

**MANITOU**  
GROUP

**200 ATJ E - OXYGEN**  
**Introduction**

Marketing Product team

ULTIMAMA

1 INTRODUCTION OF OXYGEN LABEL

2 200 ATJ E INTRODUCTION

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# 1

## INTRODUCTION OF OXYGEN LABEL



# WHY AN ELECTRIC MACHINE?

## *Global low emission market trends*

- Northern Europe showing the path in Low Emission regulation
  - ◆ City centers regulations (London, Oslo, Grand Paris...)
  - ◆ Fossil fuel free construction sites in Norway
  - ◆ Requirements for Bio Fuel engine
- Developing countries are quick followers on regulation (India BS4, China ST4/ST5?)
- Growing market demand with possibility to work inside/outside (indoor breeding in Ag)
- 2018 : Intermat showing that Electric and Hybrid was in the heart of many companies' agenda (Mecalac, Haulotte, Wacker Neuson, JCB, Dana, Hyundai, Komatsu, CAT...)
  
- 2019 : Volvo Construction Equipment is moving forward to convert to full electric power on its compact machines by 2020 (EC15-EC27 compact excavators, L20-L28 wheel loaders)







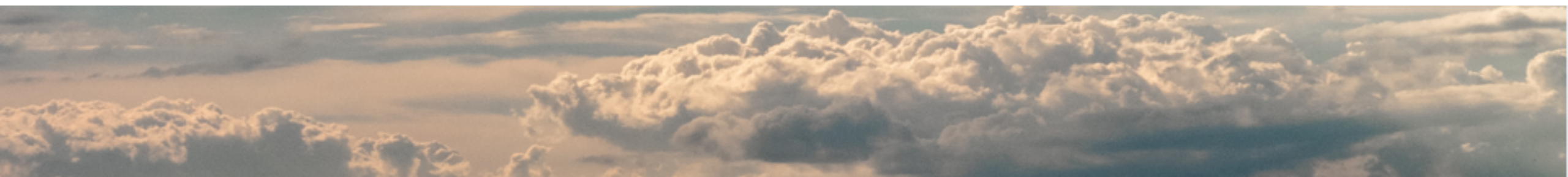
## OXYGEN - THE NEW LABEL

*What does it take to get the Oxygen label?*

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-  **Alternative energy to diesel allowing permanent or temporary use in zero emission mode** \_\_\_\_\_
-  **Reduction on the environmental impact** \_\_\_\_\_
-  **Reduction on energy consumption** \_\_\_\_\_
-  **Reduction on TCO** \_\_\_\_\_



# OXYGEN - THE NEW LABEL

*As a reminder*

OXYGEN  
by MANITOU



**“Oxygen”  
Go2Market products &  
services**

Transversal Design charter for  
all Manitou Low Emission  
solutions



**“Oxygen-lab”  
Test & Learn prototypes**

Customer experience test (Use,  
Technology, Design, Ergonomics)



**“Oxygen-concept”  
Future concepts**

Manitou Vision for Tomorrow Low  
emission solutions



The 200 ATJ-E is taking part of the  
label Oxygen



# 2

**/ 200 ATJ E  
INTRODUCTION**



## 200 ATJ E - OXYGEN

OXYGEN  
by **MANITOU**



**01** First rough terrain boom lift 100%% electric in the history of Manitou.

**02** « Same but electric ». We kept the DNA of Manitou.  
Making an electric machine is simple but building it with a reliable technology is more complex...

**03** First deliveries Q2 2020.



# 200 ATJ E Introduction - *Commercial name*

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**200 ATJ E**



**20** meters of working  
height

**A**rticulated –  
**T**elescopic arm –  
**J**ib

**+ 100%**  
**Electric**

2

## 200 ATJ-E INTRODUCTION - Requirements specification



0% EMISSION



0% NOISE



100% MANITOU

MANITOU LOVES RED AS MUCH AS  
GREEN.

# Key point - Rough Terrain performance

## *Chassis*

Manitou  
DNA

- Heavy duty axles
- Front axle with limited slip
- Immersed brake
- 4 WD / 2 WS
- Oscillating axle
- Manual locking of differential on the rear axle



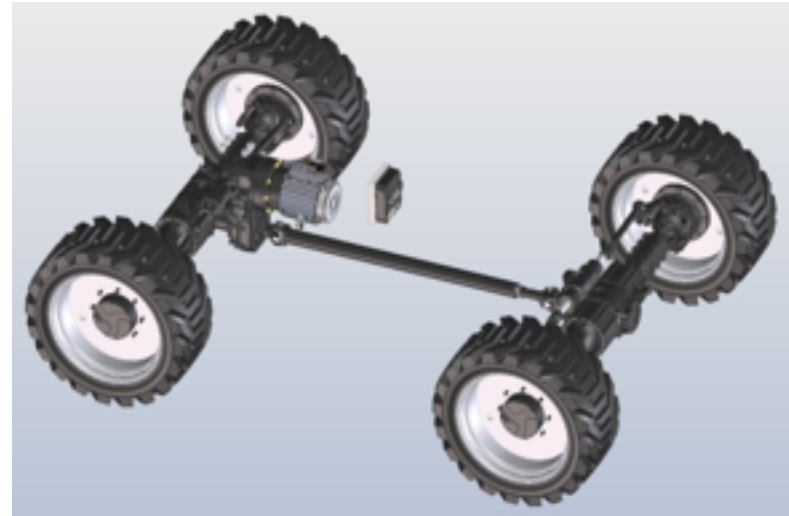


## Key point - Chassis.

### *The choice of the electric architecture.*

Technology  
simple and  
reliable.

