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MERLO
AN HISTORIC ITALIAN COMPANY



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MACHINE
OF THE YEAR 2015



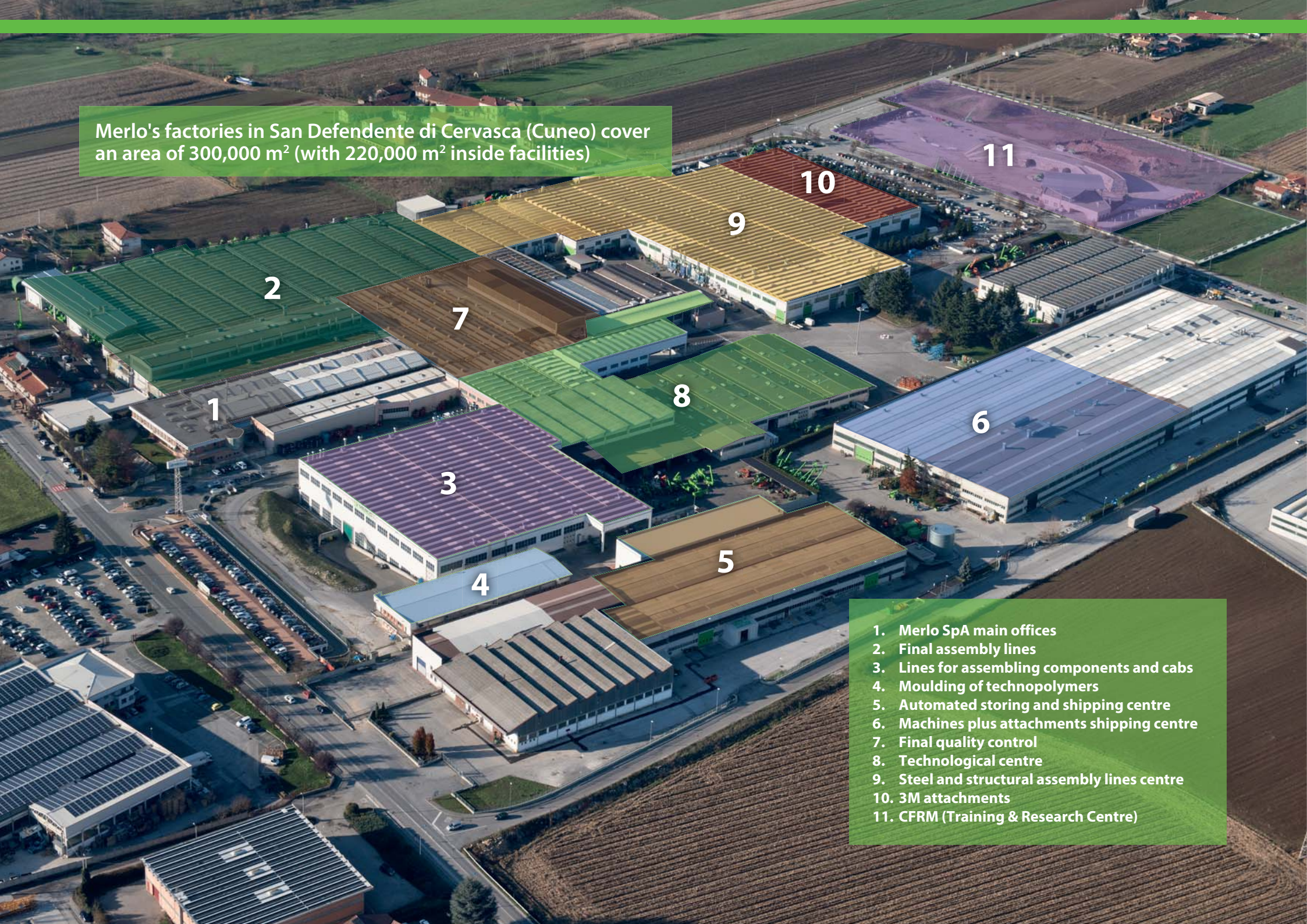
MERLO



PANORAMIK HIGH CAPACITY EE MODELS

XG

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:**

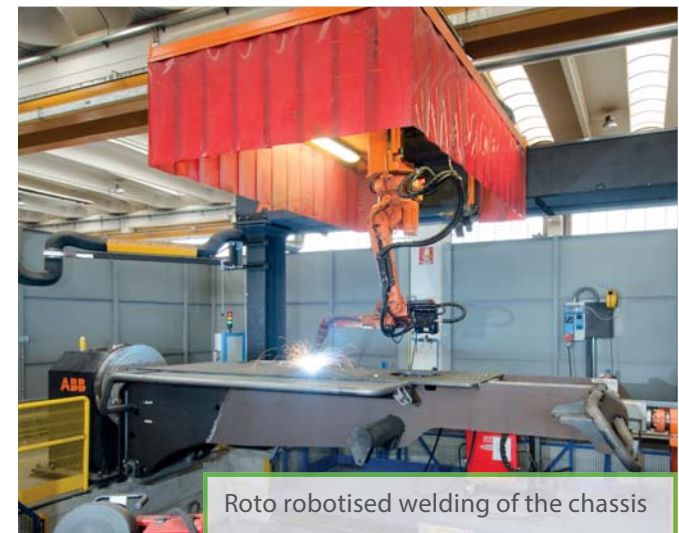
- Turbofarmer 42.7 Hybrid: Gold Medal for innovation at Agritechnica.
- Turbofarmer II: Machine of the year 2014 in the "handling and logistics" category.
- Multifarmer: Selected as a "milestone" in agriculture.

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

The High Capacity
Merlo Range



New high capacity families

High capacity telehandlers according to Merlo

They have been updated and are even more innovative, performing and safe, in line with the evolution of the Merlo product. These models offers the following advantages:

- + **Comfort**
 - ➔ Largest cab in its category
 - ➔ Best comfort level
- + **Safety**
 - ➔ Cab compliant with ROPS and FOPS level II standards*
 - ➔ M CDC Dynamic load control as optional
- + **Versatility**
 - ➔ Tilt correction and standard boom side shift
- + **Efficiency**
 - ➔ Tier 3 Engines: powers of 100 HP and 126 HP
 - ➔ Regenerative system (standard on P120.10 EE)

* 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)



- **Largest cab**
on the market: **1010 mm**
- **3 models** for every need
- **Levelling and side shift**
as **standard**

High capacity family

Technology at the top of the market



Innovative Merlo systems

- Frame levelling + boom side shift
- Tac-Lock rapid coupling of the attachments

Performance

- 10 meters booms
- Capacities ranging from 6 to 12 tons

Comfort

- Largest cab on the market 1010 mm
- Maximum comfort and excellent visibility

Safety

