

50
MERLO
1968-2018

CAMERE
DI COMMERCIO
D'ITALIA
AN HISTORIC ITALIAN COMPANY

MACHINE
OF THE YEAR 2015

INTER
M
Innovation Awards
2015
GOLD

 **MERLO**



MEDIUM DUTY TF33.9 - TF35.7

UK



Merlo's factories in San Defendente di Cervasca (Cuneo) cover an area of 300,000 m² (with 220,000 m² inside facilities)

1. Merlo SpA main offices
2. Final assembly lines
3. Lines for assembling components and cabs
4. Moulding of technopolymers
5. Automated storing and shipping centre
6. Machines plus attachments shipping centre
7. Final quality control
8. Technological centre
9. Steel and structural assembly lines centre
10. 3M attachments
11. CFRM (Training & Research Centre)

The Merlo Group

N° 1 for technology and safety

The Merlo brand has always been synonymous with advanced technology in the telehandler field and our history, since 1964, is hallmarked by experience based on determination and passion. The development of complex products, from the idea to the result, from design to sales, means being able to propose orientations for the most competitive markets. The outcome of our efforts are compact, easy to handle telehandlers ensuring incomparable operating performance, comfort, efficiency and safety. At Agritechnica 2013, three important awards were received that clearly demonstrate the technological and innovative superiority of our products:

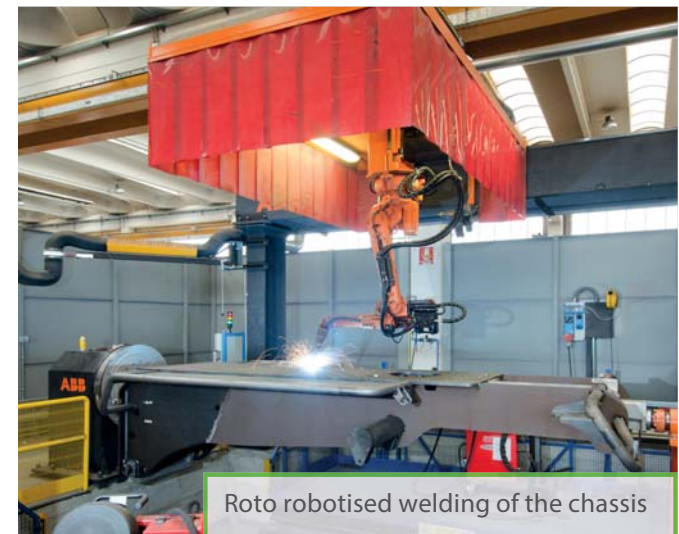
- Turbofarmer 42.7 Hybrid: Gold Medal for innovation at Agritechnica.
- Turbofarmer II: Machine of the year 2014 in the "handling and logistics" category.
- Multifarmer: Selected as a "milestone" in agriculture.

The new modular Medium Duty and Compact Turbofarmer range was named «Machine of the Year» 2015 at Sima 2015 in the handling and logistics sector.

- **> 1.100** employees
- Surface area of **300,000 m²** of which **220,000 m²** are indoors
- **90%** exports
- **600** dealers all over the world
- **8%** of turnover invested in R & D
- **54** robots



Automated boom bending workstation



Roto robotised welding of the chassis



Merlo presents
the new Medium
Duty range

New Merlo Medium Duty range

Technology and productivity for all

We were the first to launch a range of telehandlers dedicated to agriculture in 1996. Today, we proudly present the new Medium Duty generation developed on the strength of experience acquired in 50 years of operations.

- + Safety
 - ➔ Cab compliant with ROPS and FOPS level II standards*
 - ➔ Approval agricultural tractor (optional)
- + Comfort
 - ➔ Largest cab in the standard category
 - ➔ Version equipped with suspended cab, unique and patented solution (dedicated versions)
 - ➔ Reverse shuttle on Joystick, duplicated on steering column
- + Efficiency
 - ➔ 18% consumption with standard EPD
 - ➔ Load Sensing Pump and electronic joystick and boom acceleration
 - ➔ Fan-drive fan as standard. Radiant pack always clean and efficient
- + Performance
 - ➔ 2 Engines: 75 HP and 115 HP chosen by the customer
 - ➔ Speed 40 km/h as standard on the entire range



