



# MINING

Catalogue 2016



GEHL

MUSTANG



# Sustainable partner in an innovating world

## **A main player in the oil and gas business**

For over 20 years, we have understood the industrial safety, productivity and service issues that you have to deal with at every stage of a project. From the construction of your infrastructure, to operation support and equipment maintenance.

Manitou Group researches, designs, and manufactures a wide range of dedicated machines, well known for their reliability, performance and robustness. They prove themselves day after day in the most extreme working conditions.

Our network of 1,400 expert dealers provides you with services essential to your business, including after-sales support, maintenance, training and financing.

With capacities from 0,5 to 40 tons (t) (from 1,100 to 80,000 pounds (lbs.)) and lift heights from 6 to 44.3 meters (m) (19'60" to 142'), Manitou Group has the solution to all your material handling needs.





**3 brands**  
distributed by  
1,400 dealers  
in 140 countries

 **MANITOU** | **GEHL** | **MUSTANG**





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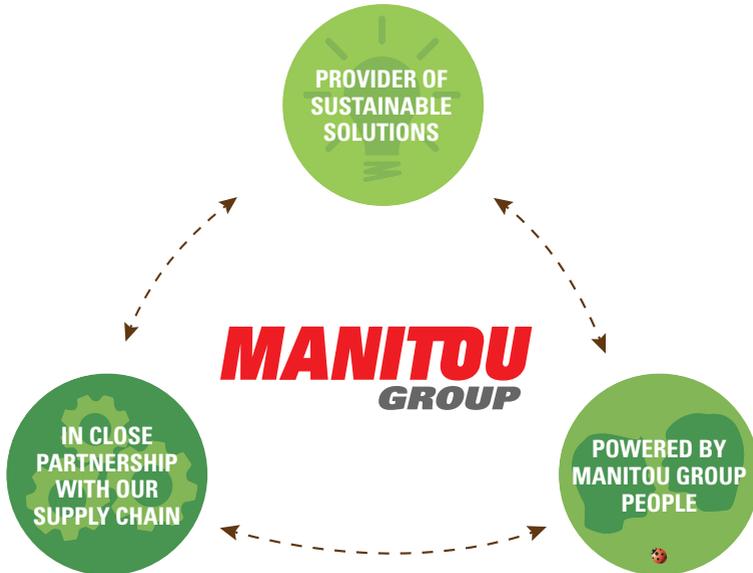
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## Our Elevation Plan: 3 MAJOR COMMITMENTS

Monitored in an operational action plan  
To meet the challenges facing us



### Number 1 at GAÏA INDEX

November 2014

Manitou Group ranked first in the Gaïa Index for the industrial sector and third in the sector for companies with a turnover of more than € 500m.

Gaïa-index is a stock market index composed of 70 better notations regarding RSE, among 230 listed companies in the Paris Stock Exchange (excluding CAC 40).

### Grand Prix for Companies and the Environment

Décember 2014

Manitou Group was awarded, by ADEME and by the Ministry for Ecology, Sustainable Development and Energy, in the category "Management and initiatives for sustainable development", REDUCE programme in particular.

### Signatory to the United Nations Global Compact

June 2015

The UN Global Compact calls for companies to voluntarily align the companies' strategies and activities with 10 universal principles on human rights, labour, environment and anticorruption, and take actions that advance societal goals.

# 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.

# Manitou group range



Range	Compact telehandlers	Rough terrain forklifts	Medium and high lift telehandlers
Max. capacity t (Lbs)	<b>6 (13,228)</b>	<b>7 (15,400)</b>	<b>4 (8,819)</b>
Lift heights m (ft)	<b>9,6 (31'6")</b>	<b>6,5 (21'3")</b>	<b>17,55 (57'7")</b>
Brand	<b>Manitou</b>	<b>Manitou</b>	<b>Manitou</b>



Range	Pallet trucks	Stackers	Electric forklifts
Max. capacity t (Lbs)	<b>5 (11,000)</b>	<b>2 (5,500)</b>	<b>3 (6,600)</b>
Lift heights m (ft)	-	<b>5,4 (17'7")</b>	<b>6 (19'7")</b>
Brand	<b>Loc</b>	<b>Loc</b>	<b>Manitou</b>



Range	Skid loaders	Track loaders	Articulated loaders
Max. capacity t (Lbs)	<b>1,8 (4,000)</b>	<b>0,9 (2,100)</b>	<b>1,2 (2,560)</b>
Lift heights m (ft)	<b>3,6 (144")</b>	<b>3,25 (128")</b>	<b>3 (120.3")</b>
Brand	<b>Gehl / Mustang</b>	<b>Gehl / Mustang</b>	<b>Gehl / Mustang</b>

## MINING SOLUTIONS



Heavy duty telehandlers	Rotative telehandlers	Aerial work platform *
40 (88,106)	5,5 (12,125)	3 pers
13,6 (44'60")	31,6 (103'67")	27,75 (91'1")
<b>Manitou</b>	<b>Manitou</b>	<b>Manitou</b>



Semi industrial forklifts	Industrial forklifts	Telescopic / masted mounted trucks
5 (11,000)	3,5 (7,700)	2,7 (5,940)
6 (19'7")	6,5 (21'3")	3,9 (12'8")
<b>Manitou</b>	<b>Manitou</b>	<b>Manitou</b>



Telehandlers**	Compact excavators**
5,4 (12,000)	4,7 (10,417)
16,8 (55.1")	3,55 (11'7.8")
<b>Gehl / Mustang</b>	<b>Gehl / Mustang</b>

\* Some models are unavailable in North America  
 \*\* Except Europe

## Services Manitou range

Choosing Manitou Group equipment means above all opting for a complete solution. Manitou supports its customers throughout the world with the help of its 19 subsidiaries and a network of 1,400 dealers in more than 120 countries.

**We respond to your needs over the entire life cycle of your machines.**









■ **Network of dealers**

A network of experts at your service, whatever your activity.

■ **Maintenance contracts**

Three levels of contract that are tailored to your needs: Initial, Advanced and Excellence. Entrust the maintenance of your equipment to your dealer.

■ **Financing**

Lease or buy? Manitou Finance helps you choose the most suitable financing solution for your activity. Why look elsewhere?

■ **Warranty extension**

Thanks to them, you can extend the cover of your forklift for up to 5 years. Use your equipment with peace of mind.

■ **Fleet management**

Easy Manager is a simple and flexible tool for managing, optimizing and securing the operational monitoring of your machines.

■ **Second-hand**

In the market for second-hand equipment? The Manitou network offers a wide range of resources so you get the machine you need at the right price. Just visit [used.manitou.com](http://used.manitou.com), our dedicated reference site for second-hand machines.

■ **Original spare parts**

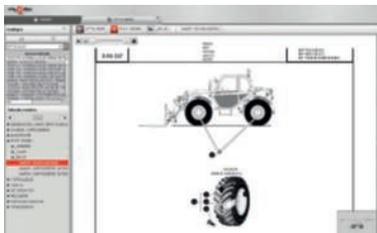
With more than 125,000 references available, your dealer provides expertise and service on a daily basis!



Our 8 spare parts centres



Spare parts centre



My Edoc



## Overview

The Manitou Group has developed brands specialised in the maintenance and repair of your machines:

MANITOU, for original parts for your MANITOU machines, and XPRT, spare parts for GEHL and MUSTANG machines.

Availability, delivery and technical support

- 8 regional distribution centres to cover the entire globe and deliver between 24 and 48 hours
- More than 125,000 specific parts in stock, with an availability rate of 95%
- Parts available on the shelf through our network of 1,400 dealer locations
- Standard or custom-tailored transportation solutions
- Hotline and technical support from our network for spare parts recommendations and advice
- Availability of parts guaranteed for more than 10 years after the end of series life

### Tips

By systematically employing original spare parts, you ensure the long-term performance of your machine

## 1.2 Training



Training centres

### Overview

- 13 training centres throughout the world
- On-site customised training upon request
- More than 600 training sessions per year
  - maintenance of the machines and attachments
  - attachment utilisation
  - operator training



Training on-site



Training centre



Training in the training centre

#### Tips

Training your employees for increased safety during work

## **MANITOU** **FINANCE**

### Overview

MANITOU Finance provides flexible finance solutions tailored to your business needs. Offering a range of products including Hire Purchase, Finance Lease and Contract Hire, you can be sure that we have an option to suit you.

- Credit
  - owner of the machine at the end of the contract
  - choice of the duration between 2 and 7 years and the rate type
  - seasonal financing plan
- Leasing
  - choice of the duration
  - owner at the end of the contract
- Renting
  - choice of the duration between 1 and 5 years
  - option of integrating other services into the monthly fee (maintenance, warranty extension)
  - investment capacity preserved
- Full-service leasing
  - choice of the duration between 1 and 5 years
  - periodic maintenance
  - any necessary repairs

*\*available in specific countries only. Check with your dealer for eligibility*



## Overview

- Maintenance contracts provide support by a qualified technician through regular maintenance operations and preventative inspections as indicated by the manufacturer.
- Our dealer network can offer various types of maintenance contracts. This ensures that:
  - your equipment is always in an optimal state of maintenance
  - repair costs are kept to a minimum thanks to regular check-ups - all maintenance work is compliant
- "Tailor made" maintenance contracts are available upon request, to suit your needs through our Manitou dealer network.



## Overview

Warranty extensions prolong the coverage of your equipment of up to 5 years. More peace of mind, more safety:

- support for parts and labour
- ensuring optimum use and minimum downtime
- increased value at resale. Use your equipment with peace of mind!



### Tips

With a maintenance contract you are guaranteed the optimal use of your equipment with a minimum of downtime.



## Overview

Keep an eye on your machines wherever you are! Easy Manager allows you to manage, optimise and secure your machine in real time and remotely.

3 simple and flexible options:

- INDOOR: fleet management
- OUTDOOR: fleet management & geolocation
- ACCESS: fleet management, geolocation & secure access control

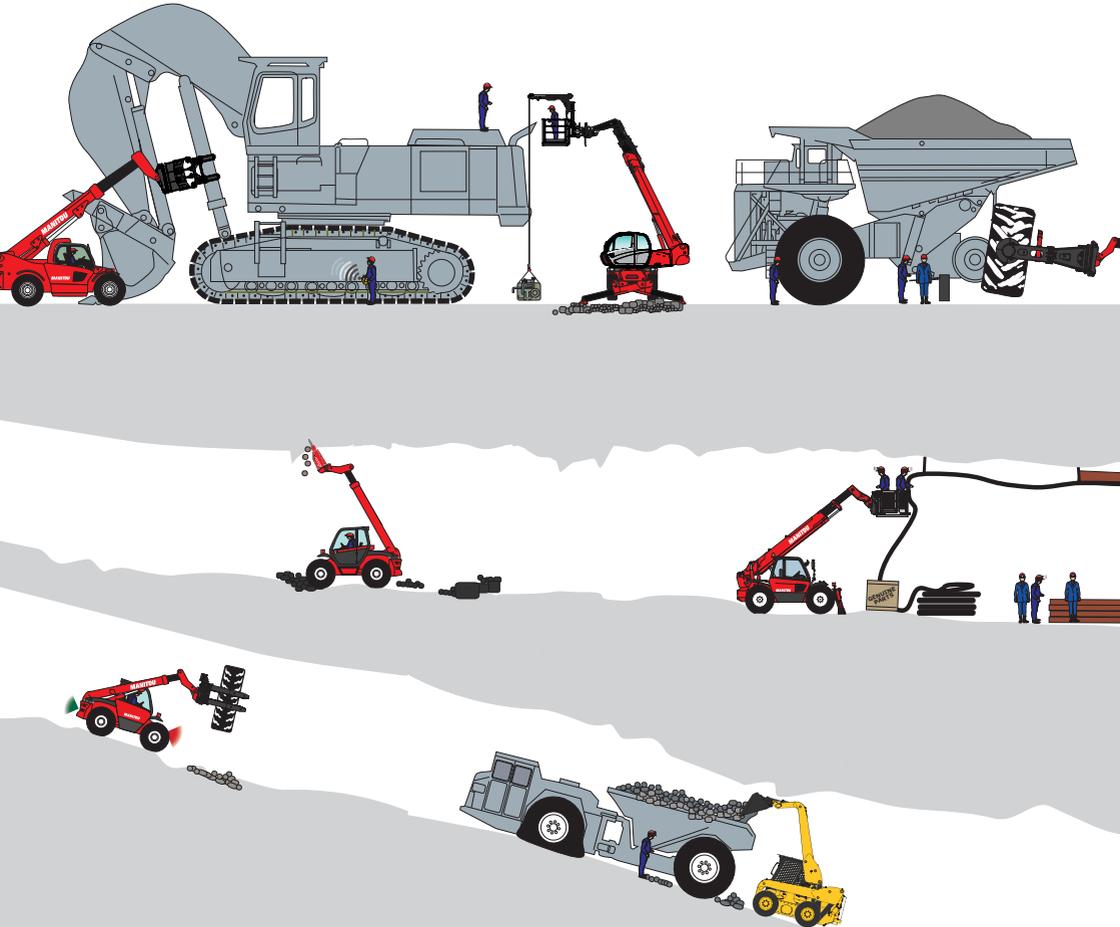


### Tips

**EASY MANAGER** informs you about upcoming maintenance work on your equipment. With a maintenance contract, you keep a handle on your costs and optimise the availability of your equipment during maintenance visits.