- M CDC Merlo dynamic load control (optional)
- Automatic attachment recognition (optional)
- Cab compliant with FOPS/ROPS

Hydraulic

- P60.10 EE and P72.10 EE: Load-Sensing pump and electronic joystick
- P120.10 EE: Load-Sensing pump and electronic joystick with Flow-Sharing distributor and regenerative system

POWERTRAIN

Panoramic P60.10 EE and P72.10 EE

- Tier 3 engine Kubota 100 HP
- Hydrostatic transmission equipped with two ranges gearbox

Panoramic P120.10 EE

- Tier 3 engine Iveco 126 HP
- Regeneration system on lifting
- Flow -Sharing Distributor

High specifications for high performances

Even more advantages and benefits

MODEL	ENGINE		HYDRAULIC			CHASSIS	TRANSM.	SAFETY DEVICES	JOYSTICK COMMAND	
	100 HP - Tier 3	126 HP - Tier 3	Load Sensing	Flow Sharing	Regeneration system	Frame levelling + Side shift	2 Speeds	M CDC + display + automatic attachment recognition	Electro-mechanical	Electronic with accelerator
PANORAMIC										
P60.10 EE	X		X			X	X	opt	X	opt
P72.10 EE	X		X			X	X	opt	X	opt
P120.10 EE		X	X	X	X	X	X	opt		X

Broad product offering:

- **3 models** available

Comfort:

- **Largest cab** on the market
1010 mm

New technologies:

- "TT" versions **frame levelling + side shift** as standard
- **M CDC Merlo** for dynamic load control (opt)
- Standard **Load-Sensing** for the entire range

Versatility and productivity:

- **2 Tier 3** engines available: **100 HP** or **126 HP**
- Height of **10 metres**
- Capacities from **6 to 12 tonnes**

Largest cab in the category

1. M CDC - Dynamic Load Control: Merlo-patented safety system with safety standards better than EN15000 (optional).
2. Electromechanical joystick. Electronic (optional) on P60.10 EE and P72.10 EE.
3. New digital display.
4. Inching-Control: expanded sensitivity for creep movements.
5. Finger Touch reverse shuttle.
6. Glove box.



