

## COMPACT EXCAVATORS E17 E19 E20



### NEW GENERATION

... of Bobcat 1-2 ton conventional swing models (E17-E19) - together with the brand-new unique 2 ton Zero House Swing model (E20) - provide superior performance, operator comfort, safety and functional features.

#### E20 - Zero House Swing (ZHS)

For operators looking for compactness without sacrificing operator comfort and performance.

- 2019 kg operating weight with cab
- Digging depth: 2385 / 2565 mm
- Overall width: 1360 mm, with possibility to retract to 980 mm
- Heavy counterweight for unbeatable stability
- Cab and canopy selection
- Comfort package (optional)
  - Joystick-controlled boom swing and auxiliary for greater comfort and accuracy with selectable auxiliary modes
  - Autoshift travel motors to guarantee better traction and manoeuvrability
     Higher-class seat
- 2nd auxiliary line circuit (optional)
- Hydraulic clamp (optional)

# E20 - EXPECT THE UNEXPECTED

- ✓ Zero House Swing functionality (even with cab)
- ✓ Stability of best-in-class conventional machine
- ✓ Roomy and comfortable operator environment
- ✓ Easy access for daily maintenance and service

#### **Key features:**

- Robust and reliable excavator
- Excellent performance both speed and force
- Smooth operation for precise job
- Unparalleled working range
- · Best-in-class stability and visibility
- Unrivalled operator comfort and access to cab
- Advanced electronic control functions with new control panel
- Integrated upper-structure tie-down points

## Excavators can be upgraded to any customer requirement with the following options:

- Long dipperstick for superior digging depth and reach
- Long blade for extra stability and easy dustpanability
- Keyless ignition
- Motion alarm
- Seat options, all with retractable seat belt
- Cab lights and MP3 radio
- Object handling certified
- Auxiliary line circuit extension on dipperstick

#### E19 - Conventional Tail Swing

For experienced operators focusing on performance and durability.

- 1885 kg operating weight with cab
- Digging depth: 2385 / 2565 mm
- Overall width: 1360 mm, with possibility to retract to 980 mm
- Cab and canopy selection
- Additional counterweight for excellent stability (optional)
- Comfort package (optional)
  - Joystick-controlled boom swing and auxiliary for greater comfort and accuracy with selectable auxiliary modes
  - Autoshift travel motors to guarantee better traction and manoeuvrability
  - Higher-class seat
- 2nd auxiliary line (optional)
- Hydraulic clamp (optional)



#### E17 - Conventional Tail Swing

This entry level "1.5 ton" excavator - designed for easy transportability - includes many of the E19's features.

- 1711 kg operating weight with canopy
- Digging depth: 2249 mm
- Overall width: 1360 mm, with possibility to retract to 980 mm
- Cab and canopy selection
- 2nd speed (optional)

## **COMFORT, VISIBILITY AND SAFETY**

The E17/E19 and E20 cabs offer an uncompromised operator environment - which, together with excellent visibility, provides the best possible operator comfort and safety.



## Premium features for first-class comfort on any job:

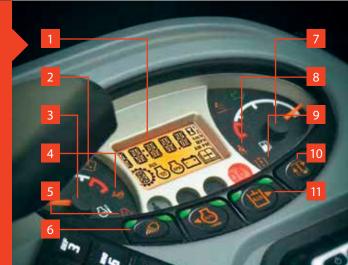
- Unique-in-class joystick control of boom swing and auxiliary hydraulics with 3 selectable auxiliary modes to match any attachments
- Fully adjustable cab heater unit
- Seat options for optimal operator preference
- All parameters checked in one view with new control panel (auto engine shutdown, auto cab lights switch-off, audible alarm in case of malfunction)
- Easy-to-operate gas spring-assisted light and rigid front window
- Keyless ignition for optimal safety
- Battery kill switch for storage and to prevent theft
- Automatic slew brake for safe parking and transportation

