

MLT & MLT-X 960

INDUSTRIAL and AGRICULTURE HANDLING solutions



www.manitou.com

MANITOU YOUR MATERIAL-HANDLING PARTNER



A global group

The MANITOU group, **the worldwide reference in material-handling**, designs, assembles and distributes handling solutions in all activity sectors: industry, construction and agriculture. Based on over 50 years' experience, MANITOU is constantly innovating and guarantees you high quality products and service that is adapted to your needs.

Products that meet your demands

With a heavy-duty capacity of **6 tonnes and lift height of 9 meters**, the MLT 960 is a machine that meets the needs of the industry and agriculture sectors for heavy lifting and bulk handling. Above all, this

telehandler is your number one ally in your quest for performance.

Your partner in material-handling

By choosing MANITOU, you are investing in a quality machine over the long term. You will also benefit from all the services proposed by your dealer: after-sales service, maintenance and service contracts, on-site assistance, rental solutions and personalized finance packages.

With MANITOU, you are sure to work with a dedicated specialist partner !

MANITOU, a global network

- ✓ **1,400 sale outlets...** available across **more than 120 countries**
- ✓ Over 2,000 factory trained technicians
- ✓ A logistics centre with 34,000 m² of storage capacity for spare parts
- ✓ **A unique approach in material-handling:**
 - Telehandlers
 - Electric and diesel-powered Platforms
 - Truck-mounted Forklifts
 - Industrial and Semi-industrial Forklift Trucks
 - Warehouse Handling Equipment...





For **intensive jobs**,
the **MLT 960** is your **solution**.



PERFORMANCE AT YOUR SERVICE

Engine

Your MLT 960 is equipped with a 141 horsepower **John Deere 4x4.5l cylinder engine** that meets the Interim Tier 4/Stage IIIB guidelines. This engine has an **EGR valve** (Exhaust Gas Recycling) with a **Diesel Particulate Filter** (DPF) to **minimize the impact on the environment**. With this power, the machine can reach 40 kph all whilst minimising fuel consumption.

The IIIA version of the engine is available only on the MLT Xversion not for EU countries see local market regulations.



Transmission

Ideal for increasing productivity, the **new CVT** (Continuous Variable Transmission) Dana 318 guarantees:

- **simple to use:** you control your speed from 0 to 40 kph, using only the accelerator pedal and you maintain permanent torque to the wheels
- **improved pushing capability** (10,000 daN) for all your loading work
- **comfortable to use** thanks to smooth transition through the speeds and high engine brake forces.

Braking

Reinforced and watertight, the front and rear axles integrate oil immersed braking systems.

As well as being protected, your machine's brakes **stay reliable over time**.

The steering cylinder is also protected and placed in the top position.

You can work in demanding tasks securely, with brakes on all 4 wheels and one **automatic parking brake** (negative action). **Maximum efficiency guaranteed!**

Optimal cooling engine, reduced consumption

With **electronic control**, the cooling system automatically controls the rotation speed of the fan, based on the engine temperature.

This therefore reduces fuel consumption significantly.

The **radiator's automatic dust removal** reverses the air flow regardless of the engine speed. Cooling is always optimal, especially in very dusty environments, particularly in the presence of straw and paper.

This system **minimizes maintenance** and especially **optimizes your engine's performance** all whilst saving **time and fuel**.



THE **MLT 960**, YOUR PARTNER IN **PRODUCTIVITY**



Continuous Transmission CVT 1

Speed control

Adjust your maximum travel speed to adapt to your needs (comfort, safety...)

Standard modes and handling

Choose the mode that best suits you and your task. The handling mode is very progressive and suitable for loading. The standard mode is a lot more dynamic and is recommended for all other tasks.

"Working mode" (SET)

Simplify your life by storing travel and engine speed for use with a sweeper, silage defacer...

Hydraulic line 2

Controlling hydraulic lines A and B.

With a flow rate of 180l/min (270 bars), the LSU (Load Sensing Ultra) hydraulic pump guarantees the combined, fast and precise movement of your boom and attachment.

Your productivity will increase!

Inching Function

For safe and flexible handling, the **inching pedal** allows you to slowly lift your loads whilst keeping your engine running at a high speed.

Wheel traction is maintained and you save significant movement speed.





**Increase
efficiency!**



COMFORTABLE WORKING ENVIRONMENT

A spacious and ergonomic cabin

Your driving seat has been designed to provide a really **ergonomic model**. It is equipped with a cloth seat with an adjustable height and depth. You can therefore select your own driving position.

The cabin is sealed to avoid outside dust entering the cab. If you work in a polluted environment, you can also choose the pressurized cabin option.

