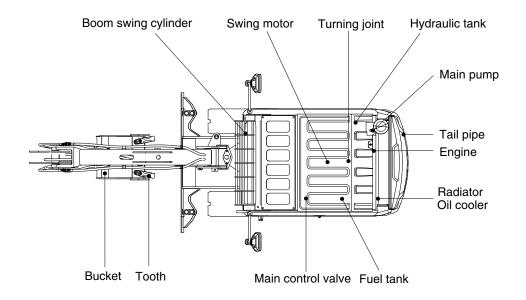
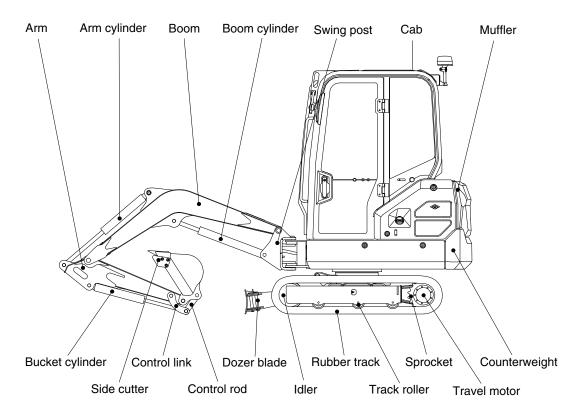
# **SPECIFICATIONS**

## 1. MAJOR COMPONENT

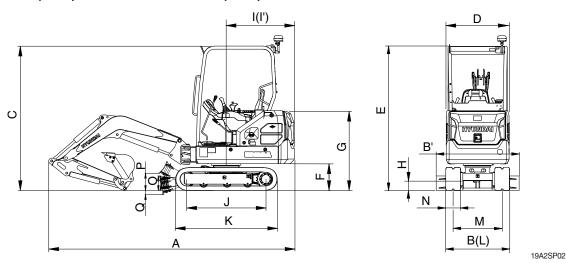




19A2SP01

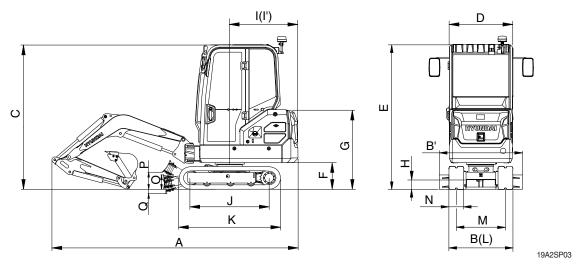
#### 2. SPECIFICATIONS

#### 1) 1.75 m ( 5' 9") MONO BOOM, 1.03 m ( 3' 5") ARM, WITH CANOPY



Description Unit Specification Operating weight (canopy/cabin) kg (lb) 1885 (4160) Bucket capacity (SAE heaped), standard m3 (yd3) 0.04 (0.05) Overall length Α 3837 (12'7") Overall width (extension crawler) В 994~1290 (3' 3"~ 4' 3") Overall width (dozer blade) В 1294 (4' 3") Overall height С 2275 (7'6") Overall width of upperstructure D 980 (3'3") Overall height of canopy/cabin Ε 2275 (7'6") Ground clearance of counterweight F 415 (1'4") Overall height of engine hood G 1240 (4'1") Η Minimum ground clearance 150 (0'6") Rear-end distance I mm (ft-in) 1065 (3'6") ľ Rear-end swing radius 1065 (3'6") Distance between tumblers J 1230 (4'0") K 1580 (5'2") Undercarriage length Undercarriage width (extension crawler) L 994~1290 (3' 3"~ 4' 3") M 764~1060 (2' 6"~ 3' 6") Track gauge (extension crawler) Track shoe width, standard Ν 230 (0'9") Height of blade 0 225 (0'9") Ρ Ground clearance of blade up 183 (0'7") Depth of blade down Q 222 (0'9") Travel speed (low/high) km/hr (mph) 2.06/3.73 (1.28/2.32) 9.21 Swing speed rpm Gradeability Degree (%) 35 (70) Ground pressure 230 mm rubber shoe (canopy/cabin) kgf/cm2 (psi) 0.31 (4.47) 1441 (3180) Max traction force kg (lb)

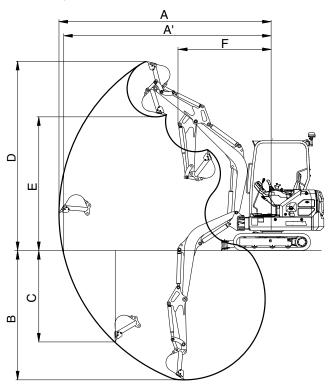
## 2) 1.75 m ( $5^{\circ}$ 9") MONO BOOM, 1.23 m ( $4^{\circ}$ 0") LONG ARM, WITH CAB



