



# HEAVY DUTY Telehandlers

P72.10  
P50.18HM  
P65.14HM  
P120.10HM

TF50.8  
TF65.9  
TF45.11



**MERLO**





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# Merlo: Technological leader in operating machines

Merlo is an important family-run industrial group founded in Cuneo in 1964 that designs, produces and markets its own products under the Merlo and Treemme brands.

People and the territory are at the centre of the project; the Merlo Group is committed to respecting the environment and making the work of the operator (and everyone who is passionately dedicated to constantly improving the efficiency and performance of our products) more functional, safe and comfortable.

The product portfolio consists of a complete range of telehandlers, both fixed and rotating, self-loading concrete mixers (DBMs), Treemme implement-holders for municipal and forestry use, and multi-purpose tracked Cingo transporters.

All products in the Merlo range are characterised by innovation, technology and reliability, which have always been distinctive features of the Group and have gained market confidence.





# HEAVY DUTY TELEHANDLER RANGE: **Technology and productivity for everyone**

The Heavy Duty range of telehandlers has been developed to meet the needs of all those who have to carry out demanding work and move heavy loads in complete safety. The technical architecture, applied to Merlo telehandlers, translates to unique and very versatile, top-performing and user-friendly machines.

Using the numerous technologies developed and patented by Merlo, this range offers excellent telescopic performance without limiting the speed of work, the manoeuvrability and ease of use typical of Turbofarmer and Panoramic products.

These characteristics ensure that the models in this range can handle large quantities of material in a short space of time, providing the optimum response in the field of logistics, material handling and storage, without neglecting the handling of components thanks to equipment designed specifically for specific requirements such as the maintenance of large machinery.

For this reason the Heavy Duty range is used in a variety of sectors: from industry to mining; from earth moving to agriculture; from construction to waste treatment.



# Performance and versatility

The Heavy Duty telehandler range consists of four families of models available in multiple versions. This allows customers to choose the right option.

The main features are:

- Power ratings of 115 to 170 HP
- Lift capacity up to 12.000 kg
- Lift height up to 18 m
- Merlo interface for use with over 40 attachments.

## BOOM SIDE-SHIFT

The only machines on the market to offer this device, which allows you to correct the positioning of the load without having to move the machine or alter the stability and safety conditions for the operator.

## TELESCOPIC BOOM

Heights from 8 to 18 metres with load-bearing capacities from 4.500 to 12.000 kg.

Exclusive design that ensures lightness, precision and durability. Implement-holder carriage equipped with hydraulic Tac-lock locking system, controllable from the cab.

## CAB

FOPS (Level II) and ROPS certified. The cab is designed to maintain the maximum level of ergonomics while ensuring excellent protection for the operator. The 1.010 mm width and the wide glass surface ensure unparalleled comfort and full visibility.

## HYDRAULIC SYSTEM

Sized hydraulic system to minimise manoeuvring times. Variable displacement (Load Sensing) hydraulic pump and Flow Sharing distributor, for maximum efficiency, excellent performance, and perfectly smooth operation.

## USER INTERFACE

In-cab display for viewing all the operating parameters. Ergonomic joystick and controls with integrated travel-direction selector switch. Cursors and controls are designed to maximise ease of implementation.

## POWERTRAIN

Hydrostatic transmission with permanent four-wheel drive, 115 and 170 HP engines and maximum speed of 40 km/h.

Exclusive position of the side and longitudinal engine.







## SAFETY

The exclusive Merlo cab is compliant with the ISO 3449 FOPS (Level II) and ISO 3471 ROPS standards, thus ensuring category-leading safety levels.

Merlo's patented ASCS (Adaptive Stability Control System) is capable of recognising the attachment being used as well as measuring the magnitude of the load being handled, ensuring operators' safety. Through the digital display (optional), customers can check all the operating parameters within which the safety system will intervene by slowing down and stopping any problematic movements. Depending on the implement in use, the system is able to vary the response of the machine and the speed of movements. Machine safety is enhanced by an automatic parking brake management system, which brakes the machine if the engine switches off in order to avoid unintentional movements.



### MERLO BOOM



Boom consisting of a double "C" profile in high-strength steel with welds made along the neutral bending axis. Hydraulic hoses and electrical wires positioned inside the boom with a "cartridge" system, to protect against any possible impacts and easy extraction in case of maintenance. The L-shaped runner blocks are made of composite material to maximise efficiency and reduce impact and wear on the sliding surfaces. The Merlo boom solution can offer:

- High accuracy with millimetric precision of movement control
- No bending of the structure
- Protection of the components and hoses against impacts

## FOPS PROTECTION

A metallic structure, positioned above the glass roof, makes it possible to achieve the most stringent level of certification in terms of protection: FOPS level II. This certification guarantees:

- Perfect comfort in the cab
- Excellent visibility of the load
- Maximum operator safety



## FRAME

Compared to market standards, the frame is characterised by small dimensions, allowing to minimise the overall floor space occupied by the machine. Furthermore, it is equipped, on the outside, with an exclusive belt, made from steel section bar.

Designed to maximise structural strength and ensure excellent torsional strength, the underside of the body is completely secured by steel sheets, in order to protect all components from possible impacts during off-road driving.



## LEVELLING

The "Heavy Duty" telehandlers are equipped with a levelling corrector device. This solution is able to absorb the transverse inclinations of the ground up to 8%. This ensures a vertical lifting of the load and minimises the risks of lateral instability of the machine. It is configured according to the family:

- Turbofarmer - a hydraulic cylinder on the side of the frame
- Panoramic - two hydraulic cylinders between the chassis and axle







## ASCS

The ASCS (Adaptive Stability Control System) safety system ensures perfect risk prevention of the machine tipping over frontally when handling a load.

The system regulates the speed and maximum degree of movement according to three operating parameters:

- Handled load - kg of material lifted
- Load position - reach, boom extension and carriage rotation
- Implement in use - automatically recognised by the ASCS system.

When the operational stability limit is reached, the system first reduces the speed of the arm and then stops movement completely. In this phase, only those movements that re-establish a safer condition are permitted, simplifying the use of the machine even for less experienced users.

