

## The accessories.

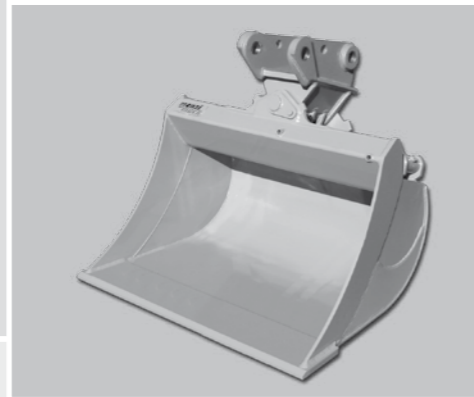
specifications subject to change  
without notice / 04/07

# A91



### Digging bucket

Blade 30 mm x 200 mm, bucket base 8 mm, anti-wear strips 8 mm, Hardox 400  
Digging bucket: 400 mm, 162 l, 202 kg  
Digging bucket: 600 mm, 278 l, 257 kg  
Digging bucket: 800 mm, 400 l, 311 kg  
Digging bucket: 1000 mm, 525 l, 365 kg



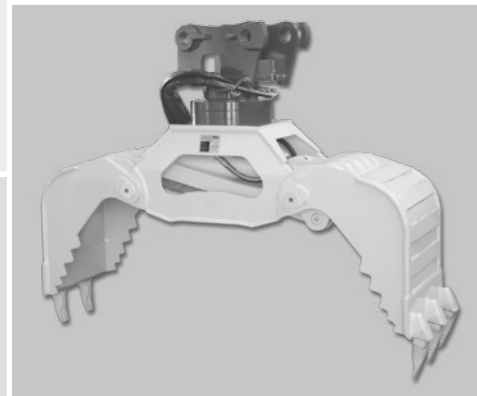
### Grading bucket

Blade 30 mm x 250 mm, bucket base 12 mm, Hardox 400  
Rigid grading bucket, 1250 mm, 450 l, 345 kg  
Rigid grading bucket, 1500 mm, 578 l, 437 kg  
Hydr. grading bucket, 1380 mm, 673 l, 560 kg



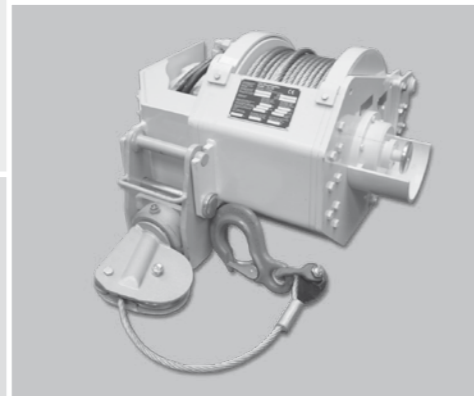
### Impact hammer

Noise reduced impact hammer:  
Type RHB 309: weight 537 kg, chisel 85 mm, impact energy 1400 Joules  
Type RHB 313: weight 974 kg, chisel 105 mm, impact energy 2500 Joules



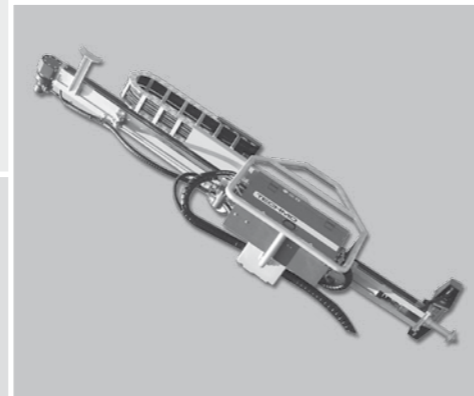
### Hydr. grabs

Universal grab / Demolition - and Sorting grab  
Grab UG12, width 570 mm, 693 kg  
Grab AG12, width 670 mm, 688 kg



### Additional equipment

Security winch, forestry winch, swivel head Powertilt, hydr. quick changer, tiltrotator, rubber pads, special tyre size, central lubricating system.



### Additional accessories

Concrete demolisher, drilling unit, hedge shears, felling-collecting unit, chain cutter, forestry mulching unit, etc.

### Options

Equipment for hoist attachment, winch preparation, biodegradable hydraulic fluid, air conditioning, central lubricating system, custom specified paintwork, street equipment, soot particle filter, powerline, additional control circuits, leak-oil tube, additional spotlights, Xenon-spotlights, dipper length 1,8 m, special tyre sizes, custom-made devices.