Description		Unit	Specification
Operating weight (canopy/cabin)		kg (lb)	2020 (4450)
Bucket capacity (SAE heaped), standard		m³ (yd³)	0.04 (0.05)
Overall length	Α		3835 ( 12' 7" )
Overall width (extension crawler)	В		994~1290 (3' 3"~4' 3")
Overall width (dozer blade)	B'		1294 (4' 3")
Overall height	С		2270 ( 7' 5" )
Overall width of upperstructure	D		980 ( 3' 3" )
Overall height of canopy/cabin	Е		2270 ( 7' 5" )
Ground clearance of counterweight	F		415 ( 1' 4" )
Overall height of engine hood	G		1240 ( 4' 1" )
Minimum ground clearance	Н		150 ( 0' 6" )
Rear-end distance	I	mm (ft-in)	1065 ( 3' 6" )
Rear-end swing radius	ľ		1065 ( 3' 6" )
Distance between tumblers	J		1230 ( 4' 0" )
Undercarriage length	K		1580 ( 5' 2" )
Undercarriage width (extension crawler)	L		994~1290 (3' 3"~4' 3")
Track gauge (extension crawler)	М		764~1060 (2' 6"~3' 6")
Track shoe width, standard	N		230 ( 0' 9" )
Height of blade	0		225 ( 0' 9" )
Ground clearance of blade up	Р		183 ( 0' 7" )
Depth of blade down	Q		222 ( 0' 9" )
Travel speed (low/high)		km/hr (mph)	2.06/3.73 (1.28/2.32)
Swing speed		rpm	9.21
Gradeability		Degree (%)	35 (70)
Ground pressure 230 mm rubber shoe (canopy	/cabin)	kgf/cm² (psi)	0.34 (4.78)
Max traction force		kg (lb)	1441 (3180)

# 3. WORKING RANGE

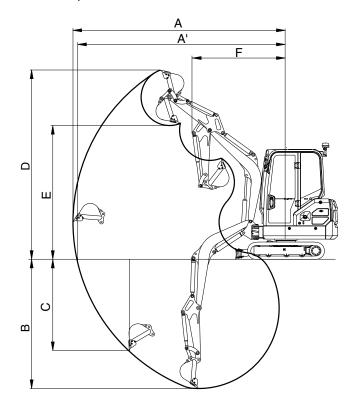
### 1) 1.75 m (5' 9") MONO BOOM, WITH CANOPY



19A2SP05

Description		1.03 m (3' 5") Arm
Max digging reach	Α	3940 mm (12' 11")
Max digging reach on ground	A'	3850 mm (12' 8")
Max digging depth	В	2340 mm ( 7' 8")
Max digging depth (8 ft level)	B'	1740 mm ( 5' 9")
Max vertical wall digging depth	С	1840 mm ( 6' 0")
Max digging height	D	3470 mm (11' 5")
Max dumping height	Е	2440 mm ( 8' 0")
Min swing radius	F	1725 mm ( 5' 8")
Boom swing radius (left/right)		55°/59°
		14 kN
	SAE	1436 kgf
Bucket digging force		3167 lbf
bucket diggling force		16 kN
	ISO	1664 kgf
		3668 lbf
		9 kN
	SAE	899 kgf
Arm crowd force		1981 lbf
Ann Gowa loice		9 kN
	ISO	933 kgf
		2057 lbf

## 2) 1.75 m (5' 9") MONO BOOM, WITH CAB



19A2SP06

Description		1.23 m (4' 0") Long arm
Max digging reach	Α	4130 mm (13' 7")
Max digging reach on ground	A'	4040 mm (13' 3")
Max digging depth	В	2540 mm ( 8' 4")
Max digging depth (8 ft level)	B'	2000 mm ( 6' 7")
Max vertical wall digging depth	С	2020 mm ( 6' 8")
Max digging height	D	3585 mm (11' 9")
Max dumping height	E	2550 mm ( 8' 4")
Min swing radius	F	1760 mm ( 5' 9")
Boom swing radius (left/right)		55°/59°
		14 kN
	SAE	1436 kgf
Punket diaging force		3167 lbf
Bucket digging force		16 kN
	ISO	1664 kgf
		3668 lbf
		8 kN
	SAE	796 kgf
A was a way and fa was		1754 lbf
Arm crowd force		8 kN
	ISO	822 kgf
		1812 lbf