## DISPLAY

The ASCS is equipped with a 10,1" colour display, as standard, that allows the operator to view all operating parameters in real time. The high-brightness display has an integrated sensor for automatic brightness adjustment according to external light conditions. In this way, a simple reading of the stability conditions is always ensured, shown inside a load diagram that updates, in real time, according to the load being handled and the implement in use. At any time the customer can see at what point the safety system will be triggered. Independent control of each hydraulic movement allows the identification of movements potentially unsafe in the event of an ASCS intervention. In these situations, a pop-up message shows the customer all the movements allowed which are not detrimental to the stability of the vehicle.

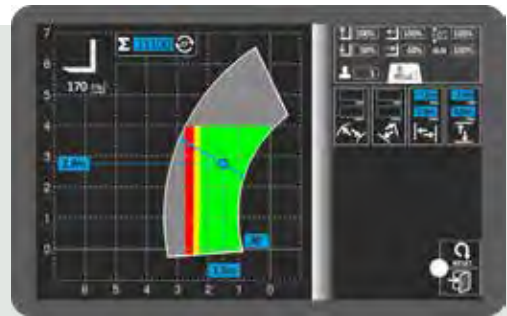
Finally, the display continuously shows the inclinometer to maximise the safe use of the machine.





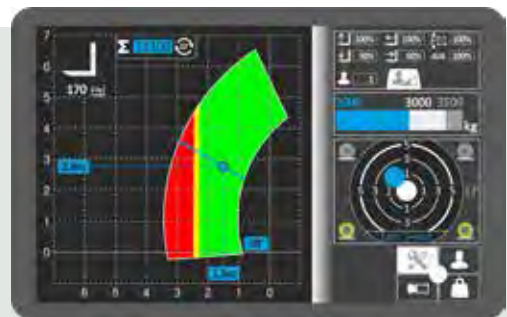
## WORKING AREA SETTING

A special function, accessible via the display, allows the operator to set the geometric working limits. Adjustments can be made in accordance with the vertical and horizontal movements or in accordance with the relative movements of the boom (minimum and maximum lift and extension). This solution makes it possible to simplify and increase safety during repetitive work and in confined spaces, such as inside a warehouse.



## MOVEMENT SPEED SETTING

The ASCS system uses the display to customise the speed of individual movements of the telescopic boom and the attachments in use according to the needs of individual operators as well as the operations to be carried out. Up to nine different setups can be stored.



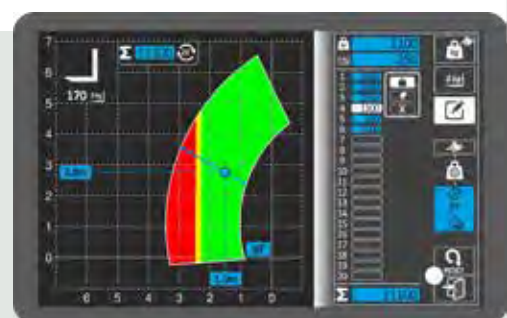
## FREE ZONE

By equipping the machine with a shovel, which is recognised accordingly, the working free zone is automatically activated. A working area of up to 1 metre of reach and 10° of lift. Within this area it is possible to operate without the control system blocking the movement of the implement in case of overload, facilitating digging operations and ensuring perfectly smooth movements.



## MEMORISING HANDLED LOADS

The ASCS display allows the reading of the load being handled, either manually or automatically, whenever the telescopic boom is raised beyond the degrees of inclination pre-set by the operator. The average tolerance on the measured values is  $\pm 5\%$  because these can vary depending on the dynamic conditions of the machine. The system can store up to 1.000 different readings, displaying the total and the last 20 values.



## REAR CAMERA

In combination with the 10,1" colour display of the ASCS system, it is possible to equip the machine with an automatically-operated rear camera, when the reverse gear control is engaged. Images from the rear of the telehandler are shown directly on the in-cab display. The camera can also be activated manually from the ASCS menu.





## PERFORMANCE

Merlo telehandlers are equipped with the latest generation of electronically controlled hydrostatic transmission, which, combined with the four-wheel drive that is always engaged, ensures:

- Excellent braking capacity when the accelerator pedal is released
- High levels of power and torque to the wheels
- Unparalleled ease of use

To complete the transmission, models are equipped with a two-speed mechanical gearbox or MCVTronic continuously variable gearbox. These allow them to reach a maximum speed of 40 km/h, without compromising precision of movement, ensured by millimetric adjustment of any movements performed.

### ENGINES

The engines available on these models have power ratings ranging from 115 to 170 HP, and, in accordance with the original Merlo design concept, are installed in a longitudinal direction on the right side of the frame. This ensures maximum accessibility to the components during scheduled and/or extraordinary maintenance operations.



### HYDRAULIC SYSTEM

These are the only models on the market equipped with two separate circuits for hydraulics and hydrostatics. The hydraulic circuit consists of a load sensing variable displacement pump combined with a flow-sharing electronically controlled hydraulic distributor for ease of use and up to three simultaneous movements without difficulty.

The hydraulic distributor, mounted at the rear of the frame, reduces vibration and heat transfer to the cab, while increasing accessibility for maintenance.





## RRM



A **unique and patented** solution. The hydraulic couplings developed and manufactured by Merlo ensure:

- Quick assembly and disassembly
- Increased tightness of connections
- Increased component service life
- No risk of line twisting

## AXLES AND BRAKES



The axles are available in two versions: with epicyclic reducers, to maximise the torque transmitted to the wheels and with portal reducers, to increase ground clearance. The Turbofarmer and P72.10 are equipped with four dry disc brakes sized to ensure high braking capacity and a high level of efficiency that minimises machine consumption. All bearings and bushings are designed to ensure a longer service life and reduce the need for maintenance. The remaining models are equipped with oil immersed brakes.

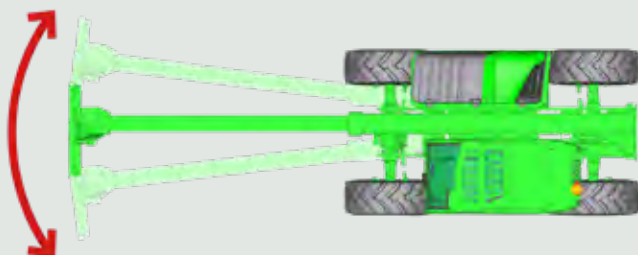
## CVTRONIC



Merlo's continuously variable CVTronic smart transmission combines the advantages of hydrostatic transmissions with the same performance and yield as a traditional CVT system. Compared to a conventional hydrostatic transmission, the CVTronic provides:

- A 12% increase in torque
- Reduced consumption thanks to its excellent efficiency
- Ease of use, thanks to the elimination of gear changes.

