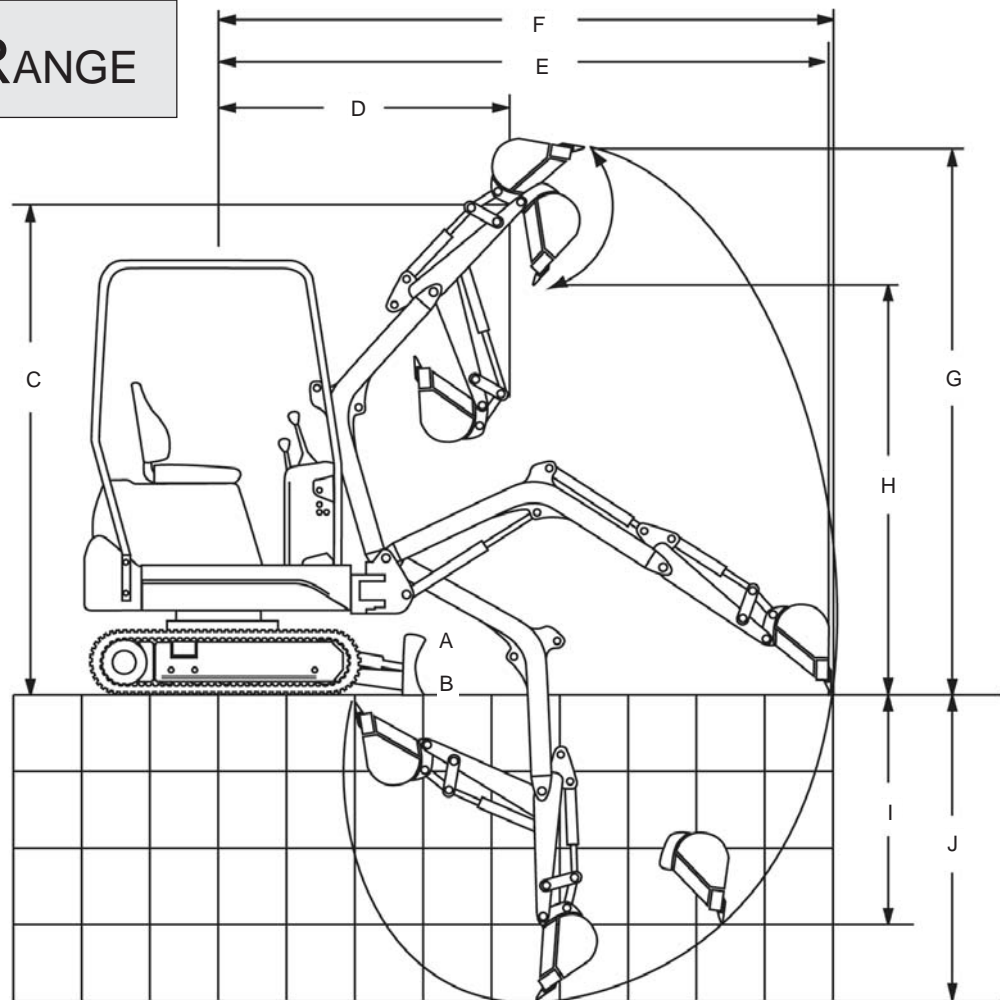


# 316 COMPACT EXCAVATOR SPECIFICATIONS

## WORKING RANGE



A.	Maximum Blade Height .....	7.5" (190 mm)
B.	Maximum Blade Depth .....	5.1" (130 mm)
C.	Maximum Height of Working Equipment with Arm Retracted .....	85.8" (2180 mm)
D.	Maximum Working Equipment Radius with Boom @ Maximum Height .....	44.1" (1120 mm)
E.	Maximum Reach at Ground Level .....	108.5" (2755 mm)
F.	Maximum Radius of Working Equipment .....	111.8" (2840 mm)
G.	Maximum Bucket Tooth Height .....	111.6" (2835 mm)
H.	Maximum Dump Height .....	79.1" (2010 mm)
J.	Maximum Dig Depth .....	61" (1550 mm)
I.	Maximum Depth of Vertical Wall which can be Excavated .....	44.9" (1140 mm)

