

VOLVO EXCAVATORS

# ECR25D

2.49 t 20.9 hp



# SMALL SIZE. BIG POWER.

The ECR25D has been designed with mobility and performance in mind. Featuring a range of innovations engineered for effortless transportation, you'll benefit from an ideal transport weight and an integrated bucket transport system. This powerful, short radius excavator boasts strong lifting capabilities as well as breakout and tear out forces that compete with larger machines.



## Short radius

With a maximum overhang of 75mm, it ensures safe and easy operation within confined spaces and when loading and unloading the machine. This compact excavator can be used on more jobsites, with a reduced risk of damage, for increased versatility and durability.

## Performance

With 3 754 daN combined breakout & tear out force, the ECR25D boasts industry-leading performance for its size. Handle heavy loads effectively thanks to a large lifting capacity and experience superior control and balance.



## Volvo hydraulic breakers

Our breakers offer consistent impact frequency and power to ensure productivity on any job site. Optimal power and performance is delivered with every strike of the breaker, maximizing your performance.

## Bucket transport

Volvo's simple and effective bucket transportation system enables a ditching bucket to safely carry general purpose buckets. Transportation hooks help to secure attachments against the blade at the end of the working day.



#### Transport configuration

Conveniently transport this highly mobile machine with up to three buckets and a hydraulic breaker on a small trailer and benefit from a total transport weight of less than 3.5t. Safe transportation is enabled by four, easily accessible, tie-down points.

# WORK EFFICIENTLY IN COMFORT.



## Operator environment

The spacious and safe cab/canopy feature an adjustable seat, superior vibration and noise insulation, ergonomic armrests and an efficient heating system (cab only). There is no gap or raised edge between the single piece, floor and the door - ensuring quick and easy cleaning.

Step inside the spacious ECR25D and experience the benefits of the comfortable and intuitive Volvo operator environment. The modern styling delivers superior all-around visibility from large expanses of glass as well as innovative, ergonomic features including ideally placed controls and heavy a large floor - with no auxiliary pedals - for increased foot space.

### Slew and offset movements

Slew and offset movements are controlled simultaneously for easy and fast positioning of the machine. Proportional fingertip control enables precise, smooth and effortless command of the boom offset.

### Adjustable flows

Easily adjust the auxiliary hydraulic flows from inside the cab/canopy via the joystick controls and benefit from the correct speed and power for optimal attachment operation. Flows can be independently adjusted in each direction.



### Travel pedals

Hydraulically controlled, large travel pedals enable easy and accurate track control. This leaves the operator's hands free to control the joysticks - particularly advantageous when working in confined spaces or loading and unloading the machine.

### Automatic travel speed

For optimized travel speed and traction, automatic two speed travel allows the machine to shift down when more effort is needed. To facilitate sensitive operations, just press a switch and enforce high torque mode, you will benefit from the fine travel control.

# INVEST IN UPTIME.

Taking care of your excavator shouldn't be complicated - and with a range of built-in service features Volvo makes regular maintenance easy. With innovative technology including the Volvo patented hydraulic oil filter and grouped service points designed to sustain your uptime, we'll help you decrease your total cost of ownership. Get more from your investment with Volvo.

## Auto-idle

Engine speed is reduced to idle when the controls are inactive for more than five seconds or when the left-hand console is raised - reducing fuel consumption and noise. The engine instantly returns to the pre-selected speed when the operator touches any control.



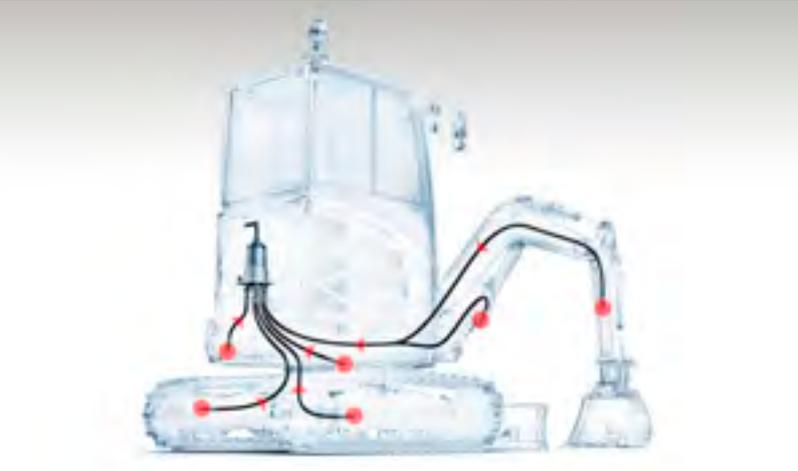
## Greasing interval

Grease points are easily accessible from one side of the machine. The greasing interval is 50 hours - therefore there is no need to re-grease during the week. Longer greasing intervals increase uptime, lower operating costs and provide longevity for all pivot points.