## BOOM SIDE-SHIFT



The system is built into the machine frame (Panoramic models) and allows for the lateral movement of the telescopic boom to ensure precise load positioning, with no need for additional manoeuvring, thereby saving time, reducing stress, and improving the machine's productivity. The side-shift control is located on the joystick and is proportional to maximise efficiency.

## ECO POWER DRIVE PLUS – SPEED CONTROL



The models in Turbofarmer family have been enhanced with the cruise control system called *Speed Control*. This solution allows the operator to set the desired transfer speed. Pressing the brake pedal or the direction selector will stop the machine.



## HI-FLOW HYDRAULICS



The models featuring *Hi-Flow* (HF) technology are equipped with a latest-generation hydraulic distributor developed by Merlo and associated with a high-flow hydraulic pump.

The HF system combines the features of traditional hydraulics with innovative solutions such as:

- Descent by gravity
- Automated movement control
- Digitised actuator position control
- Services oil continuous delivery

Thanks to *Hi-Flow* technology, Merlo is able to offer first-rate performance and unique management solutions to speed up and simplify users' daily operations.

### CAPACITIVE JOYSTICK

HF telehandlers are equipped with the innovative capacitive electronic joystick control. This instrument is able to detect the presence of the operator by means of a capacitive type sensor and enable the hydraulic movements of the machine. The joystick makes it possible to control the main hydraulic movements of the machine and implements, managing, as standard, up to 4.

Available as standard or as an option on other models in the range.





## CONTINUOUS DELIVERY

HF machines are equipped as standard with a system for regulating and delivering a constant flow of oil to the implements. This solution allows the oil flow to be precisely and specifically adjusted from 0 to maximum flow rate, for each of the 4 auxiliary hydraulic outlets at the top of the boom. This solution is also available as an option for several other models.



## DESCENT BY GRAVITY



This fully automatic solution allows the weight of the boom and load to be used for the lowering movement, significantly limiting the demand for hydraulic power and, consequently, consumption and noise, without reducing safety. Faster and more fluid movements allow for increased performance.

## VERTICAL ELEVATION



The automatic vertical elevation was developed in order to facilitate load handling operations within confined spaces. By activating this function, the machine synchronises the extension and lifting movements in order to achieve a purely vertical movement of the load during both loading and unloading of the material.

## SET-POINT



The *Set-point* function has been developed to reduce repetitive operations for operators, simplifying daily work.

By activating this function, the operator can memorise a working configuration, capable of autonomously managing the hydraulic movements (extension/retraction, lifting/lowering and carriage rotation) in order to return the implement to the memorised position.

## FLOATING MANAGEMENT



Available as an option, floating boom management has been developed to increase the versatility of the machine, facilitating operations with equipment that needs to follow ground contours such as sweepers, snow ploughs, shovels, etc.

Activating this function allows the boom to follow the ground contours freely, ensuring that the implement is in constant contact with the ground.



## COMFORT

Acoustic and thermal comfort has also been taken care of down to the smallest details, thanks to intensive research into the most innovative technical solutions and materials. In terms of environmental performance, the entry of dust into the passenger compartment is prevented thanks to the cab's ISO 10263-3 compliant pressurisation\*.

The Merlo cab is also an extremely comfortable and practical workplace, thanks to the following features:

- 1.010 mm of width and excellent roominess
- Large glass surface of 4,3 sq. m
- Vibration-damping *Silent-blocks*, which reduce noise and vibrations

The set-up is complete with a fabric seat with mechanical suspension. Optionally, the machine can be equipped with air-suspension, raised-back and heated seats.

NOTES:

\* pressurisation level not approved for use of pesticides, work in hazardous environments, with asbestos, etc.



### CAB



An unprecedented design guarantees maximum functionality and comfort; grouping the information provided to the driver and the controls of the various systems and devices for optimal ergonomics. The reverse shuttle on the steering wheel is also present on the joystick

- 1 ASCS Display
- 2 Capacitive joystick
- 3 Steering wheel and transmission controls
- 4 Transmission display
- 5 Pedal control unit
- 6 Accessory compartment and air conditioning controls

In the picture, the P72.10Plus cab



### CAB ENTRY



Easy access to the cab is provided by the **180° opening door** and the high distance between the upright and steering wheel, maximising the entry space. The side window, which is independent of the door body, can be locked in the open position to maximise air exchange, visibility and direct contact with those working outside near the machine.

### AIR-CONDITIONING

Developed according to automotive standards, cutting the warm-up and cool-down times in half compared to a conventional air conditioning system.



The suction vent is located on the side of the cab, away from potential sources of dust and dirt, while inside there are 8 vents, three of which are dedicated to defrosting the windscreen, for optimum climatic comfort.

### BOOM SUSPENSIONS



The active boom suspension system (BSS), available as an option or as standard for HF models, protects the load during transfer and maintains a high level of driving comfort on rough terrain. The suspension is automatically deactivated at low speed (below 3 km/h), for boom maximum precision and power.

### THE MERLO CARRIAGE



Merlo machines have a carriage designed to ensure record-breaking performance with every implement, without compromising on lightness, which is essential for ensuring an exceptional lifting capacity. Moreover, the maximum rotation greatly facilitates the loading and unloading of material with shovels. The **Tac-lock device**, which comes **standard** on all the models, guarantees maximum operating comfort, allowing the implements to be hydraulically locked from the cab.

### SUSPENDED CAB



The models in this range can be fitted with the exclusive and **patented Suspended Cab (CS)**. By equipping the machine with this unique solution, the cab is fitted with an active hydropneumatic suspension, which can be controlled directly by the operator with an electric switch. When the suspension is active, the total displacement of the passenger compartment is 110 mm (-60 mm / +50 mm); a condition that provides for a drastic reduction in vibrations and stresses inside the passenger compartment, thereby facilitating transport and work operations, even on uneven ground.