# 4. WEIGHT

Item	kg	lb		
Upperstructure assembly				
· Main frame weld assembly	248	547		
· Engine assembly (including DPF)	75	165		
· Main pump assembly	13	29		
· Main control valve assembly	25	55		
· Swing motor assembly	23	51		
· Hydraulic oil tank wa	16	35		
· Fuel tank wa	4	9		
· Counterweight	65	143		
· Cab assembly	364	802		
Lower chassis assembly				
· Track frame weld assembly	206	454		
· Dozer blade assembly	63	139		
· Swing bearing	19	42		
· Travel motor assembly	36	79		
· Turning joint	14	31		
· Sprocket	4	9		
· Track recoil spring	11	24		
· Idler	14	31		
· Lower roller	5	11		
· Track-chain assembly-rubber	71	157		
Front attachment assembly				
· Boom assembly	72	159		
· Arm assembly-1.03 m	37	83		
· Arm assembly-1.03 m thumb bracket	40	88		
· Arm assembly-1.23 m	47	104		
· Arm assembly-1.23 m thumb bracket	49	109		
· Bucket assembly	41	90		
· Boom cylinder assembly	16	36		
· Arm cylinder assembly	16	34		
· Bucket cylinder assembly	12	25		
· Dozer cylinder assembly	10	23		
· Boom swing cylinder	10	22		
· Extension cylinder	7	15		
· Bucket control linkage total	12	27		

<sup>\*\*</sup> This information is different with operating weight and transportation weight because it is not including harness, pipe, oil, fuel so on.

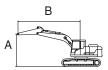
<sup>\*</sup> Refer to transportation for actual weight information and specifications for operating weight.

#### 5. LIFTING CAPACITIES

#### 1) CANOPY TYPE

Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
LIV10A	Cononi	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
HX19A	Canopy	1750	1030	65	230	-	Up	-	-	-

Rating over-front · 🖶 : Rating over-side or 360 degree



			Load ra	dius (B)			А	t max. reac	h
Load point	2.0 m	(6.6 ft)	2.5 m	(8.2 ft)	3.0 m	(9.8 ft)	Capa	acity	Reach
height (A)	·	#	<b>H</b>	#	ų.	#	<b>H</b>		m (ft)
2.5 m kg (8.2 ft) lb			*370 *820	*370 *820			*350 *770	350 770	2.77 (9.1)
2.0 m kg (6.6 ft) lb			*380 *840	*380 *840	320 710	310 680	300 660	290 640	3.10 (10.2)
1.5 m kg	*510	*510	420	400	320	300	270	260	3.30
(4.9 ft) lb 1.0 m kg	*1120 570	*1120 540	930 410	880 390	710 310	660 300	600 260	570 250	(10.8)
(3.3 ft) lb	1260	1190	900	860	680	660	570	550 550	(11.1)
0.5 m kg	550	510	400	380	300	290	250	240	3.39
(1.6 ft) lb	1210	1120	880	840	660	640	550	530	(11.1)
0.0 m   kg	530	500	390	370	300	290	260	250	3.29
(0.0 ft) lb	1170	1100	860	820	660	640	570	550	(10.8)
-0.5 m   kg	530	500	380	360	300	290	290	280	3.08
(-1.6 ft) lb	1170	1100	840	790	660	640	640	620	(10.1)
-1.0 m   kg	540	510	390	370			340	330	2.73
(-3.3 ft) lb	1190	1120	860	820			750	730	(9.0)
-1.5 m kg	*500	*500					*430	*430	2.14
(-4.9 ft) lb	*1100	*1100					*950	*950	(7.0)

Note 1. Lifting capacity are based on ISO 10567.

- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

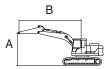
Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

- \* Please be aware of the local regulations and instructions for lifting operations.
- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Туре	Boom	Arm Counterweight		Rubber shoe	Wheel	Dozer		Outtriger	
HX19A	Canany	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Canopy	1750	1030	65	230	-	Down	-	-	-

Rating over-front · 🛨 : Rating over-side or 360 degree



			Load ra	dius (B)			А	t max. reac	h
Load point	2.0 m (	(6.6 ft)	2.5 m	(8.2 ft)	3.0 m	(9.8 ft)	Сара	acity	Reach
height (A)	<b>U</b>		<b>U</b>	#	<b>H</b>	#	<b>U</b>		m (ft)
2.5 m kg (8.2 ft) lb			*370 *820	*370 *820			*350 *770	*350 *770	2.77 (9.1)
2.0 m kg (6.6 ft) lb			*380 *840	*380 *840	*390 *860	330 730	*330 *730	310 680	3.10 (10.2)
1.5 m kg (4.9 ft) lb	*510 *1120	*510 *1120	*440 *970	430 950	*410 *900	320 710	*330 *730	280 620	3.30 (10.8)
1.0 m kg (3.3 ft) lb	*700 *1540	580 1280	*520 *1150	420 930	*440 *970	320 710	*340 *750	260 570	3.39 (11.1)
0.5 m kg	*850	550	*600	400	*480	310	*370	260	3.39
(1.6 ft) lb 0.0 m kg	*1870 *910	1210 540	*1320 *640	880 390	*1060	680 310	*820 *410	570 270	(11.1)
(0.0 ft) lb -0.5 m kg	*2010 *870	1190 540	*1410 *630	860 390	*1080 *470	680 310	*900 *440	600 300	(10.8)
(-1.6 ft) lb -1.0 m kg	*1920 *760	1190 540	*1390 *540	860 390	*1040	680	*970 *450	660 350	(10.1) 2.73
(-3.3 ft) lb	*1680 *500	1190 *500	*1190	860			*990 *430	770 *430	(9.0)
(-4.9 ft) lb	*1100	*1100					*950	*950	(7.0)

Note 1. Lifting capacity are based on ISO 10567.

- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

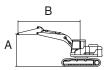
Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

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- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Туре	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX19A	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Carlopy	1750	1230	65	230	-	Up	-	-	-

Rating over-front · 🖶 : Rating over-side or 360 degree



Load				Load rad	dius (B)				At	max. rea	ch
point	2.0m	(6.6ft)	2.5m	(8.2ft)	3.0 m	(9.8 ft)	3.5 m (	11.5 ft)	Сара	acity	Reach
height (A)	<b>U</b>	#	<b>U</b>		<b>U</b>	#	<b>U</b>	#	<b>U</b>	#	m (ft)
3.0 m kg (9.8 ft) lb			*350 *770	*350 *770					*320 *710	*320 *710	2.53 (8.3)
2.5 m kg (8.2 ft) lb					*290 *640	*290 *640			*280 *620	*280 *620	3.01 (9.9)
2.0m kg (6.6 ft) lb					320 710	310 680			*270 *600	260 570	3.31 (10.9)
1.5m kg (4.9 ft) lb			*390 *860	*390 *860	320 710	300 660			250 550	240 530	3.50 (11.5)
1.0m kg (3.3 ft) lb	580 1280	540 1190	410 900	390 860	310 680	300 660	240 530	230 510	230 510	220 490	3.58 (11.7)
0.5m kg (1.6 ft) lb	550 1210	510 1120	390 860	370 820	300 660	290 640	240 530	230 510	230 510	220 490	3.58 (11.7)
0.0m kg (0.0 ft) lb	530 1170	500 1100	380 840	360 790	290 640	280 620			240 530	230 510	3.48 (11.4)
-0.5m kg (-1.6 ft) lb	520 1150	490 1080	380 840	360 790	290 640	280 620			260 570	250 550	3.29 (10.8)
-1.0m kg (-3.3 ft) lb	520 1150	490 1080	380 840	360 790					300 660	280 620	2.98 (9.8)
-1.5m kg (-4.9 ft) lb	530 1170	500 1100							390 860	370 820	2.47 (8.1)
-2.0m kg (-6.6 ft) lb									*290 *640	*290 *640	1.45 (4.7)

Note 1. Lifting capacity are based on ISO 10567.

- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
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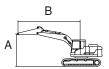
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- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Type	Boom	Arm Counterweight		Rubber shoe	Wheel	Dozer		Outtriger	
HX19A	Canany	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Canopy	1750	1230	65	230	-	Down	-	-	-

Rating over-front · 🖶 : Rating over-side or 360 degree



Load				Load rad	dius (B)				At	max. rea	ch
point	2.0m	(6.6ft)	2.5m	(8.2ft)	3.0 m	(9.8 ft)	3.5 m (	11.5 ft)	Capa	acity	Reach
height (A)	Ů.	#	<b>U</b>		<b>U</b>	#	<b>U</b>	#	<b>U</b>	#	m (ft)
3.0 m kg (9.8 ft) lb			*350 *770	*350 *770					*320 *710	*320 *710	2.53 (8.3)
2.5 m kg (8.2 ft) lb					*290 *640	*290 *640			*280 *620	*280 *620	3.01 (9.9)
2.0m kg (6.6 ft) lb					*340 *750	330 730			*270 *600	*270 *600	3.31 (10.9)
1.5m kg (4.9 ft) lb			*390 *860	*390 *860	*370 *820	320 710			*270 *600	250 550	3.50 (11.5)
1.0m kg (3.3 ft) lb	*620 *1370	580 1280	*480 *1060	420 930	*410 *900	320 710	*370 *820	250 550	*270 *600	240 530	3.58 (11.7)
0.5m kg (1.6 ft) lb	*790 *1740	550 1210	*560 *1230	400 880	*450 *990	310 680	*390 *860	250 550	*290 *640	240 530	3.58 (11.7)
0.0m kg (0.0 ft) lb	*880 *1940	540 1190	*620 *1370	390 860	*480 *1060	300 660	000	000	*330 *730	240 530	3.48 (11.4)
-0.5m kg (-1.6 ft) lb	*890 *1960	530 1170	*630 *1390	380 840	*480 *1060	300 660			*390 *860	260 570	3.29 (10.8)
-1.0m kg (-3.3 ft) lb	*810 *1790	530 1170	*580 *1280	380 840	1000	000			*420 *930	300 660	2.98 (9.8)
-1.5m kg (-4.9 ft) lb	*620 *1370	540 1190	1200	040					*420 *930	400 880	2.47 (8.1)
-2.0m kg (-6.6 ft) lb	1070	1130							*290 *640	*290 *640	1.45 (4.7)

Note 1. Lifting capacity are based on ISO 10567.