## Flat glass

The flat, toughened glass used on the four sides of the cab ensures that replacements can be fitted simply, quickly and inexpensively if damage occurs.



## Patented hydraulic filter

With Volvo's patented multifunctional hydraulic oil filter, filtration occurs when the tank is filled or topped up and before the oil returns back via the drain lines. The transparent bowl enables easy oil level checks and permits early detection of contamination. Preventative maintenance is carried out timely before damage occurs.



**Service access**

Daily service points are logically grouped under the wide-opening lockable engine hood to ensure maintenance is straightforward and uptime is maximized. Quick checks encourage this essential work to be carried out - increasing machine lifetime.

# THE VOLVO EXPERIENCE.



## Cab/canopy

Ergonomic, spacious and safe Volvo cab/canopy feature all-around visibility, intuitive controls and built-in comfort.

## Auto-idle

Engine speed is reduced to idle when the controls are inactive for more than five seconds - reducing fuel consumption and noise.

## Volvo engine

Powerful Volvo Tier 4 diesel engine built with proven, advanced technology for high performance and low fuel consumption.



## Service access

Daily service points are grouped under the engine hood and are easily accessible for straightforward maintenance.

## CareTrack

Volvo's telematics system remotely guides machine owners towards high uptime by tracking operating hours, location and providing service reminders.



## Transport configuration

Inexpensively transport the highly mobile ECR25D with up to three buckets and a hydraulic breaker on a small trailer.

## Automatic travel speed

Automatic two speed travel allows the operator to continually drive the machine at high speed. Speed is automatically reduced when traction is needed.





### Customer Solutions

Volvo provides the right solutions throughout the entire life cycle of your machine to lower total cost of ownership.



### Hydraulic pump

Variable displacement piston pump adapts the hydraulic power on demand - providing reduced fuel consumption and high performance.

### Adjustable flows

Adjust the auxiliary hydraulic flows from inside the cab/canopy via the joystick controls for optimal attachment operation.

### Greasing interval

The greasing interval is 50 hours - therefore there is no need to re-grease between jobs.

### Attachments

Volvo offers a wide range of attachments. Quick couplers, buckets, hydraulic breakers and other implements are available from factory or loose. Contact your local Volvo dealer and benefit from leading customer support.

### Slew and offset movements

Slew and offset movements are controlled simultaneously for easy and fast positioning of the machine.

### Tie-down points

Quick and safe machine transportation is enabled by four, easily accessible, tie-down points.

# ADDING VALUE TO YOUR BUSINESS.

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to increasing the positive return on your investment and maximising uptime.



## Customer Support Agreements

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services.

Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.



## Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



## Service Network

In order to respond to your needs faster, a Volvo expert is on the way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.



#### Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.

# VOLVO ECR25D IN DETAILS.

## Engine

Engine Tier4	Volvo	D1.1A
Rated speed	r/s / r/min	40 / 2 400
Maximum Gross power, ISO 14396/SAE J1995	kW / hp	15.6 / 20.9
Max torque at	Nm / r/min	72.2 / 1 600
No. of cylinders		3
Displacement	l	1.123
Bore	mm	78
Stroke	mm	78.4
Compression ratio		24

## Electrical system

Rated voltage	V	12
Batteries	V	1 x 12
Battery capacity	Ah	64
Alternator	V / Ah	12 / 40

## Hydraulic system

Maximum system flow	l/min	67
Maximum flow for accessories	l/min	45
Maximum flow for 2nd accessory circuit (option)	l/min	23
Maximum operating pressure	MPa/bar	25 / 250

