
Stage V

Pictured machine may include options and additional equipment.

Features

Charmec MF 605 D(V) charger with diesel hydraulic drive is designed for face and production charging in underground mines and tunnels up to 65 m² cross sections where max face height is 8.4 m.

Place for external emulsion kit is located in the middle the unit. Ready designed place for stick powder boxes, primers and detonators makes it possible to bring all the needed materials to the workplace at once and eliminates the need for an additional explosive service vehicle. Compressor option eliminates the need for external pressure air line.

Optional electro-hydraulic process allows to charge without diesel fumes and more ergonomically with lower noise level. If electricity is not available charging work can be still done with diesel.

The liquid cooled turbo charged Cummins 121 kW Stage V approved engine provides clean and efficient operation and gives maximum speed of 28 km/h and 8 km/h in upward 1:7 inclined tunnel.

The FOPS / ROPS approved safety canopy / cabin with pivotal operator's seat provides comfortable compartment for the driver and his assistant. The enclosed cabin provides noise level < 75 dB.

Self extinguishing marine type wire harness with tinned wires and water tight conduits are specially designed for safe and reliable operation in tough underground conditions. All daily checks can be done from the ground level.

normet

Charmec MF 605 D(V)

Technical data sheet

100179781.1

20.06.2022

Stage V

Technical specification

CHARGING SYSTEM

Process platform at the center of the unit
Inner dimensions 800 x 2000 x 1600 mm
Max load 6000 kg
Earth straps front and rear
Storage area for stick powder boxes
Storage boxes for primers and detonators

NBB3S BASKET BOOM

2-men basket
Lifting capacity 500 kg
Boom lift -18°...+ 60°
Max. Lifting height (basket floor) 6.4 m
Max. Vertical reach 8,4 m
Boom slew +/- 30°
Automatic levelling of basket
Diesel start/stop from basket
Battery operated emergency pump for lowering the boom

ENGINE

Liquid cooled turbo charged Cummins B 4.5,
121 kW/2500 rpm, Stage V approved
Exhaust brake
Requires DEF (urea) and ultra-low sulphur diesel (ULSD)
(max sulphur content < 15 ppm)

EXHAUST AFTER TREATMENT SYSTEM

EGR (Exhaust Gas Recirculation), DOC (Diesel Oxidation Catalyst) and SCR (Selective Catalytic Reduction)

TRANSMISSION

Dana 24 000 series power shift with pump drive group
3 speeds forward and reverse
4-wheel drive
Lock up turbine

AXLES

Planetary type
Dana 123
Load end axle fixed
Engine end axle oscillation +/- 10°

PERFORMANCE

1st gear max. 6 km/h
2nd gear 12 km/h
3rd gear 28 km/h
Max. tractive effort 132 kN
Max speed in 1:7 inclined tunnel
• Empty 8 km/h
Performance curve 100087562

STEERING

Hydraulic frame steering
Orbitrol type
Frame articulation +/- 40°

BRAKES

Service brake: hydraulically powered dual-circuit oil immersed multidisc brakes in both axles

Safety/Parking brake: spring applied hydraulically released fail-safe -type brake. Brake testing possible from cabin

TYRES

12.00 - 20 PR 20

FUEL TANK

Capacity 112 L

DEF TANK

Diesel Exhaust Fluid
Capacity 19 L

HYDRAULIC SYSTEM

Variable displacement pump system,
190 bar, 135 L/min/2200 rpm
Hydraulic oil tank capacity 115 L
Return oil filtration 10 µm
Indication of level, filtration and temperature

24 VDC ELECTRICAL SYSTEM

Exposed components are min IP 65 standard
Battery 2 x 115 Ah
Alternator 100 A
Driving LED lights (4 + 2 pcs)
Working LED lights (2 + 2 pcs)
LED working lights in basket (2 pcs)
LED parking, brake and indicator lights
LED side lights; amber
Side reversing LED lights
Rotating beacon; amber
Wire harness (self extinguishing) with tinned wires and water tight conduits

DRIVER'S COMPARTMENT

Open 2-man cabin FOPS/ROPS approved
3 different mounting heights for cabin
Air suspended T-back seat for driver and passenger Seat with retractable lap seat belt
Forward and side seating for the driver with two sets of pedals (brake and accelerator)
Cabin door interlock switches with safety brake application
CAN Cockpit, Master Gauge:
• Tacho, rpm
• Operating hours
• Fuel level
• Transmission temperature
• Cooling water temperature

MACHINE CONNECTIVITY

Machine connectivity hardware (WLAN/3G/4G/LTE)

GREASING SYSTEM

Centralized grease fittings for the carrier

OTHER

12 kg hand held fire extinguisher (2 pcs)
Standard symbol labels
Extendable support legs at the load end

Normet reserves the right to change this specification without further notice.

