

VOLVO EC 550-T TUNNEL EXCAVATOR

SSM
SCHÖLLER SPECIAL MACHINES

- WITH TILTABLE CABIN
- WITH WIDTH-ADJUSTABLE CRAWLER UNDERCARRIAGE
- OPERATING WEIGHT 165,000 TO 176,000 LBS
- ENGINE POWER 456 HP – TIER 4F (STAGE V)
- FOR TUNNEL HEIGHTS FROM 22 TO 36 FT
- BREAKOUT FORCE 96,600 LB
- TEAROUT FORCE 69,700 LB
- HIGH HYDRAULIC PERFORMANCE FOR ATTACHMENT TOOLS
- OPTIONAL ALSO WITH ELECTRIC DRIVE OR TWIN DRIVE



ENGINE

The Volvo diesel engine fully meets the demands of the latest, emission regulations Tier 4f / EU Stufe V. The engine is equipped with turbo charger, intercooler, high pressure fuel injectors and electronic engine controls. Featuring Volvo Advanced Combustion Technology (V-ACT), it's designed to deliver superior performance and fuel efficiency. The exhaust gas emission control system comprises a combination of externally cooled exhaust gas recirculation (E-EGR), a diesel oxidation catalytic converter (DOC) with a downstream diesel particle filter (DPF) and a selective catalytic reduction of nitrogen oxides (SCR, with AdBlue).

- Air Filter: 2-stage with pre-cleaner
- Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated.

Engine type	Volvo	D13J
Displacement	in³	781
Max. power at	rpm	1,600
gross, acc. ISO 14396/SAE J1995	HP	456
Max. torque at engine speed	ft lbf @ rpm	1,623@1,300
No. of cylinders		6

ELECTRICAL SYSTEM

Well protected high-capacity electrical system with waterproof double-lock harness plugs and shielded main relays and solenoid valves. The Contronics provides advanced monitoring of machine functions and important diagnostic information. The LCD colour monitor in the cabin enables central monitoring of the operating status and setting of the functions.

Voltage	V	24
Batteries	V/Ah	2 x 12/200
Alternator	V/Ah	28/80

SWING SYSTEM

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and anti-rebound valve are standard.

Max. slew speed	rpm	9.4
Max. slew torque	ft lbf	145,300

CRWALER UNDERCARRIAGE

Crawler undercarriage with robust, X-shaped frame and additional support and dozer blade. The crawler undercarriage can be mechanically adjusted to 2 different widths, providing greater stability when working with heavy loads. Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Crawler width	in	134 / 154 (retracted/extended)
Double grouser shoes		2 x 51
Track shoe width	in	24
Max. drawbar pull	lbf	78,600
Max. travel speed	mph	2.2 / 3.4
Max. gradeability	°	35

CABIN TILTABLE

The driver's cab is equipped with a hydraulic tilting function to ensure optimum visibility of the work area (lower cab position lockable). The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. The integrated air conditioning and heating system supplies filtered cabin air from an automatically controlled fan and thus generates a slight overpressure inside. This reduces the ingress of dust into the cab. The AC is filled with coolant of type R134a. The ergonomic, air-suspended and heated comfort driver's seat and the joystick console can be adjusted independently of each other. Beside the multifunctional LCD colour monitor, also a radio with MP3, Bluetooth and a hands-free system is installed.

SOUND LEVEL

Sound pressure level in cab according to ISO 6396		
LpA (standard)	dB	71
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
LWA (standard)	dB	107

HYDRAULIC SYSTEM

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time. The system includes a summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity. Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity. Power boost: All digging and lifting forces are increased. Hose burst protection holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump, type 2 x variable displacement axial piston pumps		
Maximum flow	gal/min	2 x 110
Additional axial piston pump	gal/min	23
Pilot pump, type gear pump		
Maximum flow	gal/min	4.2
Relief value setting pressure		
Implement	psi	4,910 / 5,260
Travel circuit	psi	4,910
Slew circuit	psi	4,050
Pilot circuit	psi	570

TUNNELING BOOM EQUIPMENT

- Heavy-duty tunnel boom with swivel mechanism 2x45 °
- All main bearing points with exchangeable bushings and floating pins
- Basic boom with double lifting cylinders including hose burst protection valves
- Swivel console (2x45 °) with 2 swivel cylinders
- Dipper arm with double lifting cylinders including hose burst protection valves and integrated, reinforced bucket cylinder
- Hydraulic hose line installation on the boom (hydraulic hoses for easy maintenance and exchangeability)
- Additional hydraulic control circuits for hammer / demolition shear / drum cutter, incl. rotary drive and drain oil line as well as additional compressed air line for hammer flushing or water spray

