
ROLL BAR	Front, folding type		
TIRES	Standard: 9.50-20 Optional: 11/2-20 * 320/70-20 * 31x15.50-15 with XTC or STG tread* 31x13.50-15 Garden * 38/14-20 with STG or Garden tread		
TOW HITCH	Standard: Front and rear tow hitches Optional: Rockinger or Scharmueller rear tow hitches		
WEIGHT - Kg	1885	1945	1955
OPTIONS	Mud guard extensions, cyclone pre-filter with external air inlet, oil cooler, Bostrom seat, front hydraulic lift with protection and 2 double acting control valves, hydraulic suspension, digital instrumentation, front ballast weight and ballast weights for the wheels		



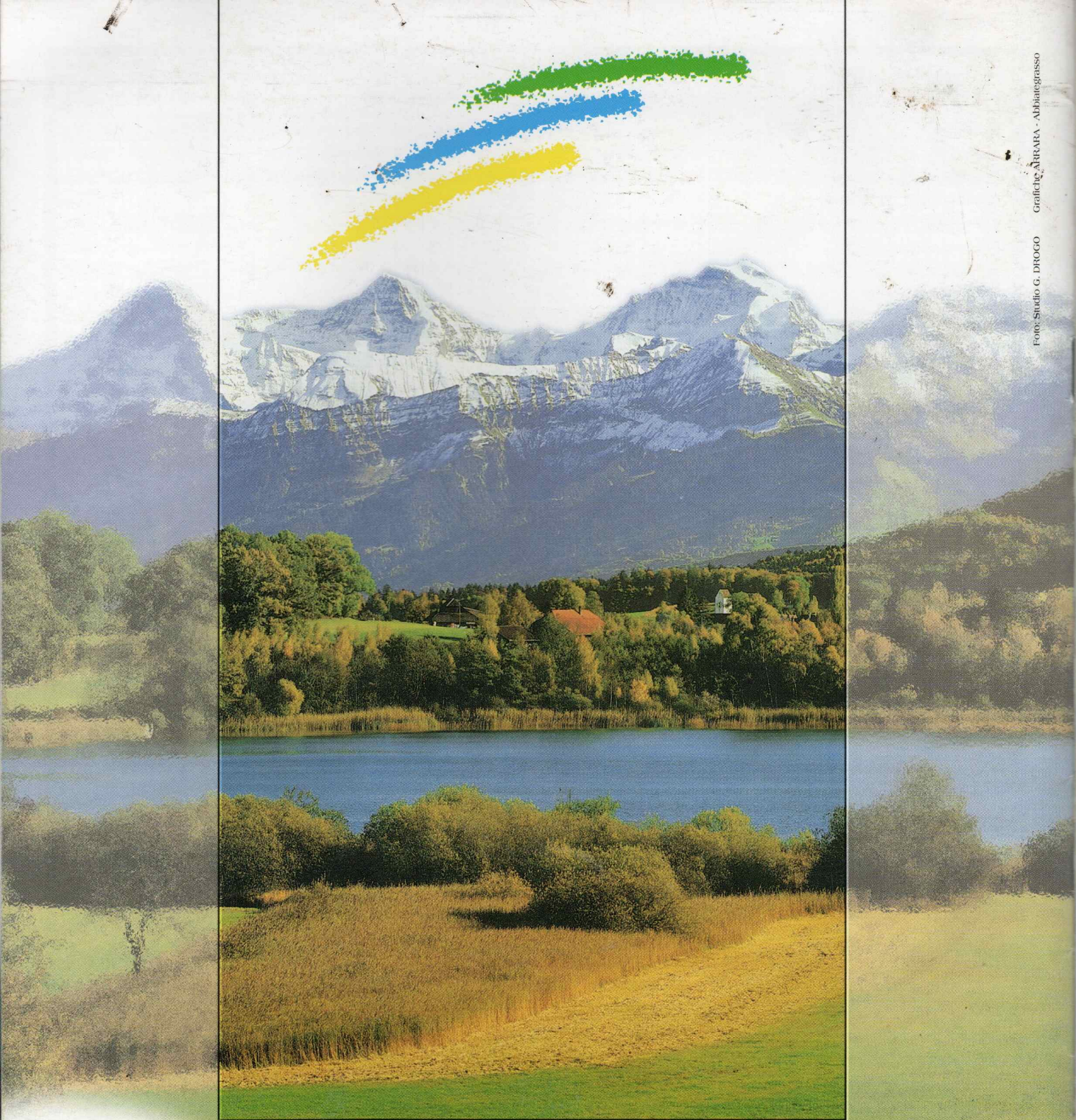
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Specifications	THOR 70 FR	THOR 80 FR	THOR 90 FR
CHASSIS	Swinging integral chassis with steering wheels		
DRIVE	Four permanently engaged driving wheels		
ENGINE	4-stroke Diesel with direct injection complying with Norms CEE 97/68, CEE 2000/25 and U.S. EPA		
Manufacturer	VM		
Model	D703 TE1 - Turbo	D754 E1	D704 LTE - Turbo
No. of cylinders	3	4	4
Displacement . cm <sup>3</sup>	2082	2970	2776
Output rating - kW/HP	50/68	50/68	61/83
Maximum rpm	2600		
Maximum Torque (Nm/rev)	220/1400	214/1400	290/1400
Cooling	Water		
Pre-heating	Standard		
TRANSMISSION	Synchronized gearbox with 32 speeds: 16 FWD and 16 REV with synchronized inverter		
MAIN CLUTCH	Multi disc clutch in oil bath		
PTO CLUTCH	Multi disc clutch in oil bath		
DIFFERENTIAL LOCK	Front and rear with electro-hydraulic control		
DRIVING POSITION	Mono-directional: Large platform with front protection according to EC norms Reversible: Rotating platform with dual pedals for quick reversal (5 seconds). Large platform with front protection according to EC norms		
AXLES	Front and rear with epicyclic final drives		
POWER TAKE-OFF	Rear, independent at 540/1000 rpm and synchronized with advancement. Electro-hydraulic control with brake when not inserted		
REAR HYDRAULIC LIFT	Standard: Two external rams    Optional: Draft and position control		
Three point hitch	Standard: Cat. 1 and 2    Optional: Adjustable width lower arms with quick connects		
Lifting capacity - kg.	2300		
MAIN BRAKES	Multi disc in oil bath		
PARKING BRAKE	Act on main brakes		
STEERING SYSTEM	Power steering with 2 cylinders and automatic flow switching for reversible models		
HYDRAULIC SYSTEM	Dual hydraulic circuits with independents pumps		
HYDRAULIC CONTROLS	Standard: 1 single acting control valve and 2 double acting control valves with block and free return Optional: 1 single acting control valve, 1 double acting control valve with block and 1 double acting floating control valve with free return OR 1 double acting control valve and 2 double acting control valves with block and free return		
ROLL BAR	Front, folding type		
TIRES	Standard: 280/70-18 Optional: 320/65-18* 340/65-18		
TOW HITCH	Standard: Front and rear tow hitches    Optional: Rockinger or Scharmueller rear tow hitches		
WEIGHT - kg	1885	1945	1955
OPTIONS	Mud guard extensions, cyclone pre-filter with external air inlet, oil cooler, Bostrom seat, front hydraulic lift with protection and 2 double acting control valves, hydraulic suspension, digital instrumentation, front ballast weight and ballast weights for the wheels		