Stage V

Optional equipment**DRIVER'S CABIN**

Enclosed cabin, FOPS/ROPS

Air suspended T-back seat for driver and passenger

MACHINE CONNECTIVITY

- Data lifetime license (Include connectivity hardware)
- Analytics lifetime license
(Include connectivity hardware and data lifetime license)

OTHER

Warning lights: 1 unit

- Rotating beacon; red
- Rotating beacon; blue

Additional equipment**SUSPENSION**

Front axle suspension

FOR ENCLOSED CABIN

CD/Radio system

Cabin ventilation:

- Cabin heating
- Air conditioning

HIGH VOLTAGE ELECTRICAL SYSTEM

Electro hydraulic drive:

- 400 V / 50 Hz with 100 m cable
- 440 V / 50 Hz with 100 m cable
- 690 V / 50 Hz with 100 or 150 m cable
- 1000 V / 50 Hz with 100 or 150 m cable

FOR NBB BASKET

Safety bar

Safety bar with hydraulic lift:

Reduces lifting capacity 60 kg

Safety roof with hydraulic lift:

Reduces lifting capacity 100 kg

Safety roof with hydraulic lift and slide:

Reduces lifting capacity 200 kg

LED working lights on safety roof / safety bar (2 pcs) 43 W

Boom suspension

FIRE SUPPRESSION SYSTEM

Fogmaker: Manually actuated

Fogmaker: Automatically actuated

Ansul: Manually actuated

Ansul: Automatically actuated

GREASING SYSTEM

Automatic lubrication system for carrier: Lincoln

Automatic lubrication system for carrier and lifter: Lincoln

OTHER

Winter kit for diesel engine

Fast fuel filling system: Wiggins

Oil evacuation kit with sample points

Extra hand held fire extinguisher (12 kg)

Hydraulic front support legs

Warning lights, 1 unit:

- Rotating beacon; amber
- Rotating beacon; red
- Rotating beacon; blue
- Strobe light; white

Text labels in: Fin / En / Por / Swe / Rus / Nor / Ger / Fra / Spa/ Ita

2 wheel chocks with brackets

Reversing camera

Spare wheel

Stage V**Service****OPERATIONAL SPARE PARTS**

A complete parts package to ensure your machine runs with optimal uptime.

After commissioning of your new Normet equipment, the following maintenance & critical spares are typically recommended to support and service your machine:

- Filters, belts
- Sensors, work lights, solenoid coils and fuses
- Sliding parts, bearings, cylinders, seals & pins
- Hoses including concrete, charging & hydraulic
- Nozzles & tips
- TamCrete EasyClean - nontoxic protective agent
- Pistons and seal kits
- Guide rollers and bushes

Note: The usage and consumption of parts may vary depending on the operating environment.

EXTENDED WARRANTY

Standard Normet equipment warranty is 2000 operation hours or 12 months (whichever is reached first). Extended warranty for your Normet equipment can be provided with service agreement- conditions apply.

TRAINING AND EXPERTISE SERVICES

Need training before your machine goes into service or any stage during its working life? The Normet Academy and our highly skilled technicians can provide all your expert training needs including...

Product training:

Operation and Maintenance

Automation -NorSmart/Nordoser

Electric, hydraulic and mechanical fundamentals

Trouble-shooting and fault finding

Process & operator improvement audit for:

Concrete spraying - practical or simulated

Charging

Scaling - practical or simulated

Audit services to improve:

Equipment performance, machine availability, safety & quality.