# EFFICIENCY

Merlo telehandlers are developed with the aim of being the most compact and lightweight models on the market. Excellent manoeuvrability is ensured by the 4-wheel steering system and the three steering modes, able to reduce manoeuvring times and space for decreased fuel consumption.

- Less manoeuvring space needed
- Greater productivity
- Reduced impact on the ground and fuel consumption

In order to ensure efficient management of the attachments, all the models feature a double-acting hydraulic service line and an electrical socket for machine-implement communication located at the top of the boom.

## THREE STEERING WAYS

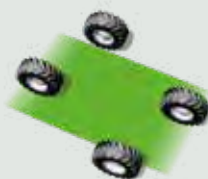
**This exclusive solution adopted on the axles guarantees the maximum steering angle to perform manoeuvres in tight spaces.**



front wheel steering

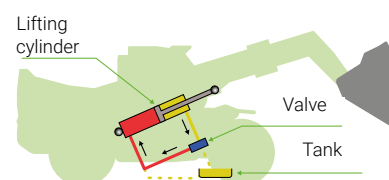


pivot steering



crab steering

## REGENERATIVE SYSTEM



In order to improve productivity, the HM models all come standard with the regenerative system for the hydraulic circuit. This solution has been developed to increase the boom's angular speed during transfer operations. This fully automated system is capable of increasing the boom's speed by 36%.





## VISIBILITY



**The improved visibility on the market** ensures efficiency in movement and safety for customers, reducing stress for operators who perform numerous manoeuvres during the working day. To achieve these standards of visibility, Merlo has invested in a careful study of the positioning of the cab and boom, as well as a detailed bonnet design and a large glass surface with the aim of ensuring fast, safe and precise operations.

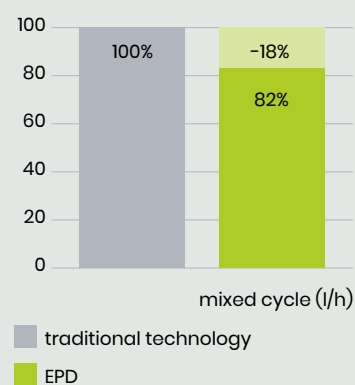
## EPD AND AUTO-REVVING JOYSTICK



The exclusive and innovative EPD (Eco Power Drive) is a Merlo patented system for the electronic control and regulation of the engine and transmission. The EPD automatically controls and adjusts engine speed, hydrostatic pump flow rate and hydrostatic engine displacement according to operating conditions to maximise efficiency and reduce RPM and ensures a reduction in fuel consumption of up to 18%. The annual savings are € 3.300 (the figure assumes an average use of 1.000 h/year and an average fuel price of €1,1 per litre). The EPD includes the "Auto-revving joystick" function, which allows engine speed proportionally to the

use of the joystick (the greater the inclination of the joystick, the greater the engine rpm). This feature further optimises machine consumption, allowing idle speed to be maintained for longer while maximising responsiveness for material handling.

## REDUCED CONSUMPTION Merlo EPD technology



## TOWING



In order to maximise the versatility of these models, it is possible to homologate the Heavy Duty telehandlers, belonging to the Turbofarmer family, as an agricultural tractor, allowing it to tow trailers on public roads. Different trailer hooking

and braking solutions are available to suit different customer requirements, as well as for the power supply of the towed component. The maximum limit is 32 tonnes, depending on the range or towing hook and brake solution adopted.

## BATTERY ISOLATOR SWITCH



As a standard feature, the telehandlers come equipped with an electric and automatic battery switch to improve the efficiency and life of the batteries. Removing the key from the ignition switch starts the process of disconnecting the machine's electrical circuit. With the circuit off, simply insert the keys into the control panel again to reactivate the batteries.



## HEAVY DUTY TURBOFARMER TELEHANDLER RANGE

The Turbostar Heavy Duty telehandler range consists of 3 models with lifting capacities between 4.500 kg and 6.500 kg, and lifting heights of up to 11 m, in 9 different versions depending on the configuration.

The strength of this range lies in its broad selection of products, which allows the customer to choose from numerous exclusive technological options, like the suspended cab and the continuously variable transmission, able to meet the various operational needs of all the end users.

The range consists of two different product lines:

- TF50.8 – TF45.11
- TF65.9



### TF50.8 – TF45.11

They are the most compact models in the Heavy Duty range. Equipped with axles fitted with epicyclic reducers, ensuring fast and precise work.

The stand out features include:

- 160 l/min hydraulics with *Hi-Flow* (HF) technology
- EPD with maximum speed of 40 km/h
- 125 kW/170 hp engine
- CS and CVTronic technology available



