VOLVO COMPACT EXCAVATORS

EC55B PRO, EW55B



MORE CARE. BUILT IN.



THE MOST COMFORTABLE WAY TO APPROACH ANY JOB.

Sit behind the controls of the Volvo EC55B Pro and EW55B Compact Excavators and you'll find an incredibly comfortable way to work. The spacious cab and ergonomic design gives you the room you need, while the standard air conditioning and low noise levels make even the longest days comfortable.



Volvo offers you a wide range of compact excavators. From proven conventional design machines for high performance to wheeled and short swing radius excavators for today's evolving jobsites, Volvo is the right machine at the right time.

Room to move around

Both the Model EC55B Pro and EW55B have a large, roomy cab to make even tall operators feel right at home. The flat floor is also wide and uncluttered, so you'll have plenty of room for your feet. Customize your operating position with the fully adjustable seat and consoles.

Controls at your fingertips

The joystick controls are mounted close to the armrests for convenience. The controls are pilotoperated for smooth, precise movements in delicate digging. There are ergonomically positioned forward and reverse travel pedals so you can reposition the machine while you're using the joysticks. In addition, the instrument panel can be angled so you can see the lights and gauges at a glance.

All-day comfort

The windshield features a gas strut, making it easy to open and lock in place. It also has tinted windows and standard air conditioning with five vents for excellent cooling of the cab. To add even more comfort, a radio/cassette player with two speakers comes standard with the EC55B Pro and as an option on the EW55B. Noise-reducing seals and foam insulation throughout dramatically reduce the noise level both in and out of the cab. Operators will appreciate reduced fatigue while those working nearby on crowded jobsites will experience a safer working environment.



Ergonomic position forward and reverse travel pedals.



Instrument panel can be angled.





DIG INTO YOUR WORK.

Tough jobs demand machines that can dig into the job at hand and keep coming back for more. The Models EC55B Pro and EW55B deliver some of the highest breakout and tear-out forces in its class. And because they're easy to service, you'll be assured that they will always be ready to dig into your work.

Start your engines

For power, performance and low fuel consumption look to the Model EC55B Pro and EW55B. The Model EC55B Pro features a proven 16-valve, 49.9 hp (37.2 kW) Volvo engine. The wheeled Model EW55B delivers proven performance with a 16-value, 52 hp (38 kW) Volvo engine. Both machines are built to dig, offering impressive bucket dig forces.

Precise, smooth movement

The dipper motion is extremely fast for more productive cycle times. The optional long dipper arm on the EC55B Pro provides even greater performance. In addition, the Total Power Control Hydraulic System provides total independence of movement for smooth, productive work cycles.

Power where you need it

The EC55B Pro features a larger size lift cylinder along with increased hydraulic system pressure for greater lifting capacity and increased productivity. The high quality hydraulic system stands up to severe, long cycle testing making it durable, reliable and ready for the daily assault of your work.

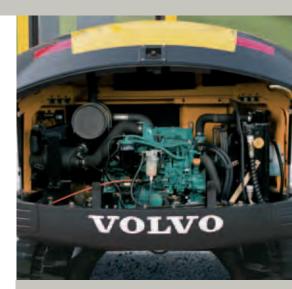
Increased hydraulic pressure in the auxiliary line adds greater attachment performance. That means more efficient attachment operation for faster cycle times and better operating economy.

A versatile approach

The exclusive Volvo quick release coupling makes it easy to change buckets or attachments without leaving the cab. The EC55B Pro features a standard double-acting circuit for use with hydraulic equipment such as breakers and augers. For the ultimate in versatile performance, the wheeled Model EW55B makes travel quick with speeds up to 18.6 mph (29.9 kph), for increased cycles times and the ability to move between jobsites with ease.

Made easy to service

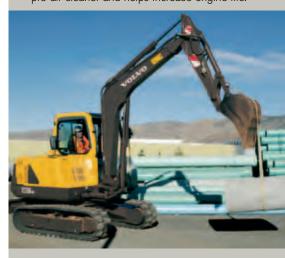
Open the wide rear cover for total access to all critical checkpoints. It's also fast and easy to check service levels and change the oil.



Powerful 16-valve STEP 2/TIER 2 Volvo engine.



 Two-stage air filtration system eliminates need for pre-air cleaner and helps increase engine life.



Larger lift cylinder for a greater lift capacity.