# Mining Competence Centre

Manufactured in our “Mining Competence Centre” (MCC), a dedicated team designs and produces the next generation of mining spec utility vehicles.





## 2.1

# Mining Competence Centre

Next generation of mining spec utility vehicles



MT X-1030S with mine basket



MHTX 10230



MHTX 780



MTX 732

This has been our constant focus: making sure that operators go home safe and that mining operations improve efficiency.

Staying true to these values, Manitou is set to deliver the next generation of lifting solutions to the resources industries.

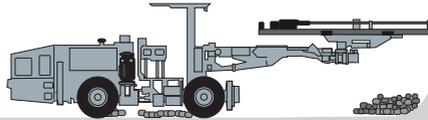
These new products:

- MT-X 732 Mining
- MT-X 1030S Mining
- MHT-X 780/790 Mining
- MHT-X 10130 Mining
- MHT-X 10180 Mining
- MHT-X 10230 Mining

are a direct response to users' needs for a safe, robust handling and personnel lifting solution.

6 models ranging from 3 tons (6,600 Lbs) to 23 tons (50,700 Lbs) integrate the first fully factory built mining specifications to suit the harsh environments.

More safety with fail safe brake system, mining guardian angel motoring of critical functions, 360 degree visibility system, safe exhaust system... More up time with robust structural guards and ultimate electrical protections and much more.



MRT 1850 UG



MT 732 UG mine specs



GEHL 4240 UG specs



GEHL 4240 UG mine specs

## Factory built utility vehicles

Mining specifications categories:

- Fail-safe braking and steering
- Control systems and warnings
- General protections
- General protections electrical
- Fire prevention & control
- Ergonomics, access & visibility
- Isolation points
- Maintenance

2.1

# Mining Competence Centre

Next generation of mining spec utility vehicles

## Some Main Key Benefits to remember



**FACTORY BUILT UTILITY VEHICLE**



**FAIL SAFE BRAKING SYSTEM  
EMERGENCY STEERING**



**ELECTRICAL PROTECTIONS**



**GUARDIAN ANGEL MINING SYSTEM**



**EXHAUST FUMES PURIFICATION  
& DILUTION SYSTEM\***

*\* Only on specific models*



**ROBUST PROTECTIONS  
Components, Structure**



**360° VISIBILITY SAFETY SYSTEM**



**AFTERSALES SERVICE & MANUFACTURER WARRANTY**

## Why is Manitou Mining Utility Vehicle better?



Manitou Mining Utility vehicle



Standard specs machine or competition

Mining Specs Factory Built and Certified Solutions		
Fail-Safe Braking & Steering system – <i>Factory fitted &amp; Certified</i>	✓	X
Electrical reinforcement protection – <i>Factory designed &amp; fitted</i>	✓	X
Guardian Angel Safety System	✓	X
Exhaust Fumes Purification & Dilution*	✓	X
Robust Protections, <i>components, structure</i>	✓	X
Manitou 360° Visibility Safety System	✓	X
OEM Aftersales Service & Warranty <i>on Mining Specs features</i>	✓	X
And many other Mining specs options...	✓	X

# Surface mining



Manitou Group's equipment range ensures production mining fleets can be safely and efficiently maintained and repaired to ensure availability.

Naturally, today's mining professionals are looking for greater efficiency and productivity from their production mining fleets.

With the high capital costs of production fleets, return on investment is realised through availability, which is vital to success of any mining operation.

Whether it be Excavators, Electric Shovels, Draglines, Off Highway Trucks, Blast Drill Rigs or Wheel Loaders, Manitou Group's spirited approach to solutions ensures safe and effective delivery of service and maintenance tasks to maximise the efficiency of your people and machines.



### 3.1

# Cylinder handling

Heavy cylinders: CH10



CH10 + 8t (17640lbs) cylinder



CH10



CH10 with movements (side shift + body rotation)



Cylinder handling CH10

## Overview

- Operating for cylinder from 150mm (6") to 600mm (23") OD.
- Max capacity: 10.5t (23148lbs) at 9.3m (354") (MHT 10225).
- Rough terrain ability of the solution, designed to carry cylinders to any location in the mine site.
- Safety and productivity: Smooth and accurate cylinder catching and positioning.
- 8 combined movements: Functional as a human wrist.
- Compact and shielded design for state of the art features protection

**Reduced Downtime!**  
4 to 6 hours needed to replace a cylinder in total safety, instead of 12+ hours.



CH10 with 6.2t (13669lbs) cylinder

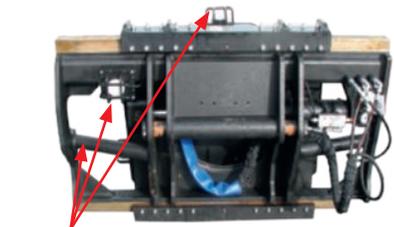


CH10 + MHT 10210 radio remote controlled

Visual gauge



Warning lights    Reduction pads    Pad shoe    Accumulator

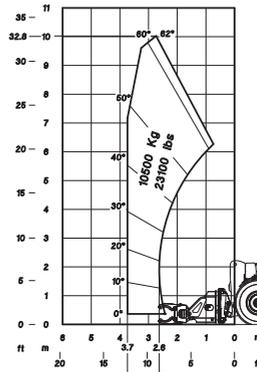


Warning lights

## Safety First



- Failure prevention: Safety chains and slings system.
- Load Moment Indicator 3B6 to accurately define your working envelop.
- Machine carrying the cylinder: Limitation of the machines number on maintenance area.
- Radio Remote Control for close and safe operation monitoring.
- Not suspended load condition: No guessing of balance point. Annihilated risk of sudden fall.
- Clamping Pressure Control System: Accumulator and Visual Gauge.
- Adaptive design with pad shoe for a perfect cylinder catch.



MHT 10230 at 10.5t (23148lbs)

**Lowering all the risks!**  
**A versatile tool enabling a tremendous machinery fleet reduction to handle the operation. Less technical risks, fewer operators present resulting in lowering potential mistakes.**

# 3.1

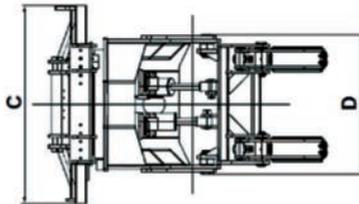
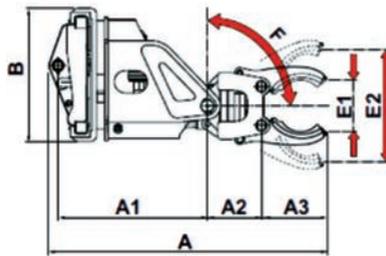
# Cylinder handling

Heavy cylinders: CH10

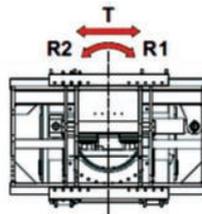
## Specifications

Manitou quick hitch mounted: Change in less than 3 minutes. Manual operation for operator safety check.

Name	Max Capacity	Cylinder Diameter	Side Shift	Body Rotation	Handler Tilting
CH10	10,500kg 23148lbs	From 230/640 mm (9.05" /25.2")	Total 600mm (23") 300mm each side (12")	340° (200° right side, 140° left side)	90° in addition to the original tilting of the Telehandler



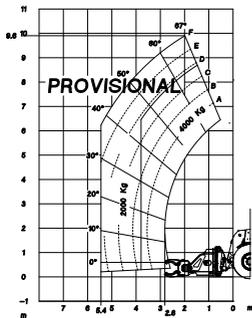
A	2525 mm
A1	1355 mm
A2	490 mm
A3	600 mm
B	1195 mm
C	1780 mm
D	1255 mm
E1	85 mm
E2	630 mm
F	90°
T	± 300 mm
R1	+200°
R2	-140°
WEIGHT	3350 kg



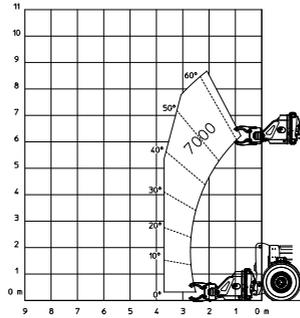


# Load Charts

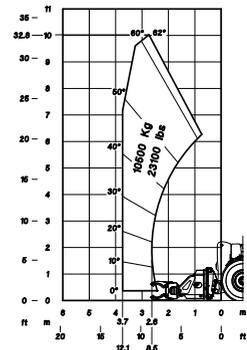
Model	Max Combined Capacity	Max Height at Max Capacity	Max Reach at Max Capacity
MHT(-X) 10120	4,500 kg (9,920 lbs.)	9,9 m 32'7"	2,7 m 8'10"
MHT(-X) 10130	4,000 kg (8,820 lbs.)	8,7 m 28'6"	3,8 m 12'5"
MHT(-X) 10180	7,000 kg (15,430 lbs.)	8,7 m 28'6"	4,4 m 14'5"
MHT(-X) 10225	10,500 kg (23,150 lbs.)	9,0 m 29'6"	3,1 m 10'2"
MHT(-X) 10230	10,500 kg (23,150 lbs.)	10 m 32'9"	3,7 m 12'1"



MHT 10130



MHT 10180



MHT 10230

3.1

# Cylinder handling

Heavy cylinders: CH10

## Tips

**Oil adds weight to the cylinder and can overpass your capacity. Check the cylinder chamber volume when the piston is fully extended.**

**Hoses around the cylinder may interfere with clamp.**



CH10

## CHECK

Ø: Outside diameter of the cylinder or clamping diameter.

L: Length of the cylinder.

W: Max weight of the cylinder (+ oil if piston extended).

C: Clearance around cylinders.

H: Height of cylinder in maintenance position.



MHT 10160 + CH10 servicing a 9,80 ton (21605lbs) excavator



MHTX10225

### 3.1

## Cylinder handling

Mid size cylinders: CH4



CH4 + MHT780



Strut handler



All cylinders on backhoe excavator

## Overview

- Suitable for: rear struts, front struts, dumping cylinder, boom cylinders, accumulators, transmission shaft, tilting cylinders and steering cylinders.
- Operating for cylinder from 250mm (10") to 530mm (21") OD.
- Max capacity: 4t (8820lbs) at 9.9m (354") (MHT 10230).
- Load clamped and fixed to the ground: Cancellation of suspended loads.
- Suitable for all cylinders/suspensions under 4t (8820lbs).
- Safe and cost efficient.
- Compact and light, it allows a simplified approach on limited access areas.