### TF65.9

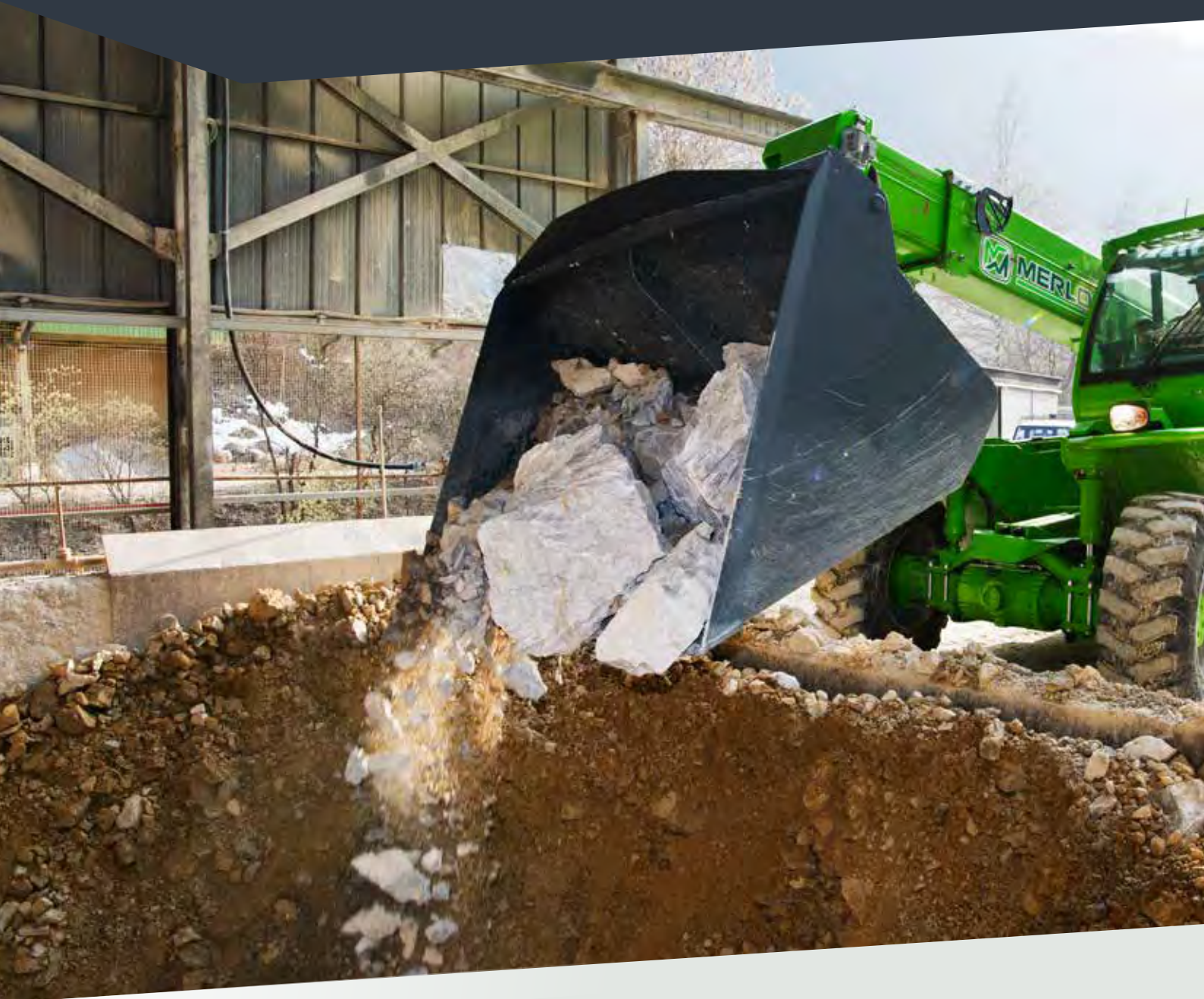
Models developed to offer greater telescopic performance.

The portal axles allow increasing the ground clearance, thus making the machine nimbler in off-road conditions. The cab is on a higher position in order to ensure that the operator has better visibility.

The stand out features include:

- 160 l/min hydraulics with *Hi-Flow* (HF) technology
- EPD with maximum speed of 40 km/h
- 125 kW/170 hp engine
- CS and CVTronic technology available





## HEAVY DUTY PANORAMIC TELEHANDLER RANGE

The Panoramic Heavy Duty telehandler range consists of 4 models with lifting capacities between 5.000 kg and 12.000 kg, and lifting heights of up to 18 m. The strength of this range is its high lifting capacity combined with ease of use and precision in the management of the telescopic boom and transmission. All models are equipped with exclusive technological features, such as the safety system and boom side-shift.

The range consists of two different product lines:

- P72.10Plus
- Panoramic HM





### P72.10Plus

Model designed to offer high lifting capacities, ensuring maximum ease of use.

The portal axles allow increasing the ground clearance, thus making the machine nimbler in off-road conditions.

The stand out features include:

- 104 l/min hydraulics with *Load Sensing* technology
- EPD transmission with maximum speed of 40 km/h
- 85,9 kW/115 HP engine
- Levelling device and boom side-shift system



### Panoramic HM

Models developed to offer greater lifting capacity.

The axles with epicyclic reducers are equipped with oil immersed brakes.

The cab is on a higher position in order to ensure that the operator has better visibility.

The stand out features include:

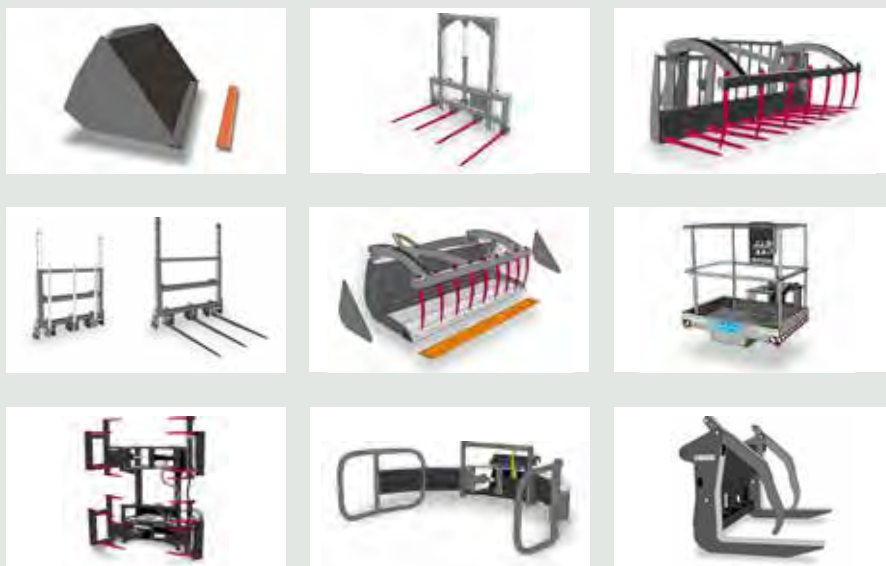
- 158 l/min hydraulics with *Load Sensing* and *Flow Sharing* technology as well as a regenerative system
- EPD transmission with maximum speed of 40 km/h
- 125 kW/170 hp engine with CVTronic gearbox
- Levelling device and boom side-shift system



# ATTACHMENTS

The attachments, which are designed and manufactured at the Merlo Group facilities, are the real operational tools used by Merlo telehandlers, and are designed to bring out the machines' performance and versatility in different operational situations.

The patented recognition of the attachments and the effective Tac-lock hydraulic locking system allow for quick tool changes to be performed, with the operating parameters being configured automatically for maximum safety.



