

# SUNWARD



## SWE SERIES EXCAVATORS

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# Introduction



Mar. 29th, 2009, the present premier Li Keqiang visited SUNWARD



Jul. 2nd, 2010, the ex-premier Wen Jiabao visited SUNWARD  
Highly praised independent innovation

Founded in 1999, Sunward Equipment Group is headquartered in Changsha and its main body is a listed company named Sunward Intelligent Equipment Co., Ltd (Stock Short Name: SUNWARD; Stock Code: 002097). Its subsidiaries spread in Changsha, Wuxi, Huaibei, Tianjin, and Europe. In 2011, SUNWARD has been listed among the World Top 50 Engineering Equipment Manufacturers.

#### EXTENT OF SUNWARD

SUNWARD Group has developed more than 100 equipments featured with great performance, high quality and independent intellectual property right. The product line ranges from large-scale piling machinery, compact construction machinery, full series of excavator, modern drilling equipment, industry vehicle, coal mining equipment, hoisting equipment, road equipment, hydraulic component, military construction machinery to general aviation equipment and yacht. SUNWARD' s professional sales force, powerful worldwide sales network and service centers have led to great sales performance and bulk export to over 60 countries and regions across the globe.

#### HONOR OF SUNWARD

Taking the motto "To be the value creator of world equipment manufacturers" as its mission and vision, Sunward Intelligent Equipment Group has been highly praised by state leaders and experts both from home and abroad because of its independent innovation results. From 2009 to 2010, party and state leaders including Wen Jiabao, Li Changchun and Li Keqiang visited SUNWARD and spoke highly of SUNWARD' s persistence in independent innovation. The trade mark "SUNWARD" has been registered many countries in the world.

#### BLUEPRINT OF SUNWARD

In the future, Sunward Intelligent Equipment Group will continue to take advantage of its strong independent innovation power to create value for customers and raise people' s living standards by establishing an efficient and quality manufacturing system, and bring out world-class products, aiming to be a world-famous enterprise.



# Lean Manufacturing



High Precision Nc Laser Cutter

With lean thinking and JIT production technology as the core, combined with the practical experience, we have established a platform and variety of production models to meet the needs of different customs. The company has advanced equipment to ensure product quality; it has set up the network management system of CNC, and owns a team of experienced technology as the strong backing of lean production.



Welding Robot

# Lean Manufacturing Precision Design





## Vanguard of independent R&D excavator brand in Asia, SUNWARD EXCAVATOR E Series Excavators - Expecting the Launch

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As the fruit of intelligence and the heritage of technology, the brand new SUNWARD E Series 2013 Excavators are expecting their launch!

E series excavator fully embodies the 5E performance by inheriting the cutting-edge technology of SUNWARD R&D Team, catering to market needs and optimizing control matching system. It is expected to be the model of the "3 highs and 1 low" times.





# **E**fficient

The overall performance is greatly enhanced by adopting control matching technique which is of independent IPR.

Optimized specific engine and hydraulic system guarantee energy-efficient T18 technique.

Equipped with Independent Flow Distribution System, the work efficiency has remarkably improved through the reduction of system pressure loss.



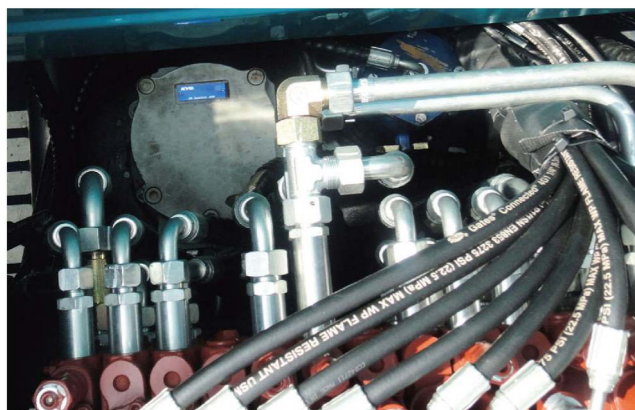
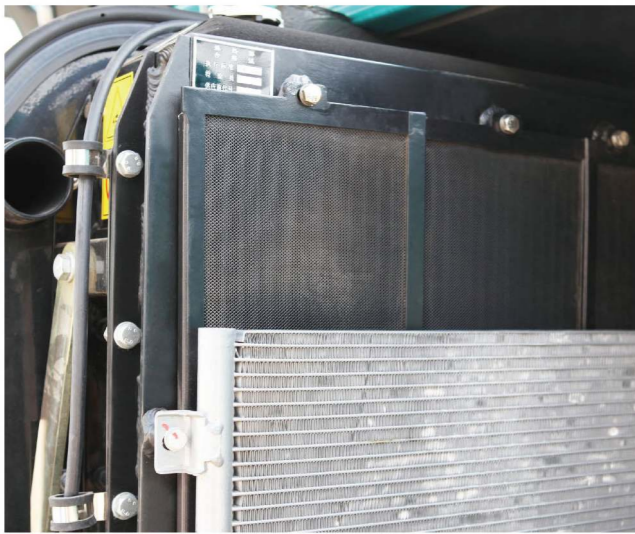


## Economical

Fuel consumption is reduced due to advanced hydraulic electric control system.