- **40 km/h as standard**
- **New cab**, the **widest** in the category
- **CS version** with suspended cab
- **EPD as standard -18% of consumption**

* EN ISO 3449/2008, protection level II (highest protection level provided by the norm and equivalent to the fall of a 227 kg object from 5.22 metres)

New Medium Duty family

Flagship technology and performance



Innovative Merlo systems

- Tac-Lock rapid coupling of the attachments

Lifting capacity

- Booms from 7 to 9 metres
- Capacities ranging from 3.3 to 3.5 tons

Safety

- Merlo Dynamic Control light version
- Cab compliant with FOPS/ROPS

Versatility

- Towing hook
- Hydraulic connections (2 opt.)
- Trailer braking (Pneu/Hydr.)

Comfort

- Largest cab on the market 1010 mm
- Standard cab on silent-block
- Unique CS version with suspended cab
- Reverse shuttle on Joystick, duplicated on steering column

Hydraulic system options

- Gear pump and electro-hydraulic joystick
- Load-sensing pump with electronic joystick and automatic accelerator

Efficiency – Powertrain

- Tier 4 Final engine 75 HP and 115 HP
- Merlo 2-speed hydrostatic transmission
- EPD - Eco Power Drive as standard, optional EPD Top

The high performance Medium Duty range

Two models, 10 evolved versions

MODEL	ENGINE		CAB		HYDRAULIC		Transmission 2 speeds	Speed (km/h)	Approval for Agricultural use	EPD		DIMENSIONS		
	75 HP - Tier 4 Final/Euro IIIB	115 HP - Tier 4 Final/ Euro IV	Steady	Suspended	Gears	Load Sensing				EPD	EPD TOP	Height (mm)	Width (mm)	Length (mm)
TF 35.7 G	X		X		X		X	40	OPT	X		2250	2240	4315
TF 35.7 - 115 G		X	X		X		X	40	OPT	X		2250	2240	4315
TF 35.7 -115		X	X			X	X	40	OPT		X	2250	2240	4315
TF 35.7 -115 G CS		X		X	X		X	40	OPT	X		2250	2240	4315
TF 35.7 -115 CS		X		X		X	X	40	OPT		X	2250	2240	4315
TF 33.9 G	X		X		X		X	40	OPT	X		2250	2240	4335
TF 33.9 -115 G		X	X		X		X	40	OPT	X		2250	2240	4335
TF 33.9 -115		X	X			X	X	40	OPT		X	2250	2240	4335
TF 33.9 -115 G CS		X		X	X		X	40	OPT	X		2250	2240	4335
TF 33.9 -115 CS		X		X		X	X	40	OPT		X	2250	2240	4335

Broad product offering:

- **2 models** and **10 different** versions available

Comfort:

- The largest cab on the market
- **CS versions** with unique suspended cab

Technological Innovations:

- **EPD as standard -18%** of consumption
- **Reverse shuttle** on joystick duplicated on the steering wheel
- Automatic **accelerator**
- **Fan-drive** as standard

Versatility and productivity:

- **2 engines** available with **75 HP** and **115 HP**
- **2 boom lengths 7 e 9 m**
- **2 capacities of 3.3 and 3.5 tons**
- **40 km/h** as standard

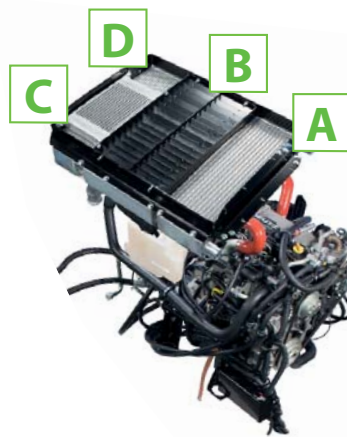


Fan Drive available on the entire range.
Radiators always clean

Record specifications

Merlo technology is available for everyone

The Medium Duty range is offered with two different engines: 55kW/75HP and 85kW/115HP. The two-speed hydrostatic transmission adds **40 km/h, unique in its category**. EPD (Eco Power Drive) for electronic management of the thermal engine, helping to reduce consumption by 18%. The EPD Plus version offers "Speed Control" mode, which memorises the machine's movement speed and keeps it constant (ideal for yard handling operations), and the ECO function, which limits the rpm for further economic savings. In combination with the electronic joystick, the EPD Top system offers automatic Diesel speed control in relation to joystick movements on order to increase telescopic boom movement speed, optimise machine performance and minimise consumption. The «Fan Drive» is available, making it possible to change the direction of the fan's rotation from sucking to blowing, in order to keep the radiant pack at maximum efficiency.