**Safe maintenance practices!**  
Simplify your maintenance process while making it safer.



Strut handler



MHT 10120 + CH4 remote control



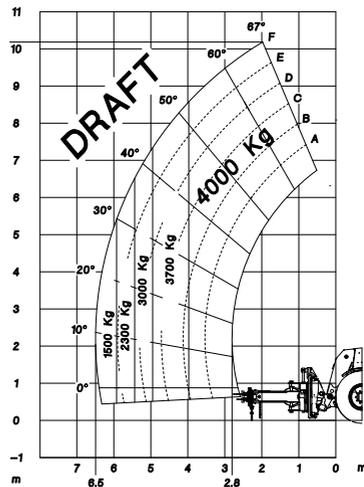
CH4 + 4.5t (7716lbs) cylinder



CH4 clamping torque controller

## Safety first

- Clamping torque controller to ensure perfect clamping.
- Manual extension of attachment's boom enhance operating process.
- Compact and easy to work around. Allow to catch load before releasing cylinder fixing points.
- LMI 3B6 permanently monitoring handling conditions to limit it to the safest process. Suitable for radio remote control for close and accurate movements.
- Free movement of the head and boom, manually controlled to avoid residual efforts on clamping.



MHT10130 + CH4

**Limitations of parts in movement!  
Lower number of parts to be removed =  
limitation of risks.**

# 3.1

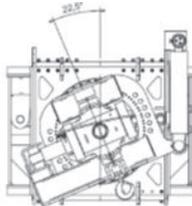
# Cylinder handling

Mid size cylinders: CH4

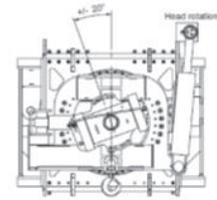
## Specifications

- Robust and reliability proven. 6 combined movements, including 2 manually controlled.
- 3 calibrated ropes for an efficient clamping without damaging the cylinder.

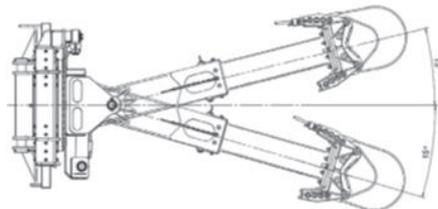
Name	Max Capacity	Cylinder Diameter	Side Shift	Body Rotation	Handler Tilting
CH4	4,000kg/8820lbs Retracted 1,200kg/2646lbs Extended	From 250mm (10") to 530mm (21")	Total 600mm (23") 300mm each side (12")	Body +/- 35° on 2 axis Head +/- 20°	+/- 15° from perpendicular CL of boom



Body Rotation



Head Rotation



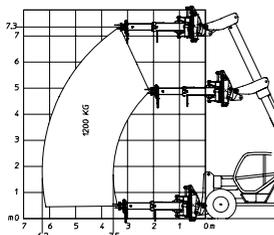
Boom Orientation

**Simple and adaptive design!**  
**Minimal hydraulically controlled motions to reduce human efforts while securing the clamping.**

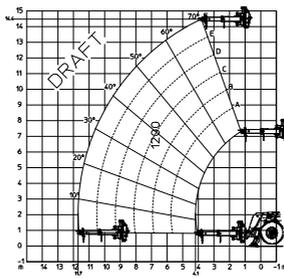


# Load Charts

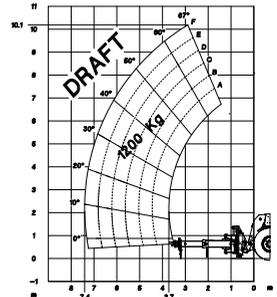
Model	Max Capacity CH4 boom extended	Max Capacity CH4 boom retracted	Max Height	Capacity @ Max Height (extd/retd)	Max Reach (extd/retd)	Capacity @ Max Reach (extd/retd)
MHT(-X) 860	1200kg 2646lbs	3000kg 6614lbs	8,7m 28'6"	1200 / 1900kg 2645 / 4188lbs	7,1 / 6,2m 23'3" / 20'4"	600 / 700m 1968'6" / 2296'7"
MHT(-X) 780	1200kg 2646lbs	4000kg 8820lbs	7,3m 23'11"	1200 / 2900kg 2645 / 6693lbs	6,2 / 5,3m 23'3" / 17'4"	1200 / 1500m 3937" / 4921'3"
MHT(-X) 790	1200kg 2646lbs	4000kg 8820lbs	7,3m 23'11"	1200 / 3500kg 2645 / 7716lbs	6 / 5,1m 19'8" / 16'9"	1200 / 2000m 3937" / 6561'8"
MHT(-X) 1490	1200kg 2646lbs	4000kg 8820lbs	14,4m 47'2"	1200 / 4000kg 2645 / 8818lbs	10,7 / 11,8m 35'1" / 38'8"	1100 / 2300m 3608'11" / 7545'11"
MHT(-X) 10120	1200kg 2646lbs	4000kg 8820lbs	10,2m 33'6"	1200 / 3400kg 2645 / 7495lbs	7,8 / 6,7m 25'7" / 21'11"	1200 / 1900m 3937" / 6233'7"
MHT(-X) 10130	1200kg 2646lbs	4000kg 8820lbs	10,1m 33'1"	1200 / 4000kg 2645 / 8818lbs	7,4 / 6,5m 24'3" / 21'3"	1200 / 1500m 3937" / 4921'3"
MHT(-X) 10180	1200kg 2646lbs	4000kg 8820lbs	10,2m 33'6"	1200 / 3800kg 2645 / 8377lbs	7,8 / 6,7m 25'7" / 21'11"	1200 / 3400m 3937" / 11154'10"
MHT(-X) 10225	1200kg 2646lbs	4000kg 8820lbs	10,2m 33'6"	1200 / 4000kg 2645 / 8818lbs	7,8 / 6,7m 25'7" / 21'11"	1200 / 4000m 3937" / 13123'4"
MHT(-X) 10230	1200kg 2646lbs	4000kg 8820lbs	10,2m 33'6"	1200 / 4000kg 2645 / 8818lbs	7,7 / 6,8m 25'3" / 22'3"	1200 / 4000m 3937" / 13123'4"



MHT780 + CH4



MHT1490 + CH4



MHT10130 + CH4

**The solution for mid-size mining equipment!  
Capacities offering the best rate price/  
versatility in the market.**

3.1

# Cylinder handling

Mid size cylinders: CH4



Titling cylinder change CH4 remote controlled



CH4 + MHT 10120



CH4 + MHT 10120  
heavy wheel loader maintenance



MHT 10120 + CH4

## Tips

Available for most equipment: mobile or fixed.  
Installation layout and summary of  
maintenance/ assembly process is the key to  
defining the most convenient solution.

### CHECK

Ø: Outside diameter of the cylinder or clamping diameter.

L: Length of the cylinder.

W: Max weight of the cylinder (+ oil if piston extended).

C: Clearance around cylinders.

H: Height of cylinder in maintenance position.

**A single solution for all your cylinders!  
Suitable for all cylindrical loads within  
attachment capacity.**



MHTX780



CH4

3.1

# Cylinder handling

Can and pillar handlers



Can and pillar handler

## Overview

- OEM solutions. Definition upon request.
- Product adapted from standard attachment to suit mining environment constraints.
- Suitable on all machines: MT, MLT, MRT, MHT. Diameters from 250mm (10") to 2,700mm (106"). Weight from 300kg (661lbs) to 8,000kg (17640lbs).
- From the warehouse down to the pit: same equipment, same expertise, different tasks.
- A data base built over more than 20 years of experience allows us to find the most suitable solution to your needs.



Can and pillar handler

**Adaptation of your existing tool possible!  
More than 50 clamps references available.**



*Handle your pillars with total control*



### Tips

**A versatile machine with a versatile tool!  
The answer for up to 8t (17640lbs)  
cans and pillars.**

#### CHECK

$\varnothing$ : Diameter of can.

$O$ : Offset of centre of gravity of can.

$H$ : Platform deposit height.

$L$ : Length of the can.

$W$ : Max weight of the can.

3.1

# Cylinder handling

Rod handlers



MLT 845 120 LSU



Pick up rods from storing area



Rotate and place rod under the drilling head, continuous rotation clamp

## Overview

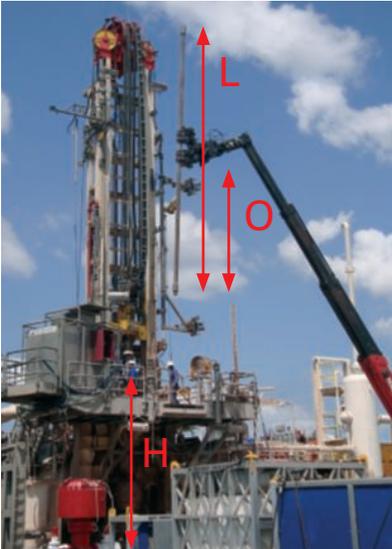
Rods storing on forks clamp

- Solutions from 2t (4400lbs) up to 14t (30900lbs) capacity.
- Pipes and bundle from 50mm (2") OD to 1,100mm (43").
- Pipes length up to 6m (240").
- OEM Solution defined upon inquiry and definition of process to offer the most suitable solution combined with Grapple handler.

## Overview

Rod placing Grapple clamp

- Solutions for up to 3t (6614lbs) capacity.
- Pipes and bundle from 50mm (2") OD to 300mm (12").
- Pipes length up to 6m (240").
- OEM Solution defined upon inquiry and definition of process to offer the most suitable solution combined with Forks clamp handler.



## Tips

From 500kg (1102lbs) to 3t (6614lbs).  
Up to 12m (472") rod.

### CHECK

$\emptyset$ : Diameter of rod.

$O$ : Offset of centre of gravity of rod.

$H$ : Platform deposit height.

$L$ : Length of the rod.

$W$ : Max weight of each rod/pole.

$D$ : Daily consumptions of rod/pole.

**2 solutions for carrying and placing Rods!**  
**Suitable for all MT Range machines used**  
**for high lifting.**

3.2

# Tyre handling

TH Range



MHT 10160 with TH63



MT 732 with TH33 / 2000S



We have the solution for any tyres



Pantograph design

## Overview

- Suitable for all kinds of haul-trucks: rigid body, articulated and low profile.
- 8 solutions from 1t (2200lbs) to 16,3t (35935lbs).
- 3 technologies:
  - Flat clamps
  - Telescopic arms
  - Parallelogram arms
- Endless combinations possible to suit your requirements.
- Up to 8 combined movements.

**Not only a manipulator: A logistic asset!**  
All Manitou TH are designed to suit the entire tyre logistical chain.



## Safety first

- Fall back protection arms: No risks of falling tyre when clamping pressure is released.
- Remote control for an accurate and safe process.
- Permanent monitoring of load. 3B6 system compliant.
- Precision and smoothness.
- 8 combined movements: Natural movement, same motion as a wrist.