## Digging performances

Standard bucket width (blade, W/O side cutter)	mm	500
Standard bucket mass	kg	59
Standard bucket rated capacity	m <sup>3</sup>	0.074
Bucket rotation	deg	205
Bucket breakout force	daN	2 026
Short arm (1050mm) tearout force	daN	1 728
Long arm (1350mm) tearout force	daN	1 464

## Swing system

Max, slew speed	r/min	9.4
Max, slew torque	daN.m	485

## Undercarriage

Bottom/top rollers per side		3 / 1
Track tension		by grease piston
Blade (width x height)	mm	1 550 x 322

## Drive

Max, drawbar pull	daN	1 984
Max. travel speed (low / high)	km/h	2.5 / 4.5
Gradeability	°	30

## Service refill capacities

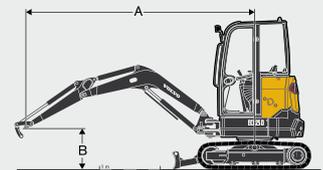
Fuel tank	l	28
Hydraulic system, total	l	33
Hydraulic tank	l	15
Engine oil	l	5.1
Engine coolant	l	4
Travel reduction unit	l	0.6

## Sound Level

Interior sound level according to ISO 6396 (LpA)	dB(A)	78
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009 (LwA)	dB(A)	93

## Weight and ground pressure

Operating weight according to ISO 6016 (according to most usual configuration and including 75kg operator)	kg	2490
Ground pressure cab	kg/cm <sup>2</sup> (kPa)	0.31 (30.5)
Ground pressure canopy	kg/cm <sup>2</sup> (kPa)	0.30 (29.5)
Transport weight (Heated cab, 250mm rubber tracks, short arm, 500mm direct-fit bucket, full fuel tank)	kg	2 415
With canopy	kg	-90
With extra counterweight	kg	+100
With long arm and additional counterweight	kg	+112
With 300mm rubber tracks	kg	+78



## Lifting capacity ECR25D

These capacities are given for a machine equipped with a cabin, 250mm rubber tracks and without a bucket or quick-coupler.

The above values are in compliance with ISO standard 10567. They do not exceed 75% of the tipping load or 87% of the hydraulic limit with the machine on firm level ground. Loads marked with an asterisk (\*) are limited by machine's hydraulic lifting capacity rather than tipping load.

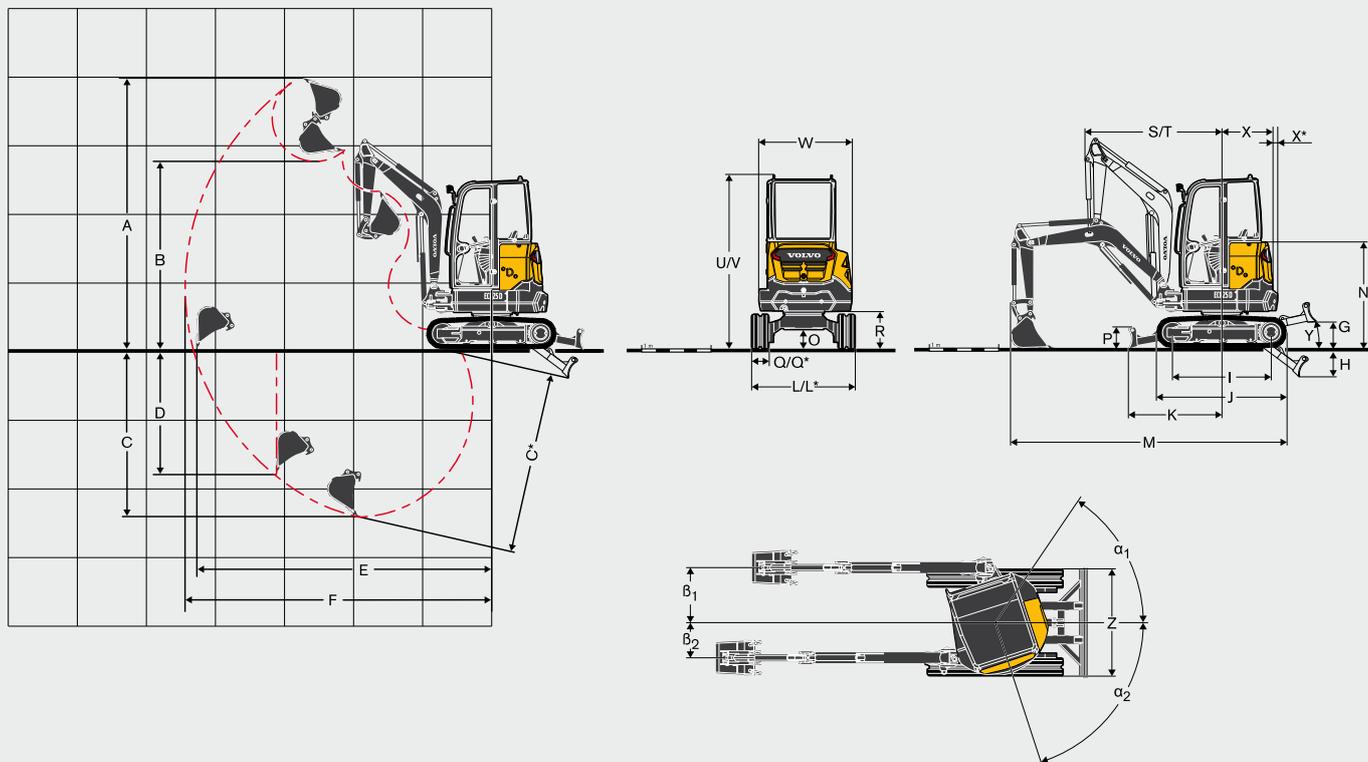
Caution: In accordance with standard EN 474-5, the machine must be equipped to carry out handling operations.