SERVICE AGREEMENTS

Parts supply

Periodic fleet inspection

Preventative maintenance

Maintenance Supervision

Fleet availability

ELECTRONIC MANUALS

LinkOne electronic spare parts and instruction manuals

EQUIPMENT - COMMISSIONING & START UP SERVICES**Operator Training**

- Class room training
- Practical training

Maintenance & Repair Training

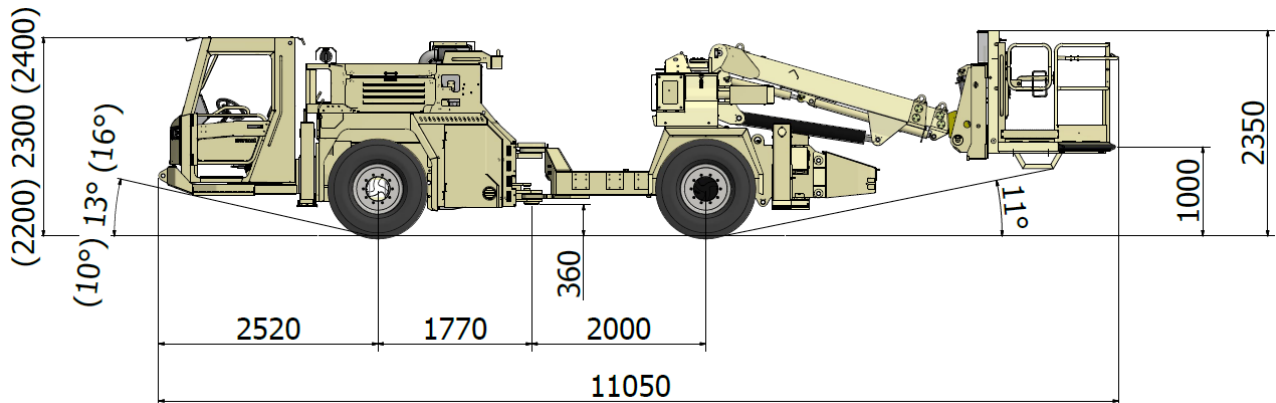
- Class room training
- Practical training

Commissioning

- Receiving inspection

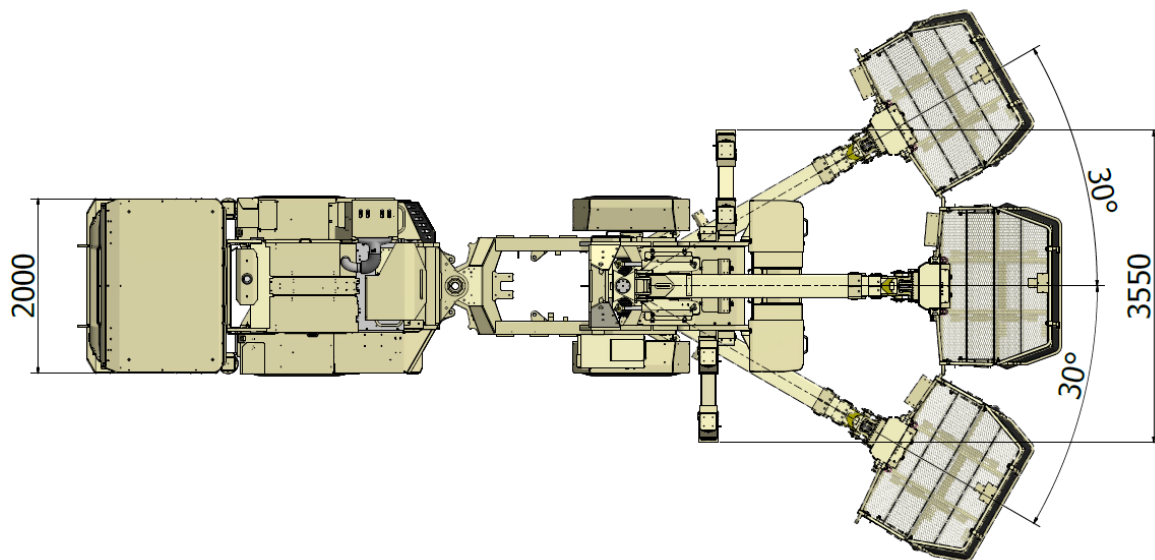
Stage V

Dimensions



SIDE VIEW

Basic machine



TOP VIEW

DIMENSIONS

Length	11050 mm
Width	2000 mm
Height	2350 mm
Wheel base	3770 mm
Track	1650 mm
Ground clearance	360 mm