- Hydraulic quick-release coupling makes it easy.
- Efficient main hydraulic pump helps optimize fuel consumption and improve productivity.
- Increased slope swing means more productivity.



SAFETY IS ALWAYS A TOP PRIORITY.

When it comes to your safety, Volvo never compromises. The Models EC55B Pro and EW55B offer exactly what you need to stay safe, so you can concentrate on getting the job done. And each model is robustly built, to stand up to even the most punishing jobsite conditions.

A sturdy, rigid design

The center of the undercarriage is X-shaped on the EC55B Pro, while the EW55B features heavy-duty axle housings. Both exceed expectations in extreme conditions - offering greater durability, better load distribution and sturdier operation. The undercarriage of each model is also very long for incredible stability, performance and comfort.

The blade cylinder and the connections are well protected against damage. The EC55B Pro features anti-vibration tracks, and the EW55B's wheels offer smooth travel even at higher speeds. The counterweight is rounded and wraps around the sides to protect the engine cover, which is set back from the counterweight to protect it even more.

We're strong and stable

Both machines offer an enhanced conventional design that delivers greater digging performance. The EC55B Pro features a larger, longer counterweight for increased balance, stability and lift capacity. With a combination of increased hydraulic pressure and a heavier counterweight, both machines feature increased slope swing for

fast cycle times when performing slope work. For increased reliability and a higher resale value, the EC55B Pro's boom support strength has been increased through a large 80mm pin diameter and an additional 80mm bushing. This provides extra surface contact and greater impact/shock absorption.

Helping you work safely

The wide door and retractable console offer safe and easy access to the operator station.

The machine won't start unless the console and safety lever are in position, and the controls lock out whenever either is raised to help prevent incidental movement. The EW55B is equipped with 4-wheel wet disc brakes to ensure safe operation around high traffic areas and populated jobsites. In addition, the instrument panel is equipped with automatic shut off to protect the machine from system low operating pressure or high heat damage.



All controls lock out when safety lever is lowered.



· Wheels offer fast, smooth travel and fast cycle times.



Volvo takes durability and reliability to new extremes.



SPECIFICATIONS - EC55B PRO

Engine

Water-cooled Volvo 4-cylinder diesel engine.

Model	D3.1A - D3.1A
Gross power, rated (ISO 9249)	52 hp (38.8 kW) @ 2,100 rpm
Power, installed (ISO 9249)	49.8 hp (37.2 kW) @ 2,100 rpm
Displacement, total	186.3 in ³ (3054 cc)
Maximum torque	143~155 ft-lbf (194~210 Nm) @ 1,600 rpm ± 100 rpm
Bore x stroke	3.7" x 4.3" (94 mm x 110 mm)

Electrical system

Rated voltage	12 V
Battery capacity	12 V - 100 Ah x 1EA
Alternator rating	12 V - 55 Ah
Starter motor output	12 V - 3.0 kW

Hydraulic system

Variable displacement Total Power Control hydraulic system providing total independence of all movements and of travel.

Control	Power-assisted I	nydraulic controls

Variable displacement double pump for the equipment (boom, dipper and bucket) and travel circuits:

Maximum flow	2 x 13.8 US gpm (2 x 52.5 l/min)
Maximum operating pressure	3,190 psi (22 Mpa (220 bars))

Gear pump for the power assistance circuit:

Maximum flow	2.5 US gpm (9.5 l/min)
Maximum operating pressure 507.6 psi (35 bars)	
Single-acting hydraulic circuit f	or accessories:
Single-acting hydraulic circuit f Maximum flow	or accessories: 8.98 US gpm (34 l/min)

End-of-stroke cushion:

On boom ram	at the end of the rod extension
On dipper ram	on both sides
On offset ram	on both sides
Offset ram lock	

The equipment's offset ram is equipped with a balancing valve which holds the boom offset angle in the position chosen by the operator in all working conditions.

WeightWeight and ground pressure with 9.8" (250 mm) rubber tracks:

Cab version Weight	12,125 lbs (5500 kg)	
	Operating	
0 0 1	, ,	

Slewing system

Turntable slewing is provided by a radial piston hydraulic motor which drives directly (without a reduction gear) a ball internal crown wheel with remote lubrication.

Slewing speed	9.4 r/min
Turntable braking	automatic multi-disc brake
Absorption of hydraulic shocks	Shockless valve

Bucket performance

Breakout force 8,992 lbf (40	000 daN)
Tearout force 6,519 lbf (29	900 daN)

Undercarriage

The undercarriage is made up of an "X" box fabricated centre part for more rigidity and of sloping side members for a better clearance of materials. The rollers and the tensioning wheels are lubricated for life.

