PANORAMIC WITH STABILIZERS

EN


Merlo's factories in San Defendente di Cervasca (Cuneo) cover an area of 300,000 m² (with 220,000 m² indoor facilities)
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10
11
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 an 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 innovatives solutions to advance needs and 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 to demonstrate the technological and innovative superiority of our products: gold Medal for innovation at Agritechnica (Turbofarmer 42.7 Hybrid), «Machine of the year 2014» in the handling and logistics category (Turbofarmer II), «milestone» in agriculture (Multifarmer).
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.

- 1,200 employees
- Surface area of 300,000 m^2 of which 220,000 m^2 are indoors
- 90% exports
- 600 dealers all over the world
- 8% of turnover invested in Research & Development
- 60 manufacturing robots

Automated boom bending workstation

Roto robotised welding of the chassis

Versatile and safe. Merlo telehandlers suited for all construction and rental companies.

Stabilized 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 stabilized 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 stabilizers
- “Tilting” angle correction
- “Boom Side Shift” movement
  The unique Merlo-patented solution

+ Performances

- Engines - 75 HP (base models - Tier 4 Interim) and 101 HP (Plus models - Tier 4 Final)

* 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)

- Cab - 1010 mm: largest in category
- Stabilizers 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

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	STABILIZERS	CHASSIS	TRANSMISSION		SAFETY		HYDRAULIC	CONTROLS		BSS	EAS	SPEED
	75 HP - Tier 4 Interim	101 HP - Tier 4 Final	Steady	Independent fronts	Tilting	Hydrostatic with 2 speeds	EPD standard	M CDC + display + automatic attachment recognition	Light	Load-Sensing	Levers	Joystick	Boom suspension system	Electronic Active Suspension	Maximum (km/h)
P38.12	X		X	X	X	X			X	X	X	opt	opt	opt	33
P38.12 Plus		X	X	X	X	X	X	X		X		X	opt	opt	40
P38.13	X		X	X	X	X			X	X	X	opt	opt	opt	33
P38.14	X		X	X	X	X			X	X	X	opt		opt	33
P38.14 Plus		X	X	X	X	X	X	X		X		X		opt	40
P40.17	X		X	X	X	X			X	X	X	opt		opt	33
P40.17 Plus		X	X	X	X	X	X	X		X		X		opt	40

* BSS and EAS suspensions can not be mounted together.


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

Stabilized Panoramic models

New technologies for new fields of application

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

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

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

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

Efficiency – Powertrain
- 75 HP Tier 4 Interim
- 101 HP Tier 4 Final engine - Plus version
- Merlo 2-speed hydrostatic transmission

Hydraulic system
- Load-Sensing Pump

Advanced technologies for greater productivity

New engines. Performance and efficiency

The best technologies for higher productivity

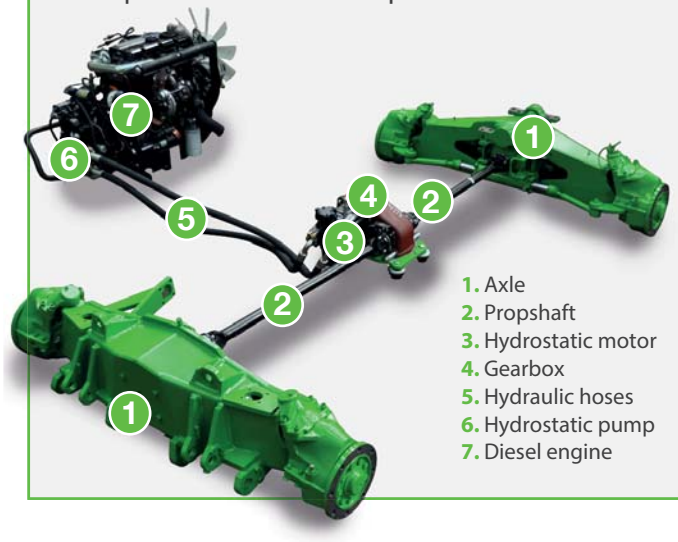
The stabilized Panoramic range is equipped with two engines in line with current EC standards:

- ➔ Basic Version: 4 cylinders, 2.9 litres - 55 kW/75 HP Tier 4 Interim
- ➔ Plus version: 4 cylinders, 3.6 litres - 74.5 kW/101 HP Tier 4 Final

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

New stabilized Panoramic engine bonnet tapered for better side visibility.