#### **Display:**

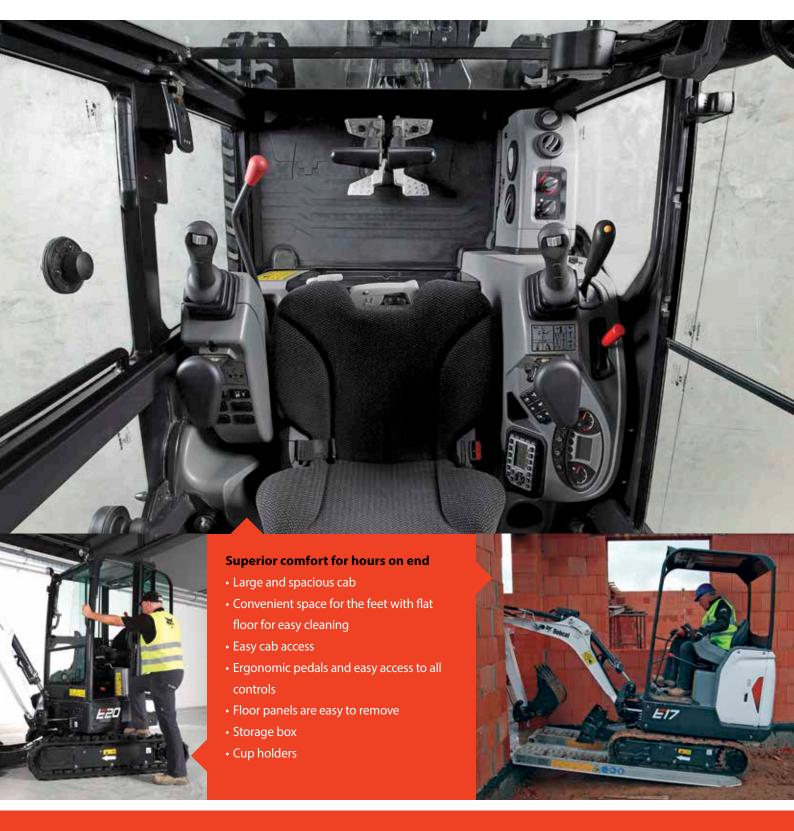
- Engine hours, job hours, service codes, voltage, maintenance clock, countdown for glow plugs, RPM
- 2. General warning
- 3. Engine coolant temp
- 4. Two speeds

- 5. Engine warning
- 6. Lights
- 7. Fuel gauge and alarm
- 8. Seat belt
- 9. Hydraulic warning
- 10. Info button Display menu
- 11. Aux hydraulics button -

Thumb aux control (optional)



These machines are built around the operator - providing optimal ergonomics for operators of all sizes. The new cab design features large windows and narrow pillars to maximise all-around visibility.



### SMOOTH PERFORMANCE AND COMPACTNESS

Bobcat's unique E17, E19 and E20 hydraulic systems make the best possible use of the engine power. Fast cycle times, combined with smooth control of class-leading breakout forces, provide maximum productivity. Boom and dipperstick cylinder cushioning - unique in their class - enhance overall smoothness.



The Zero House Swing (ZHS) concept enhances Zero Tail Swing (ZTS) functionality by further protecting the front upper structure corners turning within the swing circle. ZHS functionality provides 320° of free rotation while working close to any object.

The retractable undercarriage (standard equipment for all 3 models) enables you to enter buildings through the doors. Side-shifted work group provides excellent working visibility. New easy-to-operate durable blade extensions. Left-hand side-mounted offset cylinder to minimise chance of damaging surrounding objects.

#### Lift more, lift higher

The superior dumping height makes loading trucks easy, while the reach at ground level means you don't need to reposition as often when digging.

With enhanced stability and lifting capacity, combined with best-in-class proportional auxiliary flow, the E17, E19 and E20 offer you the highest versatility in operating a wide range of attachments.