Bottom/top rollers per side	5/1
Track width	14.9" (380 mm)
Track tension	by grease piston
Blade (width x height)	75.6" x 13.8" (1920 x 350 mm)

Travel system

Each track is driven by an axial piston hydraulic motor equipped with two gears and an epicyclic reduction gear. Braking is provided automatically by a multiple disc brake.

Travel speed (low / high)	1.4 mph / 2.5 mph (2.2 / 4.1 km/h)
Max. tractive force	10,071 lbf (4480 daN)

The forward movement control is automatically locked when the operator raises the left console.

Service fill capacities

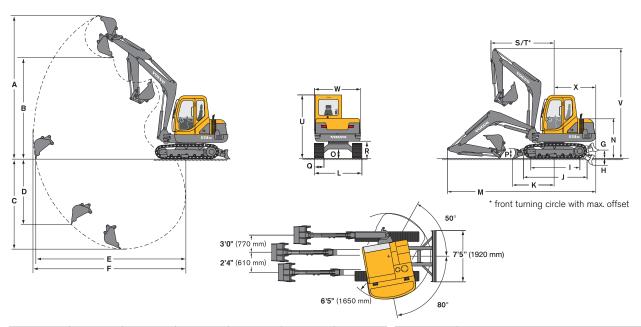
Fuel tank	23.8 US gal (90 l)
Hydraulic system, total	34.3 US gal (130 I)
Hydraulic tank	23.8 US gal (90 l)
Engine oil	2.7 US gal (10.1 I)
Cooling system	2.9 US gal (11 l)

Noise level

The EC55B Pro conforms to the 2006 European Machine Directive Noise Level (2000/14/CE) of 97 dB(A) for this class of machine.

Noise level exterior (LwA)	97 dB(A)
Noise level in the cab (LpA)	78 dB(A)

The noise levels conform to directive n° 86/662 EEC and its amendments.



Dipper	Α	В	С	D	E	F
61"	227"	161"	150"	103"	235"	240"
(1540 mm)	(5770)	(4090)	(3820)	(2620)	(5980)	(6110)
75"	237"	170"	165"	118"	249"	254"
(1900 mm)	(6010)	(4320)	(4180)	(2990)	(6320)	(6450)

G	Н	ı	J	K	L	М	N	0
14"	18"	77"	98"	63"	75"	233"	63"	15"
(350)	(450)	(1950)	(2500)	(1610)	(1920)	(5920)	(1600)	(380)

P	Q	R	S	T	U	V	w	х
14"	16"	27"	93"	92"	101"	176"	72"	66"
(360)	(400)	(690)	(2360)	(2330)	(2560)	(4470)	(1840)	(1670)

Buckets				
	Width	Weight	Capacity	
	13.8" (350 mm)	187.3 lbs (85 kg)	2.47 ft ³ (70 l)	
	17.7" (450 mm)	213.8 lbs (97 kg)	3.46 ft ³ (98 I)	
Backhoe	23.6" (600 mm)	260.1 lbs (118 kg)	5.0 ft³ (142 l)	
	29.5" (750 mm)	304.2 lbs (138 kg)	6.6 ft³ (187 l)	
	35.4" (900 mm)	359.3 lbs (163 kg)	8.1 ft³ (231 I)	
Ditch	59" (1500 mm)	407.8 lbs (185 kg)	9.3 ft³ (265 l)	

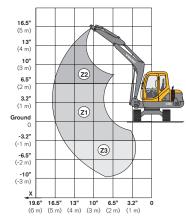
These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks.

The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

Caution: In accordance with standard EN 474-5, the machine must be fitted with a safety valve on the boom ram and with an overload indicator for handing operations.