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- \* Lifting capacities are based upon a standard machine conditions.

Lifting capacities will vary with different work tools, ground conditions and attachments.

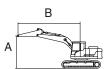
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- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

#### 2) CAB TYPE

Model	Туре	Boom	Arm	Counterweight	Rubber shoe	Wheel	Do	zer	Outt	riger
HX19A	LIV10A Cob	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Cab	1750	1030	65	230	-	Up	-	-	-

Rating over-front · Rating over-side or 360 degree



				Load ra	dius (B)			А	t max. reac	h	
Load p	oint	2.0 m (	(6.6 ft)	2.5 m	(8.2 ft)	3.0 m	(9.8 ft)	Capa	Capacity F		
height	(A)	·		<b>U</b>	#	ų.	#	<b>U</b>	#	m (ft)	
2.5 m	kg			*370	*370			*350	*350	2.77	
(8.2 ft) 2.0 m	lb kg			*820 *380	*820 *380	350	330	*770 *330	*770 310	(9.1)	
(6.6 ft)	lb			*840	*840	770	730	*730	680	(10.2)	
1.5 m	kg	*510	*510	*440	430	350	330	300	280	3.30	
(4.9 ft)	lb	*1120	*1120	*970	950	770	730	660	620	(10.8)	
1.0 m	kg	620	580	440	420	340	320	280	270	3.39	
(3.3 ft)	lb	1370	1280	970	930	750	710	620	600	(11.1)	
0.5 m	kg	590	560	430	410	330	320	280	270	3.39	
(1.6 ft)	lb	1300	1230	950	900	730	710	620	600	(11.1)	
0.0 m	kg	580	550	420	400	330	310	290	280	3.29	
(0.0 ft)	lb	1280	1210	930	880	730	680	640	620	(10.8)	
-0.5 m	kg	580	540	420	400	330	310	320	300	3.08	
(-1.6 ft)	lb	1280	1190	930	880	730	680	710	660	(10.1)	
-1.0 m	kg	580	550	420	400			380	360	2.73	
(-3.3 ft)	lb	1280	1210	930	880			840	790	(9.0)	
-1.5 m	kg	*500	*500					*430	*430	2.14	
(-4.9 ft)	lb	*1100	*1100					*950	*950	(7.0)	

Note 1. Lifting capacity are based on ISO 10567.

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- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

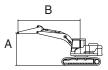
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- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Туре	Boom	Arm	Counterweight	Rubber shoe	Wheel	Do	zer	Outt	riger
HX19A	HX19A Cab	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Cab	1750	1030	65	230	-	Down	-	-	-

Rating over-front · 🖶 : Rating over-side or 360 degree



			Load ra	dius (B)			А	t max. reac	h
Load poin	2.0 m	(6.6 ft)	2.5 m	(8.2 ft)	3.0 m	(9.8 ft)	Capa	Capacity Re	
height (A)	·	#	<b>P</b>	#	<b>H</b>	#	<b>U</b>	#	m (ft)
2.5 m kg (8.2 ft) lb			*370 *820	*370 *820			*350 *770	*350 *770	2.77 (9.1)
2.0 m kg (6.6 ft) lb			*380 *840	*380 *840	*390 *860	350 770	*330 *730	*330 *730	3.10 (10.2)
1.5 m kg (4.9 ft) lb	*510 *1120	*510 *1120	*440 *970	*440 *970	*410 *900	350 770	*330 *730	300 660	3.30 (10.8)
1.0 m kg	*700	620	*520	450	*440	340	*340	290	3.39
(3.3 ft) lb 0.5 m kg		1370 600	*1150 *600	990 440	*970 *480	750 340	*750 *370	640 280	(11.1) 3.39
(1.6 ft) lb 0.0 m kg	*1870 *910	1320 590	*1320 *640	970 430	*1060 *490	750 330	*820 *410	620 290	(11.1)
(0.0 ft) lb	*2010	1300	*1410	950	*1080	730	*900	640	(10.8)
-0.5 m   kg   (-1.6 ft)   lb	*870 *1920	590 1300	*630 *1390	430 950	*470 *1040	330 730	*440 *970	320 710	3.08 (10.1)
-1.0 m kg (-3.3 ft) lb	*760 *1680	590 1300	*540 *1190	430 950			*450 *990	380 840	2.73 (9.0)
-1.5 m kg	*500	*500	1190	930			*430	*430	2.14
(-4.9 ft) lb	*1100	*1100					*950	*950	(7.0)

Note 1. Lifting capacity are based on ISO 10567.

- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

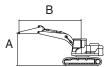
Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

- \* Please be aware of the local regulations and instructions for lifting operations.
- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Туре	Boom	Arm	Counterweight	Rubber shoe	Wheel	Do	zer	Outt	riger
HX19A	HX19A Cab	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Cab	1750	1230	65	230	-	Up	-	-	-

: Rating over-front · 🖶 : Rating over-side or 360 degree



Load				Load rad	dius (B)				At	max. rea	ch
point	2.0m	(6.6ft)	2.5m	(8.2ft)	3.0 m	(9.8 ft)	3.5 m (	11.5 ft)	Capa	acity	Reach
height (A)	<b>U</b>	#	<b>U</b>		<b>U</b>	#	<b>U</b>	#		#	m (ft)
3.0 m kg (9.8 ft) lb			*350 *770	*350 *770					*320 *710	*320 *710	2.53 (8.3)
2.5 m kg (8.2 ft) lb					*290 *640	*290 *640			*280 *620	*280 *620	3.01 (9.9)
2.0m kg (6.6 ft) lb					*340 *750	330 730			*270 *600	*270 *600	3.31 (10.9)
1.5m kg (4.9 ft) lb			*390 *860	*390 *860	350 770	330 730			*270 *600	260 570	3.50 (11.5)
1.0m kg (3.3 ft) lb	*620 *1370	590 1300	440 970	420 930	340 750	320 710	270 600	250 550	260 570	240 530	3.58 (11.7)
0.5m kg (1.6 ft) lb	590 1300	560 1230	430 950	410 900	330 730	310 680	260 570	250 550	250 550	240 530	3.58 (11.7)
0.0m kg (0.0 ft) lb	580 1280	540 1190	420 930	390 860	320 710	310 680	0.0	000	260 570	250 550	3.48 (11.4)
-0.5m kg (-1.6 ft) lb	570 1260	530 1170	410 900	390 860	320 710	300 660			280 620	270 600	3.29 (10.8)
-1.0m kg (-3.3 ft) lb	570 1260	540 1190	410 900	390 860	7.10	333			330 730	310 680	2.98 (9.8)
-1.5m kg (-4.9 ft) lb	580 1280	550 1210	300	300					*420 *930	410 900	2.47 (8.1)
-2.0m kg (-6.6 ft) lb	1200	1210							*290 *640	*290 *640	1.45 (4.7)

Note 1. Lifting capacity are based on ISO 10567.

- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

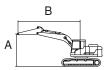
Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

- \* Please be aware of the local regulations and instructions for lifting operations.
- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

Model	Туре	Boom	Arm	Counterweight	Rubber shoe	Wheel	Do	zer	Outt	riger
HX19A	HX19A Cab	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
ПАТЭА	Cab	1750	1230	65	230	-	Down	-	-	-

: Rating over-front · 🖶 : Rating over-side or 360 degree



Load				Load rad	dius (B)				At	max. rea	ch
point	2.0m	(6.6ft)	2.5m	(8.2ft)	3.0 m	(9.8 ft)	3.5 m (	11.5 ft)	Capa	acity	Reach
height (A)	<b>U</b>	#		#	<b>U</b>	#	<b>U</b>	#		#	m (ft)
3.0 m kg (9.8 ft) lb			*350 *770	*350 *770					*320 *710	*320 *710	2.53 (8.3)
2.5 m kg (8.2 ft) lb					*290 *640	*290 *640			*280 *620	*280 *620	3.01 (9.9)
2.0m kg (6.6 ft) lb					*340 *750	*340 *750			*270 *600	*270 *600	3.31 (10.9)
1.5m kg (4.9 ft) lb			*390 *860	*390 *860	*370 *820	350 770			*270 *600	*270 *600	3.50 (11.5)
1.0m kg (3.3 ft) lb	*620 *1370	*620 *1370	*480 *1060	450 990	*410 *900	340 750	*370 *820	270 600	*270 *600	260 570	3.58 (11.7)
0.5m kg (1.6 ft) lb	*790 *1740	600 1320	*560 *1230	430 950	*450 *990	330 730	*390 *860	270 600	*290 *640	260 570	3.58 (11.7)
0.0m kg (0.0 ft) lb	*880 *1940	580 1280	*620 *1370	420 930	*480 *1060	330 730	000	000	*330 *730	270 600	3.48 (11.4)
-0.5m kg (-1.6 ft) lb	*890 *1960	580 1280	*630 *1390	420 930	*480 *1060	330 730			*390 *860	290 640	3.29 (10.8)
-1.0m kg	*810 *1790	580	*580 *1280	420 930	1000	730			*420 *930	330 730	2.98
-1.5m kg	*620	1280 590	1200	930					*420	*420	(9.8) 2.47
(-4.9 ft) lb -2.0m kg (-6.6 ft) lb	*1370	1300							*930 *290 *640	*930 *290 *640	(8.1) 1.45 (4.7)

Note 1. Lifting capacity are based on ISO 10567.

