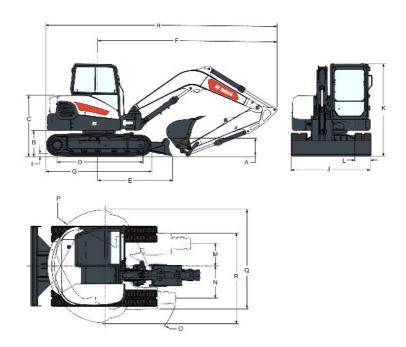


Excavators Specifications

Dimensions

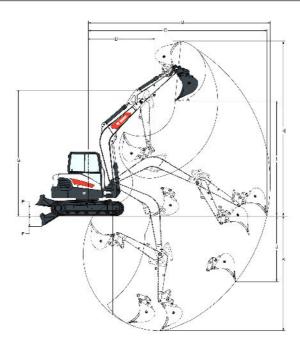


(A) Blade height	462.0 mm
(B) Clearance, upper structure to ground line	710.0 mm
(C) Ground line to top of engine cover	1666.0 mm
(D) Length of track on ground	2311.0 mm
(E) Machine centre line to blade	2009.0 mm
(F) Minimum radius in travel position	4872.0 mm
(F*) Minimum radius in travel position, long dipperstick	4886.0 mm
(G) Overall length of track assembly	2896.0 mm
(H) Overall length in travel position	6329.0 mm
(H*) Overall length in travel position, long dipperstick	6341.0 mm
(I) Track lug height	30.0 mm
(J) Blade width	2200.0 mm
(K) Height	2540.0 mm
(L) Track width	450.0 mm
(M) Machine centre line to working equipment centre line, left-hand rotation	622.0 mm
(N) Machine centre line to working equipment centre line, right-hand rotation	907.0 mm
(O) Minimum turning radius	2202.0 mm
(O*) Minimum turning radius, long dipperstick	2345.0 mm
(P) Swing clearance, rear	348.0 mm
(P*) Swing clearance, add-on counterweight	468.0 mm
(Q) Working width at maximum right-hand rotation	2600.0 mm
(Q*) Working width at maximum right-hand rotation, add-on counterweight	2707.0 mm
(R) Working width at maximum left-hand rotation	2525.0 mm
(R*) Working width at maximum left-hand rotation, add-on counterweight	2646.0 mm
(•) Boom length (boom pivot to arm pivot)	3380.0 mm
(•) Standard arm length (arm pivot to bucket pivot)	1840.0 mm
(•) Optional arm length (arm pivot to bucket pivot)	2180.0 mm
(Values with a "*" are for the long dipperstick)	



E88 | Excavators Specifications

Working Range



 (A) Bucket pivot angle (B) Maximum reach of working equipment (B*) Maximum reach of working equipment, long dipperstick (C) Maximum reach at ground level (C*) Maximum reach at ground level, long dipperstick (D) Maximum working equipment radius with boom at maximum height and dipperstick fully retracted (D*) Maximum working equipment radius with boom at maximum height and dipperstick fully retracted, long dipperstick 	170.0° 7225.0 mm 7549.0 mm 7087.0 mm 7418.0 mm 2659.0 mm
(E) Maximum blade height	479.0 mm
(F) Maximum blade depth	410.0 mm
(G) Maximum height of working equipment with dipperstick retracted	4983.0 mm
(H) Maximum bucket tooth height	6887.0 mm
(H*) Maximum bucket tooth height, long dipperstick	7115.0 mm
(I) Maximum dump height	4537.0 mm
(I*) Maximum dump height, long dipperstick	4765.0 mm
(J) Maximum depth of vertical wall which can be excavated	2587.0 mm
(J*) Maximum depth of vertical wall which can be excavated, long dipperstick	2883.0 mm
(K) Maximum digging depth	4519.0 mm
(K*) Maximum digging depth, long dipperstick (Values with a "*" are for the long dipperstick)	4859.0 mm



Lift Capacity (Standard dipperstick - Object handling applications excluded)



Rated hydraulic lift capacity Over blade, blade down

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5266	1771*	-	1735*	1741	-
3000	5749	1756*	-	2002*	1809*	-
2000	5992	1767*	3563*	2439*	1989*	-
1000	6030	1791*	4052*	2846*	2173*	1802
Ground	5869	1820*	4554*	3036*	2266*	-
-1000	5486	1839*	4237*	2949*	2174*	-

