

Atlas Copco Surface drill rigs

SmartROC T35 and T40

Technical specification



SmartRig T35 and T40 are intended for construction sites and aggregate quarries. The main components are:

- Track frames with single grouser pads and cleaning holes, size FL6
- Hydraulic track oscillation and two speed traction
- Caterpillar turbo charged diesel engine C 7.1
- Atlas Copco screw type compressor
- Operator's cabin, ROPS and FOPS approved
- LED work lights
- Folding boom system
- Aluminum profile feed beam
- Hydraulic cylinder feed system
- Carousel type rod handling system, 1 + 7 rods
- Hydraulic rock drill
- Dust collection system
- Dust pre separator
- Automatic rod adding system
- Toe hole drilling kit
- Adjustable flushing air system
- Air flow switch
- Automatic cooler fan control
- Adjustable dust collector fan speed
- Double hydraulic drill steel support with movable down support
- Ready for radio remote control

Hole range			
Recommended hole range			
SmartROC T35	T38, T45, T51	64-115 mm	2 ½" - 4 ½"
SmartROC T40	T45, T51	76-127 mm	3" - 4 ½"
Hydraulic rod handling system for max hole depth, with 3,6 m (12') extension rods			
SmartROC T35	T38, T45	28 m	92'
SmartROC T35	T51	21 m	69'
SmartROC T40	T45, T51	28 m	92'

Specifications

Engine

Caterpillar turbo charged, diesel engine, CAT C7.1,
Tier 4A/Stage IIIB

- Power rating at 2200 rpm 168 kW 225 HP

Feed

Hydraulic cylinder feed with hose guide and double drill steel support with movable lower guide/dust hood

• Feed extension.....	1 400 mm	4'7"
• Feed rate, max	0.92 m/s	184 ft/min
• Feed force, max	20 kN	4 400 lbf
• Tractive pull, max	20 kN	4 400 lbf
SmartROC T35/ SmartROC T40		
• Total length.....	7 440 mm	24'5"
• Travel length.....	4 240 mm	14'

Dust collector DCT 110D

• Filter area.....	11 m ²	118 sq.ft
• Number of filter elements.....	11 pcs	
• Suction capacity at 500 mm wg.....	560 l/s	1 200 cfm
• Suction hose diam.....	127 mm	5"
• Cleaning air pressure, max	7.5 bar	109 psi
• Cleaning air consumption.....	2-4 l/pulse	0.06 - 0.12 cu.ft/pulse

Safety cabin

- ROPS and FOPS approved with rubber vibration dampers
- 2 x wipers with washer
- Clear laminated glass (front and roof windows)
- Clear toughened glass (side and rear windows)
- Fully adjustable operator's seat
- Adjustable foot rest
- Cabin light
- Rig inclination indicator
- Rear view mirror
- Fire extinguisher, 6 kg (13 lbs) dry chemical type ABE class III type
- Outlet socket, 24 V
- Prepared with speakers for CD-radio or DVD radio
- Combined front mounted platform/tool box
- Electric combined engine/inclination/hole depth instrument in main computer display

Air conditioner

- Refrigerant.....R134a
- Cooling capacity5,5 kW
- Fan suction capacity125 l/s 265 cfm

Compressor

Atlas Copco OIS K-36-C111 GD, screw compressor
SmartROC T35

- Working pressure, max 10.5 bar 152 psi
- Free air delivery..... 127 l/s 270 cfm

SmartROC T40			
• Working pressure, max	10.5 bar	152 psi	
• Free air delivery	158 l/s	335 cfm	

Hydraulic system

- Anti-jamming
- Feed speed control
- Proportional control - feed RPCF
- Proportional control - impact DPCI

Hydraulic oil cooler

- Max ambient temperature..... 50°C 122°F

• Axial piston pump (1)	145 l/min	38.3 US gal/min
• Gear pump (2)	75 l/min	19.8 US gal/min
• Gear pump (3)	50 l/min	13.2 US gal/min
• Gear pump (4)	30 l/min	7.9 US gal/min