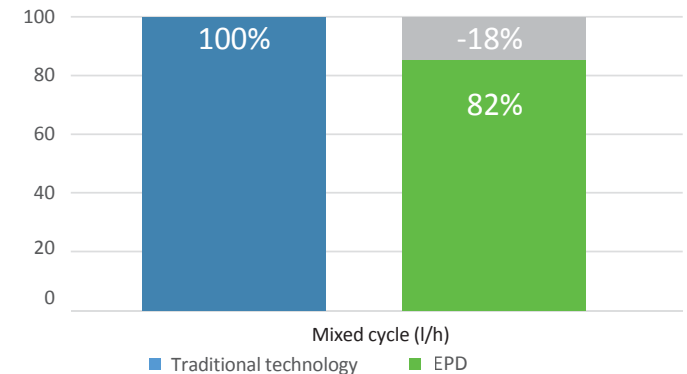


FAN DRIVE AND DEDICATED RADIATORS

- A. Intercooler radiator
- B. Engine radiator liquid
- C. Radiator hydraulic oil
- D. Radiator hydrostatic oil

Reduction in consumption

EPD technology



- **40 km/h. Unique** in the category
- **EPD** as standard **-18%** consumption
- Tier 4 Final engine: **55kW/75HP** and **85kW/115HP**
- **Fan Drive** available to ensure the radiators are always clean
- **EPD TOP** version with **electronic joystick** and **Load Sensing pump**. Allows acceleration of the telescopic boom speed

Largest cab in its class

5

1. New Joystick with reverse shuttle (duplicated on steering wheel): ergonomic and easy to use.
2. New display makes it possible to display a great deal of useful information for the operator.
3. New air conditioning system in line with automotive standards for fast and effective heating/cooling.
4. Inching-Control: the dedicated pedal provides calibrated movements of the machine.
5. Curved windscreen: maximum visibility and safety in work at height.
6. Differential lock.
7. Drawer.

6

3

3

1

4

7

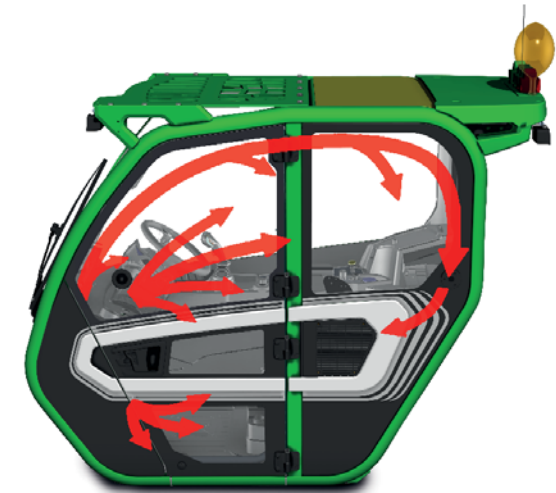


The new record-breaking cab

Even more unique and comfortable

The modular system allows use of the same "New Generation" cab that equips the highest capacity models. For the Medium Duty family, there is also a version equipped with the "CS" suspended cab, offered only by Merlo in the field of telehandlers: the pneumatic suspensions provide the best comfort in its class. At 1010 mm, it is the largest cab in its category, yet even acoustic and thermal comfort involved detailed design; the cab is also pressurised to prevent dust entering the cockpit. The air conditioning system is completely new and was developed based on automotive standards, halving the warm-up and cool-down times, guaranteeing an optimal temperature in all conditions. The new Merlo cab can now reach an internal temperature of 22°C with an external temperature of 43 °C and full sunlight and an internal temperature of 26°C with an external condition of -15 °C and no solar irradiation. The inlet vent is located on the side of the cab away from potential sources of dust and dirt. Inside, there are 8 vents (three for defrosting the windscreen) for optimal conditioning comfort.

AIR-CONDITIONING SYSTEM



The air flow is distributed evenly inside the compartment and reaches all areas.

