

# Scooptram ST14

## Technical specification



The 14 tonne Scooptram ST14 underground loader features state of the art levels of safety, serviceability and operator comfort, providing unmatched performance in any underground operation.

## Features

### » Safe working environment

- Excellent visibility with a low rear hood height and larger window area
- Door interlock (applies brakes, blocks steering and bucket/boom movement when door opens)
- Automatic brake test logging
- Spring applied hydraulic released (SAHR) brakes
- Oil free operator's compartment

### » Superior operator's comfort

- Spacious Atlas Copco Footbox
- Low sound level in optional cab
- Low vibration level in cab
- A durable, air suspended seat
- Dump & hoist control located in the right side armrest
- Door mounted monostick steering control
- Simple, clear and multi-functional display in cab
- Extended wheel base for a steady ride during tramping

### » Reliability for enhanced productivity

- Proven powertrain components

### » Peak performance

- When compared to a gear pump hydraulic system, the more efficient load sensing variable displacement hydraulic pump system increases tractive effort up to 44 percent when digging and increases unit tramping speed on grade by up to 14 percent
- An enhanced boom and load frame geometry optimizes digging performance
- Cab in line with the tyres for improved manoeuvrability and same turning radius in both directions
- Integrated de-clutch function for more efficient truck loading

### » Serviceability

- Easy access to service points, filters and valve blocks
- The well proven Atlas Copco Control system (RCS) providing service information and diagnostics logged and displayed in clear text on screen

# Specifications

CAPACITIES			MOTION TIMES			WEIGHTS		
kg	Tramming capacity	14 000	sec	Boom raising	7.6	<b>Standard equipped vehicle (empty bucket)</b>		
	Breakout force, hydraulic	22 300		Boom lowering	3.0	kg	Approximate weight	38 000
	Breakout force, mechanical	18 240	sec	Dumping	1.8		Axle load, front end	19 115
m <sup>3</sup>	Standard bucket volume (nominal heaped)	6.4		Axle load, rear end	18 885			

## » Engine

- Cummins Diesel Engine ..QSM11 EPA Tier 3/EU Stage IIIA
- Power Rating at 2 100 rpm ..... 250 kW/335 hp
- Maximum torque at 1 350 rpm ..... 1674 Nm
- Catalytic purifier and silencer
- Dry type air cleaner
- Exhaust heat protection
- Remote engine oil drain

## » Upbox

- Power transmitted through a 1:1 gear ratio box
- Superior..... T825

## » Transmission

- Automatic shift with integrated converter, four speed power-shift with forward/reverse modulation
- Dana ..... Series T40000

## » Axles

- Spiral bevel differential, full floating, planetary wheel end drive
- Dana .....53R
- Degree of oscillation (total) ..... 16°
- Differentials:
  - Front ..... Limited slip
  - Rear ..... No spin

## » Brakes

- Fully enclosed, force cooled, multiple wet discs at each wheel end
- Service/parking/emergency.....SAHR

## » Electrical System

- System voltage ..... Start & accessories 24 V
- Mine duty high output alternator ..... 140 Amps
- Isolation switch lockout
- Driving lights, LED bulbs
  - Rear lights .....4 x 40W, 2 high beam, 2 low beam
  - Front lights ..... 4 x 40W, 2 on boom, 2 for truck loading
  - Cab lights .....3 x 40W
  - Center hinge light .....1 x 40W

## » Tyres

- Tubeless, smooth, extra deep tread design for underground mine service
- Tyre size ..... 26.5 x 25 32 Ply L5S\*

## » Operator's compartment

- Canopy; ISO ROPS/FOPS (approved at 60 KJ)
- Side seated operator for bi-directional operation
- Air suspended Grammer seat with retractable seat belt
- Door mounted electric joystick for steering control
- Armrest mounted electric joystick for dump & hoist controls
- Interactive display module

## » Hydraulic system

- Heavy duty load sensing piston pumps
- System pressure .....27.6 MPa
- Hydraulic tank capacity ..... 218 litres
- Filtration, return line ..... 12 µm
- Electric pump for hydraulic tank fill
- Cylinders, diameter:
  - Steer cylinders (2) ..... 105 mm
  - Hoist cylinders (2) ..... 200 mm
  - Stabilizer cylinder ..... 230 mm

## » Control system

- Logging of production data; weight per bucket, number of buckets, accumulated load
- Logging for maintenance planning; engine, transmission, brake and hydraulic system data
- Trouble shooting tools, for engine, transmission, hydraulics and the RCS System

## » Fuel

- Fuel tank capacity ..... 390 litres
- Anti-siphon fuel supply

## » Other

- Fire extinguishers, 2x6 kg
- Audio-visual reverse alarm
- Bucket float control
- Central manual lubrication
- Scooptram RRC radio remote control interface (standard equipment)

\* As applications and conditions vary, Atlas Copco recommends that the user consults with tyre suppliers to obtain the optimum tyre selection.