MHT 860 with TH51 with clamp fall arm



MLT 845 changing a 2.5t (5500lbs) tyre



Remote control

**A tyre in motion with a static machine!  
Limited risk of physical or mechanical damage.**

## 3.2

# Tyre handling

TH Range

## Specifications

Name	Max Capacity kg / Lbs.	Opening range (Min/Max) mm / In"	Side Shift mm / In"	Body Rotation	Pads Rotation	Design Type
TH 33 / 2000 S	2000 4400	600 / 2100 23" / 82"	+/- 100 +/- 3.9"	360° Continuous	None	Flat Clamp
TH 35 / 2900 S	2900 6400	640 / 2650 25" / 104"	+/- 100 +/- 3.9"	360° Continuous	None	Flat Clamp
TH 49	2500 5500	1146 / 3146 45" / 124"	+/- 200 +/- 8"	+/- 20 °	0° -120°	Telescopic
TH 51	3500 7700	1130 / 3410 44" / 134"	+/- 150 +/- 5"	+/- 120 °	+/- 22,5 °	Parallelogram
TH 57	6000 13200	1210 / 3830 47" / 150"	+/- 300 +/- 12"	+/- 172°	360° Continuous	Parallelogram
TH 63 / 9300	9300 20500	1580 / 4170 62" / 164"	+/- 300 +/- 12"	+/- 172°	360° Continuous	Telescopic
TH 63 / 12000	12000 26400	600 / 4200 23" / 165"	+/- 300 +/- 12"	+/- 172°	360° Continuous	Parallelogram
TH 63 / 16300	16300 35935	600 / 4200 23" / 165"	+/- 300 +/- 12"	+/- 172°	360° Continuous	Parallelogram

**In House Engineering for quality guarantee!**  
**Based upon more than 20 years experience**  
**in tyre handling.**

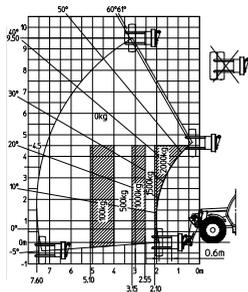


Parallelogram design TH 57

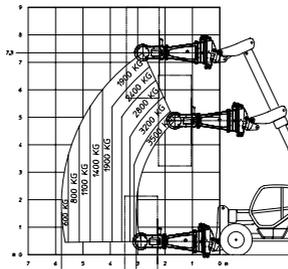


## Combinations and capacity

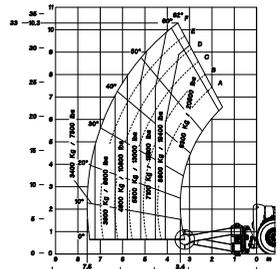
Machine	3 T Class MT	4 T Class MT/MRT	MHT 860	MHT 780 / 790	MHT 10120	MHT 10130	MHT 10180	MHT 10225 / 10230	MHT 14350 / 13400
TH 33 / 2000 S	2,000 kg 4,400 lb.	2,000 kg 4,400 lb.	2,000 kg 4,400 lb.	2,000 kg 4,400 lb.	NA	NA	NA	NA	NA
TH 35 / 2900 S	NA	2,500 kg 5,500 lb.	2,900 kg 6,400 lb.	2,900 kg 6,400 lb.	NA	NA	NA	NA	NA
TH 49	NA	2,000 kg 4,400 lb.	2,500 kg 5,500 lb.	2,500 kg 5,500 lb.	NA	NA	NA	NA	NA
TH 51	NA	NA	2,500 kg 5,500 lb.	3,500 kg 7,700 lb.	3,500 kg 7,700 lb.	3,500 kg 7,700 lb.	3,500 kg 7,700 lb.	3,500 kg 7,700 lb.	NA
TH 57	NA	NA	NA	NA	4,500 kg 9,900 lb.	5,000 kg 11,000 lb.	6,000 kg 13,200 lb.	6,000 kg 13,200 lb.	NA
TH 63 / 9300	NA	NA	NA	NA	NA	NA	8,500 kg 18,700 lb.	9,300 kg 20,500 lb.	9,300 kg 20,500 lb.
TH 63 / 12000	NA	NA	NA	NA	NA	NA	NA	12,000 kg 26,400 lb.	12,000 kg 26,400 lb.
TH 63 / 16300	NA	NA	NA	NA	NA	NA	NA	NA	16,300 kg 35,900 lb.



MT 1030 + TH 33



MHT 780 + TH 51



MHT 10230 + TH 63+

Over 40 combinations matching  
400 types of tyre!  
Most types of tyre can be handled  
by your Manitou machine.

## 3.2 Tyre handling

### TH Range



MHT 780 with TH 51

Optimise downtime and tyre management!  
Versatile solution for cost reduction.



MHT 10180 with TH 63 / 9300

#### CHECK

$\emptyset$ : Diameter of tyre (without chain).

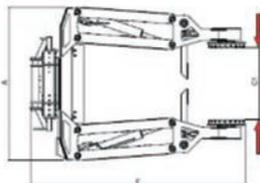
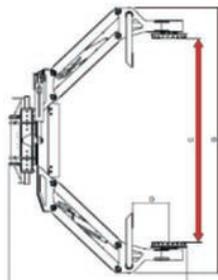
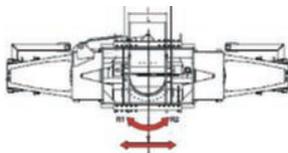
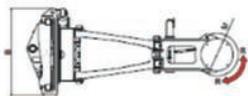
W: Max weight of the tyre + rim.

W2: Additional weight if water filling.

W3: Additional weight if chain fitted.

Exact tyre, dumper and truck reference to be known.

Always check for potential tank and electrical box clearance.





MHT 10225 with TH 63 / 12000

3.3

# Reel handling

## Conveyor Belt Handler



MHT 14350 with CBH



MHT 780 + 3t (6614lbs) CBH



MHT 10210 + 6t (13230lbs) CBH



CBH 8t (17640lbs)

## Overview

### Conveyor Belt Drum

- Rough terrain operation for up to 27t (59,500 Lbs) reels.
- Adaptive design to catch several widths.
- Hydraulic driving over square pins: Smooth engagement of power. Limited risks for belt to be torn.
- Remote control mode available.
- Match your complete reel logistic chain.

**2 attachments to protect your assets!**  
**Smooth and safe reeling protecting the operator and the product.**



# Specifications

## Conveyor Belt Reel

- Telescopic design allowing carrying of the load over long distances.
- Combined to pulling capacity of the MHT, a true mobile conveyor workshop available in and around your pit.
- Quarter turn suspension to avoid brutal reeling and ensure smooth engagement of torque.

Name	Indicative Max Capacity Kg / Lbs	Indicative Opening range (Min/Max) mm / In	Indicative Arm length mm / In	Alignment correction	SQ Drive Rotation	Design Type	Indicative Machine compatibility
CBH 3-5t	3000 – 5000 6600 – 11000	1500 / 2000 59" / 78"	1800 70"	n/a	360° continuous	Telescopic	MHT 860 - MHT 780 MHT 790
CBH 7-9t	7000 – 9000 15400 – 19800	1500 / 2000 59" / 78"	1800 70"	n/a	360° continuous	Telescopic	MHT 10130 MHT 10180
CBH 12t	12000 26400	500 / 1500 19" / 78"	1800 70"	+/-10°	360° continuous	Telescopic	MHT 10225 MHT 10230
CBH 27t	27000 59500	500 / 2500 19" / 98"	2200 – 2600 87" - 102"	+/-10°	360° continuous	Parallelogram	MHT 14350 MHT 13400



Tips to define your CBH

Ø: Overall drum diameter.

F: Overall weight (drum + belt).

W: Overall width of the drum (wall to wall).

H Reeling height from ground.

**Reduce your material conveying downtime!  
Smooth and safe reeling protecting the operator and the product.**

3.3

# Reel handling

Cable Reel Handler



CRH 3.5t (5500lbs)

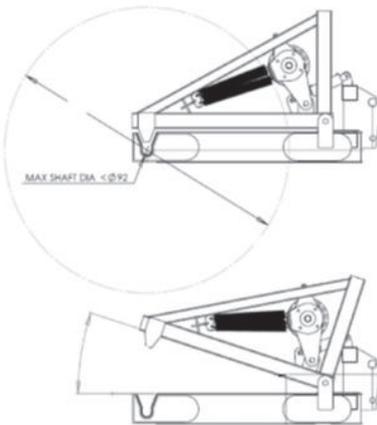


MHT 860 with CRH 3.5t (5500lbs)

## Overview

### Cable Reel

- Rough terrain operation for up to 8t (17640lbs) reels.
- Compact and safety orientated design: Gravity handling of load.
- Reeling friction driven: Avoid any damage on the cable in case of blockage.
- Easy to operate, no special predisposition required. Return piping is only condition.



**Handle with care = improved lifetime!**  
**Smooth and safe reeling protecting the operator and the product.**

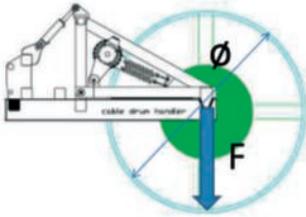


MHT 10160 + CRH 5t (11020lbs)

## Specifications

### Cable Reel

- Designed to reel-up, lift, carry and off-reel a cable, a hose, a drain or a belt.
- According to reel weight, suitable on all MHT machines.



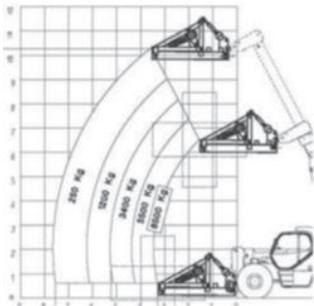
*Tips to define your CBH*

*Ø: Overall drum diameter.*

*F: Overall weight (drum + belt).*

*W: Overall width of the drum (wall to wall).*

*H: Reeling height from the ground.*



**A simple design that is easy to operate!  
Basic design allowing perfect sight  
on the carried load.**

3.4

# Container handling

The Logistical Plus



MHT 10180



MLT 960



MLT 625

## Overview

- The solution for loaded and empty containers.
- Forks lifting and special attachment.
- The only rough terrain container handler.
- From basic forks handling through container forks tunnel to dedicated front spreader, we are offering the full panel of solutions to handle up to 30t (66140lbs) containers.
- The true rough terrain container handler adapted to your working conditions.
- No need of costly solution to run your none adding value handling process. MHT, MRT, MLT, M Series will handle it.

**The rough terrain handler for your containers!**  
**Machines engineered to carry voluminous loads in total safety.**



## Specifications

Machine	Attachment	Max stacking Height	20 foot dry freight (on forks)	20 foot open top (on forks)	40 foot dry freight (no side shift available)	40 foot open top (no side shift available)
M50 / M70	<b>long forks + wide carriage + side shift</b>	2	yes empty	yes empty	no	no
MLT 845	<b>long forks + wide carriage + side shift</b>	3	yes empty	yes empty	no	no
MRT 5t Class	<b>long forks + wide carriage + side shift</b>	3	yes empty	yes empty	no	no
MHT 860	<b>long forks + side shift</b>	3	yes empty	yes empty	no	no
MHT 780	<b>long forks + side shift</b>	3	yes empty	yes empty	no	no
MHT 790	<b>long forks + side shift or front spreader</b>	3	yes empty	yes empty	no	no
MHT 10130 (MHT 10120)	<b>long forks + side shift or front spreader</b>	4	yes 8,000kg (17640lbs) total	yes 8,000kg (17640lbs) total	yes front spreader empty	yes front spreader empty
MHT 10180	<b>long forks + side shift or front spreader</b>	4	yes 10,000kg (22046lbs) total	yes 10,000kg (22046lbs) total	yes front spreader empty	yes front spreader empty
MHT 10230 (MHT 10225)	<b>long forks + side shift or front spreader</b>	4	yes 16,000kg (35280lbs) total	yes 16,000kg (35280lbs) total	yes front spreader empty	yes front spreader empty
MHT 13400 MHT 14350	<b>long forks + side shift or front/top spreader</b>	5	yes* 30,000kg (66140lbs) total	yes* 30,000kg (66140lbs) total	yes* front/top spreader 30,000kg (66140lbs)	yes* front/top spreader 30,000kg (66140lbs)

\*Upon request, depending on attachment.  
30t (66140lbs) guideline indicative value.

**Simple solutions to handle everything!  
User friendly controls and efficient load  
control makes this solution easy  
and safe to operate.**

### 3.4

# Container handling

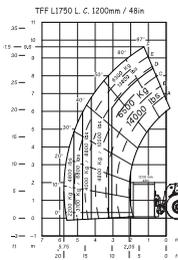
## The Logistical Plus



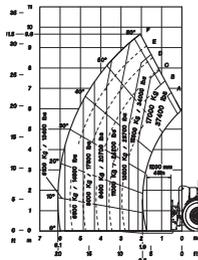
Wide carriage on MRT



MHT rough terrain handling with levelling correction



MHT 10130



MHT 10230

### Tips

**A perfect asset for your container storage.**

#### CHECK

- T: Type of container.
- CG: Position of the centre of gravity if loaded.
- W: Max weight to handle.
- F: Number of containers to be handled daily.
- D: Average carrying distance.
- H: Stacking height.
- AW: Aisle width in the stacking area.

