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MERLO  
AN HISTORIC ITALIAN COMPANY



**PANORAMIC WITH STABILISERS**

XG



Merlo's factories in San Defendente di Cervasca (Cuneo) cover an area of 300,000 m<sup>2</sup> (with 220,000 m<sup>2</sup> 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 of 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.

• **> 1.100** employees

• Surface area of **300,000 m<sup>2</sup>**  
of which **220,000 m<sup>2</sup>**  
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

Versatile and safe building sector telehandlers. Merlo technology at the service of construction companies



# Stabilised Panoramic

## A complete range of telehandlers

Merlo was founded with products dedicated to building and construction and has always invested in technologies and new systems intended to improve safety, comfort and productivity. Today, we proudly present the new generation of stabilised Panoramic machines developed on the strength of experience acquired since 1964.

- + Comfort → Largest cab in its category
- + Safety → Cab compliant with ROPS and FOPS level II standards\*  
→ M CDC Dynamic load control as standard
- + Versatility → Independent and in size stabilisers  
→ "Tilting" angle correction  
→ "Boom Side Shift" movement  
The unique Merlo-patented solution
- + Performances → Engines - 75 HP (base models - Tier 3) and 101 HP (Plus models - Tier 4 Interim)



- Cab - 1010 mm: largest in category
- Stabilisers in size
- 4 heights from 12 to 17 m
- 2 capacities: 3.8 and 4.0 ton
- Frame levelling and side shift of the boom as standard

\* 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)

A green Merlo telehandler is shown in operation at a construction site. The machine is positioned on a gravel surface, and its telescopic boom is extended upwards to reach the steel framework of a building under construction. The building features a dark green corrugated metal lower section and an upper section with exposed steel beams and a brown roof. The sky is clear and blue. The Merlo logo is visible on the boom.

Versatile, easy to operate  
and high-performance for  
completing every task with  
maxim precision  
in the shortest possible time

# A complete range for work in complete safety

## Record breaking performances and reliability

MODEL	ENGINE		CAB	STABILISERS	CHASSIS	TRANSMISSION	SAFETY		HYDRAULIC	CONTROLS		BSS	EAS	SPEED
	75 HP - Tier 3	101 HP - Tier 4 Interim	Steady	Independent fronts	Tilting	Hydrostatic with 2 speeds	M CDC + display + automatic attachment recognition	Light	Load-Sensing	Levers	Joystick	Boom suspension system	Electronic Active Suspension	Maximum in km/h
P38.12	X		X	X	X	X		X	X	X		opt	opt	35
P38.12 Plus		X	X	X	X	X	X		X		X	opt	opt	40
P38.13	X		X	X	X	X		X	X	X		opt	opt	35
P38.13 Plus		X	X	X	X	X	X		X		X	opt	opt	40
P38.14	X		X	X	X	X		X	X	X		opt	opt	35
P38.14 Plus		X	X	X	X	X	X		X		X	opt	opt	40
P40.17	X		X	X	X	X		X	X	X		opt	opt	35
P40.17 Plus		X	X	X	X	X	X		X		X	opt	opt	40

Reliable and proven  
transmissions, new 75 HP  
and 101 HP engines



# Stabilised Panoramic models - state-of-the-art performances

## New technologies for new fields of application

### Comfort

- Largest cab on the market 1010 mm
- Electro-mechanical Joystick (Plus version)

### Safety

- M CDC Merlo dynamic load control  
With display in cab (Plus version).
- Cab compliant with FOPS/ROPS