Given the wide-ranging applications of stabilized 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 33 km/h compared to 25 km/h

101 HP versions:

Top speed of 40 km/h

- **Two engines depending on set-ups: 75 HP Tier 4 Interim and 101 HP Tier 4 Final**
- **No DPF and No SCR for the entire range equipped with stabilizers**
- **75 HP versions with variable displacement hydraulic engine, 35% torque and max. speed 33 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)

Crossways angle corrector command on joystick front panel

Side dashboard c/w:
1 Steering mode selection lever
2 Stabilizer management buttons

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

75 HP version: levers for operating the boom, carriage, attachments and boom side shifts

- **Largest cab in category**
- **Maximum visibility in every direction**
- **ROPS and FOPS protection no impact on comfort**
- **Boom and carriage command: 75 HP: with levers 101 HP: electromechanical joystick**
- **Ergonomic and intuitive stabilizer and tilting commands**

M CDC the system invented by Merlo always ensuring maximum safety

M CDC system with display and Automatic attachment recognition

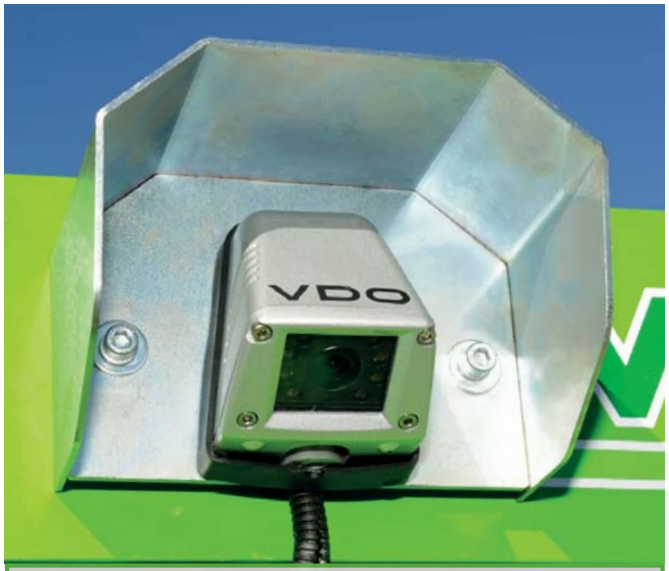
Merlo Dynamic Load Control

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

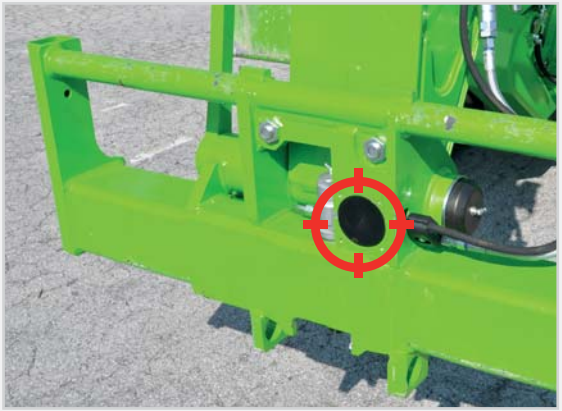
The latter configuration ensures automatic recognition of the attachment fitted * and calibrates performance in relation to specific load charts. The operator can check at any time the dynamic equilibrium of the vehicle, thanks to the led on the screen or the traffic light on the front upright. For manoeuvres 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 stabilized 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 stabilized 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 mm ground clearance (405/70-204tyres) 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)
- 480 mm clearance from ground - best in category
- Three steering modes
- Automatic parking brake engagement engagement system when engine switched off