## **QUALITY - RELIABILITY - DURABILITY**

#### Tough materials, tested design

Using highly durable materials makes the Bobcat E17, E19 and E20 models hard-wearing and robust. The design features are tested under extreme conditions - and the heavy steel gauge tailgate ensures extra durability and peace of mind while working.



#### Reliability added in every feature:

- Rear tailgates protected by casted counterweights
- Metal covers can be opened or bolted on
- 2-piece blade cylinder hoses
- Wrenchless hydraulic hose technology helps prevent leakage
- Proven boom and dipperstick design
- Top-mounted boom cylinder
- Oversized cylinders for long life
- New paint and surface treatment process
- Reinforced expandable undercarriage to raise rigidity

## **MAINTENANCE AND SERVICE**

Daily maintenance and service points are conveniently located for easy and immediate access.



Side-by-side coolers for easy cleaning. Diagnostics are easy thanks to display error codes on control panel and service tool connection. The E20 tailgate provides great access to all daily maintenance components and service points.



## E17 E19 — SPECIFICATIONS

	E17	E19		
WEIGHTS				
Operating weight with canopy	1711 kg	1781 kg		
Operating weight with cab	1807 kg	1885 kg		
Additional weight for internal counterweight	-	50 kg		
Ground pressure	29.4 kPa	32.4 kPa		
ENGINE				
Make / model	Kubota / D722-E2B-BCZ-7	Kubota / D722-E2B-BCZ-7		
Fuel/Cooling	Diesel/Liquid	Diesel/Liquid		
Number of cylinders	3	3		
Displacement	0.7 L	0.7 L		
Maximum NET power (ISO 9249)	9.9 kW	9.9 kW		
Maximum NET torque (ISO 9249)	42.3 Nm	42.3 Nm		
PERFORMANCE				
Digging force, standard dipperstick (ISO 6015)	9108 N	10371 N		
Digging force, long dipperstick (ISO 6015)	-	9279 N		
Digging force, bucket (ISO 6015)	16177 N	20835 N		
Drawbar pull	14334 N	19380 N		
Travel speed, low range	2.0 km/h	2.5 km/h		
Travel speed, high range	3.2 km/h	4.0 km/h		
HYDRAULIC SYSTEM				
Duman dum a	Tuinle meen norman	Dual piston pump		

HYDRAULIC SYSTEM		
Pump type	Triple gear pump	Dual piston pump with gear pump
Pump capacity	32.5 L/min	41.3 L/min
Pump 1 capacity at 2500 RPM	10.0 L/min	11.3 L/min
Pump 2 and 3 capacity at 2500 RPM	11.3 L/min	15 L/min
Auxiliary flow	32.5 L/min	30 L/min
Auxiliary relief	227.0 bar	180.0 bar
SLEW SYSTEM		
Boom swing, left	80°	80 °
Boom swing, right	60°	60°
Slew rate	8.7 RPM	8.4 RPM
FLUID CAPACITIES		
Cooling system	3.3 L	3.3 L
Engine lubrication plus oil filter	3.3 L	3.3 L
Fuel reservoir	19.0 L	19.0 L
Hydraulic system	17.0 L	19.0 L
ENVIRONMENTAL		
Noise level LpA (EU Directive 2006/42/EC)	79 dB(A)	79 dB(A)
Noise level LWA (EU Directive 2000/14/EC)	93 dB(A)	93 dB(A)
Whole body vibration (ISO 2631–1)	$0.74\mathrm{ms^{-2}}$	0.74 ms <sup>-2</sup>
Hand-arm vibration (ISO 5349–1)	1.42 ms <sup>-2</sup>	1.42 ms <sup>-2</sup>
Hand-arm vibration (ISO 5349—1) Uncertainty	0.37 ms <sup>-2</sup>	0.37 ms <sup>-2</sup>

#### **STANDARD FEATURES**

TOPS/ROPS/FOPS\* canopy

Hydraulically retractable undercarriage from 1360 to 980 mm  $Exposed\ counterweight\ with\ 4\ mm\ steel\ tailgate$ 980 mm dozer blade with two 190 mm blade extensions