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

More space on board offered as standard

The Merlo cab is known for ease of access and for its inside space.

At 1010 mm, it is the widest in the category and allows maximum comfort in daily use.

The machine's architecture, the low centre of gravity and the tapered hood ensure excellent visibility in every direction. The operator can visually follow the load to its maximum height, thanks to the transparent top. The 770 mm door is fitted with a 180° opening window for better natural ventilation. The controls are placed according to accurate ergonomic studies.

All information is available clearly and precisely with the new on board panel and the new display for the M CDC.



New analogue-digital instrument panel

Standard specifications for P120.10 EE model



Dual-Shuttle reverse shuttle buttons



Armrest and Joystick with reverse shuttle

- **1010 mm wide.** The cab is the largest in its category

- Driver's side access made easier with a **wide door (770 mm)**

- **360° visibility.**

Low hood thanks to careful engine layout

- **P120.10 EE** equipped with **armrest** and **Dual-Shuttle reverse shuttle** (on the Joystick and the steering wheel)

Merlo CDC (optional),
when safety counts



Merlo CDC display

Merlo Dynamic Load Control (optional)

Safety for everyone

The Merlo Group considers safety as an absolutely essential value and this is why it invented the M CDC system. The objective is to allow every operator to work in total safety by fully exploiting the potential of the telehandler and the attachment used.

With the Merlo CDC system, the High Capacity models can automatically recognise the attachment fitted and consequently calibrates its 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.

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
- **Automatic attachment*** recognition
- Recognition and memory of the **load***
- **ROPS** and **FOPS** protection, no impact on comfort

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





Levelling and side shift:
versatility, precision
and safety

Merlo precision and technology

Merlo Boom, reliability and innovation

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
- ✓ Levelling: system for correcting tilt, built into the chassis, allowing the operator to correct ground slopes and work in complete safety
- ✓ Movement: the boom can be shifted sideways by the operator so that the load can be positioned with maximum precision, comfort and time-savings



Boom side shift



Frame levelling

- **Lighter** but **stronger** booms: robotised welding on the neutral axis, area with less strain
- **Extension mechanism**, protected inside the boom
- Unique **frame levelling** and **side shift**: with a patented system
- P120.10 EE: standard **Flow Sharing**



Winning hydraulics

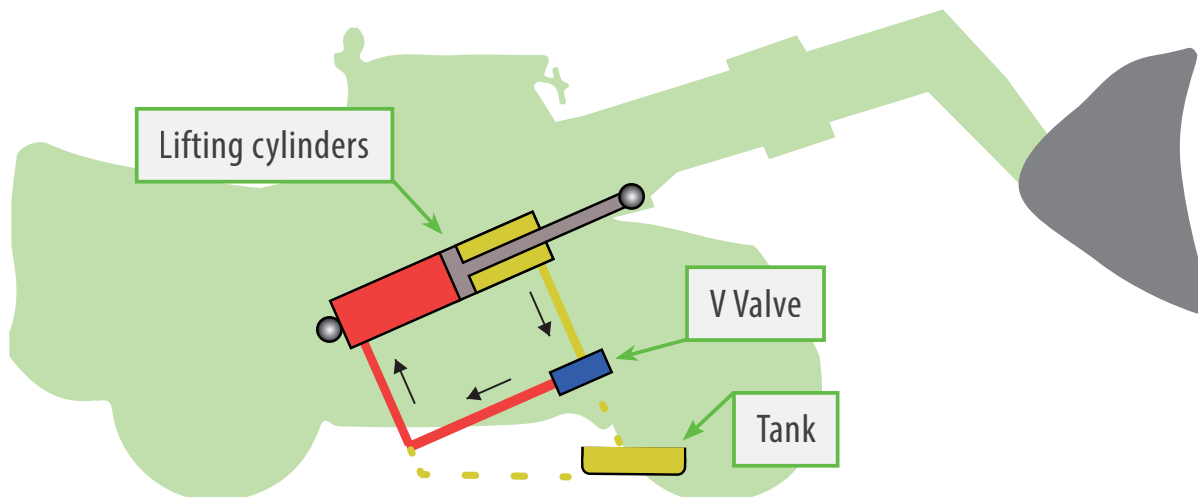
Practical and efficient systems

→ REGENERATIVE SYSTEM

To improve productivity for the P120.10 EE, Merlo has adopted the regenerative system, designed to increase the boom's angular speed while handling loads. The system makes it possible to automatically increase the speed by 36% compared to similar systems without the regenerative function.