# SERVICE AND SPARE PARTS

Whoever buys a Merlo machine chooses a product that meets the highest standards of quality, reliability and innovation. The customer can count on first-rate support and maintenance services offered by the Merlo Service network, and original spare parts subjected to continuous and rigorous quality controls.

Careful and periodic maintenance, combined with the use of original spare parts, will help your telehandler maintain its performance levels over time.



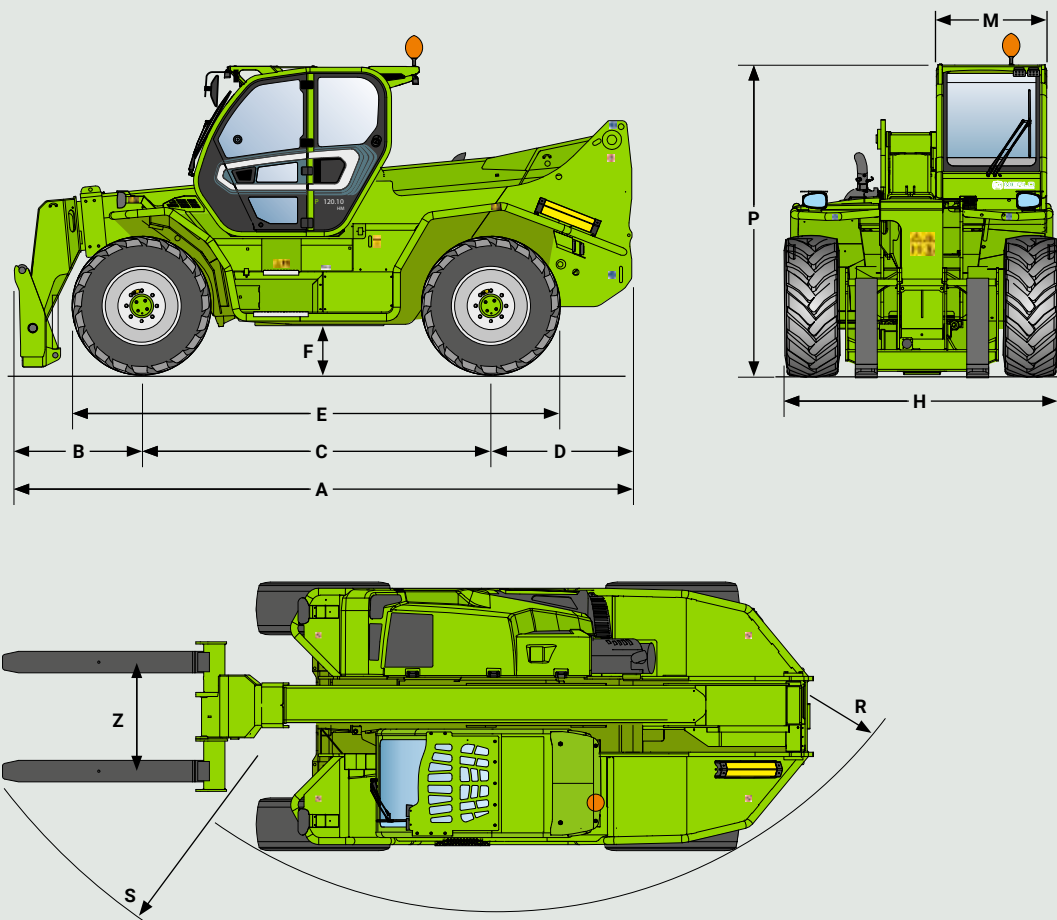
# MERLOMOBILITY

The Merlo telehandler range offers exclusive technology, making their telehandlers even smarter and more connected. The customer, through the MerloMobility 4.0 connectivity system, can fully utilise the information detected by the machines and transferred to a portal.

MerloMobility is a flexible tool that allows the user to optimise the operational monitoring of their machines used in various sectors.



# Technical characteristics



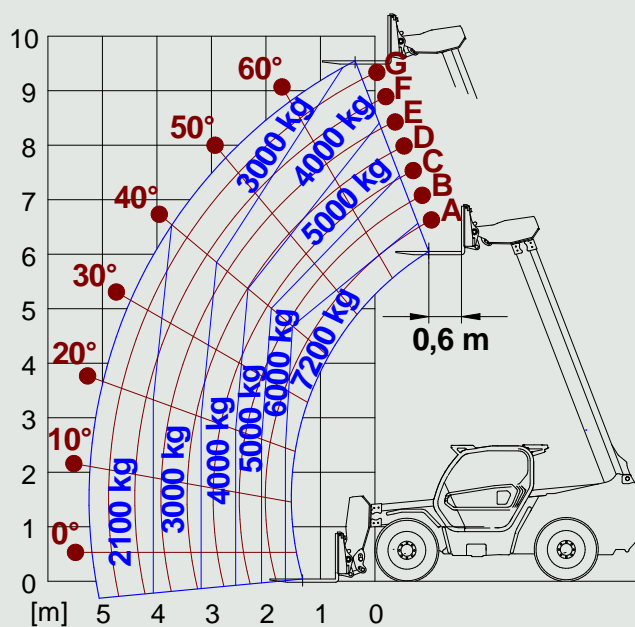
	Dimensions	A	C	E	F	H	M	P	R	S
<b>P72.10PLUS</b>	mm	5480	2920	4815	450	2240	1010	2500	3970	4990
<b>P50.18HM</b>	mm	6180	3240	5235	450	2520	1010	2850	4300	5480
<b>P65.14HM</b>	mm	5910	3240	5235	450	2520	1010	2850	4300	5400
<b>P120.10HM</b>	mm	5770	3290	5260	450	2520	1010	2850	4300	5700
<b>TF50.8T-170-HF</b>	mm	4870	3050	4360	440	2400	1010	2530	3830	4800
<b>TF50.8TCS-170-HF</b>	mm	4870	3050	4360	440	2400	1010	2590	3830	4800
<b>TF50.8TCS-170-CVTRONIC-HF</b>	mm	4870	3050	4360	440	2400	1010	2590	3830	4800
<b>TF65.9T-170-HF</b>	mm	5260	3050	4660	440	2400	1010	2510	4560	5325
<b>TF65.9TCS-170-HF</b>	mm	5260	3050	4660	440	2400	1010	2510	4560	5325
<b>TF65.9TCS-170-CVTRONIC-HF</b>	mm	5260	3050	4660	440	2400	1010	2510	4560	5325
<b>TF45.11T-170-HF</b>	mm	4870	3050	4360	440	2400	1010	2530	3830	4800
<b>TF45.11TCS-170-HF</b>	mm	4870	3050	4360	440	2400	1010	2590	3830	4800
<b>TF45.11TCS-170-CVT-HF</b>	mm	4870	3050	4360	440	2400	1010	2590	3830	4800