### Hydraulic system

- Load-Sensing Pump

### Lifting capacity

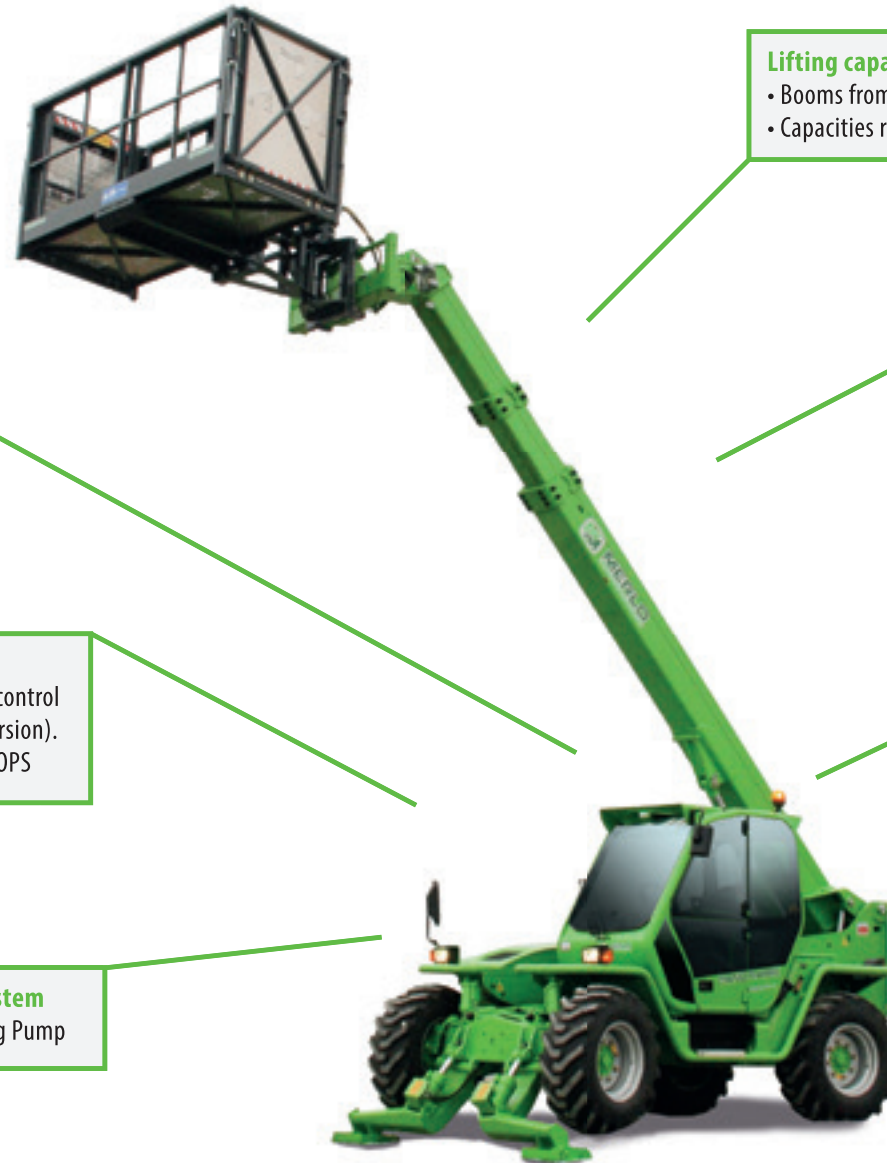
- Booms from 12 to 17 metres
- Capacities ranging from 3.8 to 4.0 tons

### Innovative Merlo systems

- Titling corrector for maximum safety
- Tac-Lock rapid coupling of the attachments
- Independent stabilisers
- BSS: Boom Suspension System (optional)
- EAS: Electronic Active Suspension (optional)

### Efficiency – Powertrain

- 75 HP Tier 3 engine - Basic version
- HP Tier 4 Interim engine - Plus version
- Merlo 2-speed hydrostatic transmission



Advanced technologies  
for greater productivity



# New engines. Performance and efficiency

## The best technologies for higher productivity

The Stabilised Panoramic range is equipped with two engines in line with current EC standards:

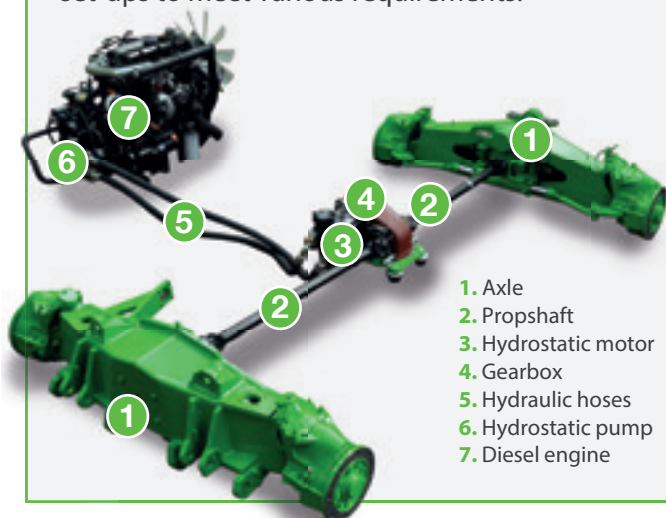
- ➔ Basic Version: 4 cylinders, 3.3 litres - 55 kW/75 HP Tier 3
- ➔ Plus version: 4 cylinders, 3.6 litres - 74.5 kW/101 HP Tier 4 interim

The latter engine is fitted with a DOC (Diesel Oxidation Catalyst) filter and EGR (Exhaust Gas Recirculation) valve and does not require a DPF (particulate filter).



New stabilised Panoromac engine bonnet tapered for better side visibility.