HOW IT WORKS

The boom lifting system is fitted with two dual effect cylinders, one of which is equipped with the regenerative system. The oil coming from the pump enters the cylinder's expansion chamber (in red in the diagram below), and since it is dual effect the oil in the opposite chamber is placed back into the pressure chamber (in yellow in the below diagram) instead of being discharged, being added to the oil from the pump, speeding up the filling of the cylinder and, as a result, the angular speed of the boom.



Regenerating system

+36%

angular speed of the boom when rising

- Standard **Load Sensing** pump:
104 litres/min (P60.10 EE and P72.10 EE)
115 litres/min (P120.10 EE)
- P120.10 EE: **Flow Sharing**
Allows three boom movements at the same time.
Increased productivity
- P120.10 EE: the **regenerative system** allows a **36% increase** in the angular speed of the boom

Sturdy, reliable axles
with excellent
ground clearance

↑ 485 mm
ground clearance
↓ 18-19.5 tyres

P72.10 EE



Axles and brakes, effective and efficient

Added value for tangible benefits

Our heavy duty telehandlers are fitted with ideal axles uncompromisingly designed and built in-house.

The main body is in welded steel and the reducers are epicyclic.

This type of axle has proven to be a winner for its sturdiness, reliability and duration.

It ensures a minimum turning radius of 3950 mm and a significant ground clearance of 485 mm

(at the centre of the axle with 18-19.5 tyres). They come with 4 dry brakes and the

parking brake engagement system that automatically activates when

the engine is turned off. They have been designed by Merlo engineers to be integrated into the «TT» chassis with levelling and side shift, a winning combination that only Merlo can offer.

The axles adopted for the P120.10 EE are specific and structurally suited to support heavy loads in line with the heavy duty class.



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

Four-wheel drive with hydraulic servo-assistance.



FRONT WHEEL STEERING



COORDINATED STEERING



CRAB STEERING

- Axles conceived, designed and built by Merlo (P60.10 EE and P72.10 EE)
- 485 mm ground clearance best value in the category (P60.10 EE and P72.10 EE)
- **Three steering modes**
- **Dry brakes** to reduce friction and consumption
- Automatic **parking brake** engagement system when engine switched off



CFRM 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 platforms, forklift trucks, telehandlers, cranes, earth-moving machinery, agricultural and forestry tractors, snow ploughs and urban cleaning vehicles.

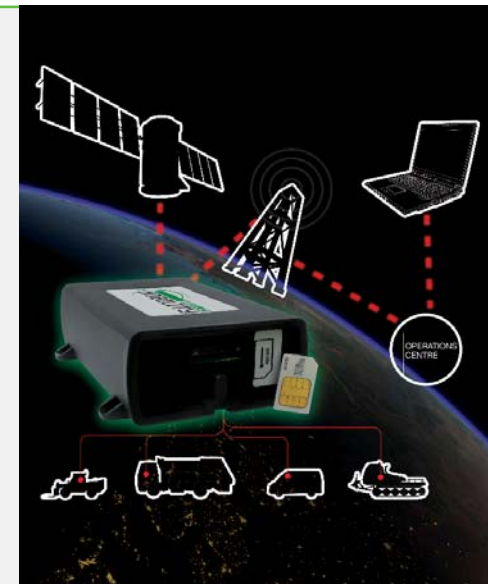


Countries where Merlo is a market leader



MOVIMATICA MERLO INFOMOBILITY

This is the GPS radiolocation, anti-theft and vehicle diagnostics system from the Merlo Group. It can dialogue with other Web systems already used by our customers. Advantages for the dealer: diagnostics, remote assistance. Advantages for the user: anti-theft device, operating time slots, working areas, aintenance management.



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.

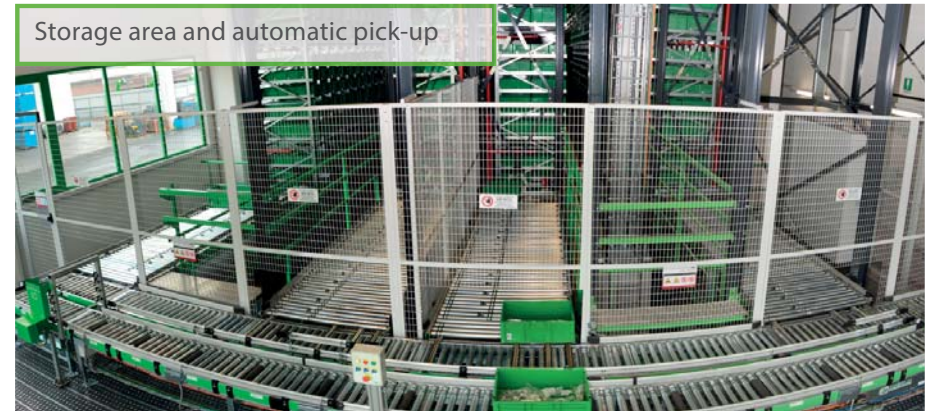
At the same time, the foundations have been laid to put the Customer first, implementing investments aimed at Services such as Financing, Training Assistance, Spare parts and Telematic Means such as remote diagnostics, thanks to the Merlo Mobility project.