Model	P72.10PLUS	P50.18HM	P65.14HM	P120.10HM	TF50.8T-170-HF	TF50.8TCS-170-HF	
<b>Performance</b>							
Unladen weight (kg)	11.300	15.700	15.250	16.200	9.500	9.700	
Maximum load capacity (kg)	7.200	5.000	6.500	12.000	5.000	5.000	
Lift height (m)	9,55	17,9	13,9	9,8	7,8	7,8	
Maximum reach (m)	5,2	13	8,8	5,3	4,2	4,2	
Boom side-shift (mm)	+/- 250	+/- 440	+/- 375	+/- 185	-	-	
Frame levelling (%)	+/- 8	+/- 8	+/- 8	+/- 8	+/- 8	+/- 8	
<b>Powertrain</b>							
Engine	Perkins 904J	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45	
Displacement / cylinders	3.600/4	4.500/4	4.500/4	4.500/4	4.500/4	4.500/4	
Engine power (kW/HP)	85,9/115	125/170	125/170	125/170	125/170	125/170	
Anti-pollution technology	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	
Reversible fan	No	No	No	No	No	No	
Maximum speed (km/h)	40	40	40	40	40	40	
Fuel tank capacity (l)	140	150	150	150	140	140	
Adblue tank capacity (l)	18	43	43	43	18	18	
Hydrostatic transmission	Yes - 2V	CVTronic	CVTronic	CVTronic	Yes - 2V	Yes - 2V	
EPD	STD	STD	STD	STD	Plus	Plus	
Auto-revving joystick	Yes	Yes	Yes	Yes	Yes	Yes	
Reducers	Cascade	Epicyclic	Epicyclic	Epicyclic	Epicyclic	Epicyclic	
Brakes	Dry discs	Oil immersed	Oil immersed	Oil immersed	Dry discs	Dry discs	
<b>Hydraulic system</b>							
Hydraulic pump	LS	LS + FS	LS + FS	LS + FS	HF	HF	
Delivery/pressure (l/min-bar)	104 - 250	119 - 210	119 - 210	119 - 210	160 - 250	160 - 250	
Hydraulic oil tank capacity (l)	100	149	149	149	100	100	
<b>Cab</b>							
Cab finishing	ECO	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM	
ASCS	Full	Full	Full	Full	Full	Full	
FOPS LEV II Cab - ROPS	Yes	Yes	Yes	Yes	Yes	Yes	
Joystick	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	
<b>Configuration</b>							
Cab suspension	No	No	No	No	No	Yes	
Regenerative system	No	Yes	Yes	Yes	No	No	
Tac-lock	Yes	Yes	Yes	Yes	Yes	Yes	
Standard tyres	400/70-24	17,5-25	17,5-25	17,5-25	500/70-24	500/70-24	

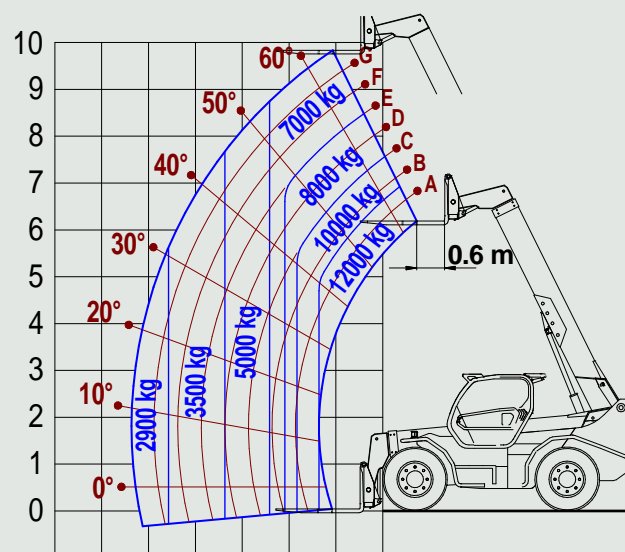


	TF50.8TCS-170-CVTRONIC-HF	TF65.9T-170-HF	TF65.9TCS-170-HF	TF65.9TCS-170-CVTRONIC-HF	TF45.11T-170-HF	TF45.11TCS-170-HF	TF45.11TCS-170-CVTRONIC-HF
	9.750	11.000	11.200	11.250	9.850	10.000	10.050
	5.000	6.500	6.500	6.500	4.500	4.500	4.500
	7,8	8,8	8,8	8,8	10,6	10,6	10,6
	4,2	4,7	4,7	4,7	7	7	7
	-	-	-	-	-	-	-
	+/-8	+/-8	+/-8	+/-8	+/-8	+/-8	+/-8
	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45
	4.500/4	4.500/4	4.500/4	4.500/4	4.500/4	4.500/4	4.500/4
	125/170	125/170	125/170	125/170	125/170	125/170	125/170
	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF	Stage V, SCR+DOC+DPF
	No	No	No	No	No	No	No
	40	40	40	40	40	40	40
	140	140	140	140	140	140	140
	18	18	18	18	18	18	18
	CVTronic	YES - 2V	YES - 2V	CVTronic	Yes - 2V	Yes - 2V	CVTronic
	Plus	Top	Top	Top	Plus	Plus	Plus
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Epicyclic	Epicyclic	Epicyclic	Epicyclic	Epicyclic	Epicyclic	Epicyclic
	Dry discs	Dry discs	Dry discs	Dry discs	Dry discs	Dry discs	Dry discs
	HF	HF	HF	HF	HF	HF	HF
	160 - 250	160 - 250	160 - 250	160 - 250	160 - 250	160 - 250	160 - 250
	100	100	100	100	100	100	100
	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM
	Full	Full	Full	Full	Full	Full	Full
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
	Yes	No	Yes	Yes	No	Yes	Yes
	No	No	No	No	No	No	No
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	500/70-24	500/70-24	500/70-24	500/70-24	500/70-24	500/70-24	500/70-24