**Depending on type:** hydr. telescopic feet, slope supports, lift shaft, hydr. free-wheel switch hub drive, fast version.

## The king's class of mobile allterrain excavators

### SWISSPOWER+





# What matters at a glance. The Menzi Muck A91.

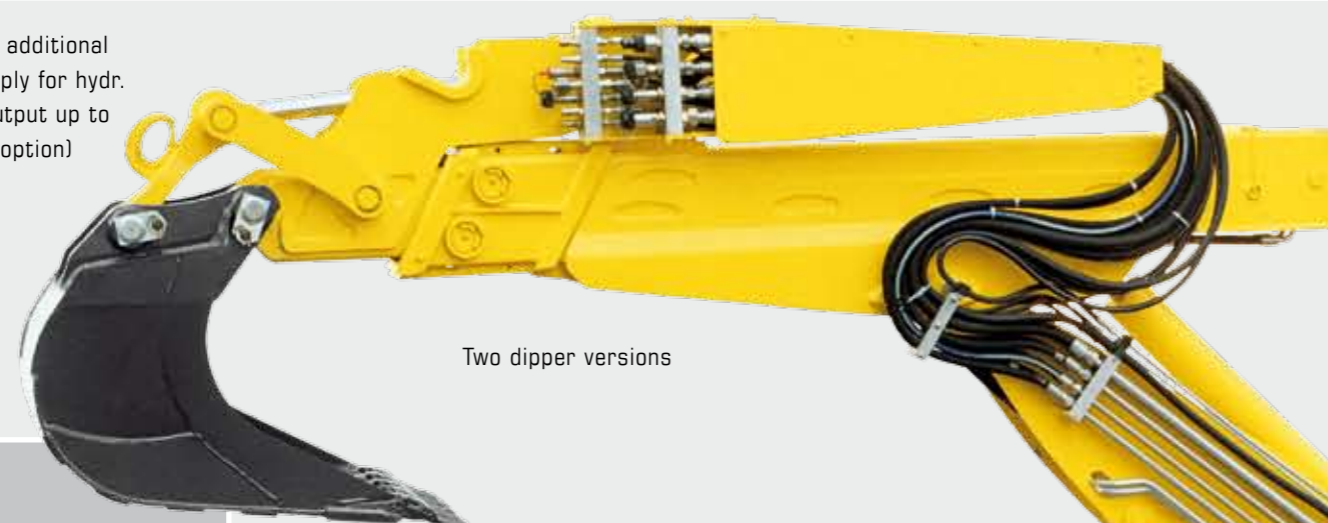
# Technology leadership over four decades.

The world's number one for mobile allterrain excavators – this claim calls for on-going development that based on over 40 years of experience. Planning is geared towards optimised safety, quality and long service life. Empirical data, practical tests and supplementary computer-generated calculations create the best possible design framework for our engineers.

### Basic data

Weight from	9'800 kg / 21605 lb
Diesel engine 4-cyl.	104 kW / 140 PS
Ripping force	76'800 N / 17256 lbf
Breakout force	73'600 N / 16546 lbf
Swivel force	46'000 N / 33928 lbf

„Powerline“ - independent additional pump with prioritised supply for hydr. attachments. Constant output up to 170 l/min. / 45 US/gall. (option)



Two dipper versions

Hoses arranged within the operator's field of vision

Comfortable working position in a generously-proportioned comfort cab giving the feeling of space

John Deere 4.5 litre common rail engine turbocharged with air cooling system

Soziale Load sensing hydraulic  
Working hydraulics: 220 l/min. / 58 US/gall.  
Driving hydraulics: 160 l/min. / 42 US/gall.

Maintenance intervals 500 hours

### Hydraulic Connections

Control circuit 1  
via foot pedal up to 160 l/min. / 42 US/gall., proportional - double action

Control circuit 2  
via joystick up to 80 l/min. / 21 US/gall. digital - double action

Control circuit 3 (Option)  
via joystick up to 40 l/min. / 10.5 US / gall., digital - double action

Control circuit 4 (Option)  
for hydr. quick changer digital - double action

„Powerline“ (optional)  
via joystick up to 170 l/min. / 45 US /gall. digital - single action, 3 volume settings individual programmable

Winch connection (optional)  
via foot pedal up to 100 l/min. / 26 US/gall., proportional - double action

Return pipe (standard)  
for hydraulic hammer

Leak oil tube (optional)