Given the wide-ranging applications of stabilised Panoramic machines, Merlo offers two distinct set-ups to meet various requirements:



1. Axle
2. Propshaft
3. Hydrostatic motor
4. Gearbox
5. Hydraulic hoses
6. Hydrostatic pump
7. Diesel engine

### 75 HP versions:

Transmission equipped with variable displacement hydrostatic engine. Offers +35% torque compared to the previous version and a max speed of 35 km/h compared to 25 km/h

### 101 HP versions:

Top speed of 40 km/h

## • Due motorizzazioni

secondo gli allestimenti:

**75 HP Tier 3 e  
101 HP Tier 4 Interim**

• **No DPF** and **No SCR** for the entire range equipped with stabilisers

• **75 HP versions** with **variable displacement hydraulic engine**, **35% torque** and **max. speed 35 km/h**

## Largest cab in the category

- 1. Merlo CDC - Dynamic Load Control. safety standard higher than EN15000.
- 2. Electromechanical joystick.
- 3. Dashboard: makes it possible to display a great deal of useful information for the operator.
- 4. Conditioning system for fast cooling-heating.
- 5. Reverse shuttle at steering wheel.
- 6. Inching-Control: Ensures creep movements.
- 7. Drawer.



# The record-breaking cab is more up-to-date than ever

## More space on board offered as standard

At 1010 mm, this is the widest cab in the category. Access is made even easier thanks to a large door (770 mm) fitted with an opening window for better natural ventilation.

The Panoramic name originated from the excellent visibility which has always been the pride of Merlo since the concept of telehandlers with side-mounted engines. The air conditioning system reaches and maintains an ideal temperature of 22 °C inside the cab.

For telescopic boom and carriage commands, Merlo offers two set-up levels:

- ➔ Basic with levers and safety buttons (photo top right)
- ➔ Plus: with electro-mechanical Joystick (pics on page 12, item 2)



Basic Version: levers for operating the boom, carriage, attachments and boom side shifts



Crossways angle corrector command on joystick front panel



Side dashboard c/w:

- 1 Steering mode selection lever
- 2 Stabiliser management buttons

- **Largest cab in** category
- **Maximum visibility**  
in every direction
- **ROPS** and **FOPS** protection  
no impact on comfort
- Boom and **carriage command:**  
**Basic:** with levers  
**Plus:** electromechanical joystick
- **Ergonomic** and **intuitive**  
**stabiliser** and **tilting**  
**commands**

N.B. "Basic" version with platform and/or radio control supplied with Joystick + display + attachment recognition

M CDC the system invented  
by Merlo always ensuring  
maximum safety



M CDC system with display and Automatic attachment  
recognition



# Merlo Dynamic Load Control

## Safety as standard for everyone

Safety is an absolute value for the Merlo Group and this principle was the basis for the invention of the M CDC system. The aim is to ensure that every operator works in total safety by exploiting to the full the potential of their telehandlers and the attachment used.

- ➔ Basic Version: M CDC system (Light) with LED indicator on RH upright
- ➔ Plus Version: M CDC system c/w display in cab

The latter configuration ensures automatic recognition of the attachment fitted \* and calibrates performance in relation to specific load charts. The operator can check at any time the dynamic equilibrium of the vehicle, thanks to the led on the screen or the traffic light on the front upright. For manoeuvres that may give rise to a telehandler stability risk, the M CDC system will block the boom and prevent any further movements that may worsen the situation.

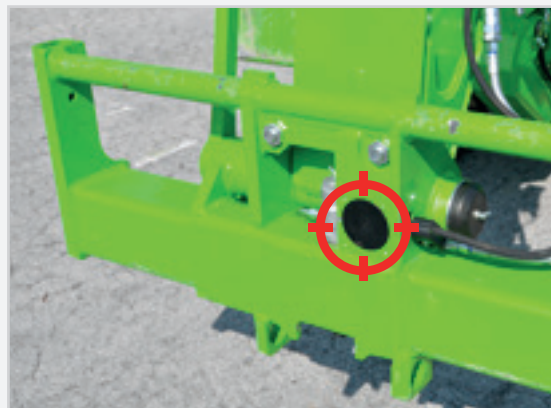


Rear video camera (optional)

## Automatic attachment recognition



Sensor on the attachment



Sensor on the carriage

• **Safety** beyond even  
**EN15000** standards



- 75 HP version: **M CDC** (Light) with LED indicator
- 101 HP version: **M CDC** with display and **automatic attachment recognition\***

\*Valid for attachments built in Merlo factories and fitted with the M CDC sensor

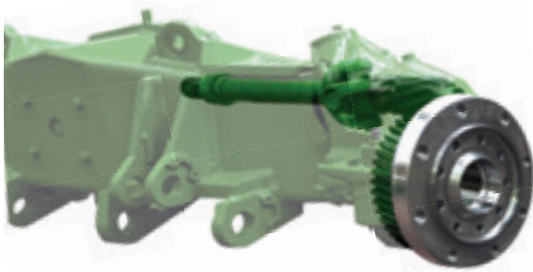
Axles designed and built by Merlo. Versatile,  
sturdy and designed for all applications