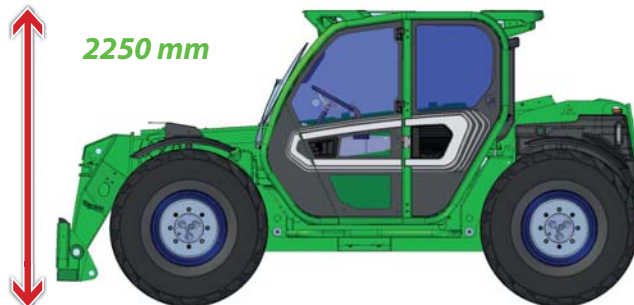


Hydropneumatic suspended cab which can be activated by the operator. The only one of its kind on the market.

Cab height

2250 mm (with 405/70-24 tyres)

[Pressurized cab*]



• **"CS" version** with unique suspended cab

• The **largest cab** in the category with its width of **1010 mm**

• Automotive type **air conditioning** system

*According to the ISO 10263-3 standard, models with load-sensing, not approved for pesticides.

**New Medium Duty - the best
ground clearance**

**420 mm
of clearance
460/70-24
tyres**



New generation of Merlo planetary axles

Designed for maximum performance and long duration

Our Medium Duty telehandlers are equipped with a **new generation of planetary axles**, conceived, designed and built entirely, with 2240 mm track. The solution with planetary reducers was chosen to keep the machine's height as high as possible.

The result of experience acquired on the field, **the axles consist of a central cast iron body, planetary reducers and differential locking**. Braking is ensured **by 4 dry disc brakes keyed onto the axle shafts**, allowing a remarkable reduction in friction and, consequently, consumption.

To complete the specifications offered, **the Medium Duty telehandlers are equipped with a parking disc brake which is automatically engaged when the diesel engine is switched off**, or engaged directly by the operator in the event of work on sloping surfaces.

The new axles ensure an excellent **ground clearance of 420 mm (460/70-24 tyres)**, making it possible to pass obstacles with agility.



The manual parking brake selector is automatically engaged when the engine is switched off.



THREE STEERING MODES



FRONT WHEEL STEERING MODE



FOUR WHEEL STEERING



CRAB STEERING

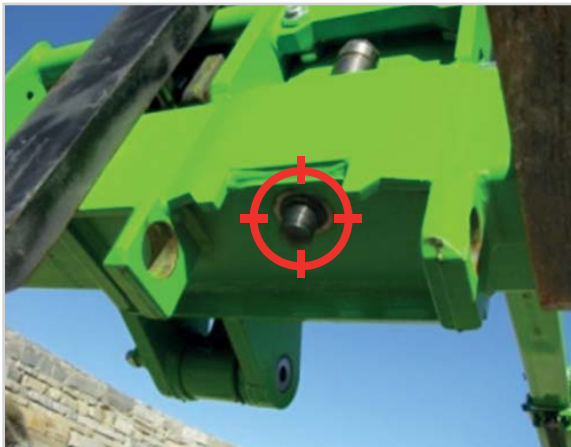
- Axles **conceived, designed and produced** in-house by Merlo
- **Compact solution** to maintain a **reduced height** in all the versions
- **420 mm** ground clearance
- **Three steering modes**
- **Dry brakes** to **reduce friction** and **consumption** and ensure **40 km/h**
- **Automatic engaging** of the parking brake when the **engine is switched off**

Merlo precision and technology

An effective and cutting-edge boom

Merlo produces the booms mounted on its telehandlers in-house and has developed unique technologies to make them strong yet lightweight, protect handling mechanisms against accidental blows and allow users to position the load in the most precise manner possible.

- ✓ Boom sheet metal welded on the boom's neutral bending axis
- ✓ Cartridge protected handling system inside the boom, thanks to a patented solution that is easy to access if maintenance is needed
- ✓ Tac-Lock: hydraulic attachment clamping system from the cab



Tac-Lock: hydraulic attachment clamping system from the cab



Pipes, power cables and auxiliary hydraulic are all located inside the boom

- **Lighter** but **stronger** booms:
robotised welding on the neutral axis,
area with less strain
- **Extension mechanism**
well-protected inside the boom
- **Carriage** equipped with
Tac-Lock hydraulic locking

From the idea to development of multi-applicability

More efficiency and productivity thanks to Merlo

Merlo adopts simple and effective guidelines in the evolution of the product.