Electronic power control system with additional mode and car-like driving

Three chassis versions with two-wheel and all-wheel drive

Double-row slewing gear  
Proportional power control  
Swivel force 46,000 Nm / 33928 lbf

Electrical system: 24 volt  
Battery capacity: 2 x 95 Ah  
Starter: 7.2 kW

Tried, tested and computer-aided design calculations

New chassis control with fast, parallel and independent functions

Hydraulic cylinder protected from external influences

Powerful drive in four versions up to 15 km/h / 9,4 mph



## Rugged. Stable. The three chassis variants.

The Menzi Muck A91 is made with three different chassis designs: mobile / 4x4 / 4x4 plus. The modular-designed chassis system is set apart by its rugged steel construction. The basis is always the chassis body with integrated reserve diesel tank (capacity; 200 litres). Prop, wheel trunk and drive components vary. This enables machine configuration according to need. The traction drive is supplied with 160

l/min (up to 400 bar) by a separate performance-controlled tilting plate axial piston pump. Automatic parking brakes and hydraulic differential locks round out the drive concept. The winch connection (up to 100 l/min.) is an option.

**Chassis control** The independent chassis control by the CAN bus system offers the operator swifter and more rational handling with parallel support functions. All components in the chassis are to IP69 standard and suitable for continuous operation in water.

### Menzi Muck A91 mobile

The "mobile" version is two-wheel drive. The two larger wheels with a single-phase hydrostatic traction drive are fitted as standard. Maximum speed of 8 km/h. The two smaller bogie wheels, side-mounted on the props, are detachable. The support feet with lugs are telescopically adjustable. Optional: Fast-runner with 2-phase traction drive. Speed: first phase up to 8 km/h, second phase up to 15 km/h.

### Menzi Muck A91 4x4

The "4x4" version is all-wheel drive and fitted as standard with two-phase traction drives. Two larger wheels and two smaller wheels side-mounted on the props.

#### Variable track

A special feature of the 4x4 version is the four-way, parallel track adjustment mechanism on the smaller wheels from 2,350 mm to 3,700 mm. Speed: first operating phase to 4 km/h, second phase to 10 km/h. The support feet with lugs are telescopically adjustable. Optional: hydraulic lift axes for raising the smaller wheels.

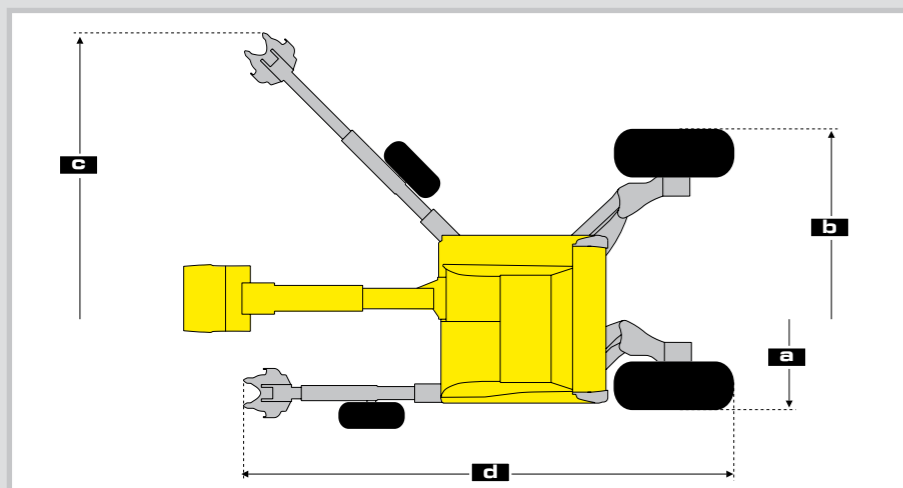
### Menzi Muck A91 4x4 plus

The "4x4 plus" version has a two-phase traction drive with four identical large wheels. The axle steering knuckle allows very narrow radii to be driven; smallest turning circle is 12.5 meters. Speed: first operating phase to 4 km/h, second operating phase to 10 km/h. A hydraulic prop with lugs can be fitted as an option for additional hold on difficult terrain.