# Merlo axles and brakes

## Versatility, effectiveness and durability

Our stabilised Panoramic telehandlers are equipped with axles developed, designed and built in-house. The main body is in welded steel and the side reducers are mounted in cascade with pinion and crown-wheel. The gantry axle ensures excellent ground clearance. All of our stabilised Panoramic telehandlers are equipped with 4 dry disc brakes that allow for consistent reduction of friction and, thus, fuel consumption in comparison to oil bath discs, ensuring maximum effectiveness and durability at the same time. In addition, the parking brake is automatically engaged when the engine is switched off. The operator can engage it at will when the engine is running **1** for stationary works on slopes. 480 ground clearance (405/70-24 tyres) to overcome all obstacles with total agility.



Portal axle for better ground clearance



Manual parking brake selector

**1**

### THREE STEERING MODES WITH END-OF-TRAVEL RE-SYNCH



FRONT WHEEL STEERING



COORDINATED STEERING



CRAB STEERING

- **Axles conceived, designed and built** by Merlo (Panoramic)
- **450 mm clearance** from ground - best in category
- **Three steering modes**
- **Automatic parking brake** engagement system when engine switched off



Practical and safe shift and stabilisation systems. Solutions developed to facilitate work in total safety

# Stabilisation and crossways angle

## Better precision means better productivity, comfort and safety

Merlo has developed a chassis (patented) that allows the boom to be shifted to the side by 870 mm. The operator is able to position the load without further manoeuvres: the system saves times, reduces stress and improves machine productivity. On sloping ground, the operator can correct side angle by up to 10% per side, totalling 24% in combined action with the stabilisers; this enables telescopic booms to be extended perpendicularly to work in conditions of maximum safety. The stabilisers form a solid unit with the front axle and are always in size to ensure minimal front dimensions for work even in very narrow spaces.



Tilting system for angle correction



Boom side shift



Combined action of side angle control and stabilisers

- Merlo-patented **boom side shift system**
- **Combined action** of **chassis** and **stabilisers** for **levelling** by up to **24%** for **maximum safety**
- **Boom with BSS suspensions:** better **comfort** and **productivity**

Boom handling:  
speed and precision



# Merlo precision and technology

## An original, 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, electrical cables and auxiliary hydraulic are all located inside the boom for maximum protection.



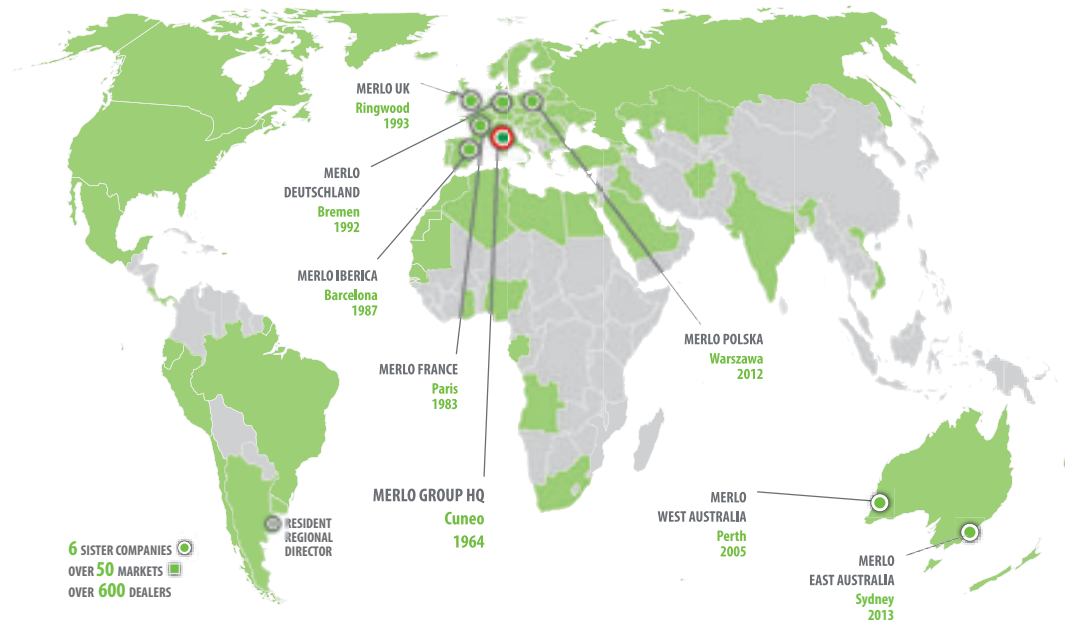
### ➔ Variable displacement pump with Load Sensing distributor:

- Multiple movements with high precision
- Energy savings / lower consumption
- Reduced wear of components.