**Another solution to lower your costs!**  
**The versatile machine with the adapted tool.**



MHT10180



MRT2150

3.5

# Rib and Beam Handler

The Rib Erector



MT 1235 ST with Rib Erector 2000kg (4400lbs) capacity



MT 1235 ST Handling HEB 120 Beam



Rib Erector 2000kg (4400lbs) capacity clamping head

## Overview

- The solution for all kinds of steel beams.
- Your safe solution for pre-prepared steel structures.
- Designed for underground duties, this attachment offers safe and rigid handling of the beam for metallic framing.
- +/- 65° head rotation with hydraulic locking to align beam over the boom to enhance stability. (+/- 15° with platform).
- Clamp jaw similar to industrial machining clamping = strong, quick and fail-safe.

**Ability to clamp up to 450mm wide beams!  
All international standard steel beams  
can be caught with this attachment.**



Rib Erector with man basket



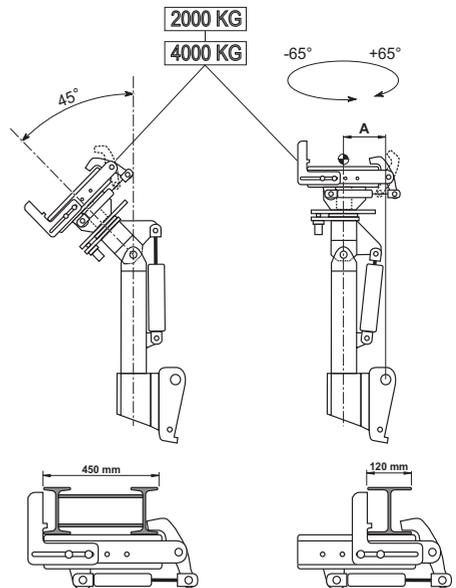
MT 1235 ST Handling HEB 120 Beam



MRT 2150 placing a 2000kg (4400lbs) beam

## Overview

- Ability to complete a full logistic chain from whichever position: Picking up a beam, carrying and placing.
- 2 attachments:
  - With placing platform = 1,500kg (3300lbs) capacity.
  - Simple arm = 2,000kg (4400lbs) and 4,000kg (8820lbs) capacity.

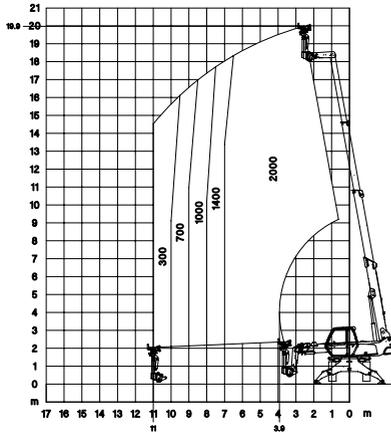


**A simple design, easy to operate!  
Basic design allowing perfect sight  
on the carried load, making the final  
positioning of the beam safer than ever.**

3.5

# Rib and Beam Handler

The Rib Erector



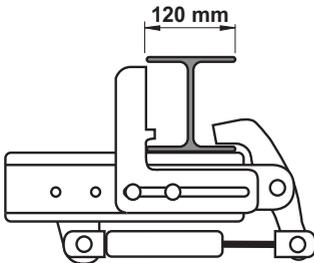
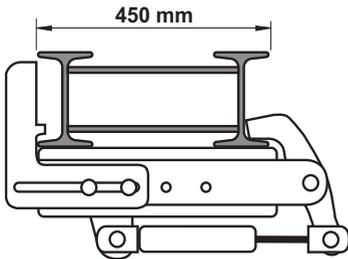
MRT 1840 with 2t (4400lbs) Rib erector

### Tips

Simple and robust design to face high frequency handling in safe conditions.  
 Cost efficient and user friendly substitute to heavy cranes. Alleviate risks of working under a suspended load.

#### CHECK

- T: Type of the beam or width (HEA - HEB).
- L: Length of the beam.
- W: Weight of the beam.
- E Placing environment of the beam.



**Safe clamping and stiff support to lift beams!  
 No need to lift and place your beam on a suspended way.**



## Specifications

Machines MRT range	Max capacity
MRT(-X) 1440	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MRT(-X) 1640	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MRT(-X) 1840	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MRT(-X) 1850	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MRT(-X) 2150	2-4t (PSC 20- 40) (4.409- 8.818 lbs)

Machines MT range	Max capacity
MT(-X) 732	2t (PSC 20) (4.409lbs)
MT-X 1030	2t (PSC 20) (4.409lbs)
MT-X 1235	2t (PSC 20) (4.409lbs)
MT(-X) 1440	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MT-X 1740	2-4 t (PSC 20 -40) (4.409- 8.818 lbs)
MT(-X) 1840	2-4t (PSC 20- 40) (4.409- 8.818 lbs)

Machines MHT range	Max capacity
MHT(-X) 10120 / 10130	2-4 t (PSC 20- 40) (4.409- 8.818 lbs)
MHT(-X) 10180	2-4 t (PSC 20- 40) (4.409- 8.818 lbs)
MHT(-X) 10225 / 10230	2-4 t (PSC 20- 40) (4.409- 8.818 lbs)

3.6

# Pipe and coil handling

Spikes and prongs



10t (22046lbs) capacity spike



MHT 10180 with 10t (22046lbs) capacity spike



Handling of an 8t (17640lbs) refined steel coil

## Overview

- For handling and placing of tubes, rigid drains and final product coils.
- The solution for handling pipes, coils and big bags on site. Enhance processes, costs limitation and product preservation.
- In and out a container, in a stockyard or just in your processing plant, we can handle products in total safety conditions.
- Switch from one diameter to another in a few minutes. A versatile tool to suit accurate applications, as good as a dedicated machine.

**Ideal for organising  
your round material logistics!  
Basic design allowing perfect sight  
on the carried load.**



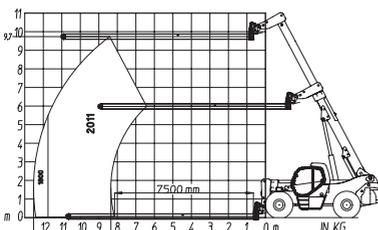
MHT 10180 with 3.5m (100"), 3t (6614lbs) capacity prong



MHT 10225 with 7.5m (300"), 2t (4400lbs) spike



MHT 10210 handling a 12m (470"), 2,200kg (4850lbs) pipe with a prong



MHT 10225 with 7.5m (300"), 2t (4400lbs) spike

## Technical details and Load Charts

- Adapted to all kinds of weight and diameters, you will find your solution within our range of spikes and prongs.
- Internal diameter: From 100mm (4") to 600mm (23")
- Max weight: From 30kg (66lbs) to 12t (26400lbs).
- Length of round: From 10m (400") to 12m (470").
- All operating features to enhance your safety are present within our attachment/machine combination: Remote control, side shift, body sway, camera on boom head. Designed to ensure you work in safe and protected conditions.

**Simple and efficient source of cost reduction!**  
**Versatility = efficiency. Use the most suitable attachment to handle your round product.**

3.6

# Pipe and coil handling

Spikes and prongs



## CHECK

*T: Type of pipe/coil (material).*

*W: Max weight to handle.*

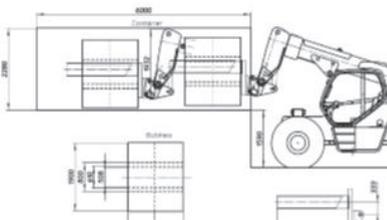
*L: Length/width of the pipe/coil.*

*ID: Internal diameter.*

*Always specify type of contact to protect the inner diameter of the product.*



MHT 10225 + 5m (200"), 3.5t (5500lbs) spike



MHT 10160 + 10 spike simulation of container loading

**Protect your Investments using an adapted tool!  
Personnel and goods are in even safer  
condition when tool definition is optimum.**



MHTX 10225



MHTX 10225

### 3.7

# Suspended Load Handler

Winch, Jibs and Hooks



MHT 14350 with P35



5t (11020lbs) winch on MRT 2540



5t (11020lbs) Jib winch on MHT 10120



MHT 10120 pipe holder

## Overview

- Designed for construction.
- Offers accuracy and safety.
- Pick and carry crane mode by Manitou: Adapted height of lift to carry a load. Rough terrain ability on carrying process.
- More than 100 attachments to suit your handling process. From 600kg (1320lbs) capacity hook to 23.5t (49604lbs) capacity winch.

**The solution suiting every step of mine site life!  
Based over construction requirements this  
range covers all suspended lift modes.**



*MLT 845 with PC 40*



*MHT 10160 with PC 16000 lifting a helicopter, smoothly and safely*



*MRT 2150 with 5t (11020lbs) winch*

## **Safety first**

- All Manitou telescopic handlers are featured with a Load Moment Indicator to ensure a permanent stability and safe working condition to the operator.
- Remote control of the boom movements allows accurate and safe placing of the load and perfect sight on load environment.
- Suitable for every Manitou Group machine.
- No need of overhead access to load. The attachment goes to the part to be handled reducing the sway and risks.

**Offering up to 25m (1000") lift  
@ 6m (240") offset!  
Performing as a crane  
using a versatile product.**

3.7

# Suspended Load Handler

Winch, Jibs and Hooks



MRT 1840 with fixed Jib P 1200 remote controlled



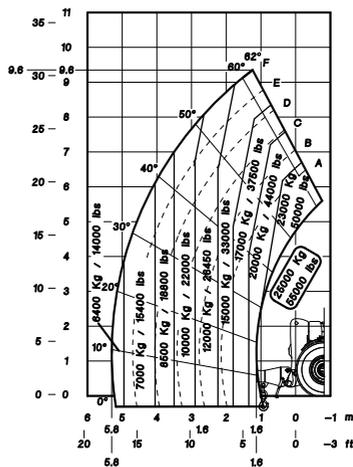
MRT 1840 with Jib winch PT 1200 remote controlled



MHT 10120 + PC 120

## Specifications

With or without stabilisers, we always guarantee perfect stability even in rough terrain conditions.



**Basic design for safe and easy handling!  
Boom lift is more accurate than a pure sling  
lift, with a reduction of pendulum effect.**



MRT 3050 with 5t (11020lbs) winch



MRT 2150 with Jib winch 350kg (772lbs) mounted on man basket



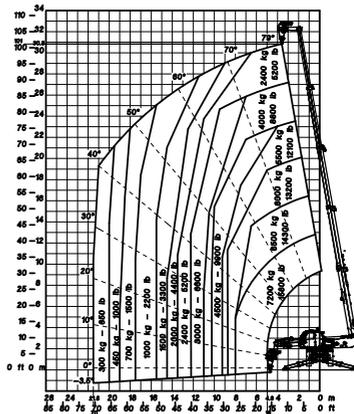
MHT 10120 + PC 120

## Tips

To lift or to reach?  
Always gauge the environment.

### CHECK

- E: Environment, space around boom head.
- W: Max weight to handle.
- D: Dimensions of the load.



Crane mode on a compact  
and versatile machine!  
Suiting all your suspended load needs for  
construction, renovation and maintenance.

## 3.8

# Personnel Elevation

## Man Platforms



MHT 780 + fixed 365kg (800lbs) man basket



180 ATJ



MRT 2150 with ORH 365kg (800lbs)



MHT 10210 + ORH 1,000kg (2200lbs) basket

## Overview

- Designed for construction.
- Offers you accuracy and safety.
- 3 possibilities available within the Manitou Group:
  - 1 - Fixed boom Telehandler + attachment: MT - MHT.
  - 2 - Dedicated platform ManiAccess: ATJ - AETJ.
  - 3 - Rotative boom Telehandler + attachment: MRT.