# Grade performance

STANDARD CONFIGURATION, BUCKET EMPTY													
%	Grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.0	16.0	18.0	20.0	25.0
km/h	1st gear	5.1	5.1	5.1	5.0	5.0	4.8	4.8	4.8	4.6	4.6	4.5	4.3
	2nd gear	10.6	10.3	10.1	9.8	9.5	9.3	8.8	8.3	7.7	7.0	6.4	4.8
	3rd gear	17.7	16.9	16.1	15.1	13.5	11.6	9.3	–	–	–	–	–
	4th gear	29.4	26.9	21.5	15.9	–	–	–	–	–	–	–	–

3% rolling resistance assumed. Actual performance may vary depending on the application.

STANDARD CONFIGURATION, BUCKET LOADED													
%	Grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.0	16.0	18.0	20.0	25.0
km/h	1st gear	5.0	4.8	4.7	4.7	4.5	4.5	4.3	4.3	4.3	4.2	4.0	3.7
	2nd gear	10.0	9.5	9.3	9.0	8.7	8.0	7.1	6.4	5.6	4.8	4.2	–
	3rd gear	16.4	15.4	14.3	12.2	9.8	–	–	–	–	–	–	–
	4th gear	26.9	21.9	15.0	–	–	–	–	–	–	–	–	–

3% rolling resistance assumed. Actual performance may vary depending on the application.

## Optional Equipment

### » Main frame

- Optional bucket sizes
- EOD buckets, recommended for low back height truck loading
- Wheel chocks and brackets
- Knockdown construction

### » Ergonomics

- Enclosed operator cabin
- Heater (cab/cabin)
- Air conditioner (cabin only)
- CD player (cabin only)

### » System

- Ansul dual bottle fire suppression system with engine shutdown
- Ansul Checkfire, automatic fire suppression
- Lincoln auto lube with timer
- Wiggins fast fuel fill
- Wiggins fast hydraulic, engine and radiator fill
- Scooptram RRC (line of sight radio remote control)
- Finnkat exhaust system
- Brake release retriever tow hook
- Ride control

### » Electrical system

- Machine status indicator light mounted on canopy

### » Controls and instruments

- Blockout 3rd and/or 4th gears
- Load weighing system
- Armrest mounted electric joystick steering control

### » Power unit

- Cold weather package 120V or 240V:
  - Block heater
  - Battery warmer
  - Fuel heater
  - Oil pan heater
  - Arctic oil

### » Documentation

- LinkOne parts catalogue, CD
- LinkOne Reader
- Operator's and maintenance manual - plasticized