^{*} Rated hydraulic lift capacity

Rated hydraulic lift capacity Over blade, blade up

Lift point height	Maximum radius [R] (mm)	Lift at max.	Lift at 3000 mm	Lift at 4000 mm	Lift at 5000 mm	Lift at 6000 mm
[H] (mm)	[. 4] ()	radius (kg)	radius	radius	radius	radius
4000	5266	1360	-	1735	1486	-
3000	5749	1188	-	2002	1488	-
2000	5992	1112	3150	2039	1465	-
1000	6030	1098	3021	1978	1438	1006
Ground	5869	1145	3044	1957	1426	-
-1000	5486	5486	3144	1981	1440	-

^{*} Rated hydraulic lift capacity

Rated hydraulic lift capacity Over side, blade up

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Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius		
4000	5266	1177	-	1735	1290	-		
3000	5749	1018	-	1807	1280	-		
2000	5992	943	2611	1724	1245	-		
1000	6030	923	2437	1643	1206	929		
Ground	5869	953	2404	1598	1181	-		
-1000	5486	1050	2439	1596	1180	-		

^{*} Rated hydraulic lift capacity



Excavators
Specifications

Lift capacity (Standard dipperstick, additional counterweight - Object handling applications excluded)

Rated hydraulic lift capacity Over blade, blade down

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5266	1771		1735	1741	
3000	5749	1766		2002	1809	
2000	5992	1767	3563	2439	1989	
1000	6030	1791	4052	2846	2173	1802
Ground	5869	1820	4554	3036	2266	

⁻¹⁰⁰⁰

Rated hydraulic lift capacity Over blade, blade up

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5266	1529		1735	1667	
3000	5749	1342		2002	1671	
2000	5992	1260	3525	2287	1650	
1000	6030	1246	3406	2231	1626	1255
Ground	5869	1299	3440	2214	1616	

⁻¹⁰⁰⁰

Lift Capacity (Long dipperstick - Object handling applications excluded)



Rated hydraulic lift capacity Over blade, blade down

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5644	1560*	-	-	1538*	-
3000	6091	1513*	-	1759*	1640*	1593
2000	6319	1531*	3093*	2219*	1845*	1650
1000	6355	1612*	4176*	2686*	2065*	1732
Ground	6203	1671*	4545*	2964*	2209*	1759
-1000	5847	1699*	4388*	2975*	2198*	-

^{*} Rated hydraulic lift capacity



Excavators
Specifications

Rated hydraulic lift capacity Over blade, blade up

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5644	1213	-	-	1492	-
3000	6091	1075	-	1759*	1486	1104
2000	6319	1011	3093	2051	1459	1099
1000	6355	998	3065	1982	1427	1088
Ground	6203	1035	3045	1948	1407	1084
-1000	5847	1137	3120	1958	1411	-

^{*} Rated hydraulic lift capacity

Rated hydraulic lift capacity Over side, blade up

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5644	1061	-	-	1312	-
3000	6091	930	-	1759	1295	956
2000	6319	866	2709	1756	1256	944
1000	6355	848	2510	1668	1212	926
Ground	6203	871	2437	1611	1179	912
-1000	5847	949	2449	1595	1168	-

^{*} Rated hydraulic lift capacity

Lift capacity (Long dipperstick, additional counterweight - Object handling applications excluded)

Rated hydraulic lift capacity Over blade, blade down

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5644	1560			1538	
3000	6091	1513		1759	1640	1593
2000	6319	1531	3093	2219	1845	1650
1000	6355	1612	4176	2686	2065	1732
Ground	6203	1671	4545	2964	2209	1759
-1000			ı			

Rated hydraulic lift capacity Over blade, blade up

Lift point height [H] (mm)	Maximum radius [R] (mm)	Lift at max. radius (kg)	Lift at 3000 mm radius	Lift at 4000 mm radius	Lift at 5000 mm radius	Lift at 6000 mm radius
4000	5644	1368			1538	
3000	6091	1218		1759	1640	1250
2000	6319	1149	3093	2219	1644	1247
1000	6355	1137	3450	2235	1614	1238
Ground	6203	1179	3441	2204	1597	1235