FERRARI

Specifications	THOR 70 MT	THOR 80 MT	THOR 90 MT
CHASSIS	Swinging integral chassis with steering wheels		
DRIVE	Four permanently engaged driving wheels		
ENGINE	4-stroke Diesel with direct injection complying with Norms CEE 97/68, CEE 2000/25 and U.S. EPA		
Manufacturer	VM		
Model	D703 TE1 - Turbo	D754 E1	D704 LTE - Turbo
No. of cylinders	3	4	4
Displacement . cm <sup>3</sup>	2082	2970	2776
Output rating - kW/HP	50/68	50/68	61/83
Maximum rpm	2600		
Maximum Torque (Nm/rev)	220/1400	214/1400	290/1400
Cooling	Water		
Pre-heating	Standard		
TRANSMISSION	Synchronized gearbox with 32 speeds: 16 FWD and 16 REV with synchronized inverter		
MAIN CLUTCH	Multi disc clutch in oil bath		
PTO CLUTCH	Multi disc clutch in oil bath		
DIFFERENTIAL LOCK	Front and rear with electro-hydraulic control		
DRIVING POSITION	Rotating platform with dual pedals for quick reversal (5 seconds). Large platform with front protection according to EC norms		
SPECIAL MUD GUARDS	Rubber extensions on all 4 mud guards		
AXLES	Front and rear with epicyclic final drives		
Air pre-filter	Cyclone pre-filter with external air inlet		
POWER TAKE-OFF	Rear, independent at 540/1000 rpm and synchronized with advancement. Electro-hydraulic control with brake when not inserted.		
REAR HYDRAULIC LIFT	Two external rams		
Three point hitch	Cat. 1 and 2 with adjustable width lower arms with quick connects		
Lifting capacity - kg.	2300		
MAIN BRAKES	Multi disc in oil bath		
PARKING BRAKE	Act on main brakes		
STEERING SYSTEM	Power steering with 2 cylinders and automatic flow switching for reversible models		
HYDRAULIC SYSTEM	Dual hydraulic circuits with independent pumps		
HYDRAULIC SUSPENSION	Model "HDR" with tank, includes flow regulator, double acting floating flow valve and double acting flow valve with 4 fixed positions		
PROTECTIVE FRAME (R.O.P.S.)	Four pillars with roof, front and rear windshields, front and rear windshields wipers, rear view mirror with telescoping arm and head lights		
TIRES	Standard: 31x15.50-15 XTC Optional: 31x15.50-15 STG* 38/14-20 STG		
TOW HITCH	Standard: Front and rear tow hitches Optional: Rockinger or Schamueller rear tow hitches		
WEIGHT - kg	1895	1955	1965
OPTIONS	Oil cooler, Bostrom seat, front hydraulic lift with protection and 2 double acting control valves, digital instrumentation, front ballast weight and ballast weights for the wheels		





**FERRARI**

**BCS S.p.A. Divisione Ferrari**

Head Office: BCS S.p.A. Viale Mazzini, 161 - 20081 Abbiategrasso (Milano)

Tel. +39.02.94821 - Fax +39.02.9482398

Factory: FERRARI - Via Valbrina, 19 - 42045 Luzzara (RE)

[www.bcs-ferrari.it](http://www.bcs-ferrari.it) - email: [dive@bcs-ferrari.it](mailto:dive@bcs-ferrari.it)

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