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

Stabilization 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 stabilizers; this enables telescopic booms to be extended perpendicularly to work in conditions of maximum safety. The stabilizers 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 stabilizers

- **Merlo-patented boom side shift system**
- **Combined action of chassis and stabilizers 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

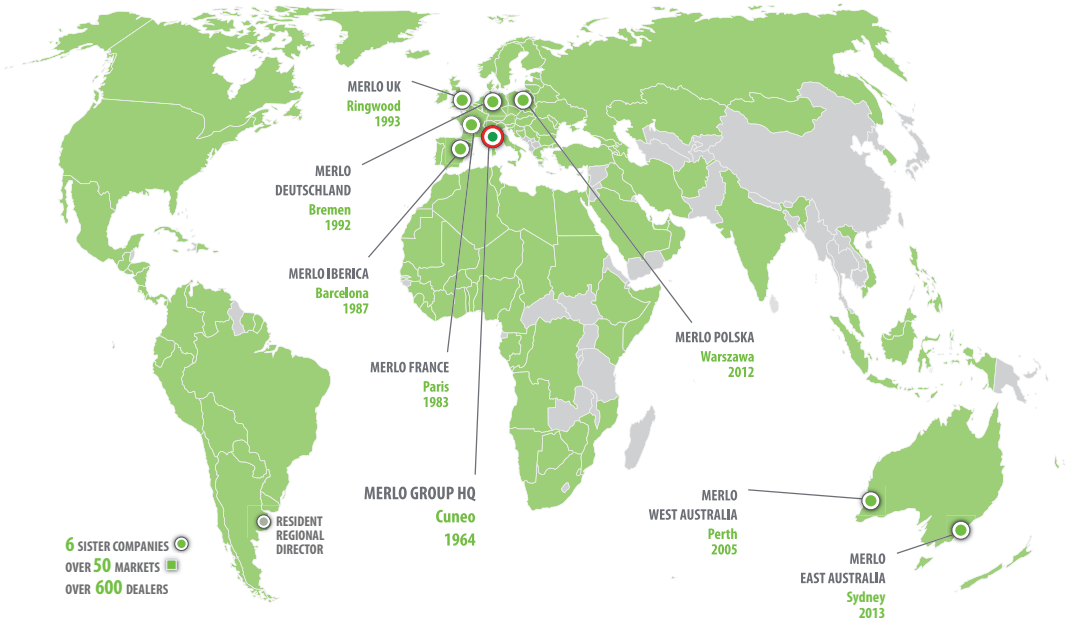
Pipes, electrical cables and auxiliary hydraulic are all located inside the boom for maximum protection.

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 (optional) 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**



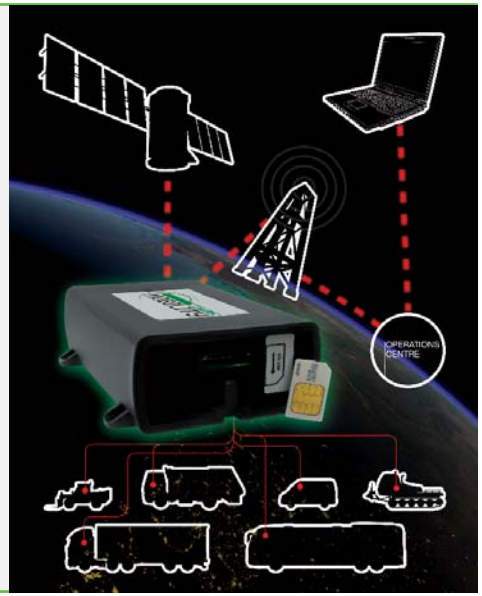
TRAINING CENTRE

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 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

Is the new system, conceived and built within the Merlo Group, for managing vehicles remotly: 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, Aftersales training, Spare parts and Telematic Means such as remote diagnostics, thanks to the Merlo Mobility project.