Return and drainage filters

- Filtration rate 10 μm absolute

Electrical system

• Voltage	24 V
• Batteries	2 x 12 V, 185 Ah
• Alternator	28 V, 105 Ah
• Work lights LED type, front	4 x 3500 Lumen
• Work lights LED type, rear	2 x 3500 Lumen
• Work lights LED type, feed	2 x 5300 Lumen
• Warning lamp and reverse buzzer	

Volumes

• Hydraulic oil tank	100 l	26	US gal
• Hydraulic system, total	150 l	40	US gal
• Compressor oil	24 l	6.3	US gal
• Diesel engine oil	16 l	4.2	US gal
• Diesel engine, cooling water	35 l	9.2	US gal
• Diesel engine, fuel tank	370 l	98	US gal
• Traction gear	3 l	0.8	US gal
• Lubrication tank (ECL)	10 l	2.6	US gal

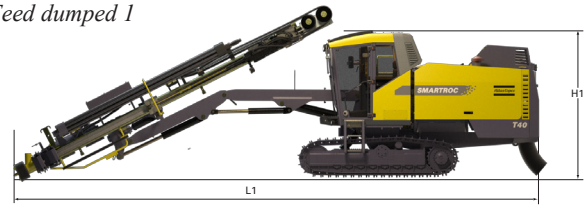
Hydraulic rock drill

Rock drill	Drill rig	Impact power		Hydraulic pressure, max		Impact rate, max	Torque, max		Weight approx	
COP 1840	SmartROC T35	20 kW	26.8 hp	230 bar	3 335 psi	42-50 Hz	1180 Nm	870 lbf/ft	175 kg	385 lb
COP 1840 EX									230 kg	507 lb
COP 2540		23 kW	30.8 hp	230 bar	3335 psi	55-70 Hz	1180 Nm	870 lbf/ft	175 kg	385 lb
COP 2540EX		23 kW	30.8 hp	230 bar	3335 psi	55-70 Hz	1180 Nm	870 lbf/ft	230 kg	507 lb
COP 2560	SmartROC T40	25 kW	33.5 hp	230 bar	3 355 psi	44-53 Hz	1 810 Nm	1 335 lbf/ft	187 kg	412 lb
COP 2560 EX									249 kg	549 lb

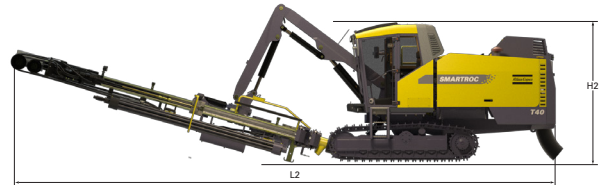
Transport dimensions

Height and length		
Feed dumped 1		
Height (H1)	3 200 mm	10' 6"
Length (L1)	11 600 mm	38' 1"
Feed dumped 2		
Height (H2)	3 400 mm	11' 2"
Length (L2)	11 300 mm	37' 1"

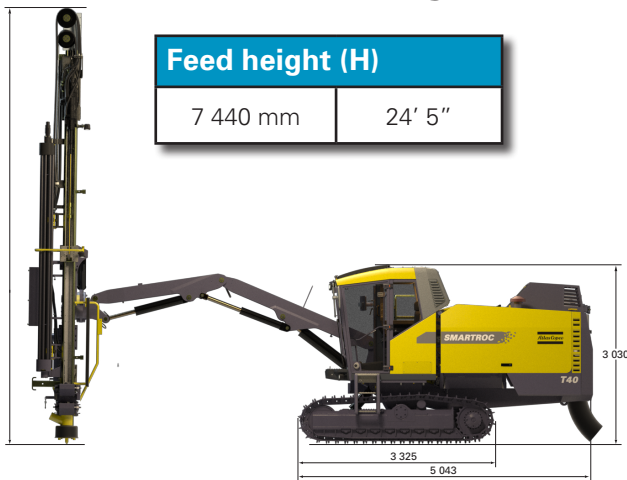
Feed dumped 1



Feed dumped 2



Dimensions and weight



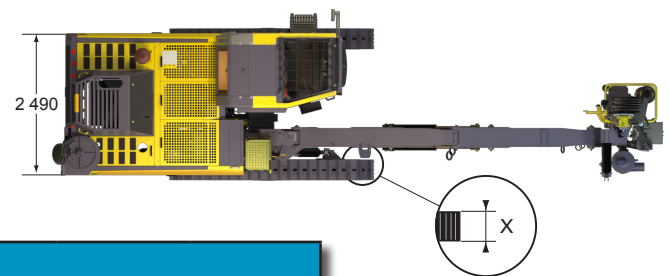
Feed height (H)