	Horizontal Range		79"	(2 m)	118"	(3 m)	157"	(4 m)	197"	(5 m)	Ma	ıxi ⁽¹⁾
			lbs	(kg)								
	n)	Z2	-	-	-	-	2,954	(1340*)	-	-	2,954	(1340*)
	(mm)	Z1	7,098	(3220*)	4,806	(2180*)	3,549	(1610*)	3,020	(1370*)	2,976	(1350*)
4	045	Z3	6,746	(3060*)	4,519	(2050*)	-	-	-	-	3,042	(1380*)
	1) 360°	Z2	-	-	-	-	2,248	(1020)	-	-	1,609	(730)
IV,		Z1	5,577	(2530)	2,888	(1310)	1,940	(880)	1,433	(650)	1,366	(620)
*	9	Z3	5,709	(2590)	2,954	(1340)	-	-	-	-	2,094	(950)

Horizontal Range		79"	(2 m)	118"	(3 m)	157"	(4 m)	197"	(5 m)	Ma	ı xi ⁽²⁾	
			lbs	(kg)	lbs	(kg)	lbs	(kg)	lbs	(kg)	lbs	(kg)
Δ	ê T	Z2	-	-	-	-	2,535	(1150*)	2,667	(1210*)	2,667	(1210*)
1		Z1	3,196	(1450*)	4,188	(1900*)	3,240	(1470*)	2,821	(1280*)	2,711	(1230*)
		Z3	4,212	(1910*)	2,601	(1180*)	3,439	(1560*)	-	-	2,513	(1140*)
	O 360°	Z2	-	-	-	-	2,270	(1030)	1,565	(710)	1.433	(650)
	î.	Z1	3,196	(1450*)	2,843	(1290)	1,895	(860)	1,410	(640)	1,234	(560)
₩.		Z3	4,210	(1910*)	2.601	(1180*)	1,918	(870)	-	-	1,741	(790)







Lifting capacity with the blade resting on the ground.





Lifting capacity in total rotation over 360° with the blade raised.

^{1:} Maxi: **208.6"** (<u>5,3 m</u>) - 2: Maxi: **220.4"** (<u>5,6 m</u>) - * hydraulic limit

SPECIFICATIONS EW55B

Engine

Low-emission, water-cooled, 4-cylinder, 16 valve, direct injection diesel engine meeting step 2 environmental regulations.

Model	D3.1A - D3.1A
Gross power, rated (SAE J 1349)	54 hp (40 kW) @ 2,200 rpm
Power, installed (ISO 9249)	51 hp (38 kW) @ 2,200 rpm
Displacement, total	186.3 in ³ (3054 cc)
Maximum torque	200 Nm@1400 rpm
	(148 lbf@1400 rpm)
Bore x stroke	3.7" x 4.33" (94 mm x 110 mm)

Bucket performance

Breakout force	8,497 lbf (3780 daN)
Tearout force	6,699 lbf (2980 daN)

Undercarriage

Blade (width x height)	75.6" x 13.8" (1920 x 350 mm)
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Electrical system

Rated voltage	12 V	
Battery capacity	12 V - 100 Ah	_
Alternator rating	12 V - 55 Ah	_
Starter motor output	12 V - 2.3 kW	_

Travel system

Travel speed (high)	18.6 mph (30 km/h)
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The forward movement control is automatically locked when the operator raises the left console.

Hydraulic system

Variable displacement Total Power Control hydraulic system providing total independence of all movements and of travel.

Variable displacement double pump for the equipment (boom, dipper and bucket) and travel circuits:

Maximum now	2 x 14.5 gpm (2 x 55 i/min)				
Maximum operating pressure	3,045 psi (21 Mpa (210 bars))				
Gear pump for the swing, offse	et and blade circuits:				
Maximum flow	9.4 gpm (35,6 l/min)				
Maximum operating pressure	2,755 psi (190 bars)				
Maximum operating pressure	3,045 psi (210 bars)				
offset/dosser blade					

Gear pump for the pilot control circuit:

Maximum flow	2.6 gpm (9.9 l/min)
Maximum operating pressure	478.5 psi (33 bars)

End-of-stroke cushion:

On boom ram	at the end of the rod extension			
On dipper ram	on both sides			
On offset ram	on both sides			

Service fill capacities

Fuel tank	23.8 US gal (90 I)
Hydraulic system, total	34 US gal (130 I)
Hydraulic tank	23.8 US gal (90 l)
Engine oil	2.7 US gal (10.1 I)
Cooling system	3.2 US gal (12.1 l)

Weight

Machine equipped with cab, standard bucket, full tanks, dozer blade, 165 lb (75 kg) operator weight.