BSS hydro-pneumatic boom suspension (opt) engaged by the operator, it speeds up transfer, protects the load and improves productivity.. It is deactivated at speeds <3 km/h.

- **Lightweight structure with high** torsional stiffness
- **Cartridge system** makes maintenance easier
- Extension system and components are well **protected** inside the boom
- **Tac-Lock:** hydraulic attachment clamping system from the cab



## 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.

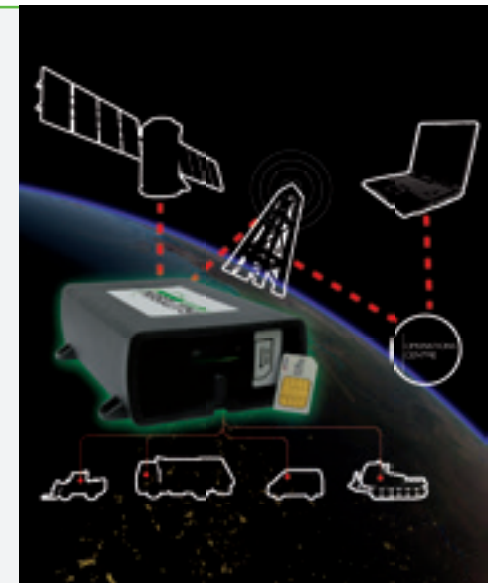


## Countries where Merlo is a market leader



## 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 <sup>3</sup>	10.000 m <sup>3</sup>
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 m<sup>2</sup>, with storage capacity for of 10,000 m<sup>3</sup> 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.



TECHNICAL INFORMATION	P.38.12	P 38.12 PLUS	P.38.13	P 38.13 PLUS	P.38.14	P 38.14 PLUS	P 40.17	P 40.17 PLUS
Total unladen mass, with forks (kg)	8550	8550	9050	9050	9050	9050	10350	10350
Maximum capacity (kg)	3800	3800	3800	3800	3800	3800	4000	4000
Lifting height (m)	11.6	11.6	13.6	13.6	13.6	13.6	16.7	16.7
Maximum reach (m)	7,6	7,6	9.1	9.1	9.1	9.1	12,5	12,5
Maximum operating height (m)	9,2	9,2	8	8	8	8	8,1	8,1
Maximum operating reach (m)	2,6	2,6	3,3	3,3	3,3	3,3	4	4
Capacity at maximum height (kg)	3500	3500	2500	2500	2500	2500	2500	2500
Capacity at maximum reach (kg)	1000	1000	900	900	900	900	500	500
Lateral boom movement (mm)	±330	±330	±345	±345	±345	±345	±435	±435
Crossways angle corrector (%)	±10	±10	±10	±10	±10	±10	±10	±10
Turbo engine (drive/cylinders)	Kubota/4	Deutz/4	Kubota/4	Deutz/4	Kubota/4	Deutz/4	Kubota/4	Deutz/4
Engine output (kW/HP)	55/75	74/101	55/75	74/101	55/75	74/101	55/75	74/101
Maximum speed (km/h)	35	40	35	40	35	40	35	40
EAS hydro-pneumatic suspension <sup>(1)</sup>	○	○	○	○	○	○	○	○
BSS hydro-pneumatic boom suspens <sup>ion</sup> (1)	○	○	○	○	-	-	-	-
Fuel tank (l)	150	150	150	150	150	150	150	150
Hydraulic Load-Sensing pump (bar-l/min)	210-108	210-108	210-108	210-108	210-108	210-108	210-115	210-115
Hydraulic oil tank (l)	105	105	105	105	105	105	140	140
FOPS (ISO 3449) and ROPS (ISO 3471) cab	●	●	●	●	●	●	●	●
Lever-operated controls	●	-	●	-	●	-	●	-
electromechanical joystick	-	●	-	●	-	●	-	●
Electronic joystick	○	○	○	○	○	○	○	○
Tac-Lock equipment locking	●	●	●	●	●	●	●	●
Auxiliary hydraulic service on boom	●	●	●	●	●	●	●	●
Hydrostatic transmission	●	●	●	●	●	●	●	●
Reverse shuttle at steering wheel:	●	●	●	●	●	●	●	●
Inching-Control pedal movement control	●	●	●	●	●	●	●	●
Permanent four-wheel drive	●	●	●	●	●	●	●	●
Automatic parking brake	●	●	●	●	●	●	●	●
Standard tyres	405/70-20	405/70-20	405/70-20	405/70-20	405/70-20	405/70-20	405/70-24	405/70-24
Work headlights on cab (2 A + 2 P)	○	○	○	○	○	○	○	○
Dynamic load control M CDC (Light) + indicator	●	-	●	-	●	-	●	-
Dynamic load control M CDC + display	○	●	○	●	○	●	○	●
Automatic attachment recognition	●	●	●	●	●	●	●	●

(1) EAS and BSS suspensions cannot be supplied together. ● As standard. ○ On request.