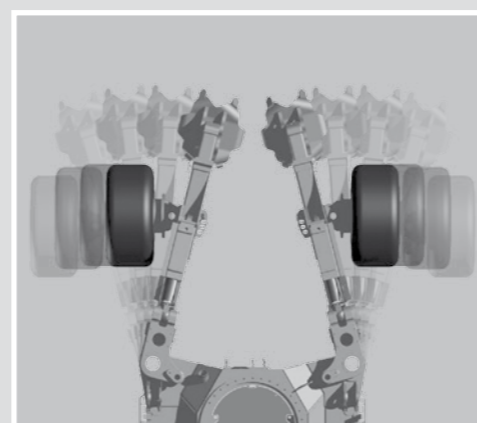
#### H-Drive System

The newly developed "H-Drive System" concept for the Menzi Muck A91 4x4 plus is highly robust. An intelligent controller with torque overlay guarantees optimised efficiency in any operating position. The force is distributed between the four wheels so that the highest possible traction is automatically achieved. New drive units with even more traction round out Menzi's latest driving concept.

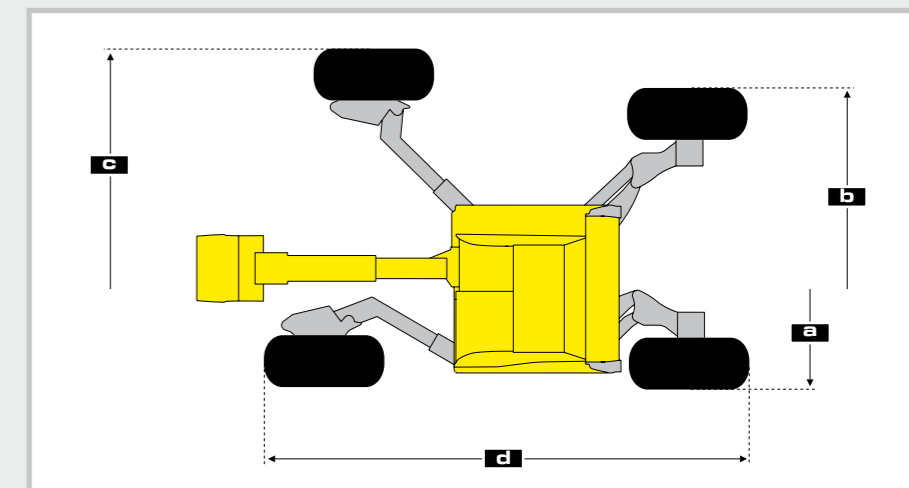
#### Menzi Muck A91 / A91 4x4



<b>a</b>	Minimum width hub drive (transport width)	mm / inch	2'080 / 6'9"
<b>b</b>	Max. positioning width hub drive	mm / inch	4'400 / 14'5"
<b>c</b>	Max. positioning width stabilizers	mm / inch	6'590 / 21'7"
<b>d</b>	Chassis length	mm / inch	5'660 / 18'6"



#### Menzi Muck A91 4x4 plus



<b>a</b>	Minimum width hub drive (transport width)	mm / inch	2'330 / 7'7"
<b>b</b>	Max. positioning width hub drive	mm / inch	4'630 / 15'2"
<b>c</b>	Max. positioning width stabilizers	mm / inch	5'530 / 18'2"
<b>d</b>	Chassis length	mm / inch	5'710 / 18'7"

Measurements depend on type of tyre.

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## Sensitive. Performance-regulated. The hydraulic system.

### Pump capacities

<b>P1</b> Working hydraulics	220 l/min. / 58 US/gall. (max.280 bar)
<b>P2</b> Driving hydraulics	160 l/min. / 42 US/gall. (max.400 bar)
<b>P3</b> Fandrive	36 l/min. / 9,5 US/gall.
<b>P4</b> Powerline	170 l/min. / 45 US/gall. (max.350 bar)

### Hydraulic system

Optimised hydraulic calibration is tradition at Menzi. The harmonic working cycle is geared towards top performance. The design incorporates the latest insights in hydraulic technology.

LIFD load sensing hydraulic components (load-independent flow division) with electronic load limit sensing control. Mechanical pump power transfer gear has two performance-regulated tilting plate axial piston pumps as standard equipment: one for working hydraulics (P1) and one for the driving hydraulics (P2). A gear pump (P3) supplies the electro-hydraulically controlled fan motor. Hydraulic system capacity: 200 liters / 52,8 US-gall.

### Load limit sensing control

Electronic power control system for faster, more sensitive and more constant interaction between engine and hydraulics. An additional operating mode is provided: Smooth mode enables work accurate to the millimeter with unrestricted force.