230 mm rubber track

Double acting auxiliary hydraulics Auxiliary quick couplers (E19)

Control console locks Horn

Hydraulic joystick controls Foldable & ergonomic pedals Hydraulic and Travel Control Lockouts

Retractable seat belt Two-speed travel (E19)

Upperstructure four point tie down

Engine with auto shutdown Full fuel warning alarm

Work light Battery kill switch

Storage compartment Cupholders

Warranty: 12 months or 2000 hours

\* (1) Tip Over Protective Structure (TOPS) – Meets requirements of ISO 12117, (2) Roll Over Protective Structure (ROPS) – Meets requirements of ISO 3471. (3) Falling Object Protective Structure (FOPS) – Meets requirements of ISO 3449.

#### **OPTIONS**

TOPS/ROPS cab with heater AM/FM MP3 stereo radio Cab/canopy light kit Clamp ready long dipperstick (E19) Long dozer blade

Additional internal counterweight (E19)

Comfort package (E19)

- Fingertip auxiliary and offset hydraulic control with selectable auxiliary hydraulic flow
- Auto Shift Drive Motors
- Superior seat with high back (Canopy)
- Deluxe textile suspension seat (Cab)

Keyless start Travel motion alarm

Two-speed travel (E17)

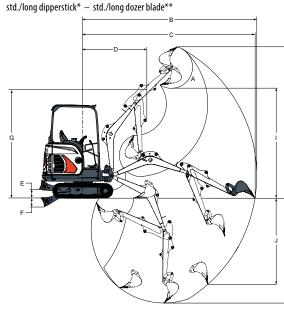
Deluxe textile suspension seat (Cab) (E17)

2nd Auxiliary hydraulics (E19) Auxiliary hydraulic line on dipperstick Auxiliary quick couplers (E17)

Hydraulic clamp (E19) Klac and Lehnhoff couplers Boom Load Holding Valve

Object handling certified

#### **WORKING RANGE**

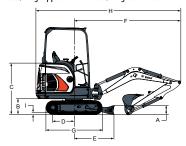


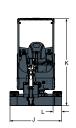
	E17	E19		
A	196°	196°		
В	3919 mm	4084 mm		
B*	-	4257 mm		
C	3871 mm	4039 mm		
C*	-	4214 mm		
D	1526 mm	1542 mm		
D*	-	1561 mm		
E	220 mm	220 mm		
E**	300 mm	300 mm		
F	204 mm	204 mm		

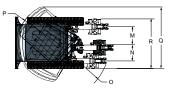
	E17	E19		
F**	254 mm	254 mm		
G	2405 mm	2564 mm		
Н	3371 mm	3573 mm		
H*	-	3701 mm		
Ī	2370 mm	2566 mm		
l*	-	2693 mm		
J	1810 mm	1948 mm		
J*	-	2115 mm		
K	2249 mm	2385 mm		
K*	-	2565 mm		

#### **DIMENSIONS**

std./long dipperstick\* - std./long dozer blade\*\*







	E17	E19		
Α	235 mm	235 mm		
В	419 mm	419 mm		
C	1340 mm	1340 mm		
D	1114 mm	1114 mm		
E	1045 mm	1045 mm		
E**	1252 mm	1252 mm		
F	2666 mm	2832 mm		
F*	-	2812 mm		
G	1476 mm	1476 mm		
Н	3665 mm	3831 mm		
H*	-	3812 mm		

	E17	E19		
	25 mm	25 mm		
J	1360 mm	> 980 mm		
K	2299 mm	2299 mm		
L	230 mm	230 mm		
M	433 mm	433 mm		
N	589 mm	589 mm		
0	1128 mm	1154 mm		
P	1009 mm	1009 mm		
Q	1801 mm	1801 mm		
R	1645 mm	1645 mm		