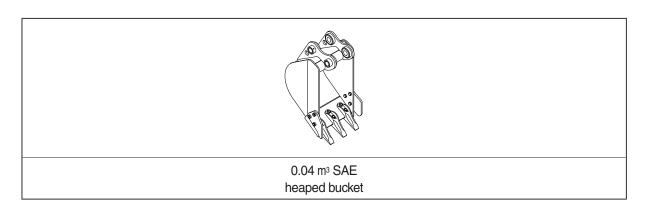
- 2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
- 3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- 4. \*Indicates load limited by hydraulic capacity.
- \* Lifting capacities are based upon a standard machine conditions.

Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

- \* Please be aware of the local regulations and instructions for lifting operations.
- ▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.

## 6. BUCKET SELECTION GUIDE



Can	Capacity		dth		Recomm	nendation
Сар	acity	VVI	ulli	Weight	1.75 m (5'	9") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter	vveigni	1.03 m (3' 5") arm	1.23 m (4' 0") arm
0.04 m <sup>3</sup> (0.05 yd <sup>3</sup> )	0.035 m <sup>3</sup> (0.05 yd <sup>3</sup> )	382 mm (15.0")	422 mm (16.6")	41 kg (90 lb)	•	•

Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less

\* These recommendations are for general conditions and average use.

Work tools and ground conditions have effects on machine performance.

Select an optimum combination according to the working conditions and the type of work that is being done.

Consult with your local HD Hyundai Construction Equipment dealer for information on selecting the correct boom-arm-bucket combination.

### 7. UNDERCARRIAGE

#### 1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

#### 2) TYPES OF SHOES

			Rubber track
Model	Shapes	5	
	Shoe width	mm (in)	230 (9")
HX19A	Operating weight (canopy / cabin)	kg (lb)	1885 (4160)
	Ground pressure	kgf/cm² (psi)	0.31 (4.47)
	Overall width mm (ft-in)		994~1290 (3' 3"~4' 3")

#### 3) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

#### Method of selecting shoes

Confirm the category from the list of applications in **table 2**, then use **table 1** to select the shoe. Wide shoes (categories B and C) have limitations on applications. Before using wide shoes, check the precautions, then investigate and study the operating conditions to confirm if these shoes are suitable.

Select the narrowest shoe possible to meet the required flotation and ground pressure. Application of wider shoes than recommendations will cause unexpected problem such as bending of shoes, crack of link, breakage of pin, loosening of shoe bolts and the other various problems.

Table 1

Model	Track shoe	Specification	Category
HX19A	T/chain-rubber for rail interlocking (230 mm)	Standard	А

#### Table 2

Category	Applications	Precautions
А	Rocky ground, river beds, normal soil	Travel at low speed on rough ground with large obstacles such as boulders or fallen trees or a wide range of general civil engineering work
В	Normal soil, soft ground	<ul> <li>These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>Travel at high speed only on flat ground</li> <li>Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>
С	Extremely soft ground (swampy ground)	<ul> <li>Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B</li> <li>These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>Travel at high speed only on flat ground</li> <li>Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>

# 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification				
Model	KUBOTA D902-E4B				
Туре	4-cycle vertical, IDI diesel fuel				
Cooling method	Water cooling				
Number of cylinders and arrangement	3 cylinders, in-line				
Firing order	1-2-3				
Combustion chamber type	Spherical type				
Cylinder bore × stroke	72.0×73.6 mm (2.83"×2.90")				
Piston displacement	898 cc (54.80 cu in)				
Compression ratio	24:1				
Gross power	16.2 hp (12.1 kW) at 2400 rpm				
Net power	16.0 hp (11.9 kW) at 2400 rpm				
Max. power	16.2 hp (12.1 kW) at 2400 rpm				
Peak torque at 1900 rpm	5.57 kgf · m (40.3 lbf · ft)				
Engine oil quantity	3.7 ℓ (1.0 U.S. gal)				
Dry weight	75 kg (165 lb)				
Starting motor	12V-1.2 kW				
Alternator	12V-40 A				

### 2) MAIN PUMP

Item	Specification				
Туре	Variable displacement tandem axis piston pumps				
Maximum pressure	210 kgf/cm² (2990 psi)				
Capacity	$2 \times 7.5$ cc/rev				
Rated oil flow	$2 \times$ 17.3 $\ell$ /min (4.6 U.S. gpm / 3.8 U.K. gpm)				
Rated speed	2300 rpm				

## 3) GEAR PUMP

Item	Specification				
Туре	Fixed displacement gear pump single stage				
Capacity	4.5/2.7 cc/rev				
Maximum pressure	190/35 kgf/cm² (2702/498 psi)				
Rated oil flow	10.4/6.2 $\ell$ /min (2.7/1.6 U.S. gpm / 2.3/1.4 U.K. gpm)				

### 4) MAIN CONTROL VALVE

Item	Specification				
Туре	Sectional, 9 spools				
Operating method	Hydraulic pilot system				
Main relief valve pressure	210 kgf/cm² (2990 psi)				
Overload relief valve pressure	230 kgf/cm² (3270 psi)				
2way (breaker piping) flow rate	27.7 $\ell$ /min (7.3 U.S. gpm / 6.1 U.K. gpm)				