All of these features contribute to your feeling of **comfort**.

The **design** is tailored to your **comfort**!



Intuitive Controls

Exclusive to MANITOU, the **JSM®** single lever allows you to operate in complete safety and carry out every movement with one hand: raise and lower the boom, extend and retract the boom, tilt and crowd the bucket, hydraulically operate the accessories, and also forward and reverse. **You always keep one hand on the wheel to totally control your MLT.**



Choose your finish

Our standard machine already meets many expectations, but since every customer is unique, you have 3 levels of finish to choose from:

 **CLASSIC**  **PREMIUM**  **ELITE**

			
Carriage + forks	●	●	●
Sun visor, windshield and sun roof	●	●	●
Front and rear windscreen wipers	●	●	●
Rear windscreen defrost	●	●	●
JSM® on adjustable armrest, steering wheel with adjustable height and depth	●	●	●
Interior rear view mirror	●	●	●
Complete road lighting	●	●	●
Front and rear work lamp	●	●	●
Rotating beacon light/Reversing alarm/Reverse light	●	●	●
Digicode (anti-start)	●	●	●
Automatic radiator dust removal system	●	●	●
Self-cleaning pre-filter	●	●	●
Hydraulic line head with quick release couplers and flow control	●	●	●
Rear power outlet/ Hydraulic trailer brake	●	●	●
Rotating draw bar	●	●	●
Boom material deflectors	●	●	●
Central lubrication point	●	●	●
Decompression system of the attachment line with cabin control: Easy Connect System (ECS)	○	●	●
Radio	●	–	–
CD MP3 radio	○	●	–
CD MP3 radio with hands free kit	–	○	●
Mechanical cloth seat	●	–	–
Pneumatic cloth seat	○	●	–
Low frequency air cloth seat	○	○	●
Air-conditioning	○	●	●
Accelerator pedal	○	●	●
Boom suspension	○	○	●
Automatic wheel alignment	○	○	●
Xenon work lamp (R+L)	○	○	●
Continuous flow	○	○	○
Hydraulic attachment locking on the standard carriage (TS)	○	○	○
Trailer braking	○	○	○
Windshield and headlight protection	○	○	○
Work lights on the boom	○	○	○

● Standard ○ Option – Not available

THE EQUIPMENT THAT YOU NEED

A large choice of tyres

MANITOU offers:

- **agricultural** tyres in different widths for all tasks on all types of terrain,
- **semi-industrial** tyres for concrete and hard standing surfaces,
- **special anti-puncture** tyres for 'environmental work' (recycling, waste disposal...),

Accessories adapted to your activity

To save you time **the MANITOU accessory attachment system** is universal, easy and simple to use. You can attach/detach your accessories without difficulty.



MANITOU attachments: performance and safety!



To meet both your needs and activities, we can provide you with a range of accessories available validated by MANITOU and specially adapted for the MLT 960:

4,000L AGRICULTURAL BUCKET: CBA 2500/4000 LDR

- **Capacity:** 4,000 litres
- **Use:** cereals and other agricultural materials (density < 1)
- **Advantages:**
 - └ optimized payload with high retention capability
 - └ reinforced and strengthened structure, suitable for intensive use
 - └ profiled bucket for maximum payload



2,200L GRAPPLE BUCKET: CBG 2480/2200 EN waste grapple bucket

- **Heaped grapple bucket capacity:** 2,200 litres
- **Level capacity:** 1,500 litres
- **Use:** waste disposal handling, for the treatment of green waste and intensive use in difficult conditions
- **Advantages:**
 - └ heavy duty attachment designed for intensive use
 - └ boom head protection thanks to an integrated grapple
 - └ grapple rotation stops and double pressure limiter for greater longevity and optimal usage



2,600L GRAPPLE BUCKET: CBG 2480/2600 MS

- **Heaped grapple bucket capacity:** 2,600 litres
- **Level capacity:** 1,500 litres
- **Use:** intensive use for agriculture and in the bio gas sector
- **Advantages:**
 - └ grapple rotation stops and double pressure limiter for greater longevity and optimal usage
 - └ limited material loss due to lateral design
 - └ robust attachment adapted to intensive usage



These accessories ensure an **optimal stock flow for intensive sites** all whilst upholding the **safety** of your machine and working environment.

Other available attachments:



Bale carriage
FB1900/1700



Bale clamp
MBC2x3



Pick-up sweeper
BRB 2500



Crane jib
PC60



Rehandling bucket
CBR 1000/2450

MATERIAL HANDLING IN COMPLETE SAFETY!

A cabin designed to protect you

With its large glass surface (roof and front windshield) as well as its high seat position, the MLT 960 offers **360° visibility** guaranteeing the safety of both yourself and bystanders.