Tearout force (arm), max.	lbf	69,700
Breakout force (bucket), max.	lbf	96,600

MODIFICATIONS AND ADDITIONAL EQUIPMENT

- Driver's cab additional is equipped with a hydraulic tilting function to ensure optimum visibility of the work area.
- Reinforcements on the excavator superstructure frame including side ram protection (tunnel protection cladding) and cover plates with screw protection on the underside of the superstructure
- Robust dozer blade dozer blade incl. protection cover for shield cylinders and central lubrication strip for relevant lubrication points on the support blade
- Additional guides for crawler drive chains
- Crawler chain dirt scrapers at front and rear (height adjustable)
- Additional hydraulic pump for dozer blade, tilting cab and boom swivel console functions
- Reinforced cabin front and roof protection grid FGPS, (FOPS level 2), folding front grid for emergency exit and cleaning the front window
- Hand operated fire extinguisher in protective box on the front upper structure
- LED headlights on the upper front and rear of the cab as well as driving warning lights (flashing lights) on the front and rear of the chassis
- Emergency stop switch on the superstructure (1 x cabin and 2 x rear of the superstructure)
- Central greasing system for superstructure including tunnelling boom
- Additional compressed air line for optional drill or hammer flushing (without compressor)
- Optional: fire extinguishing equipment, quick coupler, various buckets and attachment tools, etc.

