

Adroit 450G

4x4 Shotcrete Machine With Generator



Adroit 450G is designed as concrete pumping and shotcreting machine. The rigid chassis has 4 wheel drive and 4 wheel steering. Machine is fully equipped with lifting, tilting, telescopic boom system, rotation group, compact modular system, water and admixture pumps and tanks, energy cable reel, compressor and generator on the platform. The most important feature of Adroit 450G is that a compressor and generator are installed on its frame. Thanks to this equipment, open area applications can be performed by only one operator. As Adroit 450G minimises the need for compressors, generators, installation of line and more than one worker for concrete spraying operation, it offers cost advantage application and saves time. Adroit 450G is the first and only shotcrete machine with a generator installed on its frame. Standard pumping capacity is 30 m³/h and concrete pumping capacity is adjustable.

Hydrostatic system allows user to have max. speed - max. torque by variable flow pump and hydromotor. According to road and land conditions, gear options can be chosen as fast or slow. Adroit 450G is an ideal choice for work sites where high speed performance is required and construction areas, which have difficult ground conditions.

GENERAL SPECIFICATIONS

- > Valf groups, electrical panel, motors and pumps are sheltered by compact modular system
- > Led control panel showing fault, warning and driving info
- > Stabilizer cylinder and valve group
- > Cable remote control
- > Reversing audible and visual warning system
- > Handheld fire extinguisher
- > Eyebolts and towing hooks to use in loading and transporting the machine
- > Rear view camera
- > Anti-rust coating

DIMENSIONS AND WEIGHT

- > Length 8750 mm
- > Width 2500 mm
- > Height 3150 mm
- > Weight 13200 kg

CONCRETE PUMP

- > Theoretical max. capacity of pumping shotcrete : 30 m³/h
- > Shotcrete flow control system
- > Pumping pressure : max. 70 bar
- > Hydraulic pressure : max. 250 bar
- > Aggregate size : max. 16 mm
- > Adroit Shotcrete machines are able to pump all type of fibers
- > Diesel engine driven concrete unit cleaning system
- > Hydraulically driven hopper vibrator
- > Hydraulically controlled hopper drain cover
- > Concrete line diameter : 76 mm

ACCELERATOR SYSTEM

- > Electrically driven accelerator peristaltic pump
- > Dosing rate : max. 0 to 20 L/min
- > Pumping pressure : max. 15 bar
- > Accelerator tank : 1000 L
- > Dosing rate can be controlled manually, flow rate (L/min) and dosing percentage (%) readable on the display

BOOM SYSTEM

- > Lateral : 13.6 m
- > Vertical : 15.8 m
- > Lifting, tilting and telescopic boom system

COMPRESSOR

- > Electrically operated screw compressor
- > Capacity : 9.2 m³/min.
- > Pressure : 8 bar
- > Electric motor : 55 kW

DIESEL GENERATOR

- > Stand by power : 220 kVA
- > Voltage : 400 V

OPERATOR CABIN

- > FOPS - ROPS level 2 certified closed operator cabin
- > Tempered glasses
- > Suspended and 180° pivoting seat, retractable lap seat belt

ENGINE

- > Perkins 1104D - 44T 74.5 kW@2200 rpm
Diesel engine EU Stage 3A

TRANSMISSION

- > Hydrostatic system : Dana 357 Dropbox
- > 4 speed forward and 4 reverse
- > 4 wheel drive

AXLE SYSTEM

- > Planetary type Dana 212
- > Oscillating rear axle $\pm 8^\circ$

TIRES

- > 16 / 70 - 20 size heavy duty tires, suitable for underground work

PERFORMANCE

- > Max. speed 28 km/h
- > Max. climb gradient 40%

BRAKE SYSTEM

- > Service brake : Hydraulically powered two circuit oil immersed multidisc brake in both axles
- > Parking brake : S.A.H.R fail safe brake
- > Brake systems test set-up in cabin

STEERING

- > Four wheel steering, crab steering, front wheel steering

FUEL SYSTEM

- > Tank capacity 130 L
- > Fuel hose securely fixed and isolated from the hot surfaces

HYDRAULIC SYSTEM

- > Tank capacity 250 L
- > Hydraulic filtration, fluid temperature and tank fluid level sensing and warning system

HIGH PRESSURE WATER WASHER

- > Water pump 14 L/min.
- > Max. water pressure 200 bar
- > Hose length 10 m
- > Tank capacity 300 L