### Automotive driving

The power limit control allows even more comfort when driving on roads, conveying a new driving feeling. Engine speed and drive pump are activated in synch using the throttle pedal. This achieves an automatic-like characteristic, the speed increasing on moving away and decreasing on braking. The potentiometer limits the maximum speed and the throttle pedal can be let out more gently.

### Optional: „Powerline“

The "Powerline" makes oil-thirsty tools more efficient and creates new application potentials. An independent, performance-controlled tilting plate axial piston pump operates with priority. An additional, single-acting hydraulic connection is constantly supplied with up to 170 l/min. The operator can conveniently program three different litre settings at the display in the cab. Maximum pressure 350 bar.

### Pump power divider

The pump power divider between engine and hydraulic pumps enables economical, increased efficiency. The pump power divider raises the engine's output speed by more than 20%, which in turn increases output from the hydraulic pumps.

### Swing

The axial piston motor with automatic multi-disc brake operates via the planetary gear train on the internal spline of the double-row slewing gear. Hardened tooth flanks. The swivel force is controlled proportionally and on-demand by torque control at the joystick. Swing area 360° endless. Slewing speed up to 10 rpm. Swivel force 46'000 Nm. / 33928 lbf.

## Powerfull. Low-emission. The John Deere Diesel engine.

### Basic engine data

John Deere Engine	104 kW / 140 PS
governed to	2'000 rpm
@	2'000 min-1
Displacement	4'500 ccm
Maintenance intervals	500 h



### Commonrail engine

John Deere 4-cylinder diesel engine, type 4045HF285, turbo charged with air-cooling. Direct injection using common rail technology. Displacement 4500 ccm. Governed to 99 kW (133 PS) @ 2'000 min-1. The latest low-emission and low-noise engine technology with optimised balance, vibration free on hydraulic bearings. Exhaust emission stage 3a in accordance with standard 97/68 (TIER 3).

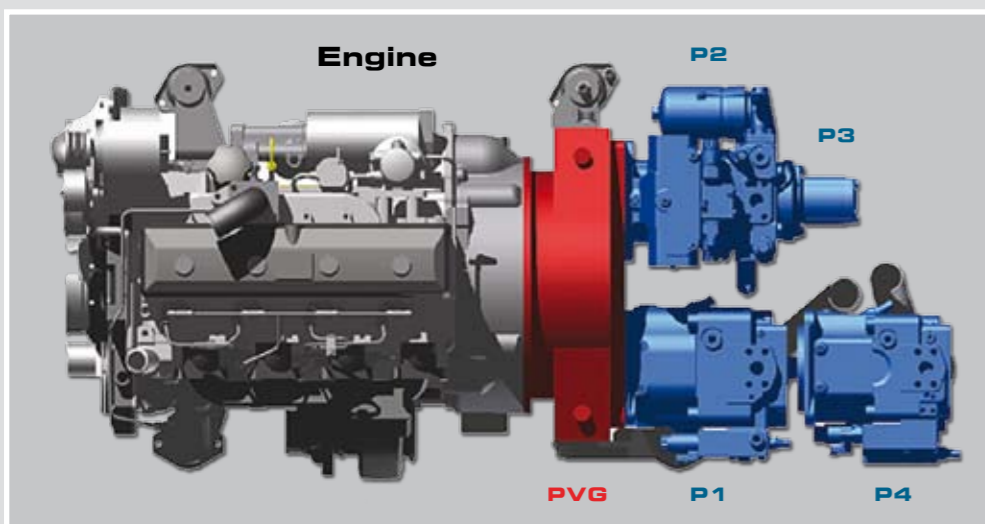
### Cooling system

The powerful fan system is generously dimensioned and rated to an 47 degrees ambient temperature. The cooling capacity is electro-proportionally controlled. Outstanding efficiency with high airflow through the wing fan.

### Electrical system

24 volt, battery capacity 2 x 95 Ah, starter 7.2 kW, alternator 45 Amp = electrical output 1'080 watt

Optional: alternator 100 Amp = electrical output 2'400 watt.



## Comfortable. Generously. The operator's cab.

## User friendly. Clearly. The information point.



### Safety cab

Comfortable and spacious cab with all-round view and sprung seat, low-vibration on rubber mounts, roll prevention, ROPS test according to DIN ISO 3471. Efficient heating with high defrost capacity. Spacious storage shelves and document compartments. Cab can be tilted hydraulically.

Optional: air condition, FOPS roof.