Bucket Pivot Angle ..... 181°

## MACHINE PERFORMANCE

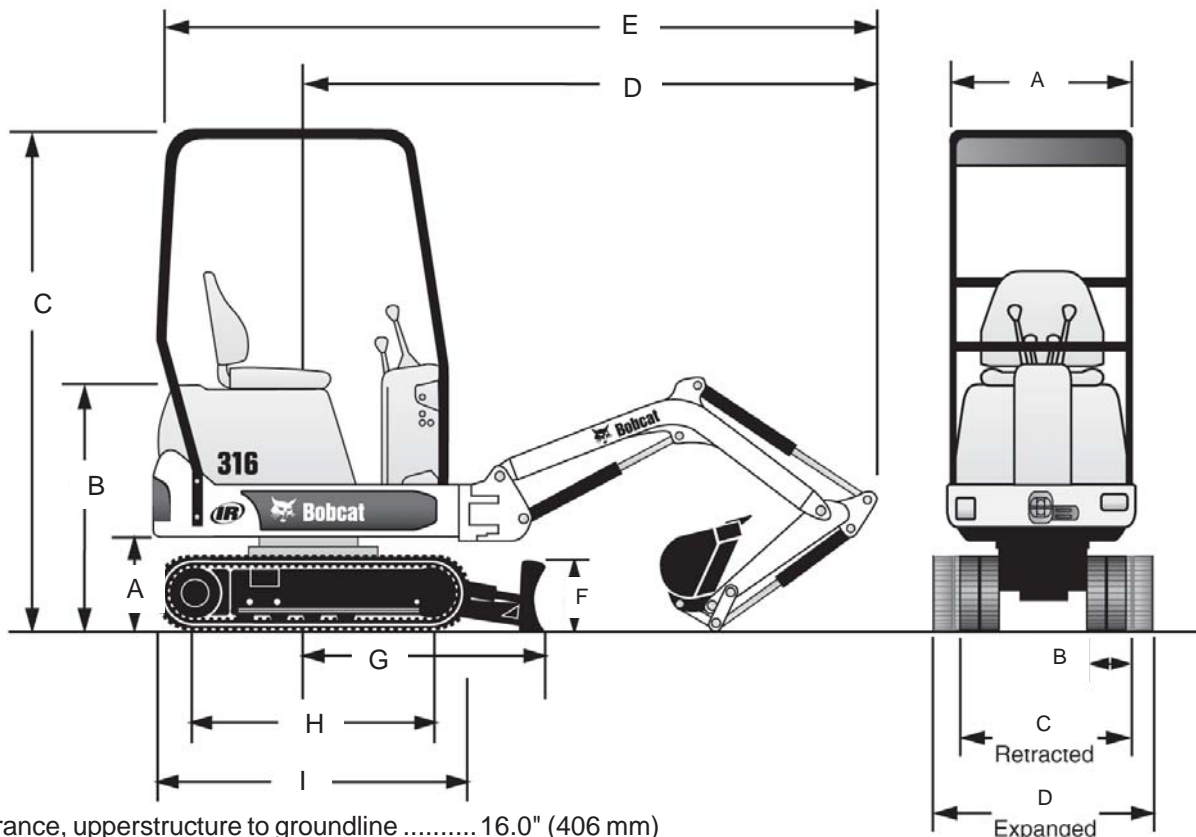
Operating Weight (includes standard equipment and 12" Bucket)  
With TOPS Canopy ..... 1676 lbs. (760 kg)

Travel Speed ..... 1.2 mph (2 km/hr)