24VDC ELECTRICAL SYSTEM

- > Electrical components : IP65 and above protection grade
- > Battery 2 x 135 Ah
- > Led lighting lamps illuminating the movement direction
- > Led flashing beacon in amber colour

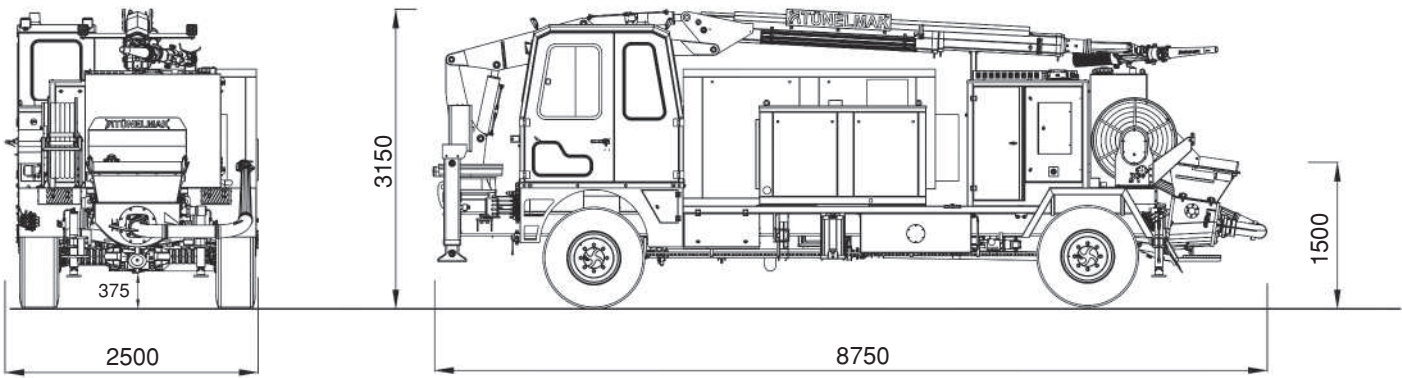
HIGH VOLTAGE ELECTRICAL SYSTEM

- > 380 V, 50 Hz. cable type 3 x 50 mm² + 25 mm²
- > Power pack : 45 kW electrical motor
- > Hydraulically driven cable reel
- > Cable length 50 m

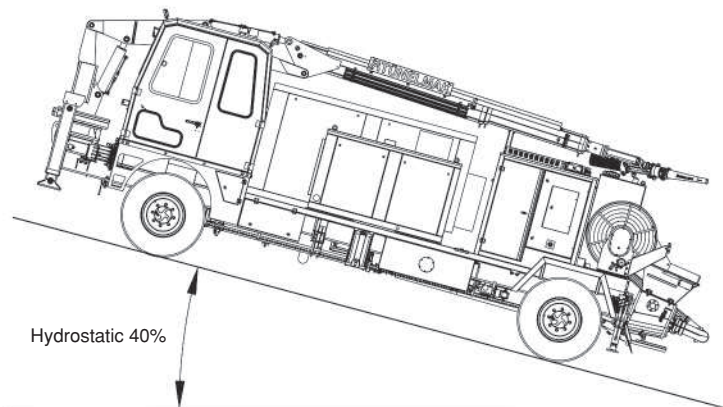
OPTIONAL COMPONENTS

- > Perkins 904J - E36TA 74.5 kW@2200 rpm
EU Stage 5 diesel engine
- > Diesel engine fire suppression system
- > Catalytic converter with diesel particle filter
- > Radio remote control
- > Automatic lubrication system
- > Air conditioner inside the cabin
- > Electrically driven hopper vibrator
- > Heated glasses and side - view mirrors
- > Form oil system
- > Water reel