Automatic spare parts warehouse	2011	2016
Storage volume	1000 m^3	13000 m^3
Filling	100%	85%
Percentage of codes managed	50%	86%
Percentage of order lines managed	65%	94%
Pick-up time	90″	30″
Number of codes	8000	18000

NEW PARTS CENTRE

The new spare parts warehouse covers an area of 7,000 m^2, with storage capacity for of 10,000 m^3 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	P 38.12	P 38.12 PLUS	P 38.13	P 38.14	P 38.14 PLUS	P 40.17	P 40.17 PLUS
Total unladen mass, with forks (kg)	8550	8750	8650	9050	9250	10580	10700
Maximum capacity (kg)	3800	3800	3800	3800	3800	4000	4000
Lifting height (m)	11,7	11,7	12,6	13,6	13,6	16,7	16,7
Maximum reach (m)	7,5	7,5	8,7	9	9	12,5	12,5
Maximum operating height (m)	9,1	9,1	11	8,5	8,5	7,7	7,7
Maximum operating reach (m)	2,6	2,6	3	3,3	3,3	3,9	3,9
Capacity at maximum height (kg)	3500	3500	3500	2500	2500	2500	2500
Capacity at maximum reach (kg)	1000	1000	800	900	900	500	500
Boom side shift (mm)	±330	±330	±345	±345	±345	±435	±435
Frame levelling (%)	±10	±10	±10	±10	±10	±10	±10
Turbo engine (drive/cylinders)	Deutz/4	Deutz/4 Final	Deutz/4	Deutz/4	Deutz/4 Final	Deutz/4	Deutz/4 Final
Engine output (kW/HP)	55/75	74/101	55/75	55/75	74/101	55/75	74/101
Maximum speed (km/h)	33	40	33	33	40	33	40
EAS hydro-pneumatic suspension (1)	○	○	○	○	○	○	○
BSS hydro-pneumatic boom suspension (1)	○	○	○	-	-	-	-
Fuel tank (l)	140	140	140	140	140	140	140
Hydraulic Load-Sensing pump (bar-l/min)	210-115	210-108	210-115	210-115	210-108	210-115	210-108
Hydraulic oil tank (l)	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	405/70-24	405/70-24
Work headlights on cab (2 A + 2 P)	○	○	○	○	○	○	○
Dynamic load control M CDC (Light)	●	-	●	●	-	●	-
Dynamic load control M CDC + display	○	●	○	○	●	○	●
Automatic attachment recognition	○	●	○	○	●	○	●

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

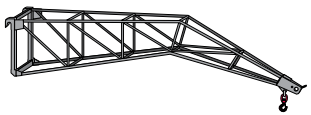
Developing multi-purpose solutions

More efficiency and productivity thanks to Merlo design

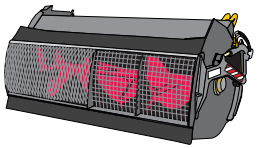
Merlo adopts simple and effective guidelines in the evolution of its products.
From conception to development, everything is studied, designed and created in the Group's research centre. This simple "rule" also applies to attachments.
Backed by years of experience, Merlo's engineers have developed a wide range of attachments, divided by type and load capacity.
This way of working makes possible to offer a wide portfolio of well tested and interchangeable equipment that save time and fatigue.