### Digging (Breakout) Force

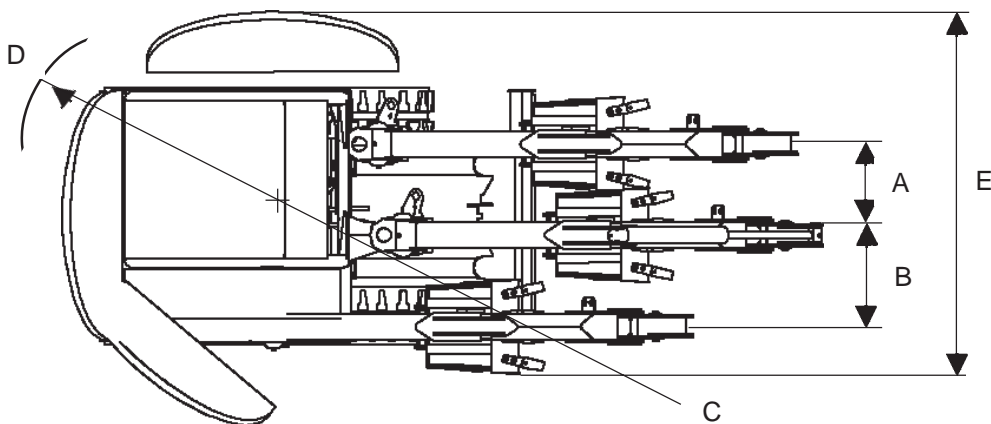
Arm ..... 1323 lbf. (5,9 kN)  
Bucket ..... 1874 lbf. (8,3 kN)

**DIMENSIONS**



- A. Clearance, upperstructure to groundline ..... 16.0" (406 mm)
- B. Groundline to top of engine cover ..... 39.8" (1010 mm)
- C. Groundline to top of canopy ..... 84.8" (2155 mm)
- D. Minimum radius in transport position ..... 44.2" (1223 mm)
- E. Overall length in transport position ..... 114.8" (2915 mm)
- F. Blade height ..... 7.5" (190 mm)
- G. Machine centerline to blade ..... 37.0" (940 mm)
- H. Length of track on ground ..... 38.2" (970 mm)
- I. Overall length of track assembly ..... 50.3" (1278 mm)

- A. Canopy width ..... 31.3" (795 mm)
- B. Track width ..... 7.1" (180mm)
- C. Blade width w/ext. .... 35.4" (900 mm)
- D. Blade width ..... 27.6" (700 mm)
- Track Lug Height ..... 0.44" (11 mm)



- A. Machine centerline to working equipment centerline, left hand rotation ..... 11.2" (284 mm)
- B. Machine centerline to working equipment centerline, right hand rotation ..... 17.5" (445 mm)
- C. Minimum turning radius (with work equipment @ maximum swing) ..... 32.3" (820 mm)
- D. Swing clearance, rear ..... 36.0" (915 mm)
- E. Working width maximum right hand rotation ..... 60.0" (1524 mm)

# STANDARD FEATURES

- 27.6" Dozer Blade with (2) 4" Blade Extensions
- 7.1" Rubber Track
- Auxiliary Hydraulics
- Control Locks
- Horn
- Hydraulically Expandable Undercarriage: 27.6" - 35.6"
- Retractable Seat Belt
- Single-Speed Travel
- Spark Arrestor Muffler
- \*TOPS Canopy
- Warranty: 12 Months, Unlimited Hours
- Work Light

**\*Tip Over Protective Structure (TOPS) - Meets Requirements of ISO/DIS 12117**

# INSTRUMENTATION

- Charging System Light
- Engine Oil Pressure Light
- Hourmeter
- Pre-Heat Indicator

# UNDERCARRIAGE

- Undercarriage ..... Crawler-Type Tractor Design
- Track Rollers..... Sealed with reinforced box-section track roller frame
- Track Adjusters ..... Thread-type
- Track Type ..... Rubber
- Track Width ..... 7.1" (180 mm)
- Number of Track Rollers ..... 2 each side
- Ground Pressure (w/ Canopy) .. 3.4psi (23,5 kPa)