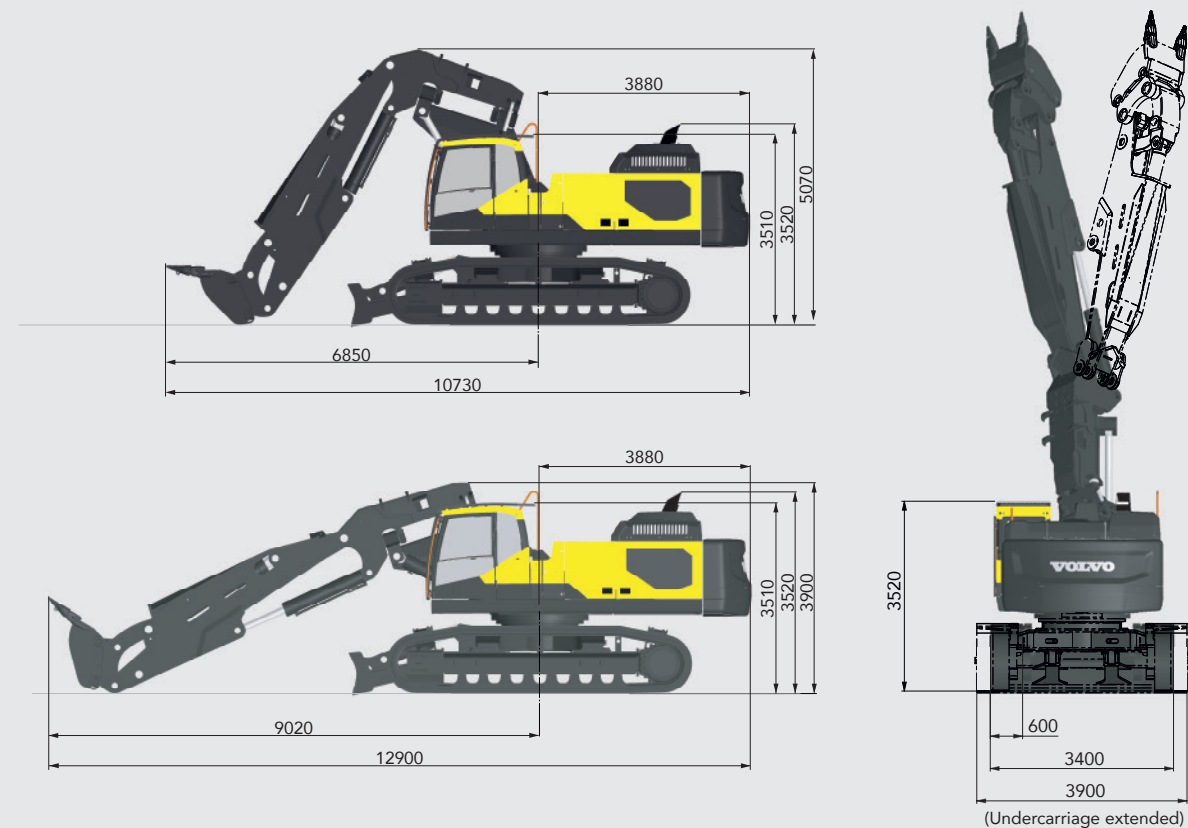
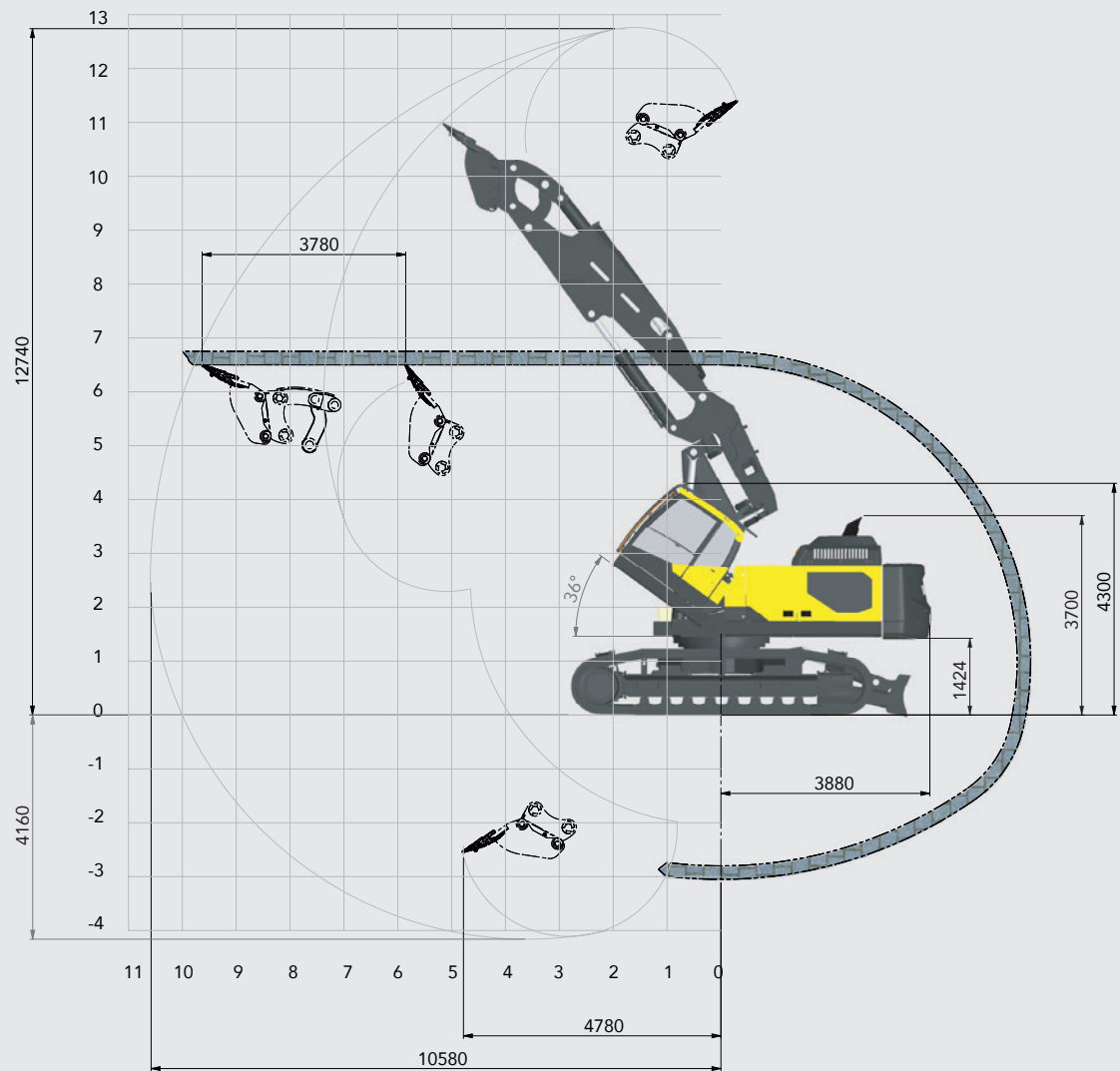
SERVICE REFILL

Fuel tank	gal	180
Hydraulic system, total	gal	156
Hydraulic tank	gal	71
DEF/AdBlue tank	gal	17
Engine oil	gal	115
Engine coolant	gal	17
Slew reduction gear unit	gal	2 x 1.7
Travel reduction gear unit	gal	2 x 2.1

Further details upon request.

Subject to changes

WORKING AREA





Schöller special machines GmbH & Co.KG
 Bachstrasse 19
 D-74585 Rot am See – Hausen am Bach
 T: +49 7958 999969-0
 Service Hotline: +49 152 26235138
 E-Mail: info@itc-ssm.de
www.itc-ssm.de