CARRIAGE-MOUNTED HOOK

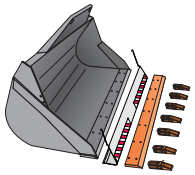
FLY JIB



CONCRETE MIXING BUCKET



DIGGING BUCKET

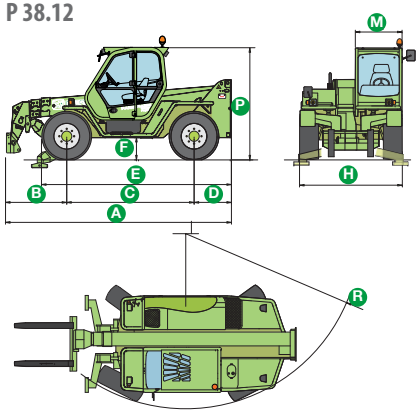


LIFTING BOOM

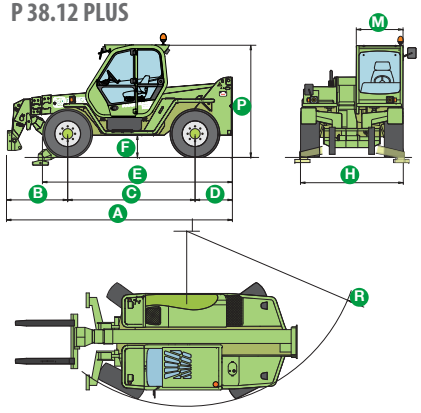
WINCH

THREE-SIDED EXTENDIBLE PLATFORM

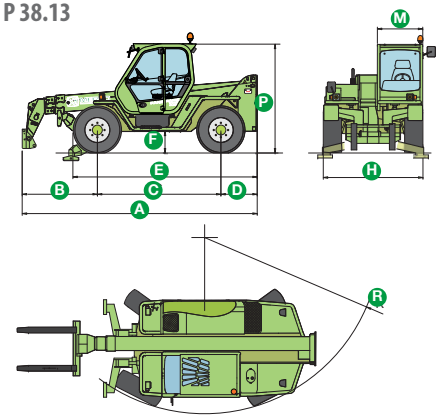
P 38.12



P 38.12 PLUS



P 38.13

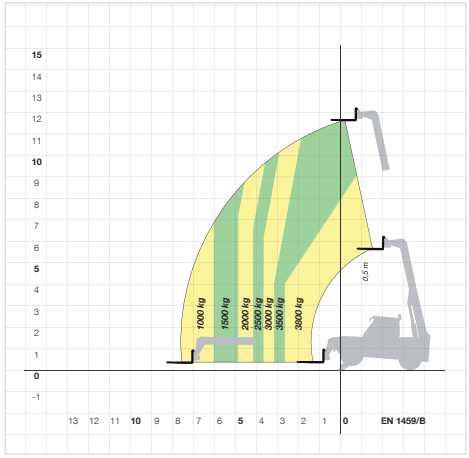


DIMENSIONS P 38.12			
A (mm)	4850	F (mm)	480
B (mm)	1285	H (mm)	2220
C (mm)	2750	M (mm)	1010
D (mm)	815	P (mm)	2440
E (mm)	4100	R (mm)	3920

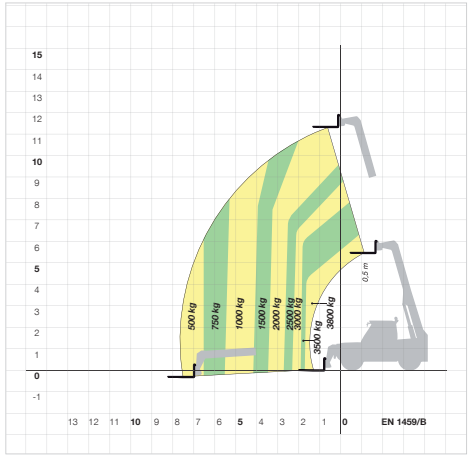
DIMENSIONS P 38.12 PLUS			
A (mm)	4850	F (mm)	480
B (mm)	1285	H (mm)	2220
C (mm)	2750	M (mm)	1010
D (mm)	815	P (mm)	2440
E (mm)	4100	R (mm)	3920

DIMENSIONS P 38.13			
A (mm)	5240	F (mm)	480
B (mm)	1675	H (mm)	2220
C (mm)	2750	M (mm)	1010
D (mm)	815	P (mm)	2440
E (mm)	4100	R (mm)	3920