# From the idea to develop multi-applicability

## Greater efficiency and productivity thanks to Merlo attachments

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.

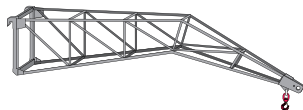
This standard provides access to the use of production attachments that are tested and interchangeable to ensure targeted applications, with the aim of facilitating work and reducing performance times.



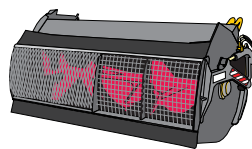
CARRIAGE-MOUNTED HOOK



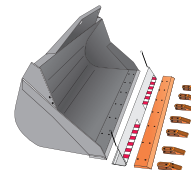
FLY JIB



CONCRETE MIXING BUCKET



DIGGING BUCKET



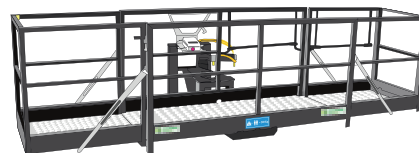
LIFTING BOOM



WINCH

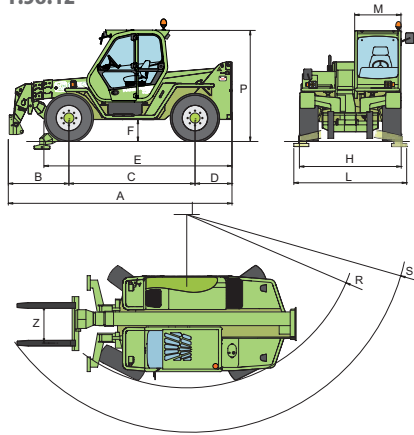


THREE-SIDED EXTENDIBLE PLATFORM



## THE DATA

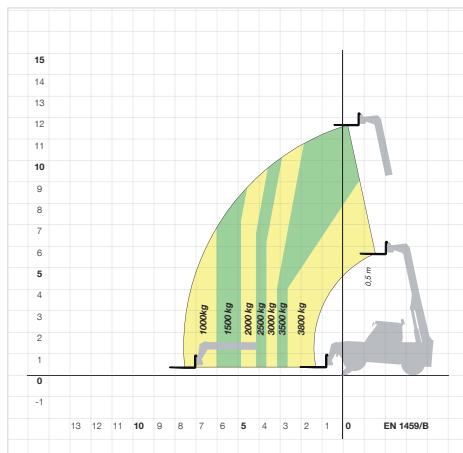
**P.38.12**



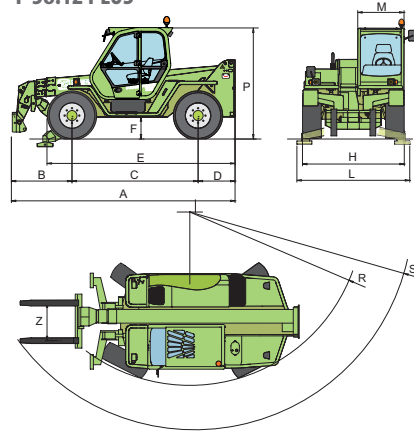
**DIMENSIONS P 38.12**

A (mm)	4850	F (mm)	480
B (mm)	1285	H (mm)	2220
C (mm)	2750	M (mm)	995
D (mm)	815	P (mm)	2440
E (mm)	4100	R (mm)	3920

**P 38.12 / PLUS WITH FORKS  
ON STABILISERS**



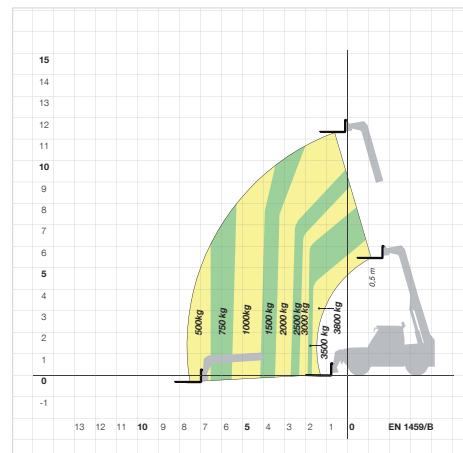
**P 38.12 PLUS**



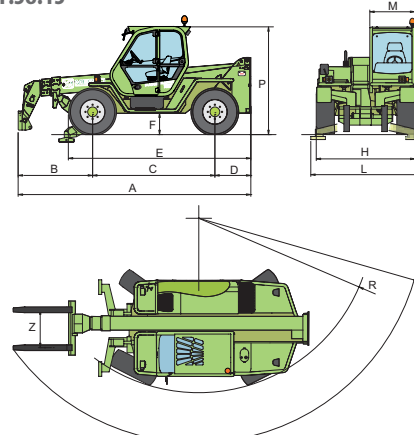
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**P 38.12 / PLUS WITH FORKS  
ON TYRES**