# ENGINE/ELECTRICAL

- Make/Model ..... Kubota/D722-E
- Fuel/Cooling ..... Diesel/Liquid
- Horsepower (SAE Net) ..... 9.9 HP (7,4 kW)
- Maximum Governed RPM ..... 2000 RPM
- Number of Cylinders ..... 3
- Displacement ..... 43.9 cu. in. (0,72 L)
- Bore x Stroke ..... 2.64" x 2.68" (67mm x 68 mm)
- Lubrication ..... Pressure system with filter
- Filter ..... Catridge type-full flow
- Air Cleaner ..... Dry replaceable paper cartridge
- Alternator ..... 12 volt; 12 amps
- Battery ..... 12 volt; 35 minute reserve capacity
- Starter ..... 12volt; Gear reduction type; 1.07 HP (.8 kW)

## HYDRAULIC SYSTEM

Number of Pumps .....	Two
Pump Type .....	Gear Type
Pump Capacity .....	2 x 2.7 GPM (10,2 L/min)
System Relief Setting	
Implement Circuits .....	2347 PSI (162 Bar)
Travel Circuits .....	2347 PSI (162 Bar)
Auxiliary Circuits .....	2347 PSI (162 Bar)
Auxiliary Flow .....	5.4 GPM (20,4 L/min)
Control Valves .....	9 Spool, parallel type, open center
Drive Motors .....	(2) Axial piston motor
Swing Motor .....	Orbit motor

### Hydraulic Function Times

Bucket .....	Curl - 3.2 Seconds	Dump - 2.5 Seconds
Arm .....	Retract - 3.8 Seconds	Extend - 2.9 Seconds
Boom .....	Raise - 2.5 Seconds	Lower - 2.3 Seconds
Boom Swing .....	Left - 3.2 Seconds	Right - 4.5 Seconds
Blade .....	Raise - 1.1 Seconds	Lower - .9 Seconds
Undercarriage .....	Expand 2.6 Seconds	Retract 3.2 Seconds

## DRIVE SYSTEM

Final Drive .....	Each track is driven by a hydrostatic axial piston motor
Type of Reduction .....	Planetary gear reduction
Gradability Traveling Down or Backing Up Slopes ...	25°
Gradability Traveling On Side Slopes .....	15°
Gradability Traveling Up Side Slopes .....	15°

## CONTROLS

Vehicle Steering .....	Direction and speed controlled by two hand levers
Excavator Functions .....	Two levers control boom, arm, bucket and cab slew. Two foot pedals control boom swing and auxiliary hydraulics. The blade is controlled by a separate lever.
Service Brake (Travel) .....	Hydraulic lock on motor
Parking Brake (Travel) .....	Hydraulic lock on motor
Service Brake (Swing) .....	Hydraulic lock on motor
Holding Brake (Swing) .....	Pin lock

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# SWING SYSTEM

Swing Drive ..... Orbital motor  
 Swing Circle ..... Single row shear type ball bearings with internal gear built into swing circle  
 Swing Speed ..... 8.5 RPM  
 Boom Swing (Left) ..... 87°  
 Boom Swing (Right) ..... 47°

# CAPACITIES

Fuel Tank ..... 2.38 gal. (9 L)  
 Cooling System ..... 1.0 gal. (3,8 L)  
 Engine Oil and Filter ..... 3.3 qts. (3,1 L)  
 Hydraulic System Capacity ..... 3.4 gal. (13 L)

# ATTACHMENTS



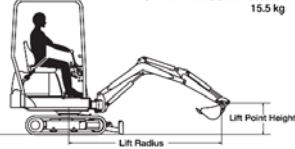
**Attachments Available**

8" Trenching Bucket with teeth  
 12" Trenching Bucket with teeth  
 16" Trenching Bucket with teeth

# WARRANTY

One Year Unlimited Hours ..... Standard  
 24 Month, 2000 Hour Limit ..... Optional  
 36 Month, 3000 Hour Limit ..... Optional  
 60 Month, 5000 Hour Limit  
 (Municipalities Only) ..... Optional