It is the operator's obligation to know and follow the applicable national and local safety regulations.

	Lifting point height (B)	Lifting point radius (A)							
		2.0m		3.0m		Max. reach		Max.	
		kg	kg	kg	kg	kg	kg		m
Arm: 1 050mm + Dozer blade up	3	-	-	440	420	427	408	3 048	
	2	-	-	433	414	313	300	3 667	
	1	-	-	409	390	282	270	3 858	
	0	718	673	393	374	294	281	3 706	
	-1	728	683	396	377	372	355	3 144	
Arm: 1 350mm + Additional counterweight + Dozer blade up	3	-	-	-	-	-	-	-	
	2	-	-	470	448	297	284	3 971	
	1	816	765	443	421	272	259	4 142	
	0	768	719	421	400	281	268	4 002	
	-1	771	721	417	396	339	323	3 502	
Arm: 1 050mm Dozer blade down	3	-	-	566*	420	577*	408	3 048	
	2	-	-	599*	414	601*	300	3 667	
	1	-	-	795*	390	642*	270	3 858	
	0	1 602*	673	933*	374	699*	281	3 706	
	-1	1 543*	683	849*	377	771*	355	3 144	
Arm: 1 350mm + Additional counterweight + Dozer blade down	3	-	-	-	-	-	-	-	
	2	-	-	500*	448	532*	284	3 971	
	1	1 334*	765	715*	421	571*	259	4 142	
	0	1 608*	719	897*	400	623*	268	4 002	
	-1	1 659*	721	902*	396	692*	323	3 502	

\*hydraulic limit

# SPECIFICATIONS.



Description	Unit	Arm 1050 mm	Arm 1350 mm
A. Maximum cutting height	mm	4 010	4 183
B. Maximum dumping height	mm	2 784	2 957
C. Digging depth	mm	2 461	2 761
C*. Maximum digging depth	mm	2 672	2 965
D. Maximum vertical wall digging depth	mm	1 832	2 119
E. Maximum digging reach at ground level	mm	4 313	4 602
F. Maximum digging reach	mm	4 484	4 768
G. Highest position dozer blade	mm		401
H. Lowest position dozer blade	mm		422
I. Tumbler length	mm		1 440
J. Track length	mm		1 906
K. Dozer blade, maximum reach at ground level	mm		1 364
L. Overall width with 250mm shoe	mm		1 500
L*. Overall width with 300mm shoe	mm		1 550
M. Overall length	mm	3 924	4 045
N. Overall height of engine hood	mm		1 564
O. Minimum ground clearance	mm		290
P. Dozer blade height	mm		317
Q. Shoe width	mm		250
Q*. Shoe width	mm		250
R. Ground clearance to superstructure	mm		868
S. Front slew radius	mm		2 002
T. Front slew radius with maximum offset	mm		1 555
U. Overall height (canopy)	mm		2 505
V. Overall height (cab)	mm		2 537
W. Overall width of superstructure	mm		1 340
X. Tail slew radius	mm	750	825
X*. Additional counterweight overhang	mm	75	(incl.)
Y. Angle of approach	deg		31
Z. Dozer blade width	mm		1 550
$\alpha^1$ Maximum swinging angle to the right	deg		56
$\beta^2$ Maximum boom offset to the left	mm		496
$\alpha^2$ Maximum swinging angle to the left	deg		72
$\beta^1$ Maximum boom offset to the right	mm		784