## E20 — SPECIFICATIONS

	E20
WEIGHTS	
Operating weight with canopy	1930 kg
Operating weight with cab	2019 kg
Ground pressure	31.1 kPa
ENGINE	
Make / model	Kubota / D722-E2B-BCZ-7
Fuel/Cooling	Diesel/Liquid
Number of cylinders	3
Displacement	0.7 L
Maximum NET power (ISO 9249)	9.9 kW
Maximum NET torque (ISO 9249)	42.3 Nm
PERFORMANCE	
Digging force, standard dipperstick (ISO 6015)	10371 N
Digging force, long dipperstick (ISO 6015)	9279 N
Digging force, bucket (ISO 6015)	20835 N
Drawbar pull	19302 N
Travel speed, low range	2.5 km/h
Travel speed, high range	4.0 km/h
HYDRAULIC SYSTEM	
Pump type	Dual piston pump with gear pump

std./long dipperstick* — std./long dozer blade**	
B	
D	
E E	
F	J

_	
	E20
A	196°
В	4134 mm
B*	4307 mm
C	4089 mm
C*	4264 mm
D	1592 mm
D*	1611 mm
E	220 mm
E**	300 mm
F	204 mm

with gear pump 41.3 L/min

11.3 L/min

15 L/min

30 L/min

180.0 bar

80°

60°

8.4 RPM

3.3 L

3.3 L

19.0 L

19.0 L

**WORKING RANGE** 

	E20
F**	254 mm
G	2564 mm
Н	3573 mm
H*	3701 mm
l	2566 mm
<b> </b> *	2693 mm
J	1948 mm
J*	2115 mm
K	2385 mm
K*	2565 mm

#### Fuel reservoir Hydraulic system

**FLUID CAPACITIES** 

Engine lubrication plus oil filter

Pump capacity

**Auxiliary flow** 

Auxiliary relief

Boom swing, right

Cooling system

Slew rate

Pump 1 capacity at 2500 RPM Pump 2 and 3 capacity at 2500 RPM

SLEW SYSTEM
Boom swing, left

 ENVIRONMENTAL

 Noise level LpA (EU Directive 2006/42/EC)
 82 dB(A)

 Noise level LWA (EU Directive 2000/14/EC)
 93 dB(A)

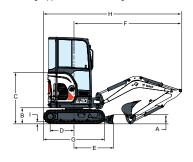
 Whole body vibration (ISO 2631–1)
 0.73 ms²

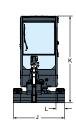
 Hand-arm vibration (ISO 5349–1)
 1.57 ms²

 Hand-arm vibration (ISO 5349–1) Uncertainty
 0.37 ms²

#### **DIMENSIONS**

std./long dipperstick\* - std./long dozer blade\*\*





#### STANDARD FEATURES

TOPS/ROPS/FOPS\* canopy

Hydraulically retractable under carriage from 1360 to 980 mm  $\,$ 

Heavy Counterweight

 $980\,mm$  dozer blade with two 190 mm blade extensions

 $230\,mm\,rubber\,track$ 

 $Double\ acting\ auxiliary\ hydraulics\ with\ quick\ couplers$ 

Control console locks

Horn

 $Hy draulic joy stick \ controls$ 

Hydraulic and Travel Control Lockouts Foldable and ergonomic pedals Retractable seat belt Two-speed travel

Upperstructure four point tie down

 $Engine\ with\ auto\ shutdown$ 

Full fuel warning alarm

Work light

Battery kill switch

Cupholders

Warranty: 12 months or 2000 hours

\* (1) Tip Over Protective Structure (TOPS) – Meets requirements of ISO 12117, (2) Roll Over Protective Structure (ROPS) – Meets requirements of ISO 3471. (3) Falling Object Protective Structure (FOPS) – Meets requirements of ISO 3449.