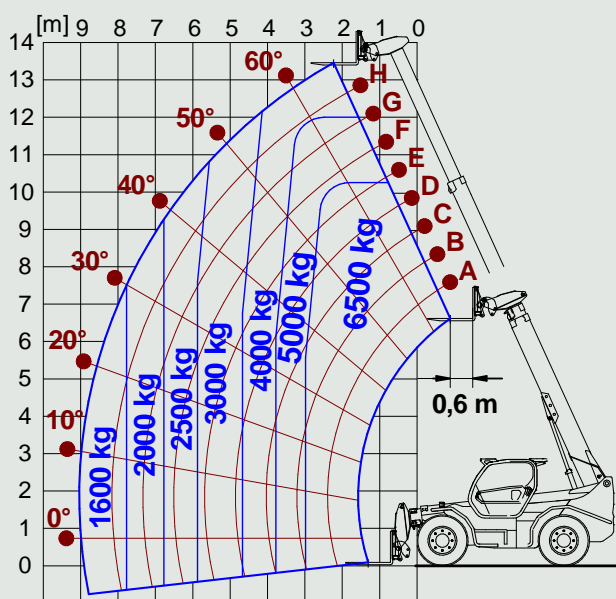
## P72.10PLUS



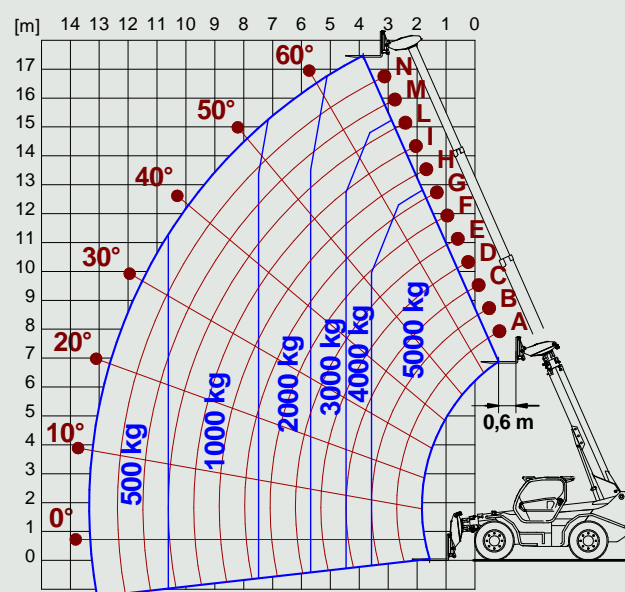
## P120.10HM



## P65.14HM

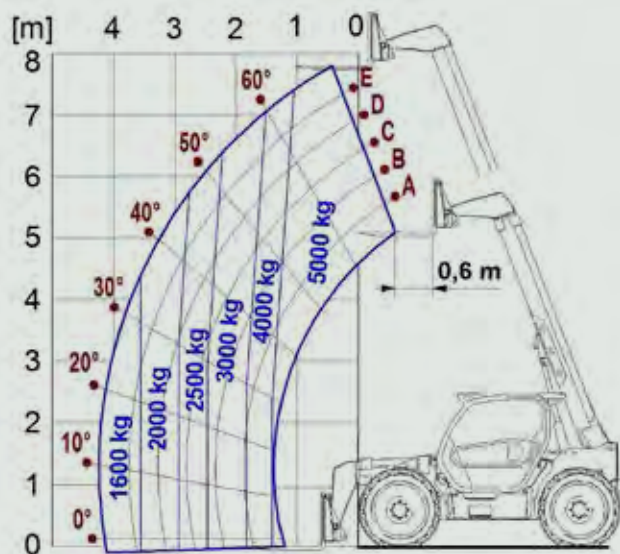


## P50.18HM

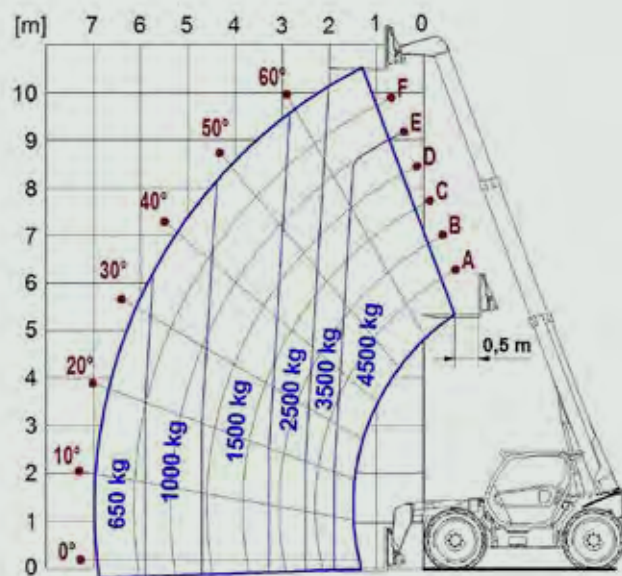




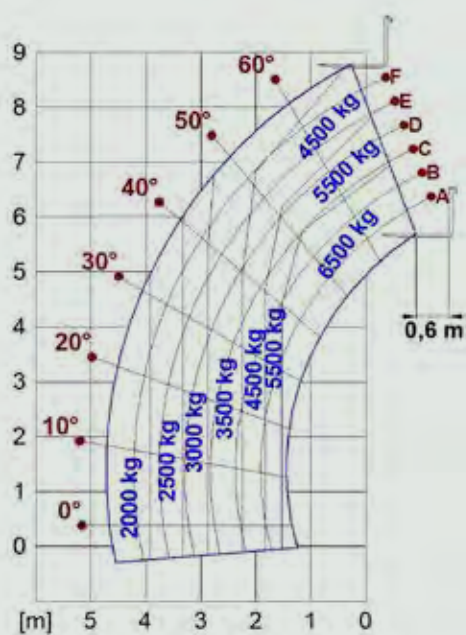
TF50.8T



TF45.11T



TF65.9T





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