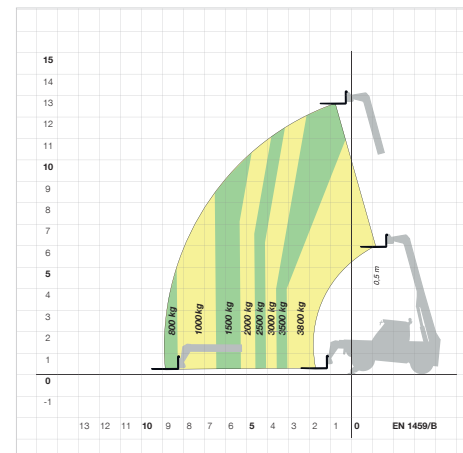
**P.38.13**



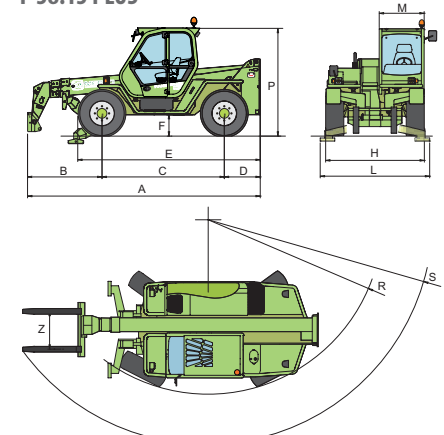
**DIMENSIONS P 38.13**

A (mm)	5240	F (mm)	480
B (mm)	1675	H (mm)	2220
C (mm)	2750	M (mm)	995
D (mm)	815	P (mm)	2440
E (mm)	4100	R (mm)	3920

**P 38.13 / PLUS WITH FORKS  
ON STABILISERS**



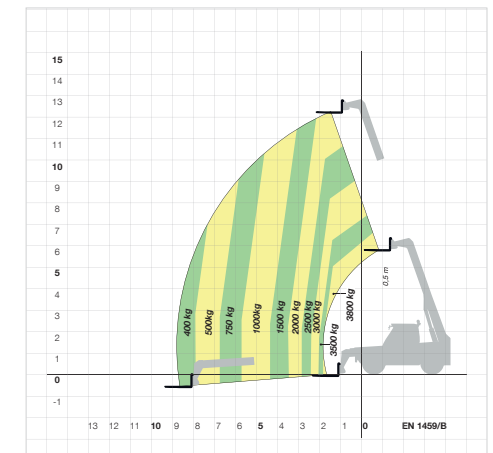
**P 38.13 PLUS**



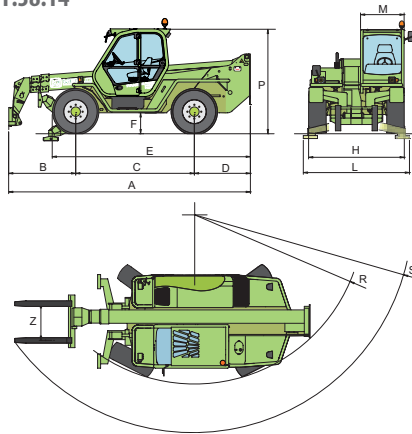
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**P 38.13 / PLUS WITH FORKS  
ON TYRES**



P.38.14



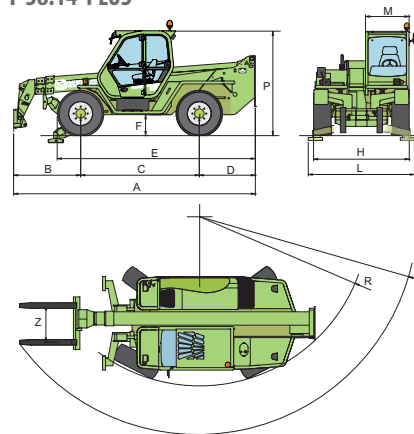
DIMENSIONS P 38.14

A (mm)	5590	F (mm)	480
B (mm)	1360	H (mm)	2220
C (mm)	2750	M (mm)	995
D (mm)	1710	P (mm)	2440
E (mm)	4585	R (mm)	3920