TURNING RADIUS

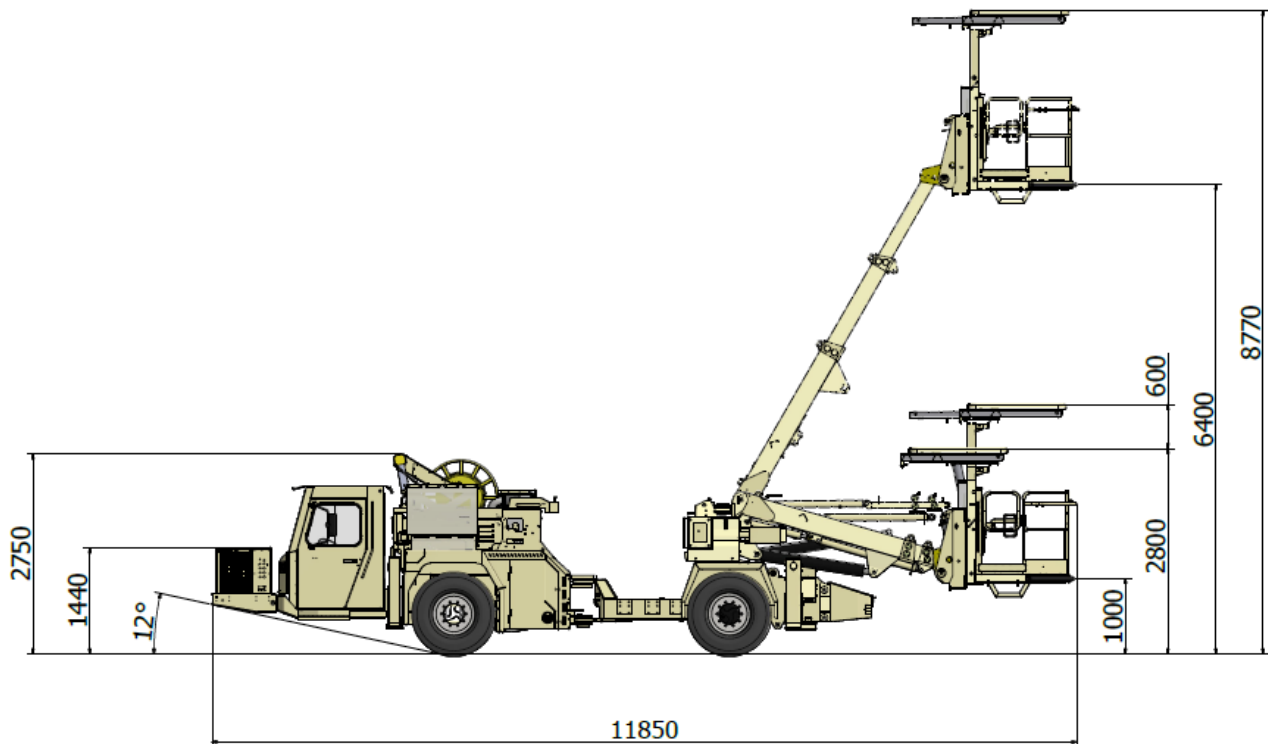
Outer	(6930) 7550 mm
Inner	4100 mm

WEIGHT BASIC UNIT WITHOUT OPTIONS