# EQUIPMENT.

## STANDARD EQUIPMENT

### Engine

Low emission, water-cooled, Volvo 3-cylinder diesel engine, meeting EPA Tier 4 environmental regulations  
Starter motor protected against ignition when engine is already running  
Dry-type single element air filter  
Water separator  
Translucent fuel filter

### Electric/Electronic control system

Maintenance free battery  
IP67 protected electrical system and high quality connectors  
Removable breaker switch  
Two working lights on cab version  
Working light on the canopy frame  
12V power socket in cab / canopy

### Hydraulic system

Variable displacement, load-sensing piston pump  
Closed centre flow-sharing main control valve  
Boom cylinder cushioning at end stroke (up)  
Patented filtering and filling element  
Large tiltable oil cooler  
Double-acting hydraulic circuit for accessories up to arm end  
Hammer / shear valve  
Plastic tank with drain plug

### Swing system

Radial piston hydraulic motor with direct engagement on the ball internal crown wheel (no reduction gears)  
Integrated shockless valve  
Automatic multi-disc slew brake  
Centralized and remote lubrication of crown wheel & ball bearing

### Drivetrain

Axial piston hydraulic motors equipped with an epicyclic reduction gears  
Automatic two speed travel  
Inner flange bottom rollers lubricated for life  
Grease tensioning wheel lubricated for life

### Undercarriage and dozer blade

"X" shape, box welded fabricated frame with sloping side members  
4 Integrated tie-down points  
2 Integrated lifting points  
Sturdy removeable protecting covers for track motors and slew system  
400HB weld-on edge on dozer blade

### Digging Equipment

Monobloc box welded fabricated boom with integrated lifting eye  
Boom cylinder protection  
Monobloc box welded arms with casted ends  
Long-life steel bushings  
Hardened, pre-lubricated and corrosion resistant pins  
50H hours greasing intervals

### Canopy

FOPS level 1 (Falling Objects Protective Structure)  
TOPS (Tip-Over Protective Structure)  
ROPS (Roll-Over Protective Structure)  
Cushionned operator station  
Toolbox with integrated storage for operator's manual and lockeable door  
Large and roomy uncluttered floor  
Left hand-rail access  
Seat-belt with warning indicator  
Right rear-view mirror

### Cab

FOPS level 1 (Falling Objects Protective Structure)  
TOPS (Tip-Over Protective Structure)  
ROPS (Roll-Over Protective Structure)  
OPG1 (Operator Protective Guard)  
Cushionned operator station  
Large door access  
Large and roomy uncluttered floor  
Flat toughened glass  
Gas-strutt assisted front window opening  
Front windscreen wiper and washer nozzle  
Right hand side sliding window  
Heating systems with in-cab adjustment of temperature and air flow level  
Multiple adjustable air vents  
Filtered air inlet  
Provision for a radio (antenna and electric wiring already fitted)  
Cab inside light  
Toolbox with integrated storage for operator's manual and lockeable door  
Seat-belt with warning indicator  
Right rear-view mirror

### Machine controls

Proportional finger tip control for boom offset  
Proportional finger tip control for auxiliary circuit with flow adjustment  
Breaker toggle switch on right joystick  
Automatic locking device for pilot controls and travel levers when the left console is raised  
Engine starting safety device : the left console must be raised to operate the starter  
Pressure accumulator to lower the equipment on the ground if the engine is switched off  
Two speed travel switch on the dozer blade lever  
Large travel pedals

### Instrumentation and monitoring

Permanent digital hour meter  
Warning lights for hydraulic filter and air filter restriction  
Water temperature and fuel level gauges  
Several warning lights, coupled to an audible signal, in the event of malfunction (overheating, drop in oil pressure, low battery voltage...)