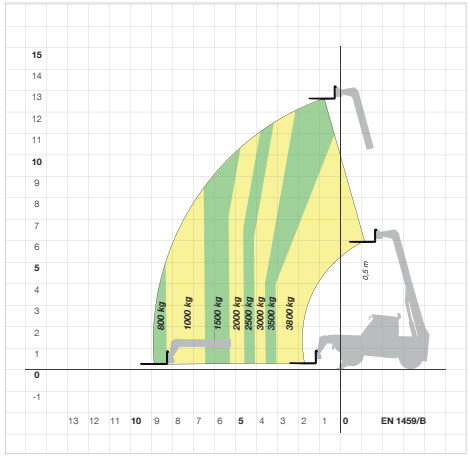
P 38.12 / PLUS WITH FORKS ON STABILIZERS



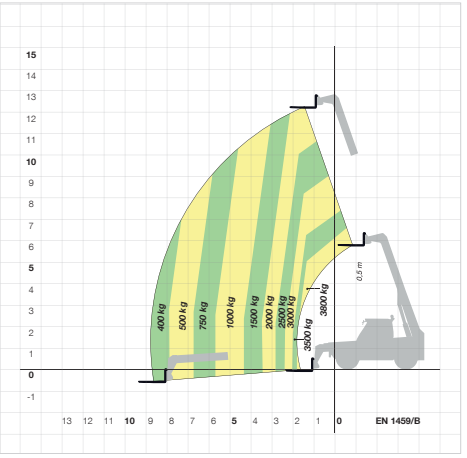
P 38.12 / PLUS WITH FORKS ON TYRES



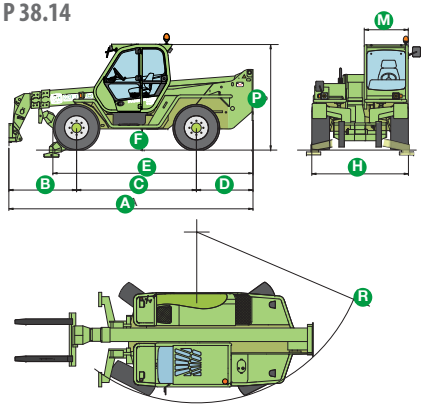
P 38.13 WITH FORKS ON STABILIZERS



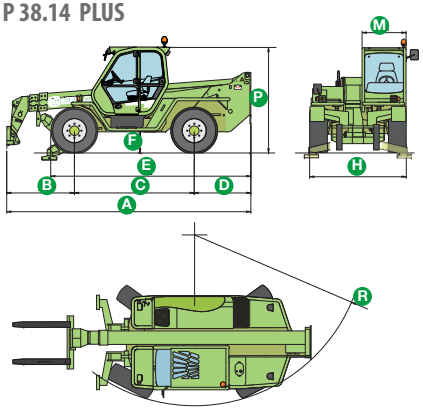
P 38.13 WITH FORKS ON TYRES



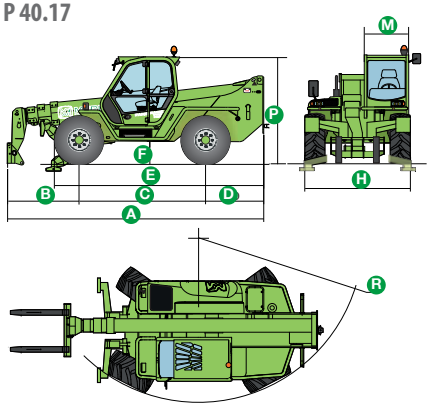
P 38.14



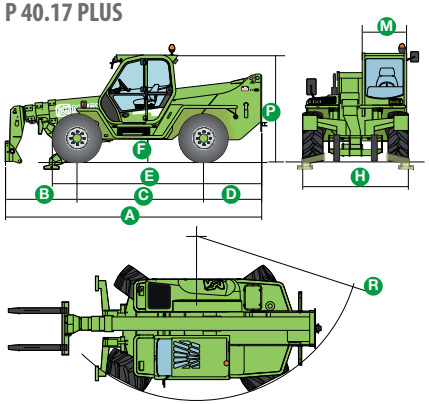
P 38.14 PLUS



P 40.17



P 40.17 PLUS



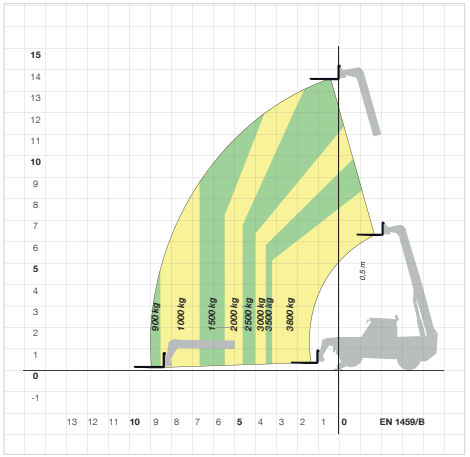
DIMENSIONS P 38.14			
A (mm)	5590	F (mm)	480
B (mm)	1540	H (mm)	2220
C (mm)	2750	M (mm)	1010
D (mm)	1300	P (mm)	2440
E (mm)	4585	R (mm)	3920

DIMENSIONS P 38.14 PLUS			