The cabin meets all ROPS/FOPS* requirements and keeps you safe in case the structure of the cab is damaged.

A fully tested structure

With the rigidity of its monobloc chassis and its duplex boom (10 mm thick), your MLT 960 will handle large and heavy loads whilst saving you time.

Its robustness is also heightened thanks to its reinforced carriages.

* Roll over protective structure (ROPS)
Falling object protective structure (FOPS)



MAINTENANCE IS SIMPLE!



Easy access to engine parts

You save time when carrying out maintenance as there is a dual opening to the engine compartment (without disassembly). Access to all the filters and engine components is very easy.

Easy radiator maintenance

To maintain your radiator's efficiency, we have equipped it with a detachable protection grill that is easy to clean.

The bottom of the compartment is also equipped with an articulated hatch that allows you to remove anything that might enter into the chamber.

Easy access to tanks

The oil and gas oil tanks are easy to access and in a central location via a lockable cover.



MANITOU SERVICES



Tailor-made finance to make the best use of your funds

You can plan the purchase of your forklift with peace of mind by using MANITOU* financing opportunities.

You will have simple solutions adapted to your needs and seasonal requirements. If you want to make a rapid investment, consider asking us for a personalised proposal to take your situation into account.

* MANITOU Finance solutions are available in certain countries.

MANITOU maintenance contract

2 levels of maintenance adapted to your needs.

You are sure of:

- equipment always in good working condition
- a reduction of repair costs as a result of regular servicing
- authentic standardised services

• Labour
• Attendance costs



• Labour
• Attendance costs
• Parts and lubricants



Extension of guarantee Maniplus

With MANIPLUS, you can take out an extension of guarantee of 12 or 24 months.

EASY MANAGER

A simple and flexible system for fleet management (with or without geolocation) to provide optimum service from your machines. EASY MANAGER gives you:

- real-time materials management
- simple and easy way of managing your machinery activity and maintenance
- maximise your asset and safeguard your equipment



MANITOU spare parts

Utilising genuine MANITOU spare parts is sure to prolong the best performance capability of your machine. Your MANITOU dealer has access to a stock of 70,000 part numbers, available in 24 hours in Europe (48 hours outside Europe).



TOGETHER, LET'S REDUCE OUR CARBON FOOTPRINT



The material handling sector has not yet got a normalised cycle to measure the trucks' energy consumption. Manitou Group clearly shows its commitment to transparency by establishing an internal protocol, accessible to all, that can reveal its own measures of consumption (l/h) and CO2 emissions (kg/h). To provide the highest reliability, the data is checked and approved by an independent body, UTAC* specialized in the registration of vehicles and equipment.

SUSTAINABLE SOLUTIONS

To be THE material handling reference is to commit to innovate to offer you safe, efficient and sustainable solutions today and tomorrow.

TOGETHER

Manitou Group would like to accompany you in reducing your trucks fuel consumption to help cut back your carbon footprint.

INFORM

We have developed information and awareness tools (product labels, iPad simulator...) to inform you about our trucks' fuel consumption and emissions.

TEST PROTOCOL

Consumption measurements are performed on four representative activities of a telescopic forklift: handling, bulk loading, idle and road work.



APPROVED PROCEDURES

To validate orientations adopted by the Group in terms of fuel consumption, we wanted to validate our procedures via a recognised external body.



Calculate your fuel consumption:
<http://reduce.manitou.com>



*UTAC: Technical Union for the Automobile, Motorcycle and Cycle Industries performs official duty cycles in the automotive sector. UTAC is the only French Technical Service notified to the European Commission and the UNO for fuel consumption.