⁻¹⁰⁰⁰



Excavators Specifications

Rated hydraulic lift capacity Over side, blade up	Rated h	vdraulic lit	t capacity	Over side.	. blade ui
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Lift point height	Maximum radius	Lift at max.	Lift at 3000 mm	Lift at 4000 mm	Lift at 5000 mm	Lift at 6000 mm
[H] (mm)	[R] (mm)	radius (kg)	radius	radius	radius	radius
4000	5644	1204			1477	
3000	6091	1061		1759	1460	1090
2000	6319	992	3035	1977	1422	1078
1000	6355	973	2841	1890	1380	1060
Ground	6203	1001	2772	1835	1348	1048

⁻¹⁰⁰⁰

Performance

Digging force, dipperstick (ISO 6015)	39073 N
Digging force, long dipperstick (ISO 6015)	35315 N
Digging force, bucket (ISO 6015)	55582 N
Ground pressure with rubber tracks	39.20 kPa
Ground pressure with steel tracks	39.80 kPa
Ground pressure with long dipperstick and rubber tracks	39.30 kPa
Ground pressure with long dipperstick and steel tracks	40.00 kPa

Cycle Times

Boom raise time	4.1 s
Boom lower time	4.9 s
Bucket curl time	2.3 s
Bucket dump time	3.1 s
Dipperstick retract time	3.8 s
Dipperstick extend time	3.9 s
Boom swing left time	6.5 s
Boom swing right time	5.9 s
Blade raise time	2.8 s
Blade lower time	2.3 s
Slew rate	9.0 RPM

Weights

Operating weight with ROPS HVAC cab, rubber tracks, counterweight, standard bucket 600 mm (223 kg) (SAE	8919 kg
J732)	
Additional weight for steel tracks	16 kg
Additional weight for segmented tracks	74 kg
Additional weight for long dipperstick	37 kg
Additional weight for counter weight	407 kg

Engine

Make / model	Bobcat D24 - 2.4L, 97/68 EC Stage V, Turbocharged	
Fuel	Ultra Low Sulfur Diesel	
Cooling	Liquid, forced circulation	
Maximum NET power (ISO 9249)	48.5 kW	
Maximum governed speed	2100.0 RPM	
High idle speed	2100.0 RPM	
Low idle speed	1200.0 RPM	
Maximum NET torque (ISO 9249)	248.0 Nm	



E88 Excavators Specifications

Number of cylinders

Displacement 2392 cm³ Bore 90.0 mm Stroke 94.0 mm

Air filter Dual dry replacement paper elements

Diesel-compression Ignition Starting aid Intake air heater Crankcase ventilation Closed breathing

Glow plug resistance

Lubrication Forced lubrication/cartridge type

Electrical

Alternator 12 Volts 90 Amps, open frame with internal regulator **Battery** 12 Volts negative ground, cold cranking current 1000 Amps

at -18°C, 186 min. reserve capacity at 25 Amps

20 Watts / 1800 Lumens LED Lights (Each)

12 Volt 2.0 kW reduction drive Starter

Hydraulic System

Pump type Engine driven, variable displacement piston pump with

pressure-compensating, load-sensing, and torque-limiter

control

Pump capacity 149.00 L/min System relief pressure for slew circuit 215.70 bar System relief pressure for blade circuit 380.00 bar

System relief pressure for implement circuits 295.00 bar System relief pressure for auxiliary circuits 210.00 bar Port relief pressure for boom, bucket and dipperstick 340.00 bar

Offset port relief, base end and rod end 380.00 bar

Control valve 9-spool or 10-spool, closed centre, individually

compensated

Hvdraulic filter Full-flow replaceable — 16 µm synthetic media element

SAE standard tubelines, hoses, and fittings Fluid lines

Auxiliary (AUX1) flow 95.00 L/min Auxiliary (AUX2) flow 62.00 L/min

Hydraulic Cylinders

Boom cylinder Cushion up 115.0 mm Boom cylinder bore Boom cylinder rod 70.0 mm Boom cylinder stroke 775.0 mm