# LIFT CHART

 <b>WARNING</b>		<b>EXCAVATOR MODEL 316</b>													
<p><b>OVERLOAD CAN TIP THE EXCAVATOR AND CAUSE INJURY OR DEATH</b></p> <ul style="list-style-type: none"> <li>Do not lift or hold any load that exceeds these ratings at their specified load radii and height.</li> <li>Total rated load is shown. The weight of all lifting devices must be deducted to determine the net load that can be lifted.</li> </ul> 		LIFT POINT HEIGHT	RATED LIFT CAPACITY OVER BLADE, BLADE DOWN - kg (lb)			RATED LIFT CAPACITY OVER BLADE, BLADE UP - kg (lb)			RATED LIFT CAPACITY OVER SIDE, BLADE UP, TRACKS RETRACTED - kg (lb)			RATED LIFT CAPACITY OVER SIDE, BLADE UP, TRACKS EXPANDED - kg (lb)			
			LIFT RADIUS - mm (in)			LIFT RADIUS - mm (in)			LIFT RADIUS - mm (in)			LIFT RADIUS - mm (in)			
			1000 (39.4)	2000 (78.7)	Max.	1000 (39.4)	2000 (78.7)	Max.	1000 (39.4)	2000 (78.7)	Max.	1000 (39.4)	2000 (78.7)	Max.	
<p>Where applicable, specifications conform to ISO Standards. Specifications are subject to change without notice. Lift Point is bucket hinge point with standard bucket attached and bucket cylinder fully extended.</p> <p>CIRCUIT PRESSURES                      WORKING 162 bar (2347 psi)                      HOLDING 191 bar (2774 psi)</p> <p>BOOM LENGTH 1346 mm (53.0 in)                      ARM LENGTH 666 mm (27.0 in)</p> <p>STANDARD BUCKET 300 mm (11.81 in)                      15.5 kg (34.2 lbs)</p> 		2000 (78.7)			*196 (433)			*194 (428)			122 (269)			169 (373)	
		1000 (39.4)		*229 (505)	*178 (392)		183 (404)	140 (308)		101 (223)	70 (155)		142 (314)	103 (226)	
		Ground		*279 (615)	*225 (497)		173 (382)	142 (314)	217 (479)	88 (194)	72 (159)		322 (710)	129 (284)	102 (224)
		-1000 (-39.4)		*361 (796)	*210 (463)		353 (779)		*225 (497)	235 (518)		132 (291)	*367 (810)	191 (422)	
		44136	* Rated Hydraulic Lift Capacity									SW 6817138			

## SAFETY

Seat Belt (Std.) .....	Should always be worn when operating the excavator
Operator Canopy .....	A four post canopy provided. Four post canopy shall meet Tip Over Protective Structure (TOPS) in accordance with ISO 12117.
Safety Tread .....	Slip resistant tread on canopy threshold to be used when entering/exiting excavator.
Front Working Light (Std.) .....	Use for indoor and low light operation.
Control Lockout (Std.) .....	Restraint bar shall lock out work group functions when in the upright position.
House Swing Lock (Std.) .....	A lock pin shall be provided to lock the upper carriage to the undercarriage for transporting.
Pedal Lock (Std.) .....	Pedal lock shall prevent activation of boom swing function.
Operator's Handbook .....	Weather resistant operator handbook written in English will be attached to the canopy, providing operational instructions and warnings by decals with pictorials and international symbols plus some messages in four basic languages: English, French, German and Spanish.

## SERVICEABILITY

Access is available to the following by lifting engine cover:

- Air cleaner
- Engine oil and fuel filters
- Engine oil level
- Fuel Fill
- Hydraulic Filter and fill
- Starter
- Cooling system for cleaning
- Sight gauge for hydraulic level
- Sight gauge for fuel level

Cover has a lock for vandal proofing.

Easy access to all grease points.

Central grease point for swing bearing and swing pinion

## TRAINING RESOURCES

### *Bobcat Excavator Operator Training Course*

4-hour course provides video, classroom and hands-on training

### *Bobcat Excavator Service Safety Training Course*

2-hour course provides video, classroom and hands-on training

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