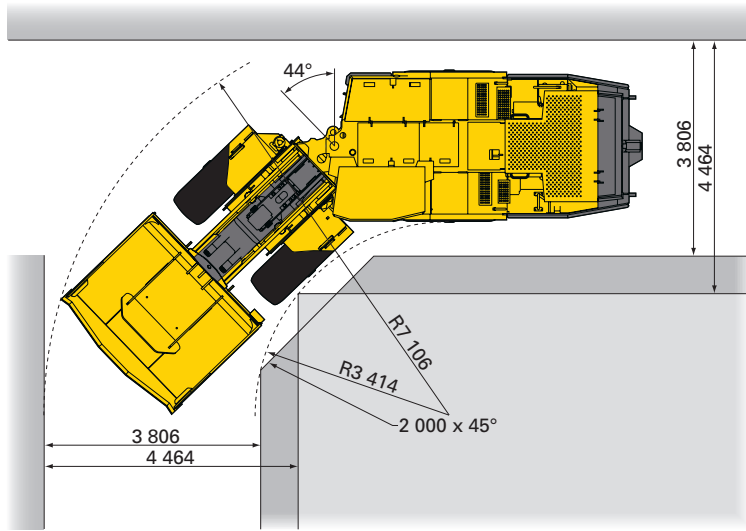
### » Parts Kit

- 1 000 hour consumables

### » Other

- Face mechanics tool set
- Shop mechanics tool set
- Service tool box for RCS

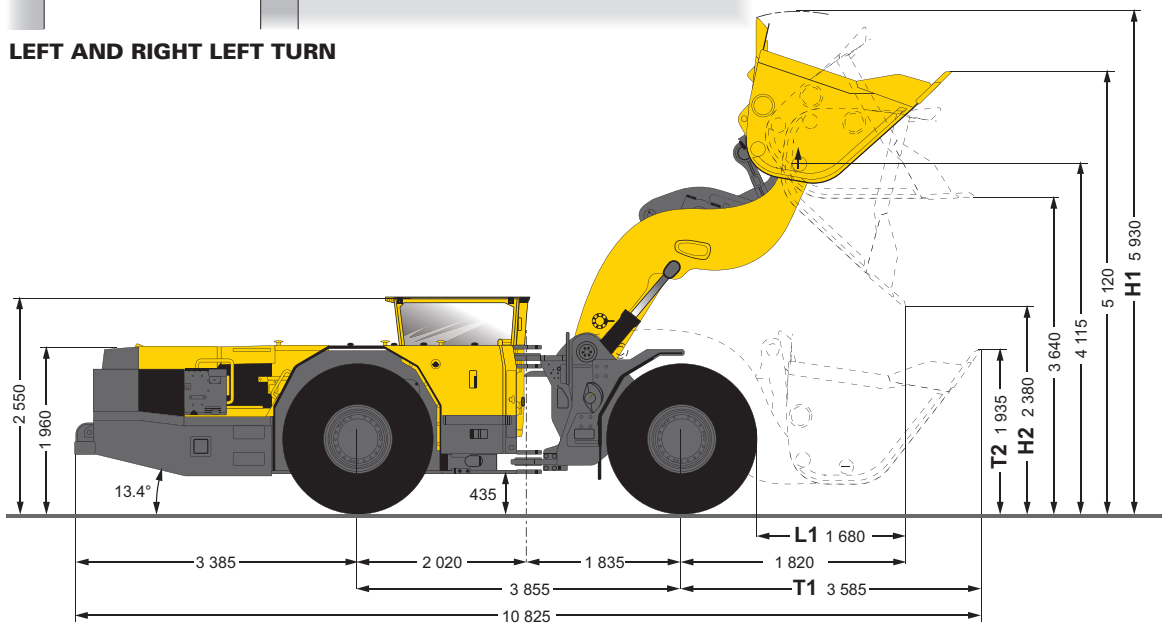
# Measurements



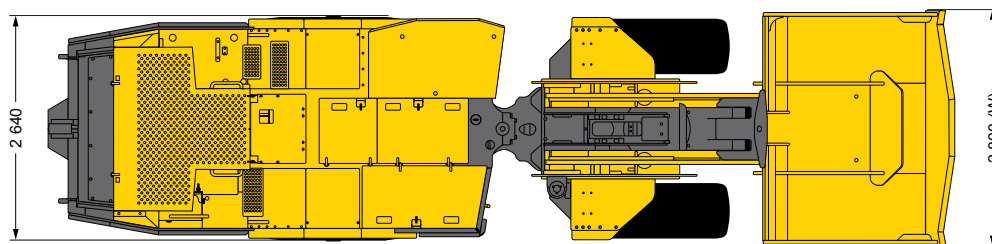
LEFT AND RIGHT LEFT TURN

**» Dimensions**

- All dimensions are shown in millimetres
- All dimensions and calculations shown are based on standard vehicle configuration with 27 mm tyre deflection, unloaded



SIDE VIEW



TOP VIEW

BUCKET DATA	STD			
	7.0	6.4	5.8	5.4
Volume, nominal heaped (m3)				
Maximum material density (t/m3)	2.0	2.2	2.4	2.6
Width, bucket (mm)	W 2 800	2 800	2 800	2 800
Tramming position: Axle centerline to bucket lip (mm)	T1 3 670	3 585	3 550	3 480
Tramming position: Ground to bucket tip (mm)	T2 2 050	1 935	1 860	1 785
Truck loading reach: (mm)	L1 1 930	1 680	1 750	1 680
Raised position: Back height, max. (mm)	H1 5 930	5 930	5 930	5 930
Raised position: Bucket tip, height (mm)	H2 2 285	2 380	2 440	2 500



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