Dipperstick cylinder Cushion retract and extend

Dipperstick cylinder bore 100.0 mm Dipperstick cylinder rod 65.0 mm Dipperstick cylinder stroke 838.0 mm **Bucket cylinder** No cushion Bucket cylinder bore 90.0 mm Bucket cylinder rod 60.0 mm Bucket cylinder stroke 690.0 mm Boom swing cylinder No cushion



E88 Excavators
Specifications

Boom swing cylinder bore Boom swing cylinder rod	101.6 mm 57.2 mm
Boom swing cylinder stroke	697.2 mm
Blade cylinder	No cushion
Blade cylinder bore	125.0 mm
Blade cylinder rod	70.0 mm
Blade cylinder stroke	199.0 mm

Buckets

Width (mm)	Weight (kg)	Struck capacity (m³)	Heaped capacity (m³)
400	176	-	0.147
500	200	-	0.197
600	222	-	0.249
700	241	-	0.301
800	264	-	0.354
900	283	-	0.408
1000	306	-	0.461
1500	216	0.350	0.500
1800	248	0.420	0.600

Slew System

Boom swing, left	64.0°
Boom swing, right	61.0°
Slew circle	Single row shear-type ball bearings with internal gear
Slew drive	Axial piston connected to a planetary drive

Drive System

Travel motor	Each track is driven by a dual speed hydraulic axial piston
	motor

Drive reduction Two-stage planetary gear reduction 50.579:1

Traction

Track width	450.0 mm
Track adjusters	Grease type with shock absorbing recoil springs
Track type, standard	Rubber
Track type, optional	Steel, Segmented
Travel speed, low range	2.5 km/h
Travel speed, high range	4.4 km/h
Undercarriage	Crawler-Tractor design, sealed track rollers with
•	box-section track roller frame.
Number of track rollers per side	1 top, 5 bottom
Gradeability	30.0°

Brakes

Slew brake Spring applied, hydraulically released Travel brake Hydraulic lock on motor



E88 Excavators Specifications

Fluid Capacities

Cooling system	9.50 L
Engine lubrication plus oil filter	9.80 L
Fuel reservoir	116.00 L
Hydraulic reservoir	21.40 L
Hydraulic system	81.40 L
Final drive case (each)	1.30 L

Fluid Specifications

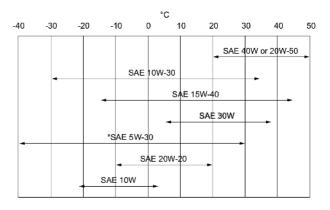
Engine coolant

Engine oil

Propylene glycol/water mix (53% - 47%) with freeze protection to -37°C

5 L can - 6904844A, 25 L container - 6904844B, 209 L drum - 6904844C, 1000 L tank - 6904844D

Oil must meet API Service Classification of CD, CE, CF4, CG4, or better. Recommended SAE viscosity number for anticipated temperature range.



^{*} Can be used only when available with appropriate diesel rating. For synthetic oil use the recommendation from the oil manufacturer.

Bobcat Superior SH, 5 L can - 6904842A, 25 L container - 6904842B, 209 L drum - 6904842C, 1000 L tank -6904842D

Motor oil is not an acceptable alternative fluid.

Controls

Hydraulic fluid

Engine

Starting Blade

Boom swing Hydraulics

Auxiliary hydraulics

Upper structure slew lock for holding and service Steering

Hand dial on the right hand side. Electronically controlled Engine. Auto idle system to reduce fuel consumption.

Key type starter switch and shutdown.

Right hand lever.

Electric switch in left joystick

Two joysticks control boom, bucket, dipperstick and upper structure slew.

Electric switch in right joystick (left joystick for second auxiliary)

Hydraulic lock on motor.

Direction and speed controlled by two hand levers or two foot pedals.



E88 | Excavators | Specifications

Instrumentation

- · Charging system indicator
- · Engine oil pressure indicator
- Engine temperature gauge
- Fuel gauge
- · Hour meter
- · Hour meter, resettable
- · Hydraulic system indicator
- Tachometer
- · Engine throttle dial
- · Auto idle switch
- · A/C control switches
- · Windshield wiper/washer switch
- · Two-speed range indicator
- · Work light indicator
- · Work light switch
- Battery kill switch

Serviceability

Fuel filler is external and has key lock for vandal proofing

Access is available to the following through the rear tailgate or side access hood:

- · Air cleaner with indicator
- Battery
- · Cooling system (engine oil and hydraulic oil coolers) for cleaning
- · Control valve
- · Engine oil and fuel filters
- · Engine oil level
- Fuel filler
- · Hydraulic valve bank
- Starter
- · Sight gauges for hydraulic level

Central grease point for swing bearing, swing pinion, and offset cylinder

Tailgate and access cover have locks for vandal-proofing.