### Controls

Two ergonomic multi-joysticks, each with max. 25 functions. Logical design for ease of use of chassis and bucket functions. No double functions. Foot pedals for actuation of boom, drive, hydraulic attachment and winch. Operator's seat, joysticks and foot pedals can be adjusted to suit to the operator.



### Menu: Main view

The main screen accommodates all the important operating displays: engine speed, fuel gauge, cooling water and hydraulic oil temperature. Selected litre setting for the "Powerline" option. The key basic information also includes various warning symbols combined with audible signals.

The sub-menu displays the individual operating modes in figures.



### Menu: Powerline

Arbitrary settings can be programmed for three different tools. Litre quantity and engine speed can be configured as required. The specified performance data are automatically activated when the desired tool is selected via the joystick.



### Menu: Diagnostics

All control units are checked and the status displayed when the machine is started-up. The various sub-menus offer the following diagnostic displays: hydraulic control circuit, diesel engine, joystick output signals, solenoid output signals. The machine is checked for operability and a fault diagnostic report created where applicable.



# Menzi Muck A91. The technical data.



## Menzi Muck A91 mobile / A91 4x4

## Menzi Muck A91 4x4 plus

### Version: A91 mobile

Weight without accessories  
9800 kg / 21605 lb

Speed - single stage drive  
up to 8,0 km/h / 5,0 mph (standard)

Speed - dual stage drive  
up to 15,0 km/h / 9,4 mph (optional)

Hub drive (standard) 550/60-22.5, 16 pr  
1'240 x 550 mm / 4'1" x 1'10" inch

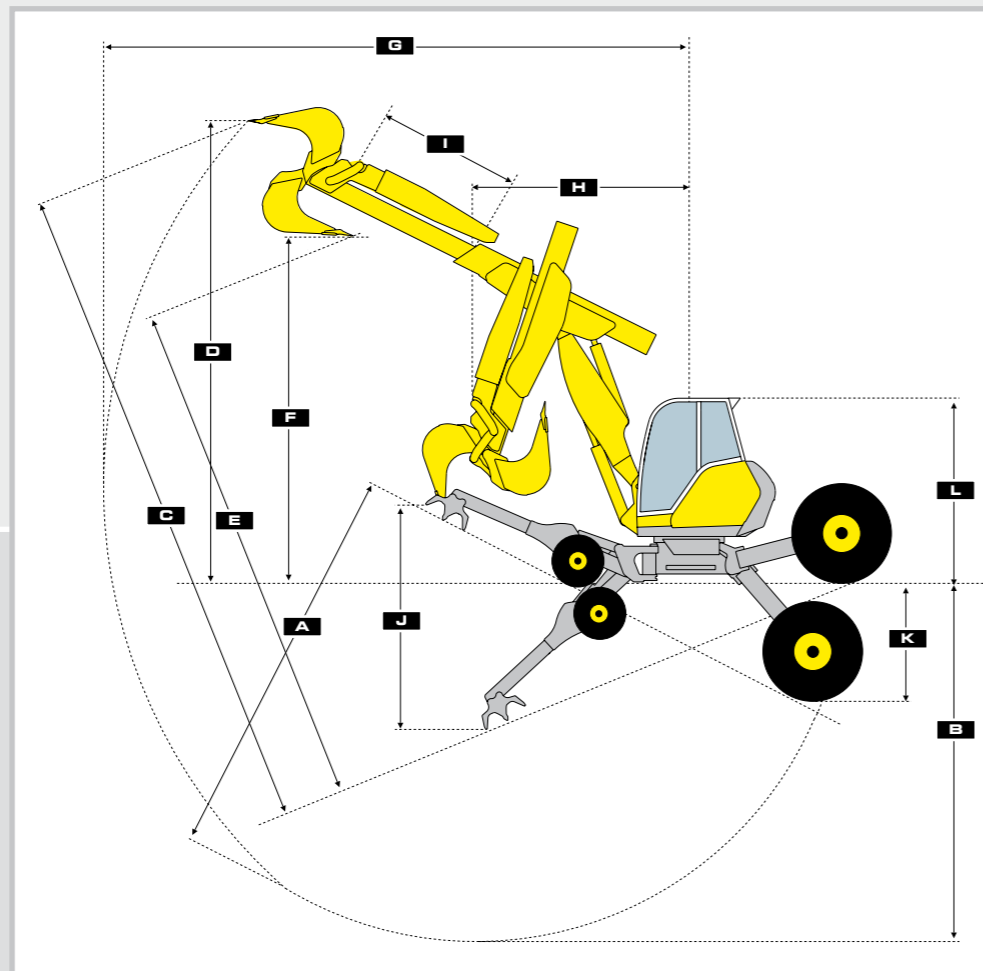
Hub drive (optional) 18R-22.5  
remoulded with Michelin Profil XF  
1'170 x 450 mm / 3'10" x 1'6" inch