## M R Q

### **OPTIONS**

TOPS/ROPS cab with heater AM/FM MP3 stereo radio Cab/canopy light kit Clamp ready long dipperstick

Long dozer blade Comfort package

 Fingertip auxiliary and offset hydraulic control with selectable auxiliary hydraulic flow

- Auto Shift Drive Motors
- Superior seat with high back (Canopy)
- Deluxe textile suspension seat (Cab)

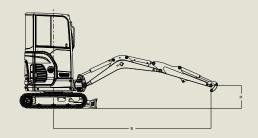
Keyless start
Travel motion alarm
2nd Auxiliary hydraulics
Auxiliary hydraulic line on dipperstick
Hydraulic clamp
Klac and Lehnhoff couplers
Boom Load Holding Valve
Object handling certified

E20	_	E20
235 mm	Ī	25 mm
419 mm	J	1360 mm > 980
1138 mm	K	2299 mm
1258 mm	L	230 mm
1045 mm	M	433 mm
1252 mm	N	589 mm
2882 mm	0	1154 mm
2862 mm	Р	1009 mm
1620 mm	Q	1801 mm
3688 mm	R	1645 mm
3669 mm	_	

## E17 E19 E20 — LIFT CAPACITIES

Picking up and placing heavy items is easy with all 3 models.

E20 stability is comparable to that of best-in-class conventional machines on the market. E19 stability can be boosted to class-leading stability by adding internal counterweights. In addition, these machines now come with an optional certified 'object handling device', which consists of: boom load holding valve, dipperstick load holding valve, hooking device and overload warning device.





	RATED	LIFT CAPACITY BLADE DO		RATED LIFT CAPACITY - OVER BLADE BLADE UP		RATED LIFT CAPACITY - OVER SIDE BLADE UP		RATED LIFT CAPACITY - OVER SIDE BLADE UP - RETRACTED				
E17 - RATED LIFT CAPACITY (Canopy, Long blade)												
LIFT POINT	LIFT RA	DIUS [R]	LIFT	LIFT RA	DIUS [R]	LIFT	LIFT RADIUS [R] LIFT		LIFT	LIFT RA	DIUS [R]	LIFT
HEIGHT [H]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]
2000 mm			*336 kg @ 2960 mm			258 kg @ 2960 mm			305 kg @ 2960 mm			180 kg @ 2960 mm
1000 mm	*448 kg	*352 kg	*331 kg @ 3338 mm	*448 kg	246 kg	210 kg @ 3338 mm	*448 kg	289 kg	246 kg @ 3338 mm	313 kg	170 kg	143 kg @ 3338 mm
Ground	*693 kg	*373 kg	*305 kg @ 3310 mm	409 kg	236 kg	206 kg @ 3310 mm	485 kg	276 kg	241 kg @ 3310 mm	276 kg	161 kg	136 kg @ 3310 mm
-1000 mm	*566 kg		*309 kg @ 2875 mm	416 kg		247 kg @ 2875 mm	485 kg		287 kg @ 2875 mm	270 kg		168 kg @ 2875 mm

E19 - RATED LIFT CAPACITY (Canopy, Standard dipperstick, Long blade)												
LIFT POINT HEIGHT [H]	LIFT RADIUS [R]		LIFT	LIFT RA	DIUS [R]	LIFT	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT
	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]
2000 mm		*394 kg	*422 kg @ 3175 mm		277 kg	244 kg @ 3175 mm		309 kg	293 kg @ 3175 mm		191 kg	183 kg @ 3175 mm
1000 mm	*660 kg	*459 kg	*402 kg @ 3533 mm	487 kg	261 kg	198 kg @ 3533 mm	543 kg	312 kg	237 kg @ 3533 mm	325 kg	193 kg	142 kg @ 3533 mm
Ground	*896 kg	*497 kg	*380 kg @ 3515 mm	439 kg	244 kg	193 kg @ 3515 mm	504 kg	294 kg	232 kg @ 3515 mm	290 kg	177 kg	137 kg @ 3515 mm
-1000 mm	*739 kg	*409 kg	*368 kg @ 3112 mm	401 kg	235 kg	222 kg @ 3112 mm	478 ka	272 kg	270 kg @ 3112 mm	266 ka	156 ka	159 kg @ 3112 mm