From conception to development, everything is studied, designed and created in the Group's plants. This simple "rule" also applies to attachments.

Backed by years of experience, Merlo's technicians have developed a wide range of attachments, divided by type and load capacity.

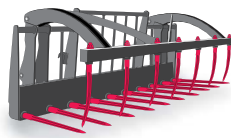
This standard makes it possible to adapt tested and interchangeable production equipment to allow for targeted uses, with the intention of facilitating work and reducing its execution times.



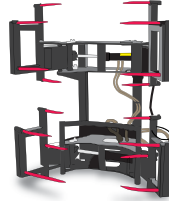
BALE FORKS



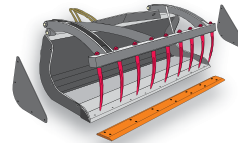
MANURE FORK WITH CLAW



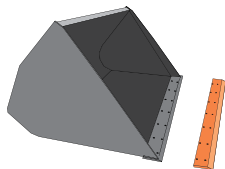
GRIPPERS FOR BALES



MULTI-PURPOSE LOADER WITH CLAW



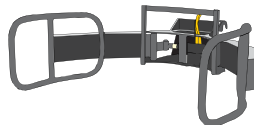
LOADERS



HOOKS/LIFTING BOOMS



GRIPPERS FOR WRAPPED BALES



PLATFORMS





TRAINING CENTRE

The Merlo Training and Research Centre (CFRM) has made safety training and instruction in the use of the machine its mission. The CFRM provides training courses for operators of person-carrying overhead platform, forklift trucks, telehandlers, cranes, earth-moving machinery, agricultural and forestry tractors, snow ploughs and urban cleaning vehicles.

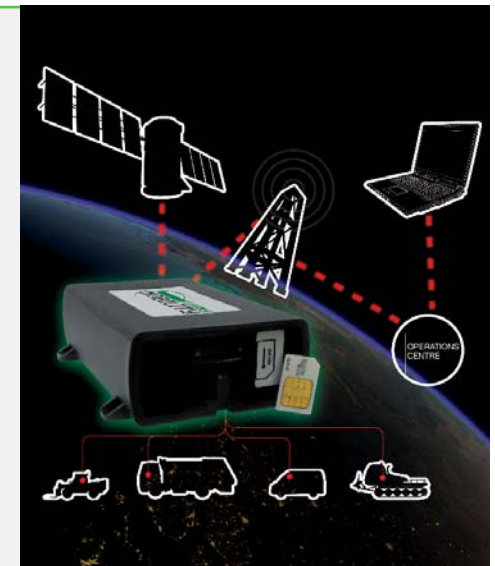


Countries where Merlo is a market leader



MOVIMATICA MERLO INFOMOBILITY

Is the new system, conceived and built within the Merlo Group, for managing vehicles: it enables GPS radio-localisation in real time, monitoring operation and use, receive and manage malfunction or burglar alarms and also send commands for handling events via the internet.



THE MERLO WORLD

In a globalised world, **the customer always comes first!**

From excellent products to excellent service. In 2008, Merlo has adapted its production process to meet the needs of the ISO 9001 quality control system. The process is perfected and improved continuously.

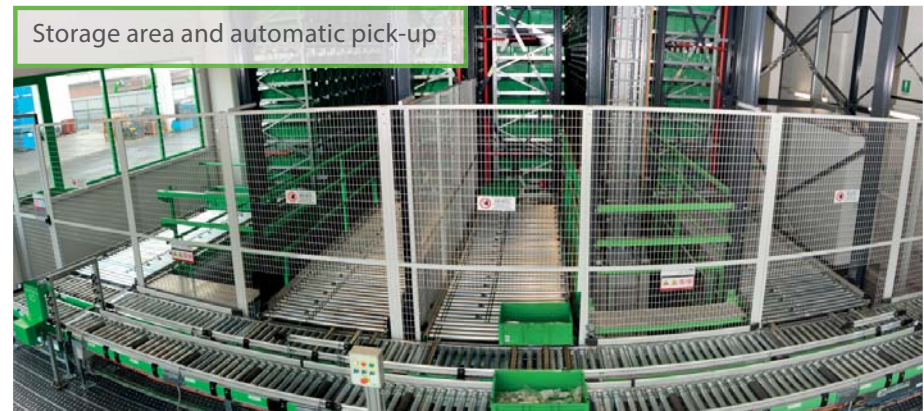
At the same time, the foundations have been laid to put the Customer first, implementing investments aimed at Services such as Financing, Training Assistance, Spare parts and Telematic Means such as remote diagnostics, thanks to the Merlo Mobility project.