Hub drive (optional) 600/55-26.5, 16 pr  
Forestry tyres with steel insertions  
1'350 x 600 mm / 4'5" x 2' inch

Hub drive (optional) 600/50-22.5, 16 pr  
Forestry tyres with steel insertions  
1'100 x 600 mm / 3'7" x 2' inch

Front drive (standard) 300-15  
800 x 300 mm / 2'7" x 1' inch

Front drive (optional) 400/55-17.5  
880 x 400 mm / 2'11" x 1'4" inch



### Version: A91 4x4

Weight without accessories  
10000 kg / 22046 lb

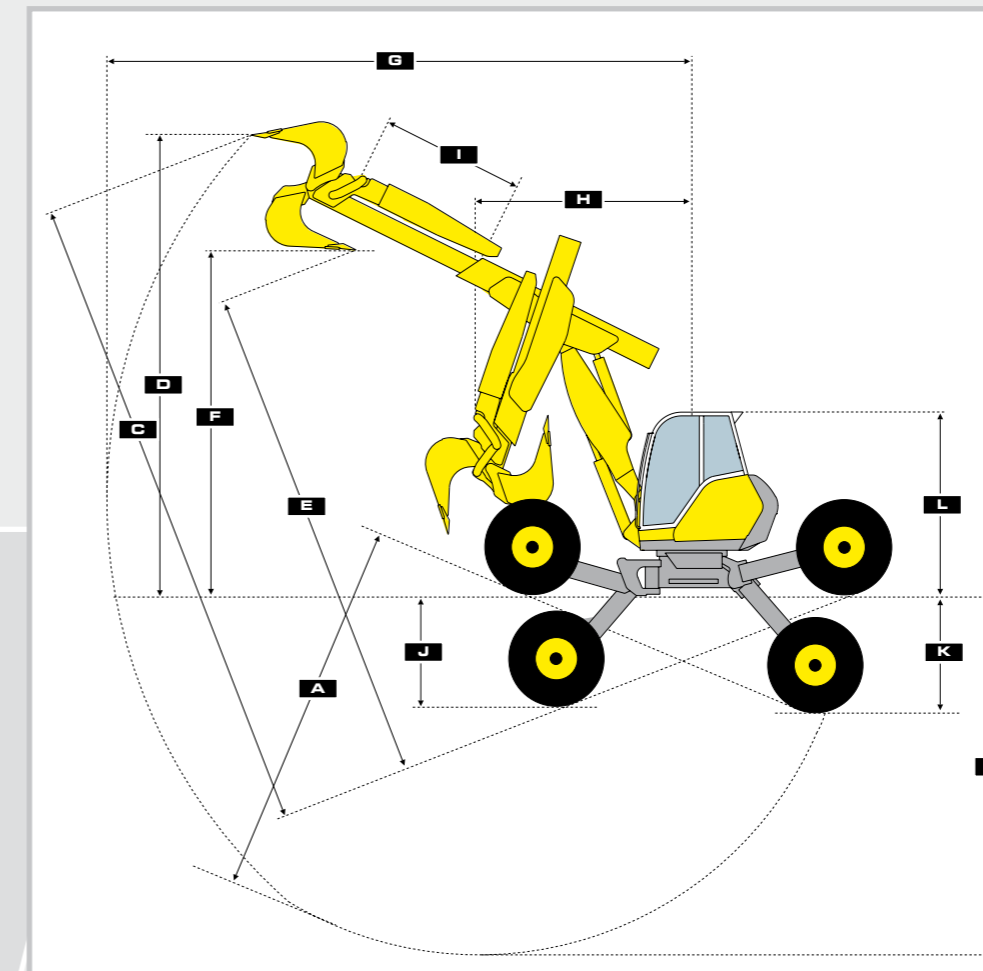
Speed - dual stage drive  
bis 10,0 km/h / 6,25 mph

Hub drive (big), 600/55-26,5, 16 pr  
Forestry tyres with steel insertions  
1'350 x 600 mm / 4'5" x 2' inch