- No oil for transmission
- Protected electric motor in the chassis
- Only 1 motor controller
- Benefit of heavy duty axles
- Excellent rough terrain performance
- Smoothness of driving movements due to the reactivity and power of electric motor
- Excellent gradeability (45%)



4

Key point - Turret.

*The choice of the electric architecture.*

Simple and  
reliable  
technology.

A 16 kW AC motor for all the hydraulic movements

Simultaneous and smooth movements

The motor will be used as generator on hybrid machine to recharge the batteries quickly.



4

## Key point - Turret. *The batteries.*

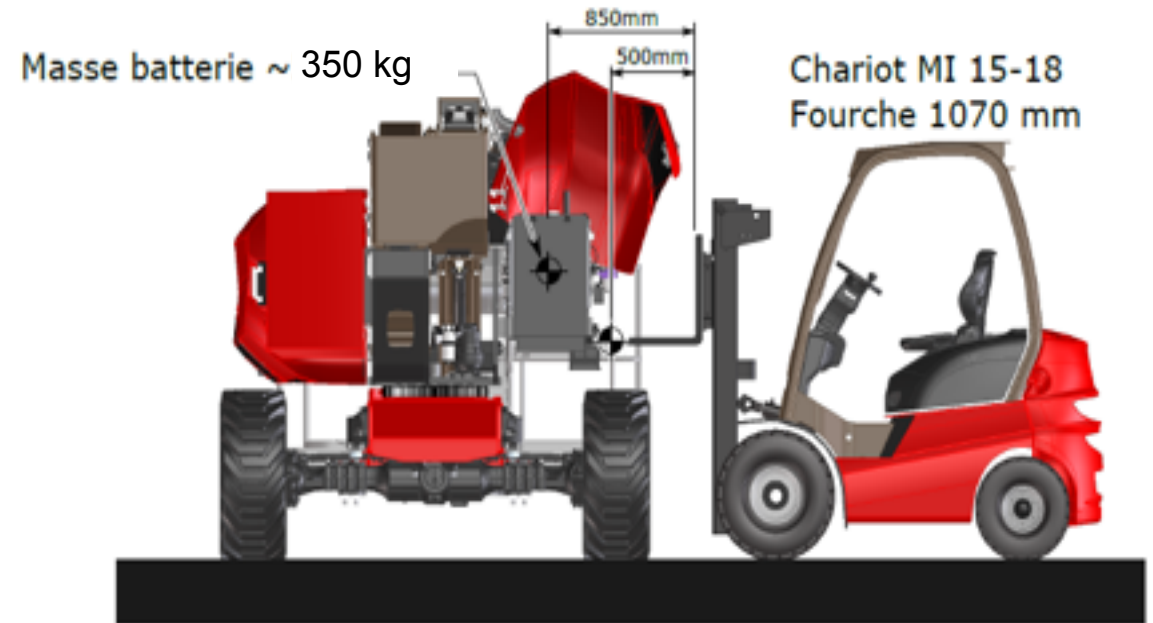
Quick & Easy  
maintenance

Lead Acid batteries - GMB 5PzS 460 (48V / 460 Ah)

Autonomy : **at least** a day and a half in « hard »  
conditions

Charging time : 8 hours

48 V ► Low voltage





4 Key point - What's changing?  
***T.C.O***



**Maintenance & repair**

- 25l of hydraulic oil
- IC units – less maintenance

**Transportation**

- Light machine (7,1 tons)
- Anchor point clearly located

- New interface (basket, turret)
- Time left indicated before

**No fuel**

**Resale value**

- Low emission advantage increases resale

4

## Key point - T.C.O *A new basket...*

- Replaceable floor
- Tool box
- Tool trays
- Lockable cover in standard
- NEW : SPS (Secondary Protection System)

**NEW**  
Common to all  
range of  
machine with  
different sizes



4

# Key point - T.C.O *New control box for PRS...*

More intuitive





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# Key point - T.C.O *Top control screen samples...*



Start screen



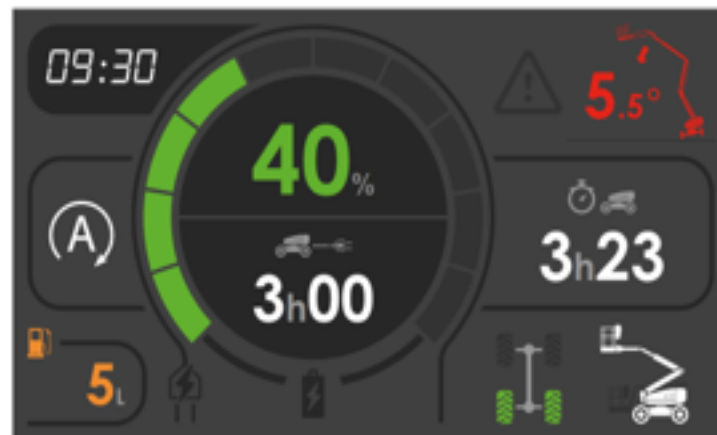
Info Screen



Work mode - Electric



Energy remaining



Over Slope / Gasoil remaining  
(Hybrid)