Automatic spare parts warehouse	2011	2014
Storage volume	1000 m ³	10.000 m ³
Filling	100%	85%
Percentage of codes managed	50%	86%
Percentage of Lines managed	65%	94%
Pick-up time	90"	30"
Number of codes	8.000	17.000

NEW PARTS CENTRE

The new spare parts warehouse covers an area of 7,000 m², with storage capacity for of 10,000 m³ for a total of 20,000 different codes. Furthermore, it can automatically manage 94% of the order lines that are processed daily, with an average withdrawal time of 30" per line.

The first fill per order line is over 99% with delivery times for urgent orders within 24 hours.



Storage area and automatic pick-up

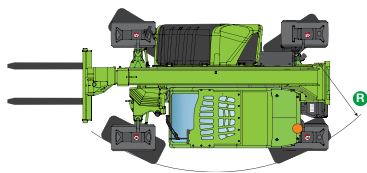
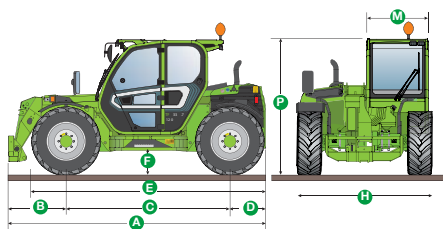


Order processing and shipment area

TECHNICAL INFORMATION	TF 33.9 -115	TF 33.9 -115 CS	TF 33.9 -115 G	TF 33.9 -115 G CS	TF 33.9 G	TF 35.7 -115	TF 35.7 -115 CS	TF 35.7 - 115 G	TF 35.7 -115 G CS	TF 35.7 G
Total unladen mass, without forks (kg)	6950	7100	6950	7100	6950	6650	6800	6650	6800	6650
Maximum capacity (kg)	3300	3300	3300	3300	3300	3500	3500	3500	3500	3500
Lifting height (m)	8,6	8,6	8,6	8,6	8,6	6,6	6,6	6,6	6,6	6,6
Maximum reach (m)	5,7	5,7	5,7	5,7	5,7	3,5	3,5	3,5	3,5	3,5
Maximum operating height (m)	6,2	6,2	6,2	6,2	6,2	6,6	6,6	6,6	6,6	6,6
Maximum operating reach (m)	1,5	1,5	1,5	1,5	1,5	1,3	1,3	1,3	1,3	1,3
Capacity at maximum height (kg)	1750	1750	1750	1750	1750	3500	3500	3500	3500	3500
Capacity at maximum reach (kg)	600	600	600	600	600	1350	1350	1350	1350	1350
Turbo motor (displacement/cylinders)	3,6/4	3,6/4	3,6/4	3,6/4	2,9/4	3,6/4	3,6/4	3,6/4	3,6/4	2,9/4
Tier 4 Final motor power (kW/CV)	85/115	85/115	85/115	85/115	55/75	85/115	85/115	85/115	85/115	55/75
Maximum speed (km/h)	40	40	40	40	40	40	40	40	40	40
BSS hydro-pneumatic boom suspension	○	○	○	○	○	○	○	○	○	○
Fuel tank (l)	100	100	100	100	100	100	100	100	100	100
Hydraulic gear pump (bar-l/min)(bar-l/min)	-	-	210/98	210/98	210/98	-	-	210/98	210/98	210/98
Hydraulic Load-Sensing pump (bar-l/min)	210/125	210/125	-	-	-	210/125	210/125	-	-	-
Fan Drive Pump (l/min)	46	46	46	46	36	46	46	46	46	36
Flow Sharing Distributor	●	●	-	-	-	●	●	-	-	-
Hydraulic oil tank (l)	85	85	85	85	85	85	85	85	85	85
FOPS (ISO 3449) and ROPS (ISO 3471) cab	●	●	●	●	●	●	●	●	●	●
Electrohydraulic joystick	-	-	●	●	●	-	-	●	●	●
Electronic joystick	●	●	-	-	-	●	●	-	-	-
Hydrostatic transmission	●	●	●	●	●	●	●	●	●	●
Differential lock (A-P)	○	○	○	○	○	○	○	○	○	○
Dual Control Reverse Shuttle (joystick/steering wheel)	●	●	●	●	●	●	●	●	●	●
Inching Control progress control from pedal	●	●	●	●	●	●	●	●	●	●
Permanent four-wheel drive	●	●	●	●	●	●	●	●	●	●
Four-wheel steering	●	●	●	●	●	●	●	●	●	●
Automatic parking brake (when the engine switches off)	●	●	●	●	●	●	●	●	●	●
Work headlights on cab (2 A + 2 P)	●	●	○	○	○	●	●	○	○	○
LED work headlights on cab	○	○	○	○	○	○	○	○	○	○
Change of speed	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds
"CS" Suspended cab	-	●	-	●	-	-	●	-	●	-
Chassis levelling + side shift	-	-	-	-	-	-	-	-	-	-
EPD Eco Power Drive	●	●	●	●	-	●	●	●	●	-
Standard tyres	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24	405/70-24
Type approval as an agricultural tractor	○	○	○	○	○	○	○	○	○	○