Hub drive (small), 400/55-17.5, 16 pr  
880 x 400 mm / 2'11" x 1'4" inch

	A91 mobile / A91 4x4	T2	T1.8
<b>A</b>	Max. Excavation depth (with adjusted chassis) ..mm/inch....	5960/19'6"	6210/20'4"
<b>B</b>	Max. Excavation depth (chassis horizontal) ..mm/inch....	5430/17'9"	5670/18'7"
<b>C</b>	Max. Excavation height (with adjusted chassis) ..mm/inch....	9510/31'2"	9650/31'8"
<b>D</b>	Max. Excavation height (chassis horizontal) ..mm/inch....	6870/22'6"	6910/22'8"
<b>E</b>	Max. Discharge height (with adjusted chassis) ..mm/inch.....	7030/23'	7160/23'5"
<b>F</b>	Max. Discharge height (chassis horizontal) ..mm/inch.....	4830/15'10"	4860/15'11"
<b>G</b>	Max. Jib Range.....mm/inch....	8570/28'1"	8790/28'10"
<b>H</b>	Min. Swivelling radius ..mm/inch....	3000/9'10"	2980/9'9"
<b>I</b>	Dipper length ..mm/inch.....	1960/6'5"	1800/5'10"
<b>J</b>	Positioning range stabilizers ..mm/inch....	3110/10'2"	do. T1,8
<b>K</b>	Positioning range hub drive.....mm/inch.....	1640/5'4"	do. T1,8
<b>L</b>	Transport height ..mm/inch.....	2570/8'5"	do. T1,8

Measurements depend on type of tyre and accessories.



	A91 4x4 plus	T2	T1.8
<b>A</b>	Max. Excavation depth (with adjusted chassis) ..mm/inch....	5680/18'8"	5920/19'5"
<b>B</b>	Max. Excavation depth (chassis horizontal) ..mm/inch....	5420/17'9"	5670/18'7"
<b>C</b>	Max. Excavation height (with adjusted chassis) ..mm/inch....	9420/30'11"	9650/31'4"
<b>D</b>	Max. Excavation height (chassis horizontal) ..mm/inch....	6870/22'6"	6910/22'8"
<b>E</b>	Max. Discharge height (with adjusted chassis) ..mm/inch....	6950/22'9"	7070/23'2"
<b>F</b>	Max. Discharge height (chassis horizontal) ..mm/inch.....	4830/15'10"	4860/15'11"
<b>G</b>	Max. Jib Range.....mm/inch....	8570/28'1"	8790/28'10"
<b>H</b>	Min. Swivelling radius ..mm/inch....	3000/9'10"	2980/9'9"
<b>I</b>	Dipper length ..mm/inch.....	1960/6'5"	1800/5'10"
<b>J</b>	Positioning range stabilizers ..mm/inch....	1550/5'1"	do. T1,8
<b>K</b>	Positioning range hub drive.....mm/inch.....	1640/5'4"	do. T1,8
<b>L</b>	Transport height ..mm/inch.....	2570/8'5"	do. T1,8

Measurements depend on type of tyre and accessories.

### Version: A91 4x4 plus

Weight without accessories  
10500 kg / 23149 lb

Speed - dual stage drive  
up to 10 km/h / 6,25 mph

Forestry tyres with steel insertions  
(standard) 600/50-22.5, 16 pr  
1100 x 600 mm / 3'7" x 2' inch

Forestry tyres with steel insertions (optional)  
600/55-26.5, 16 pr  
1350 x 600 mm / 4'5" x 2' inch

Tyres (optional): 550/80-23  
1350 x 550 mm / 4'5" x 2' inch

### Basic data Menzi Muck A91

John Deere 4-cyl. engine	104 kW/140 PS
governed output	99 kW/133 PS
governed rpm	2'000 rpm
Displacement	4'500 ccm
Electrical system	24 V
Battery capacity	2 x 95 Ah
Starter	7.2 kW
Maintenance intervals	500 h
Diesel tank fuel capacity	130 + 200 litre

	34,3 + 52,8 US/gall.
Hydraulic system capacity	200 litre
	52,8 US/gall.
Swivel speed	up to 10 rpm
Swivel force	46'000 Nm / 33928 lbf
Operation across slope	70 %
Operation along slope	100 %
Climbing ability on road up to	50 %
Ripping force T1,8	69'800 N / 15688 lbf
Ripping force T2	76'800 N / 17256 lbf
Breakout force	73'600 N / 16546 lbf