Easy access to all grease points.

Standard Features

- · 2200 mm dozer blade
- 450mm rubber track
- 5 inch display
- Air conditioning (Cab with HVAC)
- · Auto idle
- · Adjustable double acting auxiliary hydraulic (AUX1) with QC on ARM
- Battery disconnect switch
- · Blade float feature
- · Boom & arm safety valves with overload warning
- · Clamp ready
- · Control console locks
- · Cupholders
- · Dual Direction Detent
- Dual flanged rollers
- · Engine/hydraulic monitor with shutdown



E88 Excavators
Specifications

- · Fuel refill pump with auto shut-off
- · One-piece ergonomic pedals
- Full fuel warning alarm
- Horn
- · Hydraulic coupler lines (AUX5)
- Hydraulic joystick controls
- · Proportional fingertip auxiliary and boom swing offset hydraulic control
- · Retractable seat belt
- · Selectable auxiliary hydraulic flow
- Deluxe textile suspension seat with head rest
- · Storage compartment
- · Tool box
- TOPS/ROPS/FOPS cab * 1
- · Two-speed travel with Auto shift
- Upper structure tie down
- · LED Work lights front
- · Warranty: 24 months, 2000 hours (whichever occurs first)

Options

- · Auto Air conditioning (Cab with Auto HVAC)
- 7" touch screen
- · Long dipperstick
- · Add-on counterweight
- · 2nd Auxiliary hydraulics
- · Case drain line
- · Clamp with AUX1 valve
- Tilt coupler lines (AUX4)
- · Heated Deluxe textile suspension seat with head rest
- · AM/FM MP3 stereo radio with Bluetooth
- FOGS kit (Overhead guard)
- · Travel motion alarm
- · Beacon kit
- · Left and right mirror kit
- Fire extinguisher
- Special applications kit (Front windscreen protection)
- · Bucket valves (AUX3) kit
- · Depth Check kit
- · Keyless ignition kit
- · Keyless ignition Deluxe
- · Add-on counterweight kit
- · Case drain line kit
- · Direct to Tank kit
- · Clamp with AUX1 valve kit
- Blade load holding valve
- Geith pin-on hydraulic coupler
- · 450 mm Segmented tracks kit
- Rear view camera kit
- Fire extinguisher kit
- · 50 mm Steel tracks

^{1.} Roll Over Protective Structure (ROPS) – Meets requirements of ISO 3471. Tip Over Protective Structure (TOPS) – Meets requirements of ISO 12117. Falling Object Protective Structure (FOPS) - Meets requirements of ISO 3449.



E88 | Excavators | Specifications

Environmental

Noise level LpA(EU Directive 2006/42/EC)	77 dB(A)
Noise level LWA(EU Directive 2000/14/EC)	96 dB(A)
Whole body vibration (ISO 2631–1)	0.20 ms ⁻²
Hand-arm vibration (ISO 5349-1)	0.41 ms ⁻²

Safety

Retractable seat belt, standard Operator cab, standard

Grab handles, standard Safety tread, standard

Front working lights, standard Control lockout, standard

Upper carriage slew lock, standard

Pedal lock, standard Travel motion alarm, optional Special applications kit, optional Operator's handbook, standard Should always be worn when operating the excavator

Closed cab. Meets SAE

J1040 for Roll Over Protection Structure (ROPS) and ISO 12117 for Tip Over Protective Structure (TOPS). An optional top Falling Object Guard Structure (FOGS)

meeting ISO 10262 Level 1 * is available.

Should always be used when entering/exiting excavator.

Slip resistant tread on cab threshold to be used

whenentering/exiting excavator.

Use for indoor and low light operation.

Operator console locks out work group and travel functions

when in the upright position.

A lock pin is provided to lock the upper structure to the

undercarriage for transport. For use when required

Restricts objects and material from entering cab openings. Operator manual providing operational instructions and

warning decals with pictorial and international symbols.