7 440 mm	24' 5"
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Weight

Standard unit excluding all options and drill steel

SmartROC T35	14 000 kg	30 900 lb
SmartROC T40	14 300 kg	31 500 lb



Track shoe width (X)

SmartROC T35/T40 with FL 6	330 mm	1' 1"
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Selection of optional equipment

Carrier

- Hydraulic support leg
- Hydraulic winch, radio remote controlled with towing eye and wire guides
- Diesel engine preheater
- Electric refuelling pump
- Combined warning sound and warning light
- ProCom satellite based drill rig monitoring system (only in combination with a written service agreement)
- Tow hook
- Track chains with triple grouser pads
- Extra LED work lights

Safety cabin

- Clear laminated glass (front and roof windows)
- Tinted toughened glass (side and rear windows)
- Wiper for right hand side window
- Sun shade kit (rear side and rear windows)

- Cab heating
- Electric heated operator's seat
- Radio/CD
- Reverse camera integrated to rig display.

Feed

- Silencing kit
- TAC guide tube guides for drill steel support
 - TAC 56 mm for 56 mm guide tube
 - TAC 64 mm for 64 mm guide tube
 - TAC 76 mm for 76 mm guide tube
 - TAC 87 mm for 87 mm guide tube

SmartROC upgrading functions

- Laser receiver upgrading kit
- Automatic feed alignment
- Hole Navigation System (HNS) sensors and software
- GPS compass for parallel holes
- Full radio remote control of drilling, tramming and boom functions

Lube oil, lube system and water mist system

- Rock drill oil collecting system (standard on SmartROC T40)
- Central lubrication system, type Lincoln
- Thread greasing device ECG (with oil)
- Thread greasing device, brush type (with grease)
- Artic hydraulic oil, VG 32
- Tropical hydraulic oil, VG 68
- Biological hydraulic oil, VG 46
- Water mist system, excluding tank
- PAR Oil S
- PAR Oil M

Dust control

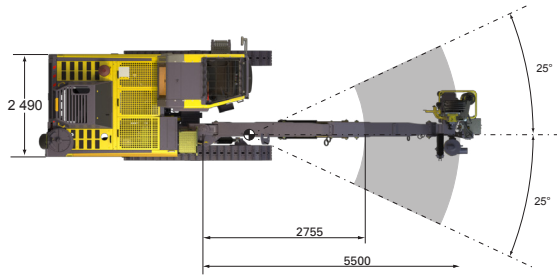
- Rubber disc for DCT
- Rubber skirt for DCT

Delivered equipment, not mounted

- Gas charging equipment for rock drill
- First 50 hours service kit for compressor

- Conversion kit T45
- Conversion kit T51
- ROC Manager with bench plan
- RCS service tool box

Coverage areas

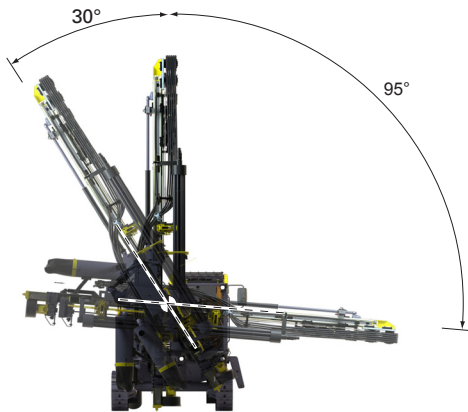


Horizontal reach (mm)



Vertical reach (mm)

Feed swing angles



Feed with toe-hole kit