	Operating
Canopy version Weight	11,68 lbs (5300 kg)

Slewing system

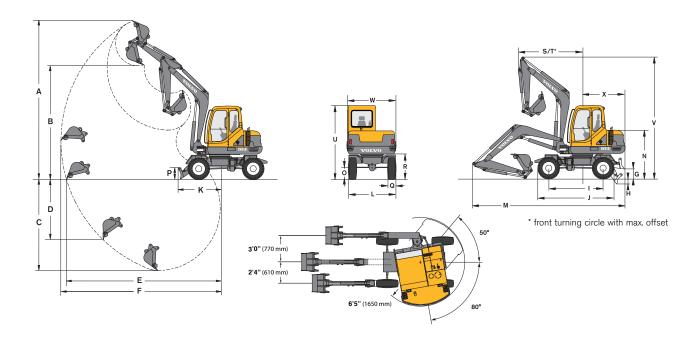
Cab swing is provided by an axial piston hydraulic motor.

Slewing speed	10 r/min
Turntable braking	automatic brake
Boom offset	130° (left: 80° / right: 50°)
Absorption of hydraulic shocks	Shockless valve

Noise level

Results of dynamic measurements (according to ISO 6396):

Noise level exterior (LwA)	100 dB (A)
Noise level in the cab (LpA)	83 dB (A)



Dipper	Α	В	С	D	E	F
61"	227"	161"	150"	103"	235.5"	240.5"
(1540 mm)	(5770)	(4090)	(3820)	(2620)	(5980)	(6110)
75"	237"	170"	164.5"	118"	249"	254"
(1900 mm)	(6010)	(4320)	(4180)	(2990)	(6320)	(6450)

G	Н	ı	J	K	L	М	N	0
14"	18"	77"	98.5"	63"	75.5"	232"	63"	15"
(350)	(450)	(1950)	(2500)	(1610)	(1920)	(5900)	(1600)	(380)

P	Q	R	S	T	U	V	w	Х
14"	16"	27"	93"	92"	101"	176"	72.5"	65"
(360)	(400)	(690)	(2360)	(2330)	(2560)	(4470)	(1840)	(1650)

Buckets				
	Width	Weight	Capacity	
	13.8" (350 mm)	187.3 lbs (85 kg)	2.47 ft³ (70 l)	
Backhoe	17.7" (450 mm)	213.8 lbs (97 kg)	3.46 ft³ (98 l)	
	23.6" (600 mm)	260.1 lbs (118 kg)	5.0 ft³ (142 l)	
	29.5" (750 mm)	304.2 lbs (138 kg)	6.6 ft³ (187 l)	
	35.4" (900 mm)	359.3 lbs (163 kg)	8.1 ft³ (231 I)	
Ditch	59" (1500 mm)	407.8 lbs (185 kg)	9.3 ft³ (265 l)	

Z2

Z1

19.6" 16.5" 13" 10" 6.5" 3.2" (6 m) (5 m) (4 m) (3 m) (2 m) (1 m)

(Z3)

16.5" (5 m)

10" (3 m) 6.5" (2 m) 3.2" (1 m)

Ground 0

> -6.5" (-2 m) -10" (-3 m)

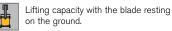
These capacities are given for a machine without a bucket or quick-release coupling. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

Caution: In accordance with standard EN 474-5, the machine must be fitted with a safety valve on the boom ram and with an overload indicator for handing operations.

Horizontal Range				79"	(2 m)	118"	(3 m)	157.5"	(4 m)	197"	(5 m)	Maxi ⁽¹⁾		
					lbs	(kg)	lbs	(kg)	lbs	(kg)	lbs	(kg)	lbs	(kg)
	60.5" (1540 mm)			Z2	-	-	3,240	(1470*)	2,623	(1190*)	-	-	2,667	(1210*)
				Z1	4,740	(2150*)	4,475	(2030*)	3,240	(1470*)	2,733	(1240*)	2,755	(1250*)
				Z3	4,916	(2230*)	3,196	(1450*)	3,306	(1500*)	-	-	2,579	(1170*)
			360°	Z2	-	-	3,174	(1440)	2,028	(920)	-	-	1,477	(670)
				Z1	4,740	(2150*)	2,689	(1220)	1,807	(820)	1,366	(620)	1,322	(600)
				Z3	4,916	(2230*)	2,689	(1220)	1,807	(820)	-	-	1,631	(740)

1: Maxi: **200,7"** (<u>5,1 m</u>)* hydraulic limit









Lifting capacity in total rotation over 360° with the blade raised.

STANDARD EQUIPMENT

Engine

Low-emission engine meeting step 2 environmental regulations.