● As standard. ○ On request.

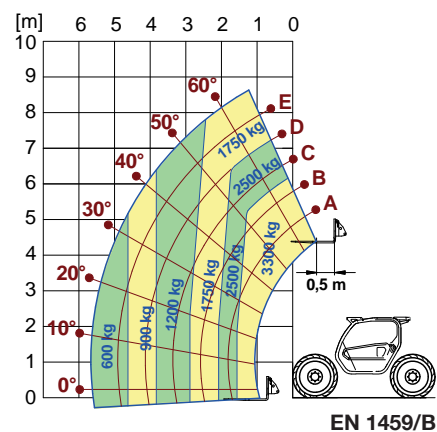
TECHNICAL INFORMATION



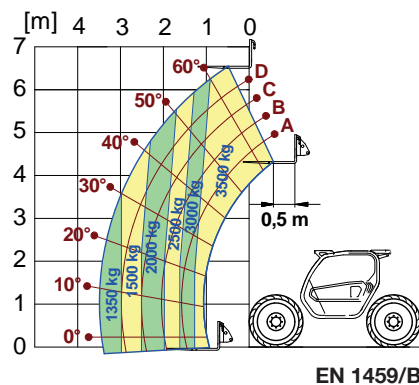
DIMENSIONS	TF35.7	TF33.9
A (mm)	4315	4335
B (mm)	990	1040
C (mm)	2740	2740
D (mm)	585	585
E (mm)	3910	3910
F (mm)	380	380
H (mm)	2250	2250
M (mm)	1010	1010
P (mm)	2240/2300*	2240/2300*
R (mm)	4095	4095

*CS activated

TF 33.9 WITH FORKS



TF 35.7 WITH FORKS



Towing hooks and trailer braking systems (option)

Maximum versatility and productivity

The new Turbofarmer Medium Duty range can be equipped with **20 ton towing hook** and pneumatic or hydraulic trailer braking system for maximum versatility, productivity and safety.



OVER 50 YEARS OF CONSTANT COMMITMENT TO WORKING TOGETHER WITH YOU

- 1964** - Establishment of the Merlo Group
- 1966** - DM and DBM: the first dumper and the first self-loading concrete mixer
- 1981** - SM: the world's first telescopic handler
- 1987** - Panoramic: the world's first telehandler with side engine
- 1991** - Roto: the world's first telehandler with rotating turret
- 1996** - Turbofarmer: the first telehandler in Europe type-approved as an agricultural tractor
- 1998** - P26: the ultra-compact telehandlers
- 2000** - Multifarmer: the first agricultural tractor with telescopic boom
- 2001** - MM: the first forestry attachment-carrier
- 2010** - Hybrid: the first diesel/electric hybrid telehandler
- 2012** - Modular: a new concept of telescopic handler
- 2013** - Three important awards at the Agritechnica in Hanover:
 - Hybrid 42.7: gold medal for technological innovation
 - Turbofarmer II range: "machine of the year 2014"
 - Multifarmer 40.9: "a milestone in agricultural machinery"
- 2015** - New modular Medium Duty and Compact Turbofarmer named "machine of the year" 2015 at Sima in Paris



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