Operating weight:	
• Empty	14 600 kg

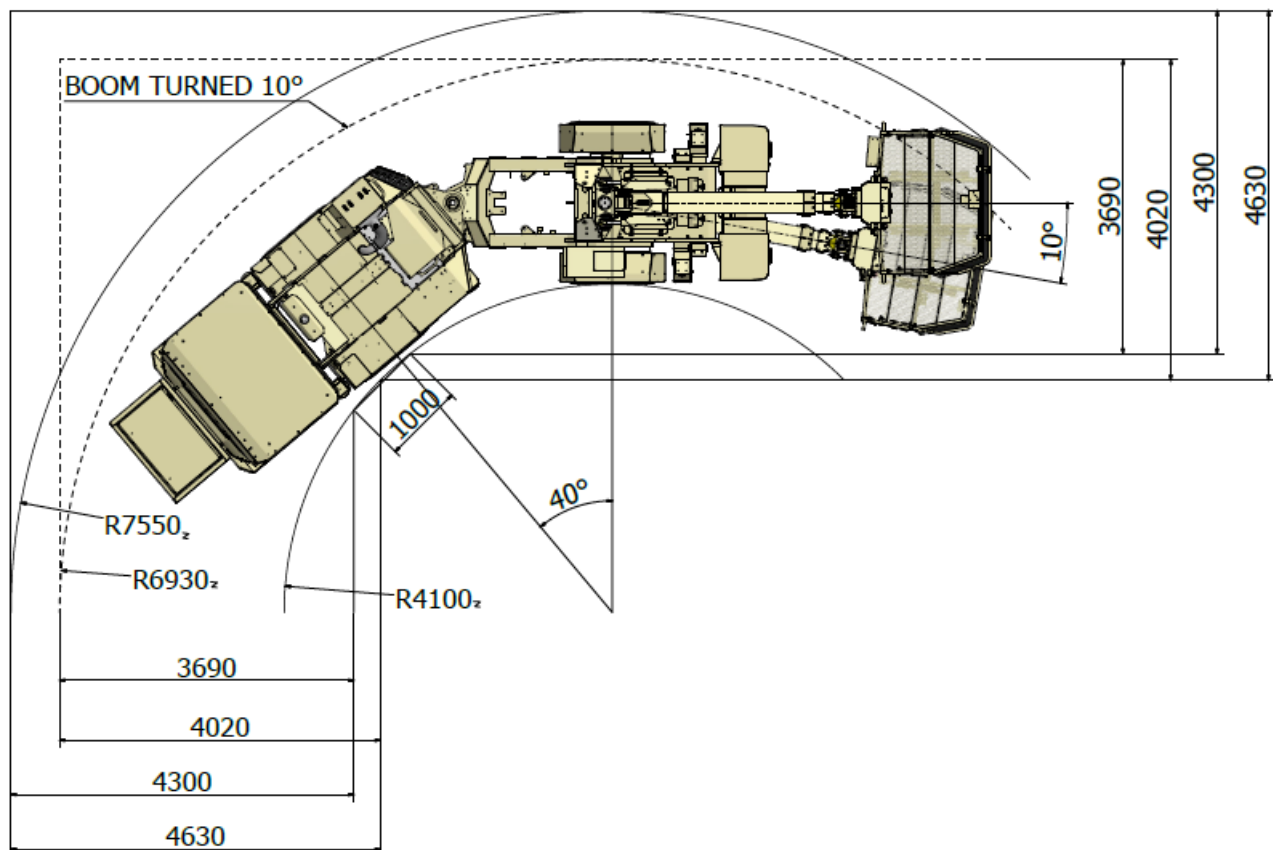
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Stage V