### Official approval

Machine conforming to European directive 2006/42/EC  
Noise emissions in the environment conforming to directive 2000/14/EC  
Hand Arm Vibrations - Whole Body Vibrations compliant with directive 2002/44/EC  
Electromagnetic compatibility (EMC) conforming to European directive 2004/108/EC and its amendments  
Object handling device conforming to EN 474-1 and EN 474-5 standards  
FOPS 1 conforming to ISO 3449 standard  
ROPS conforming to ISO 3471-1 and / SAE J1040 standards  
TOPS conforming to ISO 12117 and EN 13531 standards  
OPG 1 conforming to ISO 10262 standard (when equipped)

## ECR25D CONFIGURATIONS

- = Standard
- = Option
- = Not available

	Comfort	Deluxe
<b>Operator environment</b>		
Canopy	◦	◦
Heated cab	◦	◦
Vinyl seat with mechanical suspension, extended-back seat and 2" retractable seat belt	◦	◦
Vinyl seat with mechanical suspension, extended-back seat and 3" retractable seat belt	◦	◦
Fabric seat with mechanical suspension, extended- back seat and 2" retractable seat belt	◦	◦
Fabric seat with mechanical suspension, extended-back seat and 3" retractable seat belt	◦	◦
ISO / SAE control pattern change + travel alarm	◦	◦
Radio, CD, MP3	◦	◦
Anti-theft device	◦	◦
<b>Machine exterior</b>		
Left rearview mirror	◦	•
Protected worklight on the boom	•	•
Rear worklight	◦	•
Rotating beacon	◦	-
Rotating beacon + rear worklight	◦	•
Additional counterweight	◦	◦
Several level of customisation (RAL specifications) to match with your corporate identity	◦	◦
<b>Digging equipment</b>		
Short arm	◦	◦
Long arm + additional counterweight	◦	◦
<b>Undercarriage equipment</b>		
250mm rubber tracks	◦	-
300mm rubber tracks	◦	•
<b>Hydraulic equipment</b>		
Proportional finger tip control for boom offset	•	•
Proportional finger tip control for accessories	•	•
Maximum flow adjustment for accessories	•	•
Relief valve for auxiliaries	•	•
Hydraulic drain for accessories	◦	-
Breaker and clamshell auxiliaries	◦	◦
Second accessory circuit	◦	•
Kit 2 flat face hydraulic quick couplings	◦	◦
Kit 4 flat face hydraulic quick couplings	◦	◦
Single acting circuit for quick couplers	◦	◦
Double acting circuit for quick couplers	◦	•
Boom & arm safety lifting valves with overload indicator	◦	◦
Safety valve certification	◦	◦
Mineral hydraulic oil VG46	◦	◦
Bio hydraulic oil VG46 (PANOLIN®)	◦	◦
Mineral hydraulic oil VG68	◦	◦
Mineral hydraulic oil VG32	◦	◦
Bio hydraulic oil VG32 (PANOLIN®)	◦	◦
<b>Engine</b>		
Dual stage air filter	◦	◦
Engine Auto idling	◦	•
<b>Service and maintenance</b>		
Tool kit	◦	•
<b>Telematics</b>		
CareTrack	◦	◦
<b>Attachments</b> (Contact your Volvo dealer for the complete attachment catalogue)		
Volvo quick coupler mechanical (pin-on)	◦	◦
S-type hydraulic quick coupler (S40)	◦	◦
General purpose buckets	◦	◦
Fix ditching buckets	◦	◦
Tiltable ditching buckets	◦	◦
Breaker	◦	◦

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

<p><b>Specific color machine</b></p>	
<p><b>Anti-theft</b></p>	
<p><b>Second accessory circuit (X3)</b></p>	
<p><b>Safety lifting valves</b></p>	
<p><b>Double acting circuit for quick couplers</b></p>	
<p><b>Additional counterweight</b></p>	

# VOLVO CONSTRUCTION EQUIPMENT

Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 180 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.

Not all products are 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 version of the machine.

# **VOLVO**

**Volvo Construction Equipment**  
[www.volvoce.com](http://www.volvoce.com)

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