E19 - RATED LIFT CAPACITY (Cab, Long dipperstick, Long blade, Add. counterweight)												
LIFT POINT HEIGHT [H]	LIFT RADIUS [R]		LIFT	LIFT RA	DIUS [R]	LIFT	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT
	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]
2000 mm		*340 kg	*380 kg @ 3372 mm		*340 kg	260 kg @ 3372 mm		*340 kg	306 kg @ 3372 mm		228 kg	188 kg @ 3372 mm
1000 mm	*496 kg	*412 kg	*372 kg @ 3708 mm	*496kg	294 kg	217 kg @ 3708 mm	*496 kg	346 kg	254 kg @ 3708 mm	390 kg	219 kg	156 kg @ 3708 mm
Ground	*854 kg	*465 kg	*364 kg @ 3691 mm	495 kg	279 kg	212 kg @ 3691 mm	560 kg	329 kg	248 kg @ 3691 mm	341 kg	204 kg	154 kg @ 3691 mm
-1000 mm	*735 kg	*405 kg	*351 kg @ 3315 mm	464 kg	273 kg	240 kg @ 3315 mm	541 kg	310 kg	285 kg @ 3315 mm	342 kg	196 kg	176 kg @ 3315 mm

E20 - RATED LIFT CAPACITY (Canopy, Standard dipperstick, Long blade)												
LIFT POINT HEIGHT [H]	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT
	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]
2000 mm		*403 kg	*422 kg @ 3225 mm		311 kg	227 kg @ 3225 mm		305 kg	270 kg @ 3225 mm		192 kg	158 kg @ 3225 mm
1000 mm	*646 kg	*469 kg	*402 kg @ 3583 mm	*646 kg	306 kg	227 kg @ 3583 mm	*646 kg	301 kg	223 kg @ 3583 mm	331 kg	175 kg	126 kg @ 3583 mm
Ground	*932 kg	*508 kg	*380 kg @ 3565 mm	526 kg	297 kg	224 kg @ 3565 mm	509 kg	289 kg	222 kg @ 3565 mm	281 kg	164 kg	124 kg @ 3565 mm
-1000 mm	*769 kg	*418 kg	*368 kg @ 3162 mm	546 kg	297 kg	261 kg @ 3162 mm	516 kg	294 kg	260 kg @ 3162 mm	286 kg	168 kg	145 kg @ 3162 mm

E20 - RATED LIFT CAPACITY (Cab, Long dipperstick, Long blade)												
LIFT POINT HEIGHT [H]	LIFT RADIUS [R]		LIFT	LIFT RA	DIUS [R]	LIFT	LIFT RADIUS [R]		LIFT	LIFT RADIUS [R]		LIFT
	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]	2000 mm	3000 mm	@ max radius [R]
2000 mm		*341 kg	*380 kg @ 3422 mm		*341 kg	274 kg @ 3422 mm		*341 kg	272 kg @ 3422 mm		205 kg	165 kg @ 3422 mm
1000 mm	*532 kg	*423 kg	*372 kg @ 3758 mm	*532 kg	321 kg	233 kg @ 3758 mm	*532 kg	316 kg	229 kg @ 3758 mm	348 kg	189 kg	135 kg @ 3758 mm
Ground	*952 kg	*498 kg	*364 kg @ 3741 mm	552 kg	315 kg	230 kg @ 3741 mm	535 kg	306 kg	227 kg @ 3741 mm	304 kg	180 kg	133 kg @ 3741 mm
-1000 mm	*835 kg	*453 kg	*351 kg @ 3365 mm	577 kg	316 kg	263 kg @ 3365 mm	545 kg	313 kg	262 kg @ 3365 mm	313 kg	186 kg	154 kg @ 3365 mm