### 5) SWING MOTOR

Item	Specification				
Туре	Fixed displacement axial piston motor				
Capacity	18.1 cc/rev				
Relief pressure	165 kgf/cm² (2350 psi)				
Braking system	Automatic, spring applied hydraulic released				
Braking torque	69.7 kgf·m (504 lbf·ft)				
Brake release pressure	20~50 kgf/cm² (284~711 psi)				
Reduction gear type	2 - stage planetary				

### 6) TRAVEL MOTOR

Item	Specification			
Туре	Variable displacement axial piston motor			
Capacity	12.4/6.2 cc/rev			
Relief pressure	210 kgf/cm² (2990 psi)			
Reduction gear type	2-stage planetary			

### 7) CYLINDER

Item		Specification			
Boom cylinder	Bore dia $\times$ Rod dia $\times$ Stroke	Ø 60 × Ø 40 × 465 mm			
	Cushion	Extend only			
A was as disade w	Bore dia $\times$ Rod dia $\times$ Stroke	Ø60 × Ø40 × 393 mm			
Arm cylinder	Cushion	Extend and retract			
Diselect addington	Bore dia $\times$ Rod dia $\times$ Stroke	Ø55× Ø35× 345 mm			
Bucket cylinder	Cushion	-			
Boom swing cylinder	Bore dia $\times$ Rod dia $\times$ Stroke	∅55×∅30×355 mm			
	Cushion	-			
Dozav sulinday	Bore dia $\times$ Rod dia $\times$ Stroke	Ø65 × Ø30 × 93 mm			
Dozer cylinder	Cushion	-			
Dozer cylinder-DPC	Bore dia $\times$ Rod dia $\times$ Stroke	Ø65 × Ø30 × 93 mm			
	Cushion	-			
Extension cylinder	Bore dia $\times$ Rod dia $\times$ Stroke	Ø50× Ø25× 300 mm			
	Cushion	-			

<sup>\*\*</sup> Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.

<sup>\*</sup> Discoloration does not cause any harmful effect on the cylinder performance.

#### 9. RECOMMENDED OILS

HD Hyundai Construction Equipment genuine lubricating oils have been developed to offer the best performance and service life for your equipment. These oils have been tested according to the specifications of HD Hyundai Construction Equipment and, therefore, will meet the highest safety and quality requirements.

We recommend that you use only HD Hyundai Construction Equipment genuine lubricating oils and grease officially approved by HD Hyundai Construction Equipment.

	Capacity	Ambient temperature °C( °F)									
Service point	Kind of fluid	ℓ (U.S. gal)	-50	-30	-20	-1					30 40
		. 0,	(-58)	(-22)	(-4)	(1	4) (3	32) (	50) (6	88) (8	6) (104)
		SAE 10W									
Engino									SAE 20		
Engine oil pan	Engine oil	3.7 (1.0)									AE 30
				SAE 10W-30 or 10W-40							
		2011			★SAE	75W	<u>-</u> 90				
Final drive	Final drive Gear oil	0.3×2 (0.1×2)			A OAL	7544		045	2014/ 00		
		(0.1112)						SAE 8	30W-90		
				★ISO VG 15							
			ISO VG 32								
Hydraulic tank	Hydraulic oil	Tank:	L								L, I
		20 (5.3)					ISO VG	46, HBH	O VG 46	<b>★</b> 3	
									ISO VG 6	8	
	Diseas			A A C	TM D97		4				
Fuel tank	Diesel	21.3 (5.6)		*AS	1 NI D97	O IVO.	. 1				
fuel*¹		,						AST	M D975	NO.2	
Fitting			★NLGI NO.1								
(grease nipple)	Fitting Grease As	As required							NLGI NO	2	
									NEGI NO	.∠	
Radiator	Mixture of	tifreeze 5 4 (1 4)				Ethyle	ene alvca	l ol base n	ermanen	t type (50	):50)
	and soft		★Ethy	lene glycol	base perma					7,50	
	water*2						, ,				

- We Using any lubricating oils other than HD Hyundai Construction Equipment genuine products may lead to a deterioration of performance and cause damage to major components.
- \* Do not mix HD Hyundai Construction Equipment genuine oil with any other lubricating oil as it may result in damage to the systems of major components.
- \*\* For HD Hyundai Construction Equipment genuine lubricating oils and grease for use in regions with extremely low temperatures, please contact your local HD Hyundai Construction Equipment dealer.

**SAE** : Society of Automotive Engineers

API : American Petroleum Institute

**ISO**: International Organization for Standardization

**NLGI**: National Lubricating Grease Institute

**ASTM**: American Society of Testing and Material

\* : Cold region

Russia, CIS, Mongolia

★1: Ultra low sulfur diesel

- sulfur content ≤ 10 ppm

★2: Soft water

City water or distilled water

\*3 : HD Hyundai Construction Equipment Bio Hydraulic Oil