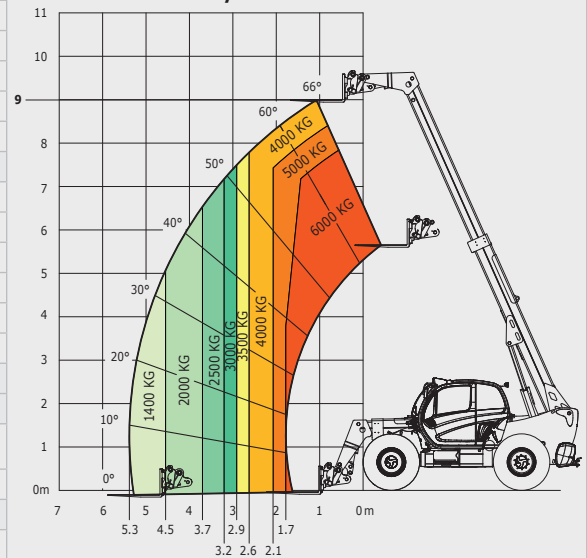
MLT & MLT-X 960

	MLT 960	MLT-X 960
Lifting		
Max. capacity	6000 kg	
Max. lifting height	9 m	
Max. outreach	5.3 m	
Reach at max. height	1.1 m	
Break-out force with bucket	7300 daN	
Unladen time		
Lifting	8.5 secs	
Lowering	6.5 secs	
Extension	7 secs	
Retraction	6 secs	
Crowd	3.8 secs	
Dump	3.6 secs	
Tyres	500/70 - R24	
Braking		
Service brake	hydraulic oil immersed multi-disc braking on front/rear axles	
Parking brake	automatic negative handbrake on the front axle	
Engine	JOHN DEERE	
Type	4045 PWX 104 kW St.IIIB	4045 - PWX St.IIIA
Cubic capacity	4500 cm³	
Power	141 HP - 104 kW	137 HP - 102 kW
Max. torque	534 Nm - 1500 rpm	545 Nm - 1500 rpm
Injection	direct	
Cooling	water	
Laden drawbar pull	10000 daN	
Transmission		
Gearbox	CVT DANA 318	
Reversing shift	electrohydraulic control	
Max. travel speed (may vary according to applicable regulations)	40 kph	
Hydraulics	swashplate piston pumps electronically controlled variable cubic capacity	
Pump	180 l/min - 270 bar	
Control valve	Rexroth	
Capacities		
Hydraulic oil	153 l	
Fuel	135 l	
Unladen weight (with forks)	11400 kg	
Dimensions		
1. Ground clearance	0.45 m	
2. Overall length to carriage	6.1 m	
3. Wheelbase	3 m	
4. Overall width of cab	0.995 m	
5. Overall width	2.48 m	
6. Overall height	2.53 m	
7. Turning radius (over tyres)	4.3 m	
8. Turning radius (with forks)	5.49 m	
Standard forks (length x width x thickness)	1200 x 200 x 60 mm	
Noise and vibration		
Noise at driving position (LpA)	80 dB	
Environmental noise (LwA)	105 dB	
Vibration to whole hand/arm	< 2.5 m/s²	

Industrial load chart

standard EN1459 A

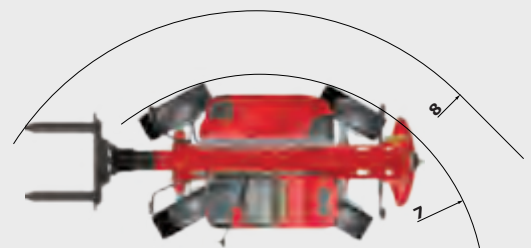
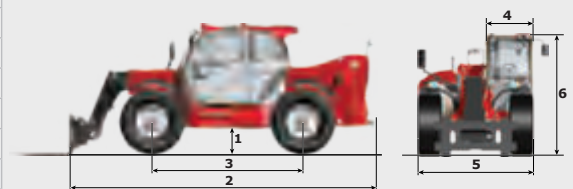
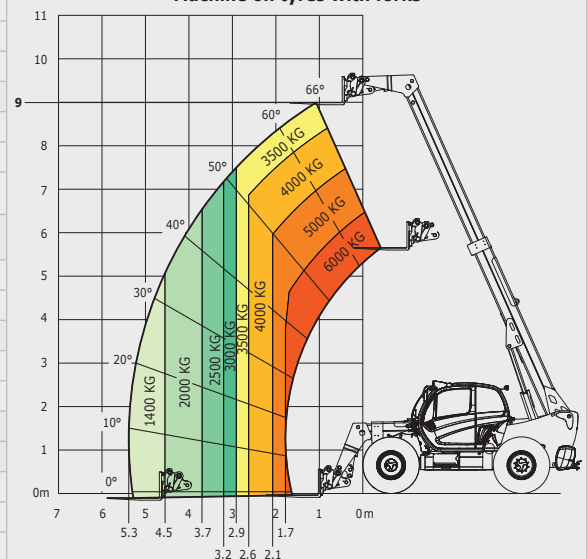
Machine on tyres with forks - CDG 600mm



Rough terrain load chart

standard EN1459 B

Machine on tyres with forks



This brochure describes versions and configuration options for MANITOU products which may be fitted with different equipment. The equipment described in this brochure may be standard, optional or not available depending on version. MANITOU reserves the right to change the specifications shown and described at any time and without prior warning. The manufacturer is not liable for the specifications given. For more information, contact your MANITOU dealer. Non-contractual document. Product descriptions may differ from actual products. List of specifications is not comprehensive. The logos and visual identity of the company are the property of MANITOU and may not be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are provided for information only.

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