A (mm)	5590	F (mm)	480
B (mm)	1540	H (mm)	2220
C (mm)	2750	M (mm)	1010
D (mm)	1300	P (mm)	2440
E (mm)	4585	R (mm)	3920

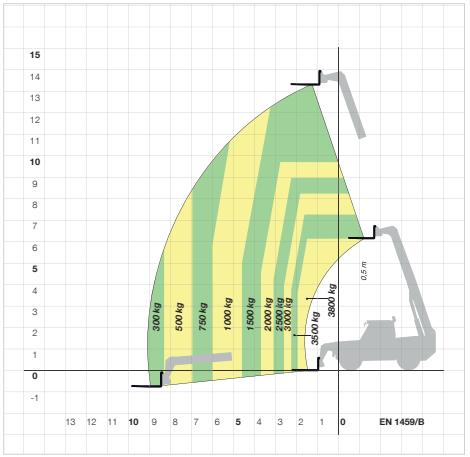
DIMENSIONS P 40.17			
A (mm)	5795	F (mm)	480
B (mm)	1505	H (mm)	2400
C (mm)	2875	M (mm)	1010
D (mm)	1315	P (mm)	2510
E (mm)	4790	R (mm)	4050

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

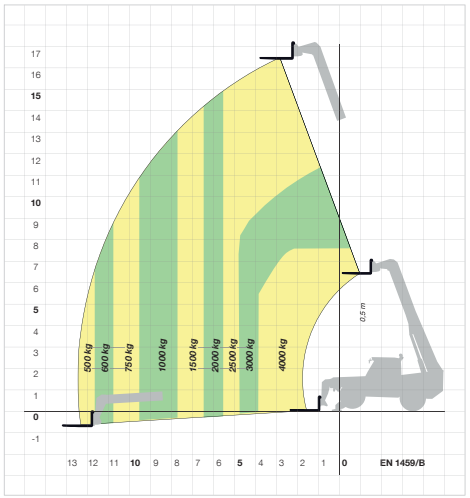
P 38.14 / PLUS WITH FORKS ON STABILIZERS



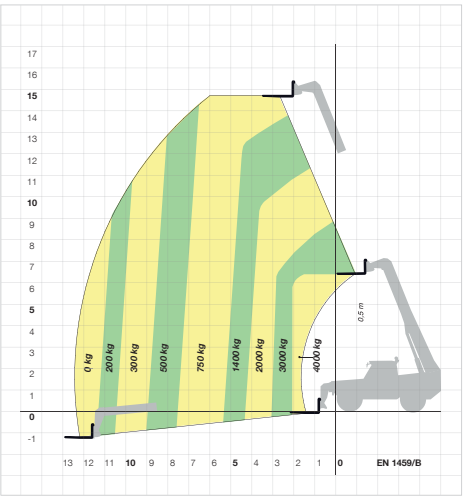
P 38.14 / PLUS WITH FORKS ON TYRES



P 40.17 / PLUS WITH FORKS ON STABILIZERS



P 40.17 / PLUS WITH FORKS ON TYRES



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