**3 operating ways for  
endless safe opportunities!  
Manitou uses its experience as a  
manufacturer of AWP's to benefits other ranges.**



MRT 2540 + Aerial Jib 2



MHT 780 + Mine underground mine platform



160 ATJ

## Safety first

- All personnel lifting solutions follow the strict frame of the EN280 ruling the AWP's design.
- Rough terrain solutions with fixed, swaying, telescopic or pendulum design to access all points of your machines, buildings and conveyors.
- Reliable, safe and efficient.
- Offering up to 1,000kg (2200lbs) capacity in the basket, complying with the highest grade standards for personnel elevation.
- All movements controlled exclusively from the basket, inactive controls from the cab unless emergency mode is activated.

### Underground mine platform

- Capacity 1200kg (2645lbs)
- Fixed platform
- Strong structure which can withstand a 3 ton (6614lbs) impact
- IP67 safety sensors, shielded against impacts
- Galvanised platform with meshed and plain floor

### Machine compatibility

MT(X) 1030ST	MT(X) 1440A
MHT(X) 860	MT(X) 1840A
MRT range	MHT(X) 780

**State of the art safety devices and processes!  
All components and features offered  
are among the best in class.**

# 3.8

# Personnel Elevation

## Man Platforms



MRT 1840 + Aerial Jib, 2 negative position for bridge inspection



ORH 3.25-4m ARG 1,000kg (2200lbs) basket with 350kg (772lbs) Jib winch

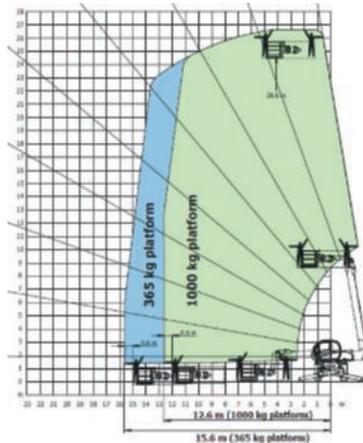


MRT 2150 + Aerial Jib 2

## Specifications

- Solutions for positive and negative activities.
- Man basket compliant with CE certification and EN 280 standard.
- ORH type baskets:
  - Up to 26.6m (1047") working height with 1,000kg (2200lbs) capacity in the basket.
- Jib type baskets:
  - Up to 33.8m (1528") working height with 200kg (440lbs) capacity in the basket.

Higher working heights available upon request.



MRT 2540 + ORH 1,000kg (2200lbs) 3.25/4m (88.6"/157")

**State of the art safety devices and processes!**  
**All components and features offered**  
**are among the best in class.**



MRT 2150 + ORH 365kg (800lbs)



MRT 3050 + ORH 1,000kg (2200lbs)



MRT 3050 + ORH 1,000kg (2200lbs)

### Tips

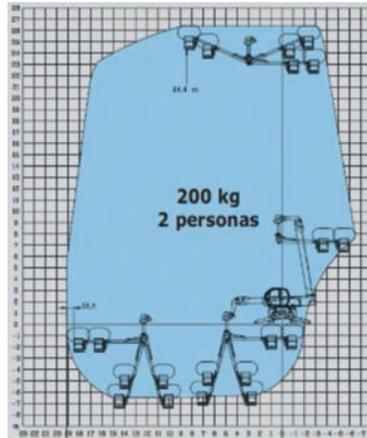
- Up to 30m working height.
- Offset over 15m (590").
- Load moment indicator limiting work envelop to the safest conditions.

Check:

*E:* Environment, space around basket.

*W:* Max weight to carry, load in basket.

*N:* Number of operators in the basket.



MRT 2540 + Aerial Jib,  
2 negative position

**An AWP able to travel up to 30km/hour!  
Basket designed to lift but also carry the loads.**

3.9

# Pallet Forks Handler

## Forks and Carriage



MHT 10210 + 3m (120") forks



MHT 10210 + 3.5m (100") fork



M50-2 with regular forks



MHT 10160

## Overview

- Designed for construction.
- Offers you accuracy and safety.
- PFB, PFF, long forks, side shift, body rotation, forks positioner and all types of carriage are suitable on Manitou Group machines.
- The most common way to handle your pallets, tanks, hoppers and big bags.
- Machine features with carriage/boom suspension to smoothen bumps and prevent loss or damage carried material.

**The base of handling on all its existing forms!  
From standard forks carriage  
to tailor made adaptations.**



MHT 860 + rotating forks carriage



MHT 780 + TFF 2500 + 1,200mm (47") forks  
(handling a 100kW generator)



M 50-2 + 3m (120") forks



MHT 7140

## Overview

- Endless possibilities of design and adaptation from Manitou industrial forklifts for your warehouse to MHT high capacity lifting.
- We handle everything.
- From simple fixed carriage or floating forks carriage, side shift, forks positionner. Dozens of solutions are available in standard.

**"Forklifts" able to operate in every condition!  
Form paved ground rough terrain condition,  
Manitou handle your goods.**

3.9

# Pallet Forks Handler

Forks and Carriage



MT 732 + PFB + 1,200mm (47") forks



MHT 10120LT



PFO 1500, +/- 90° slewing carriage



MH25-4 with side shifting carriage

## Overview

Sway the forks for lateral catch: we present the PFO 1,000kg (2200lbs).

### Tips

- Always check dimensions of load.
- Always check COG position of load.
- Always check pallet size and forks tunnel clearance.

The simplest solution to carry your goods!  
Delivered as standard on every Manitou Machine.



GEHL V330 + 1,000mm (40") forks

3.10

# Loading and Scraping

Buckets



MHT 10160 + CBG 4000



MT-X 732 + CBC



Gehl 4840 + bucket



GEHL RT 250 + bucket

## Overview

- Another example of versatility.
- Up to 4t (8820lbs) and 4 cubic metres (141.26ft<sup>3</sup>) of load.
- More than 30 buckets available throughout the range.

**Your answer to material rehandling!**  
**Solutions to support or substitute wheel loaders in a narrow area.**



GEHL 4846 Skid Steer



MT 1030 + CBR 1000



MHT 780 + CBG 2000

## Overview

- Also available: rotating brush system with self dust container.
- CBC, CBR, CBH, all buckets designed for mud, sand and dirt excavation.
- Efficient solutions to clean up your yard, drains and paths.
- Ground cleaning application on GEHL 4846 Skid Steer.
- CBC: Up to 2450L (650 US gallons).

**Simple, cheap and efficient!**  
Solutions to support or substitute wheel loaders in a narrow area.

# Underground mining

Around the world, Manitou Group provides an extensive range of machines tailored to the underground environment and to our customers' specific requirements.

Manitou Group's equipment and experience are relied upon around the world in underground applications.

Whether mining hard, metalliferous rock or soft rock such as coal, Manitou Group's solutions help you operate and maintain the critical infrastructure of an underground mine.

From forklifts which deliver consumables, roof bolts, drill rods and other essential components for mining operations, to equipment which supports infrastructure by safely and efficiently lifting personnel to install hanging ventilation fans and ducts or roof bolting and grouting operations,

Manitou Group helps in completing every task in complete safety to the highest standards.

Manitou Group's underground work platform solutions for lifting personnel fully comply with Australian Standard AS1418.10 and European Standard EN280 and offer platform capacities up to 1,000kg (2200lbs).

With experience in underground mining that goes back over 25 years, Manitou Group is well equipped to deliver a tailored solution that will meet your every requirement.





*Strut handler*



*Transmission removal on UG Haul truck*



*Tilt cylinder on UG Wheel loader*

## Overview

- Suitable for: rear struts, front struts, dumping cylinders, boom cylinders, accumulators and steering cylinders.
- Suitable for all suspension, hoist, tilt, lift, transmission shaft and push pull cylinders.
- Operating for cylinder from 250mm (10") to 580mm (23") OD.
- Max residual capacity: 4t (8820lbs) @ 6.3m (248") (MHT 780).
- Load clamped and fixed to the ground: Cancellation of suspended loads.
- Safe and cost efficient.
- Compact and light, it allows for a simplified approach on limited access areas.

**En-Safe maintenance practices!**  
**Simplify your maintenance process while making it safer.**



*Strut handler*



*CH4 + 4.5t (7716lbs) cylinder*



*MHT 10120 + CH4 remote control*

## Safety first

- Clamping torque controller to ensure perfect clamping.
- Manual extension of attachment's boom enhance operating process.
- Compact and easy to work around. Allow to catch load before releasing cylinder fixing points.
- LMI 3B6 permanently monitoring handling conditions to limit it to the safest process. Suitable for radio remote control for close and accurate movements.
- Free movement of the head and boom, manually controlled to avoid residual efforts on clamping.

**Limitations of MOVING parts !  
Lower number of parts to be removed =  
limitation of risks.**

## 4.1

# Cylinder handling

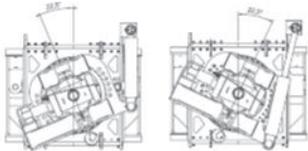
## Mid Size Cylinders: CH4

## Specifications

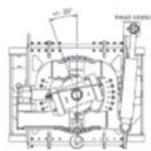
Model	Max Capacity CH4 boom extended	Max Capacity CH4 boom retracted	Max height	Capacity @ Max height (extd/retd) kg	Max Reach (extd/retd) m	Capacity @ Max Reach (extd/retd) kg
MHT(-X) 780	1200kg 2646lbs	4000kg 8820lbs	7,3m 23"11'	1200 / 2900kg 2645 / 4188lbs 2645 / 6693	6,2 / 5,3m 23"3' / 17"4'	1200 / 1500m 3937" / 4921"3'
MHT(-X) 10120	1200kg 2646lbs	4000kg 8820lbs	10,2m 33"6'	1200 / 3400kg 2645 / 7495lbs	7,8 / 6,7m 25"7' / 21"11'	1200 / 1900m 3937" / 6233"7'
MHT(-X) 10130	1200kg 2646lbs	4000kg 8820lbs	10,1m 33"1'	1200 / 4000kg 2645 / 8818lbs	7,8 / 6,7m 25"7' / 21"11'	1200 / 1500m 3937" / 4921"3'

Model	Max Capacity	Cylinder Diameter	Side Shift	Body Rotation	Handler Orientation
CH4	4,000kg/8820lbs Retracted 1,200kg/2646lbs Extended	From 250mm (10") to 530mm (21")	Total 600mm (23") 300mm each side (12")	Body +/- 35° on 2 axis Head +/- 20°	+/- 15° from perpendicular CL of boom

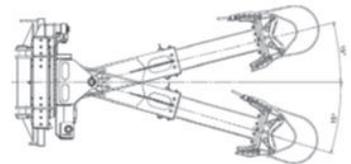
Body Rotation



Head Rotation



Boom Orientation



**The Solution for all Underground equipment!  
Suitable for compact high capacity  
Telehandlers MHT.**



*Titling cylinder change CH4  
remote controlled*



*CH4 + MHT 10120*



*CH4 + MHT 10120  
heavy wheel loader maintenance*

### Tips

- Available for most equipment: mobile or fixed.
- Installation layout and summary of maintenance/ assembly process is the key to defining the most convenient solution.

### CHECK

*Ø: Outside diameter of the cylinder or clamping diameter.*

*H: Check cylinder height.*

*L: Length of the cylinder retracted.*

*W: Max weight of the cylinder (+ oil if piston extended).*

*C: Clearance around cylinders.*

*F: Range of machine fleet + details of machines.*

**A single solution for all your cylinders!  
Suitable for all cylindrical loads within  
attachment capacity.**

## 4.1

# Cylinder handling

## Can and Pillar Handlers



Can and pillar handler



Can and pillar handler

## Overview

- OEM solutions. Definition upon request.
- Product adapted from standard attachment to suit mining environment constraints.
- Suitable on all machines: MT, MLT, MRT, MHT. Diameters from 250mm (10") to 2,700mm (106"). Weight from 300kg (661lbs) to 8,000kg (17640lbs).
- From the warehouse down to the pit: same equipment, same expertise, different tasks.
- A data base built over more than 20 years of experience allows us to find the most suitable solution to your needs.