Adroit 450G 4x4 Shotcrete Machine With Generator
Dimensions of Vehicle



Climbing Capacity

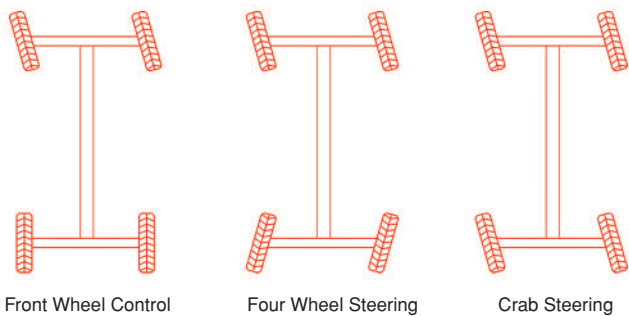
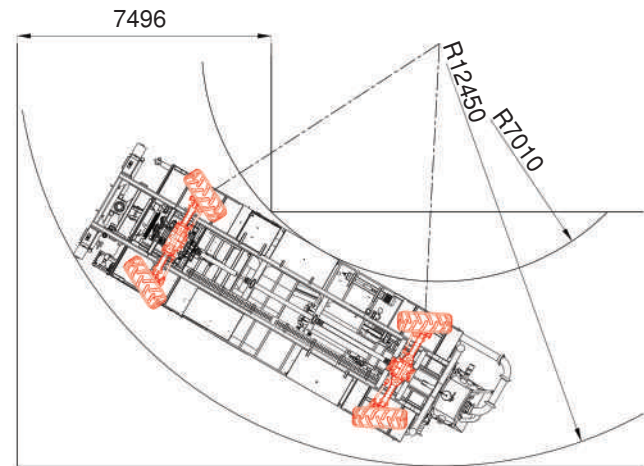


Max. Speed - Max. Power of Climbing

Adroit with 4x4 hydrostatic system ensures reliable performance on challenging terrain and 40% gradient climbing.

Rear axle oscillates $\pm 8^\circ$ and able to move on rough terrain conveniently.

Turning Radius

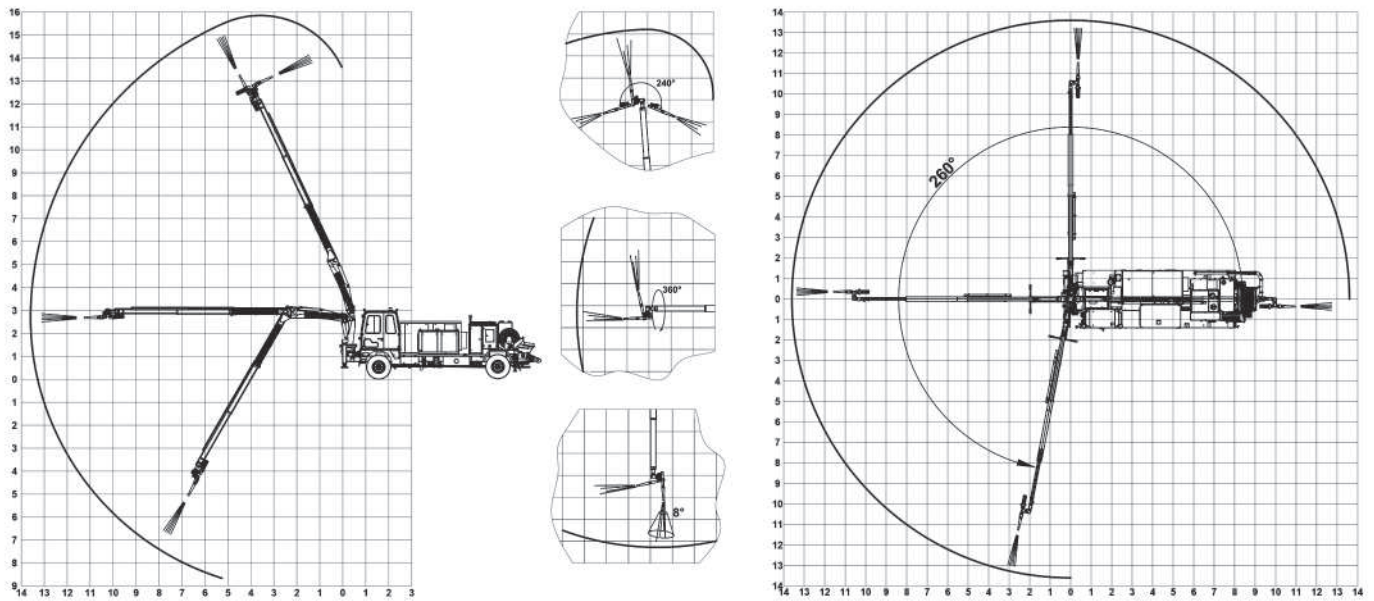


Front Wheel Control

Four Wheel Steering

Crab Steering

Adroit 450G 4x4 Shotcrete Machine With Generator Operation Diagram



Spraying Dimensions