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.



Order processing and shipment area

TECHNICAL INFORMATION	P60.10 EE	P72.10 EE	P120.10 EE
Total unladen mass, without forks (kg)	9800	10650	15650
Maximum capacity (kg)	6000	7200	12000
Lifting height (m)	9,5	9,5	9,8
Maximum reach (m)	5,3	5,3	5,1
Maximum operating height (m)	7,2	6	6,1
Maximum operating reach (m)	1,5	1,5	1,3
Capacity at maximum height (kg)	3000	4000	5000
Capacity at maximum reach (kg)	1500	2000	2750
Turbo motor (displacement/cylinders)	3.8/4	3.8/4	4,5/4
Tier 3 motor power (kW/HP)	Kubota 75/100	Kubota 75/100	Iveco 93/126
Maximum speed (km/h)	40	40	40
EAS hydro-pneumatic suspension	○	-	○
Fuel tank (l)	150	150	185
Hydraulic Load-Sensing pump (bar-l/min)	240/115	240/115	210/119
Flow Sharing	-	-	●
Regenerative device (+50% boom speed)	-	-	●
Hydraulic oil tank (l)	105	105	177
FOPS (ISO 3449) and ROPS (ISO 3471) cab	●	●	●
Electronic joystick	○	○	●
Electromechanical joystick	●	●	-
Hydrostatic transmission	●	●	●
Differential lock (Front - Rear)	○	○	●
Reverse shuttle at steering wheel:	-	-	●
Inching-Control pedal movement control	●	●	●
Permanent four-wheel drive	●	●	●
Four-wheel steering	●	●	●
Automatic parking brake	●	●	●
Work headlights on cab (2 A + 2 P)	-	-	-
Change of speed	2 speeds	2 speeds	2 speeds
Chassis levelling + side shift	●	●	●
Dynamic load control M CDC + display + automatic attachment recognition	○	○	○
Standard tyres	18-19.5	18-19.5	17.5-25

● As standard. ○ On request.

From the idea to develop multi-applicability

Greater efficiency and productivity thanks to Merlo attachments

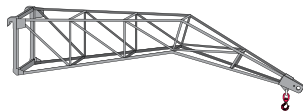
Merlo adopts simple and effective guidelines in the evolution of the product. From conception to development, everything is studied, designed and created in the Group's plants. This simple "rule" also applies to attachments. Backed by years of experience, Merlo's technicians have developed a wide range of attachments, divided by type and load capacity. The multi-function Merlo systems, immediately operative in a multitude of different applications, are among the most advanced technology to offer efficiency, comfort and above all, safety in everyday work.