**P 38.14 / PLUS WITH FORKS  
ON STABILISERS**



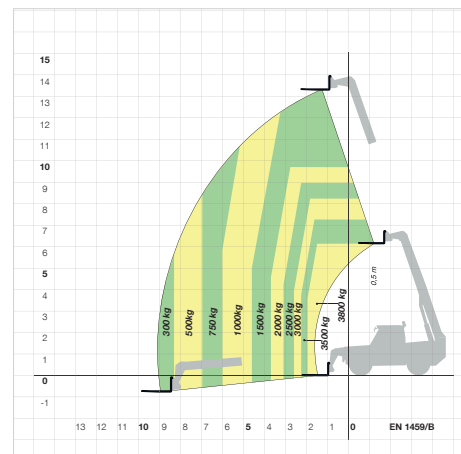
P 38.14 PLUS



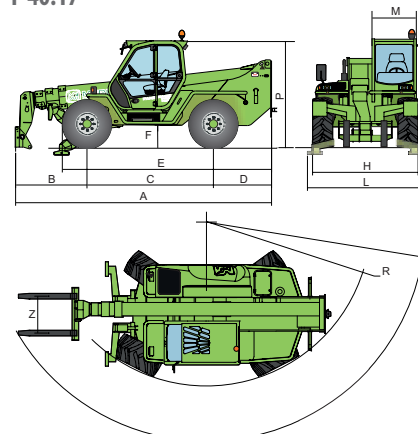
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E (mm)	4585	R (mm)	3920

**P 38.14 / PLUS WITH FORKS  
ON TYRES**



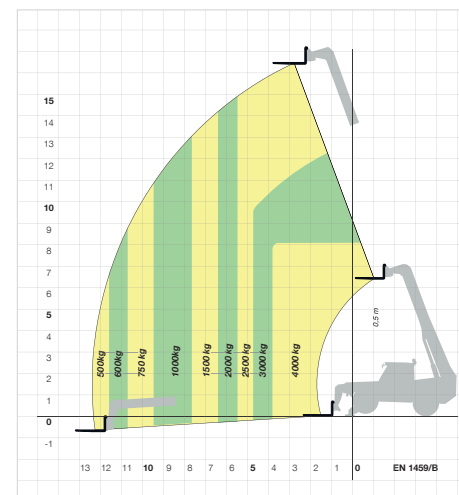
P 40.17



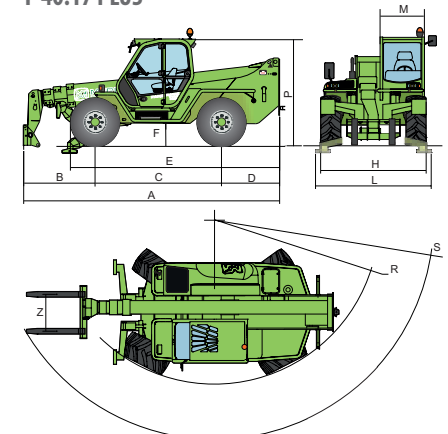
DIMENSIONS P 40.17

A (mm)	5795	F (mm)	480
B (mm)	1505	H (mm)	2400
C (mm)	2875	M (mm)	995
D (mm)	1315	P (mm)	2510
E (mm)	4790	R (mm)	4050

**P 40.17 / PLUS WITH FORKS  
ON STABILISERS**



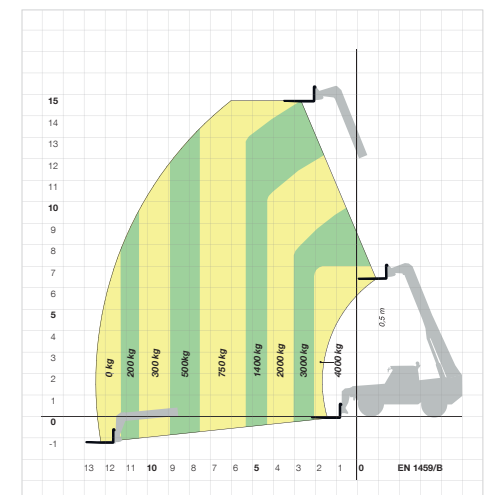
P 40.17 PLUS



DIMENSIONS P 40.17 PLUS

A (mm)	5740	F (mm)	450
B (mm)	1160	H (mm)	2400
C (mm)	3240	M (mm)	1010
D (mm)	1335	P (mm)	2850
E (mm)	5235	R (mm)	4300

**P 40.17 / PLUS WITH FORKS  
ON TYRES**



## 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



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*The Telehandlers outlined in this documentation can be equipped with optional or special accessories that are not included in standard equipment but only on request.*

*In certain countries, not all models or attachments may be available because of market or regulatory restrictions.*

*Technical data and information are up-to-date at the time of printing this documentation. Merlo reserves the right to make modifications arising from natural technological evolution without any obligation on its part.*

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