**Adaptation of your existing tool is possible!  
More than 50 clamps references available.**



Handle your pillars with total control

#### CHECK

$\varnothing$ : Diameter of can.

$O$ : Offset of centre of gravity of can.

$H$ : Height of gallery.

$L$ : Length of the can.

$W$ : Max weight of the can.



**A versatile machine with a versatile tool!  
The answer for up to 8t (17640lbs) cans  
and pillars.**

# Tyre Handler

The compact TH Range



MRT 1850 + TH S



MTX 732 + TH S



MTX 1030

## Overview

- Suitable for all kinds of underground equipment: drilling octopus, wheel loaders and low profile trucks.
- 2 solutions from 1t (2200lbs) to 2t (4400lbs).
- Up to 6 combined movements.
- Suitable for every Manitou underground utility vehicle.
- The perfect tyre handling solutions to match your reduced access tyres.
- Compact solutions able to carry and change tyres at every point in your shafts.

**Not only a manipulator: A logistic asset!**  
**All Manitou TH are designed to suit**  
**the entire tyre logistical chain.**

# Specifications

Get rid of your dedicated machine: Gain in safety, productivity and return on investment of your support machinery fleet.

Model	Max Capacity	Opening Range: Min / Max	Side Shift	Body Rotation	Pads Rotation	Design Type
TH 33 / 2000 S	<b>2,000kg</b> <b>4400lbs</b>	<b>600mm / 2100mm</b> <b>23" / 83.5"</b>	<b>+/- 100 mm</b> <b>+/- 3"</b>	<b>360°</b>	<b>None</b>	<b>Flat Clamp</b>
TH 35 / 2900 S	<b>2,900kg</b> <b>6393lbs</b>	<b>640mm / 2650mm</b> <b>25" / 104"</b>	<b>+/- 100 mm</b> <b>+/- 3"</b>	<b>360°</b>	<b>None</b>	<b>Flat Clamp</b>

Machine	3 T Class MT	4 T Class MT MRT	MHT 860	MHT 780
TH 33 / 2000 S	<b>1,300kg</b> <b>2870lbs</b>	<b>2,000kg</b> <b>4400lbs</b>	<b>2,000kg</b> <b>4400lbs</b>	<b>2,000kg</b> <b>4400lbs</b>
TH 35 / 2900 S	<b>NA</b>	<b>2,500kg</b> <b>5500lbs</b>	<b>2,900kg</b> <b>4400lbs</b>	<b>2,900kg</b> <b>4400lbs</b>

**Minimise downtime and tyre management!**  
**Versatile solution for cost reduction.**



MRT 2150



MT-X 1235 + rib 2t (4400lbs)



## Overview

- Solution for all types of steel beams.
- Your safe solution for pre-prepared steel structures.
- Designed for underground duties, this attachment offers safe and rigid handling of the beam for metallic framing.
- +/- 65° head rotation with hydraulic locking to align beam over the boom to enhance stability (+/- 15° with platform).
- Clamp jaw similar to industrial machining clamping = strong, quick and fail-safe.

**Ability to clamp up to 450mm wide beams!  
All international standard steel beams  
can be clamped with this attachment.**

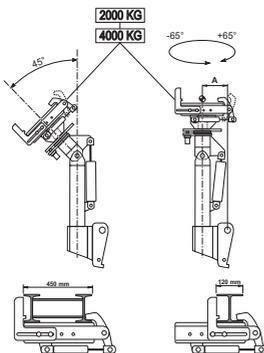


MRT 2150 with 4t (8820lbs) capacity Rib Erector

## Specifications

- Ability to complete a full logistic chain from any position: Picking up a beam, carrying and placing.
- 2 attachments:
  - With placing platform = 1,500kg (3300lbs) capacity.
  - Simple arm = 2,000kg (4400lbs) and 4,000kg (8820lbs) capacity.
- New application: Swaying rib erector to support side beams in galleries.
- Your versatile asset to enhance the gallery reinforcement in your mine.

Model	Max Capacity	Description	Compatible with
882008	2,000kg 4400lbs	Simple arm with head rotation	MT, MRT and MHT range
882032	4,000kg 8820lbs	Simple arm with head rotation	All machines over 4t capacity (MT, MRT and MHT)
736940	1,500kg 3300lbs	Telescopic arm mounted on man platform with canopy. Head rotation included	All machine EN280 compliant (MT A, MRT, MHT)



legende Photo4

Orientable Rib Erector

**A simple design that is easy to operate!  
Basic design allows for perfect sight  
on the carried load.**

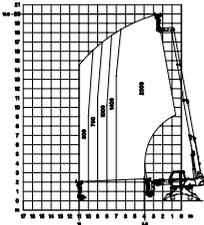
### 4.3

# Rib and Beam Handler

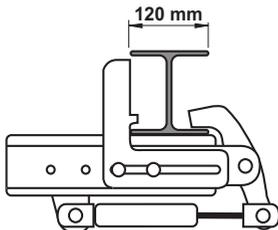
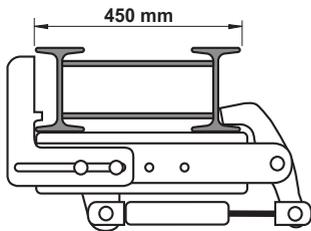
## The Rib Erector



MT-X 1235 + rib erector 2t (4400lbs) + HEB 120 beam



MRT 1840 with 2t (4400lbs) Rib erector



### Tips

Simple and robust design to face high frequency handling in safe conditions. Cost efficient and user friendly substitute to heavy cranes. Alleviate risks of working under a suspended load.

### CHECK

T: Type of the beam or width (HEA- HEB).

L: Length of the beam.

W: Weight of the beam.

Check gallery dimensions.

**Safe clamping and stiff support to lift beams!  
No need to lift and place your beam  
on a suspended way.**



MRT2150

# Suspended Load Handler

## Winch, Jibs and Hooks



MRT 2150 with 5t (11020lbs) capacity winch



12t (26400lbs) Jib winch on MHT 10120



MHT 10120 pipe holder

## Overview

- Designed for construction.
- Offers accuracy and safety.
- Pick and carry crane mode by Manitou: Adapted height of lift to carry a load. Rough terrain ability on carrying process.
- More than 100 attachments to suit your handling process. From 600kg (1320lbs) capacity hook to 23.5t (49604lbs) capacity winch.
- Controlled from the cab or remotely with a wireless remote control, our lifting solution offers the most suitable answer from gross to accurate placing in total safety.

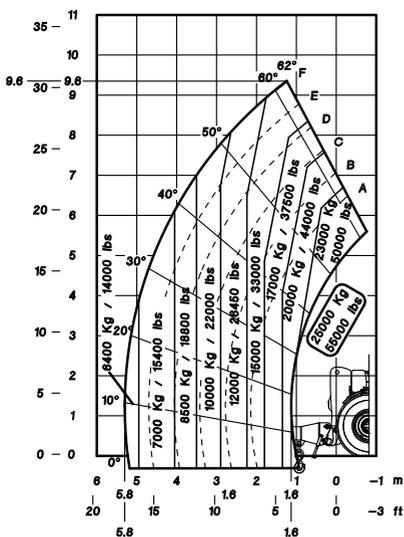
**The solution suiting every step of mine site life!  
Based over construction requirements this  
range covers all suspended lift modes.**



MHT 860 + orientable 4t (8820lbs) Swan Neck Jib



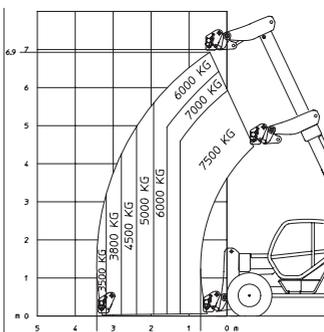
Orientable Jib PO 2000



MHT 10230 + PC25

## Specifications

With or without stabilisers, we always guarantee perfect stability even in rough terrain conditions.



MHT 780-PC 75

**Compact, Safe and heavy Duty Boom lift is more accurate than a pure sling lift, with a reduction of pendulum effect and reduced overall height of the lifting equipment.**



MRT 1840 easy with ORH Canopy FOPS Platform



## Overview

- Based on a versatile machine AWP. Capacities up to 1,500kg (3300lbs), perfect for carrying rebar, meshing, bolts, drillers and welding units.
- 3 possibilities available within the Manitou Group:
  - 1 - Fixed boom Telehandler + attachment: MT - MHT.
  - 2 - Dedicated platform ManiAccess: ATJ – AETJ.
  - 3 - Rotative boom Telehandler + attachment: MRT.
- The solution to reduce the number of equipment underground. Perfect for setting and maintaining galleries: Wiring, lights, drains and vents.

### Underground mine platform

- Capacity 1200kg (2645lbs)
- Fixed platform
- Strong structure which can withstand a 3 ton (6614lbs) impact
- IP67 safety sensors, shielded against impacts
- Galvanised platform with meshed and plain floor

### Machine compatibility

MT(X) 1030ST	MT(X) 1440A
MHT(X) 860	MT(X) 1840A
MRT range	MHT(X) 780

**3 Safe operating ways for endless opportunities!**

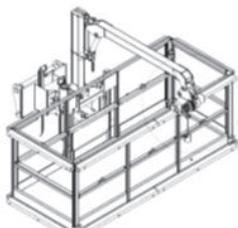
**Manitou uses its experience as a manufacturer of AWP's to benefits other ranges.**



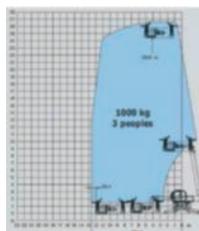
MTX 1030 ST + man basket



MT 732 + man basket 365kg (800lbs)



ORH basket 4m (157") and 600kg (1322lbs) capacity with 300kg (661lbs) capacity orientable Jib winch



MRT 2540 + ORH 1,000kg (2200lbs) 3.25m/4m (88.6"/157")

## Specifications

- 1,000kg (2200lbs) capacity ORH platform with winch. 300kg (661lbs) winch, 600kg (1322lbs) platform.
- Our special study department is also able to design custom made platforms to suit your applications.
- Max capacity doesn't include weight of personnel in basket.
- Safety at will: Complies with higher safety standards including EN 280 and AS 1418.10.
- Perfect for blasting material feeding, manual scaling and shotcreting.