CARRIAGE-MOUNTED HOOK



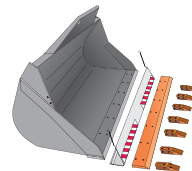
FLY JIB



FORKS



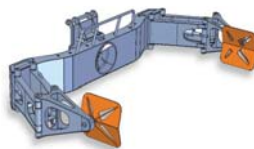
DIGGING BUCKET



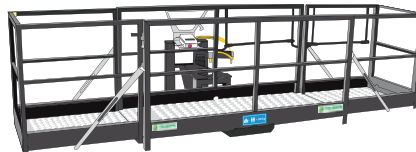
LIFTING BOOM



CALIPER FOR TYRES



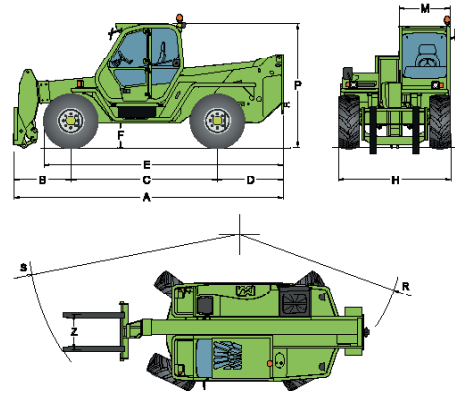
THREE-SIDED EXTENDIBLE PLATFORM





TECHNICAL DATA

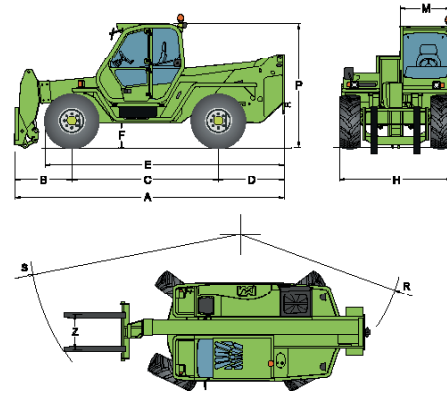
P.60.10 EE



DIMENSIONS P60.10 EE

A (mm)	5345	F (mm)	480
B (mm)	1235	H (mm)	2330
C (mm)	2875	M (mm)	995
D (mm)	1300	P (mm)	2440
E (mm)	4645	R (mm)	3950

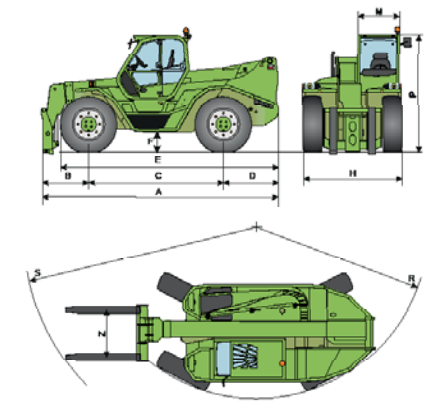
P.72.10 EE



DIMENSIONS P72.10 EE

A (mm)	5345	F (mm)	480
B (mm)	1235	H (mm)	2330
C (mm)	2875	M (mm)	995
D (mm)	1300	P (mm)	2440
E (mm)	4645	R (mm)	3950

P120.10 EE

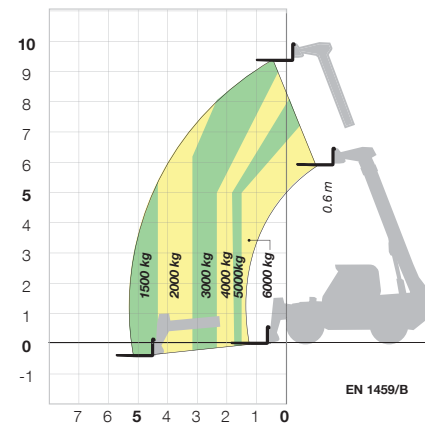


DIMENSIONS P120.10 EE

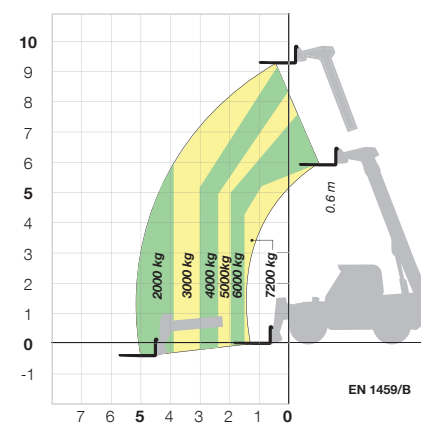
A (mm)	5740	F (mm)	450
B (mm)	1160	H (mm)	2400
C (mm)	3240	M (mm)	1010
D (mm)	1335	P (mm)	2850
E (mm)	5235	R (mm)	4300



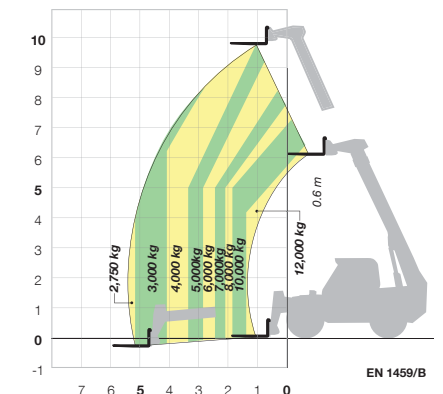
P60.10 EE WITH FORKS



P72.10 EE WITH FORKS



P120.10 EE WITH FORKS



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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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.

Your trusted Merlo Dealer will be delighted to provide you with all updates concerning our products and services.