Dimensions**BOOM REACH**

Stage V

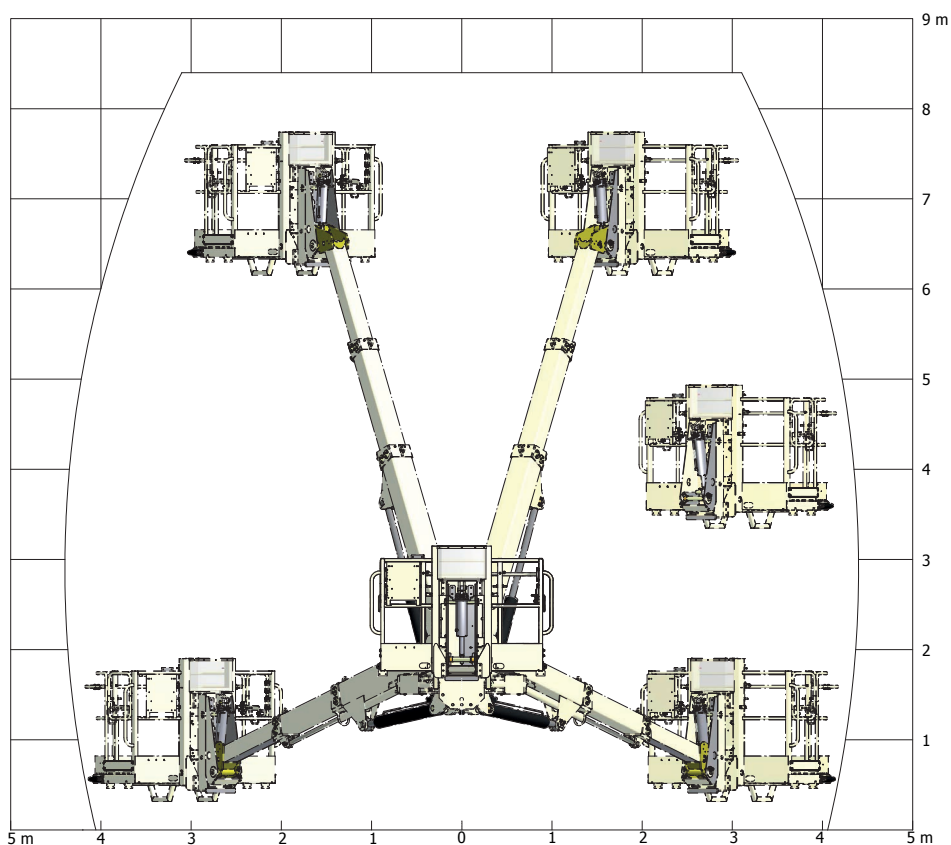
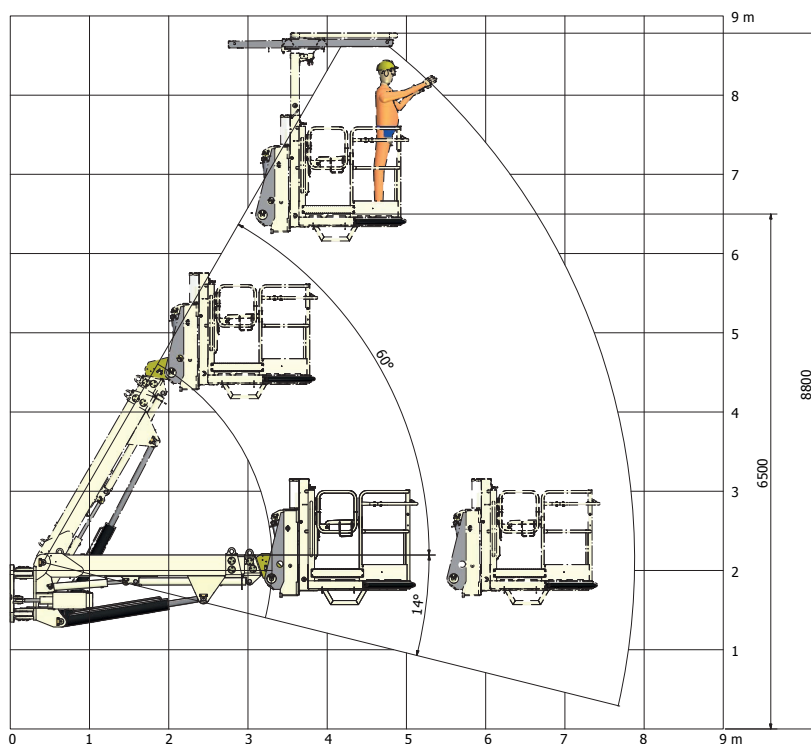
Dimensions



TURNING RADIUS

Stage V

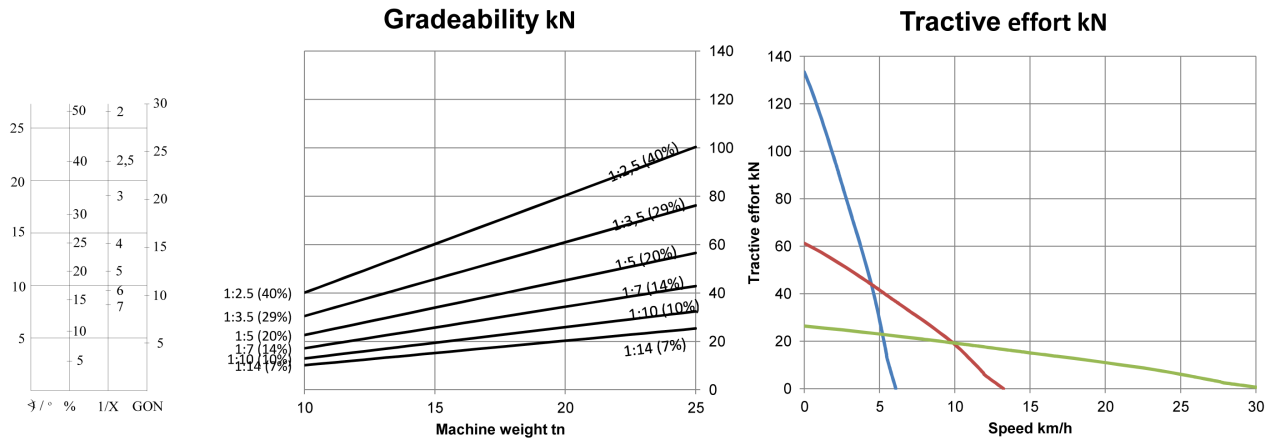
Dimensions



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Stage V

Tractive efforts



CUMMINS B 4.5, 121kW

Performance curve 100087562