**State of the art safety devices and processes!  
All components and machine features offered  
are among the best in class.**

## 4.5

# Personnel Elevation

## Man Platforms



MRT 1850 + ORH 1,000kg (2200lbs)



MT 732 mine spec + underground fixed basket



MT 732 + man basket



ORH 1,000kg (2200lbs)

### Tips

**Up to 30m (1180") working height.  
Offset over 15m (590").  
Load moment indicator limiting work envelop  
to the safest conditions.**

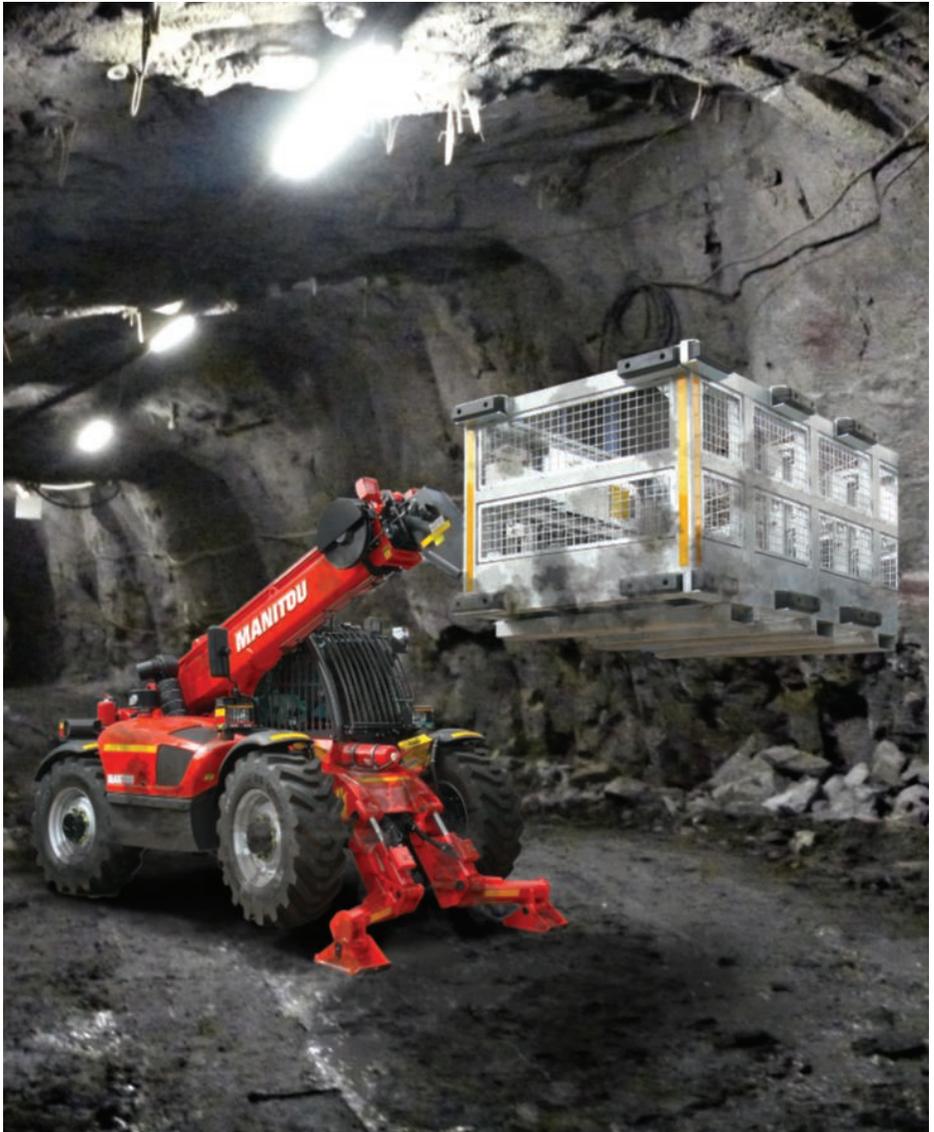
#### Check:

*E: Environment, space around basket.*

*W: Max weight to carry, load in basket.*

*N: Number of operators in the basket.*

**An AWP able to travel up to 30km/hour!  
Basket designed to lift but also carry the loads.**



MTX 1030



MVT 628 + rotating carriage + 1,200mm (47") forks



MLT 731 + 1,200mm (47") forks



MT 732 + 1,200 (47") floating forks

## Overview

- Designed for construction.
- Offers you accuracy and safety.
- PFB, PFF, long forks, side shift, body rotation, forks positioner and all types of carriage are suitable on Manitou Group machines.
- The most common way to handle your pallets, tanks, hoppers and big bags.
- Machine features with carriage/boom suspension to smoothen bumps and prevent loss or damage carried material.

**The base of handling on all its existing forms!  
From standard forks carriage to tailor made adaptations.**



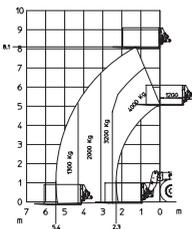
MVT 628 + 1,200mm (47") forks



MVT 628 + rotating forks carriage



Rotating fork carriage 2,500kg (5500lbs)



MHT 860 + 2,000mm (79") forks COG @ 1,200mm (47")

## Overview



- Endless possibilities of design and adaptation from Manitou industrial forklifts for your warehouse to MHT high capacity lifting.
- We handle everything.

**"Forklifts" able to operate in every conditions!**  
**Form paved ground rough terrain condition, Manitou handle your goods.**

# Safety first

Because safety is YOUR priority every day of the year, Manitou Group offers to its customers the safest material handling and personnel lifting equipment on the market (machines, attachments and options).

Discover our solutions: they meet the highest standards and increase the safety of your operators.

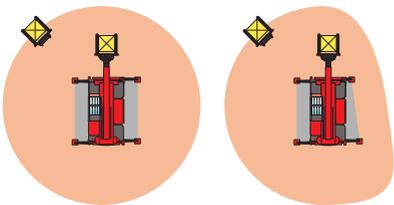




CEC and LLMI



Leveling corrector



Customising and restricting the work area

## Overview

The standard equipment provides operators with the best working conditions while complying with safety standards and international regulations:

- stability and all-terrain ROPS and FOPS Level 2 cabins in compliance with EN 1459 (Equivalent B56.6 "USA", AS 1418-19 Australia)
- the Load State Controller and Limited Load Moment Indicator (LLMI) monitor stability and reduce the risk of toppling over
- reversing alarm or lynx cry\*
- audible start signal\*\*
- battery switch off and emergency stop
- recognition of E-Reco attachment\*
- terrain compensation\*
- restricted work area\*\*
- machine self-diagnostic\*

\*Depending on model

\*\*Upon request

### Tips

**For off-road conditions, verify that the load charts of your telehandlers comply with the regulations in force in your country (EN 1459, B56.6, AS 1418-19...)**

**Work in complete safety  
with our telehandlers**

## 5.2 Safety options



Fire extinguisher



Emergency stop button outside the cab



Electrical protection



Guardian Angel System

### Overview

- Oil kit\*\* made up of:
  - external emergency stop
  - spark arrestor and damper valve
  - 3-point belt
  - weighing system
- Brake system:
  - negative brakes: automatic braking in case of damage
  - daily brake test procedure
  - auxiliary braking and emergency steering: allows the machine to be evacuated in case of failure
- Control systems:
  - guardian angel system: monitoring of the machine's vital systems
  - verification of the tyre pressure
- Protection:
  - electrical protection
  - fire extinguisher system in motor compartment
  - thermal insulation of exhaust pipes and silencers - lost nuts indicator

\*\*Upon request

#### Tips

Clearly define how your telehandler will be used in order to select the options that are best suited to your needs

More productivity  
with total safety



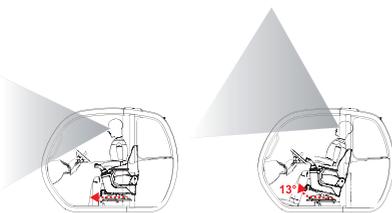
Cab FOPS/ROPS



MRT P+ screen



JSM®



Tilting seat to follow the load

## Overview

- Spacious and ergonomic ROPS/FOPS level 2 cabin (complies with EN1459)
- The Joystick Switch & Move (JSM®) allows all movements to be made with just one hand (attachment, telescope movements, move forward/backward/neutral)
- Simple and readable dashboard provides all required information at a glance
- 360° visibility in compliance with EN 15830
- Tilting seat to follow the load\*
- Driver seat with mechanical/pneumatic suspension and low frequency damping (depending on model)
- Driver presence detector
- Seatbelt alarm\*\*
- Windshield\* and roof\* grid
- Door safety lock\*\*

\*Depending on the model

\*\*Upon request

## Safety first

- Working under comfortable conditions reduces operator fatigue

**More comfort means  
more attention!**



Working lights on cab



Working lights (front and back) located high on the cab



Working lights

## Overview

- Improve the visibility of the machine and the work area with:
  - rotating or strobe light\*
  - headlights and direction indicators
  - reversing lights
  - working lights (front and back) located high on the cab\*
  - working lights on boom (can be installed on boom head)\*
  - LED or Xenon headlights\*\* (optional headlight protection)

\*Option

\*\*Upon request

### Tips

**Adjust the options on your machine to match your work environment. Protect the headlights against impacts**

**To maintain visibility under all conditions**



1 screen, 4 cameras



Signal lights for machine approach or withdrawal



Smart pedestrian detection camera/screen



Reflective strips

## Overview

- Machine complies with the visibility standard EN 15830
- Cameras: improve visibility
  - at boom head
  - reversing camera: starts automatically when backing up (or continuous visualisation)
  - on the side(s) of the machine
- Smart backing up camera<sup>\*\*</sup>: the pedestrian detection system sets off an audible signal and a visual alarm on the cab screen (red edging) to warn the driver of the presence of a pedestrian
- Cameras protected against shocks and washable with a high pressure hose (IP67K), IP55 screens upon request
- Signal lights for machine approach (red) or withdrawal (green)<sup>\*\*</sup>
- Light reflector (reflective strips)<sup>\*\*</sup>

<sup>\*\*</sup>Upon request

**See and be seen  
for increased safety**

# Machine maintenance and servicing

## Motorisation, filtration and greasing



Central greasing



Intake protection



Exhaust gas dilution system



Automatic cleaning

## Overview

Our machines are designed for easy maintenance. The following options make upkeep even easier:

- easy access to main components
  - optimised boom design to facilitate and minimise maintenance.
- Greasing\* of hard-to-reach areas: oscillation of the rear axle, axis of hoisting and compensation cylinders
  - Automatic central greasing, whether continuously or per volume, of part of the machine or its entirety
  - Self-cleaning or cyclonic pre-filters
  - Intake protection of motor cooler, slows intake clogging
  - Automatic cleaning of the intake grille\*
  - Variable speed fan (reduced fuel consumption)
  - Exhaust gas dilution system (special environments)
  - Machine maintenance and diagnostics displayed on the multi-function screen on the dashboard

\*Depending on the model

## Safety first

- An investment made to:
  - reduce maintenance times
  - improve the safety of your operators and handling operations



Extra oil cooler



Option Manimach2: hydraulic connector



Reinforced synthetic fiber sleeves to protect the hoses

## Overview

- Easy Connect System (ECS): depressurisation of the hydraulic line attachments without turning off the motor (makes attachment changes easier)\*
- Additional hydraulic oil cooler (in case of extreme temperatures)
- Forced operation: continuous operation of the hydraulic line attachment for increased confort
- Casings in reinforced synthetic fibre\*\* reinforce the high-pressure hydraulic lines to improve the safety of your employees and equipment
- Manual accelerator
- Regulation of the hydraulic flows of the attachment line\*
- Protection of the hydraulic couplers at the boom head\*
- Boom suspension (CRC) for the safe transport of heavy loads
- Energies and fluids available at boom head: electricity\*/compressed air from an external or on-board source \*/water

\*Depending on model

\*\*Upon request

### Tips

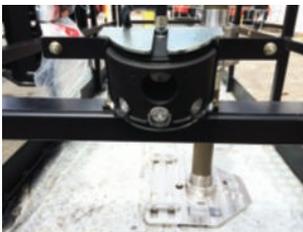
**Choice of hydraulic options depends on the machine/attachment combination and its use**



Backing up sensors



Approach sensors on platform



Approach sensor on platform

## Overview

Sensor-based obstacle detection systems can be adapted to our machines and/or to our aerial work platform baskets

- Backing up sensors at the back of the machines
  - progressive audible alarm in the cabin
  - configurable detection of distances
  - display of the detection state in the cabin
- Approach sensors on the aerial work platform:
  - audible and visual alarms in the basket at the approach of obstacles
  - automatic stoppage of movements in the aerial work platform
  - customisable detection distances
  - display of the detection state in the cabin and/or basket
- Laser detection on the boom (movement stopped in case of obstacle)
- Cameras + screen on basket
- Shock absorbing buffers

*\*\*Upon request*

## Safety first

- Reduces the risk of collision/accident using ultrasonic sensors
- Secures the approach of your sensitive equipment/infrastructure during maintenance work

Your dealer:



# **MANITOU**

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