Two-stage air filter with blinding indicators. Electric heating device.

Diesel filter and sediment chamber.

Electric fuel tank filling pump 9.2" (35 l/min). Oil sump sheet metal.

Smooth sound dual case mufler. EC55B Pro

Electrical system

Maintenance-free 12 V - 100 AH battery. Starter motor 12 V - 2.3 kW.

Halogen working lights (2 on the turret and 1 on the boom).

Indicators for road travelling. EW55B Horn.

Undercarriage

Hydrostatic transmission with 4 drive wheels. EW55B

Tire size 12 x 16.5 - 12PR single. EW55B Rim size 9.75 x 16.5. EW55B 15.8" (400 mm) wide rubber tracks. EC55B Pro

Dozer blade.

Stabilisation and backfilling blade. EW55B Remote lubrication of the slew ring.

Hydraulic system

ISO power-assisted hydraulic control.
Cylinder cushions with contamination seals.
Total Power Control system.
Boom anti-lowering device.
Multiple filtration system (30 µm).
Double-acting hydraulic circuit for accessories fitted on the boom. EC55B Pro Power-assisted control of the hydraulic offset of the boom by the left manipulator.
Auxiliary hydraulic valve port for hammer.
Control of forward and backward movement by two levers coupled to pedals.EC55B Pro

Cab

Heating and air conditioning.

Anti-dust system by pressurization of the cab. EW55B

Tinted windows.

ROPS (Roll-Over Protective Structure). EC55B Pro

TOPS (Tilt-Over Protective Structure).

Fabric-covered multi-adjustable sprung seat. Non-slip floor and grab handle for access to the driver's cab.

Seatbelt.

Adjustable control console.

Hinged front window.

Removable bottom front window.

Sliding right side window.

Rear Mirror in Cabin.

Door that can be latched in the open position. EW55B

Rubber mounting.

Radio/cassette player with 2 speakers. EC55B Pro

Flexible aerial. EC55B Pro

Interior lighting.

Intermittent windscreen wiper and windscreen washer on the front window. Ashtray.

Cigar lighter.

Instrumentation and monitoring

Monitoring and warning light for the following functions: pre-heating, engine oil pressure, water temperature, battery charge, air filter clogging.

Internal and external fuel gauges.

Hour meter.

Handling and earthwork equipment

119" (3030 mm) for EC55B Pro 9'5" (2900 mm) for EW55B long monobloc boom.

60.6" (1540 mm).

Remote lubrication of the offset and dipper arm cylinders.

Safety

Device for locking the controls when the left console is raised or safety lever is down to gain access to the driver's cab.

Safety valve on the blade cylinder. EC55B Pro Pressure accumulator on the power assistance circuit in order to be able to put the equipment on the ground if the engine

is switched off. EC55B Pro Window-breaker hammer (cab). EC55B Pro All working functions are locked when

machine is in travel mode. EW55B
Full hydraulic power brake with multi wet disc
brake, single circuit, one accumulator.

All windows tempered safety glass. EW55B Audible reverse alarm. EW55B Right and left rear sides view mirrors. EW55B

Official approval EC55B Pro

Machine conforming to EC directive n° 89/392 and its amendments.

Soundproofing conforming to EC directive n° 86/662 and its amendments.

Handling device conforming to EN standard 474-5 (Option).

ROPS conforming to ISO standard 3471/SAE J 1040.

TOPS conforming to ISO standard 12117.

Optional equipment

Handling and earthwork equipment

75" (1900 mm) Dipper arm.

Safety valve piloted by the power assistance circuit on the boom arm cylinder with overload indicator. EC55B Pro

Safety valve on the dipper arm cylinder. EC55B Pro

Quick-release accessories coupling. Hydraulic quick coupler. Heavy-duty dipper arm. **Undercarriage** EC55B Pro Steel tracks: 15" (380 mm) wide.

Service EW55B

Bracket for grease can.

Lighting

Additional front and rear working light. Turning beacon.

Environmental protection

Bio degradable hydraulic oil. EC55B Pro

Safety EC55B Pro

Antitheft device coded by digicode keypad (2 programmable codes).

FOPS1/FOG windscreen guard.

Miscellaneous

Special customised paint (RAL specifications).

Right and left rear sides view mirrors. EC55B Pro

Pilot control change valve. Travel alarm. EW55B







Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 170 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – **More care. Built in.**



All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.



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