Overload

4

## Key point - T.C.O *Base control display...*

- Colored screen
- More information for the user
- More details for diagnostics
- More intuitive troubleshooting
- Possibility to add QR codes on screen
- Possibility to remotely diagnose joysticks from basket using top screen



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# Key point - T.C.O Base control display...



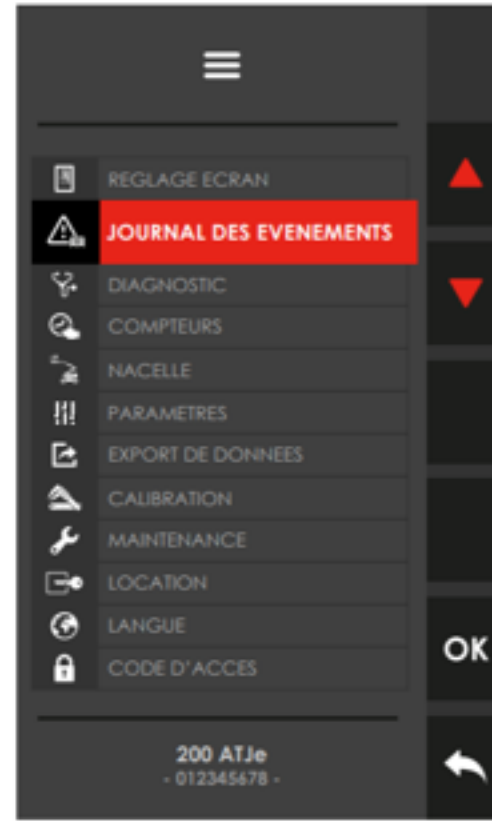
Start screen



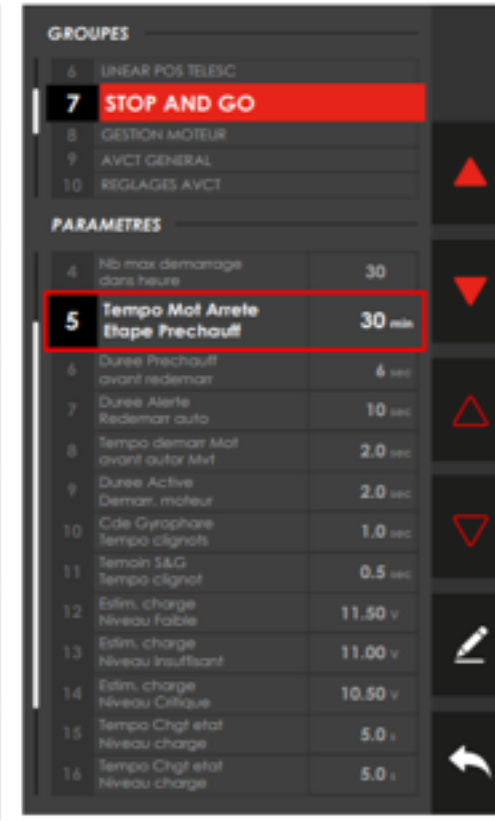
Info full electric



Alert overload



Menu



Settings

# Specs - Standard

## Standard

230 V prediposition

4 simultaneous movements

4 WD / 2 WS

Oscillating front axle

Audible alarm and illuminated indicator lamp (leveling, overload, lowering)

Backup electric pump

CAN Bus Technology

Dead Man pedal

Differential locking on rear axle

Easy Manager

Emergency stop button in platform and on frame

Flat LED Rotating beacon

Fully galvanized basket with demountable floor

Integrated diagnostic assistance

Lead acid batteries

Multi-voltage integrated charger

Non-marking tires

Protective cover for control panel

Toolbox in platform

Travel possible at maximum height

Two electric motors of 8,5 kW and 16 kW

One point lifting system

Proportional movements

Large color screen on turret

Screen information in the basket

Centralised filling of the battery

# Specs - Optional

## Optional

110 or 230V plug with differential circuit breaker

Fully galvanised basket 1m80

Beep on every movement

Beep upon travel

Biodegradable hydraulic oil

Coded anti-start

SPS : Secondary Protection System

Safety kit (harness + helmet)

Fully galvanised basket 1m80 with lateral door

Fully galvanized basket 1m50 with lateral door

Key lock on turret cover

Working light (x1) on basket

Air predisposition

Water predisposition

Hydraulic oil heater

Easy Link with access control keypad

Easy Link with remote lock



# **200 ATJ E** IS DESIGNED FOR...



**PRODUCTIVITY  
SIMPLICITY  
VERSATILITY  
PERFORMANCE**