Flat ground working mode is developed specifically for flat ground working condition.

High-quality maintenance parts reduce the maintenance cost.





## Enhanceive

Powerful stick and bucket digging force, strong travelling capacity.

Highly strong structural parts increased the reliability of the machine.

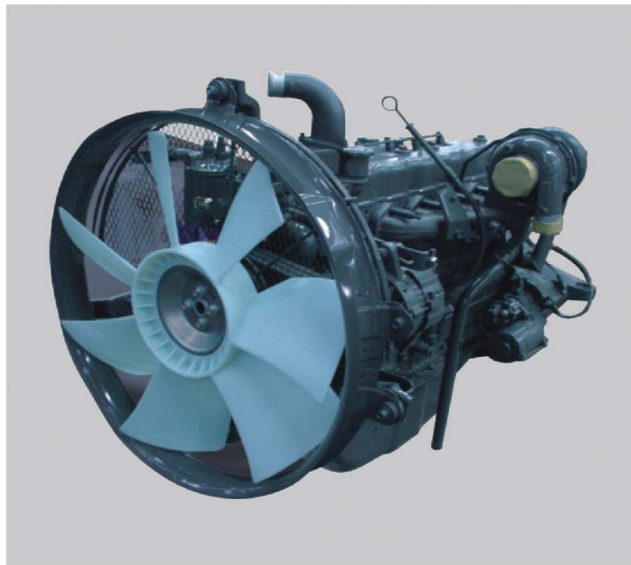




## Eco-friendly

Standard configuration is equipped with automatic idle speed function.

Noise of the machine is in line with the international standard.





## **E** Exceptional

The brand new skeleton-type luxury cab complies with the [FOPS / ROPS] standard, assuring excellent operating environment.

Electronic control system with independent IPR ensures superior operating performance.





# Ten Upgrades

- customized SU engine
- main valve designed specially for Sunward
- Optimization and upgrading of the hydraulic pipelines
- a new generation of electronic control system
- Parallel high efficient cooling
- enhanced walking drive
- Strengthened swing drive
- Standard cylinder protection plate
- easier maintenance
- large luxury cab





# SUNWARD EXCAVATOR IMAGES



mini excavator

## SWE08B

Dimension (LxWxH/mm)	2640x740x2125
Standard Bucket Capacity (m <sup>3</sup> )	0.022
Power (kW/rpm)	7.2/2400
Model	2TNV70-PSU
Bucket Digging Force (kN)	9.4
Stick Digging Force (kN)	5.8

## SWE17F

Dimension (LxWxH/mm)	3820x990x2270
Standard Bucket Capacity (m <sup>3</sup> )	0.04
Power (kW/rpm)	11.2/2400
Model	3TNV74F-SPSU
Bucket Digging Force (kN)	22.7
Stick Digging Force (kN)	11.24

## SWE18UB

Dimension (LxWxH/mm)	3582x990x2415
Standard Bucket Capacity (m <sup>3</sup> )	0.04
Power (kW/rpm)	14.7/2200
Model	403D-11
Bucket Digging Force (kN)	22.7
Stick Digging Force (kN)	11.24

## SWE20B

Dimension (LxWxH/mm)	3820x990x2370
Standard Bucket Capacity (m <sup>3</sup> )	0.04
Power (kW/rpm)	13.3/2200
Model	3TNV76-SSU
Bucket Digging Force (kN)	22.7
Stick Digging Force (kN)	9.83

## SWE25B

Dimension (LxWxH/mm)	4220x1400x2400
Standard Bucket Capacity (m <sup>3</sup> )	0.066
Power (kW/rpm)	15.5/2200
Model	3TNV82A
Bucket Digging Force (kN)	20.8
Stick Digging Force (kN)	14.47



small-sized excavator

## SWE30UB

Dimension (LxWxH/mm)	4450x1560x2540
Standard Bucket Capacity (m <sup>3</sup> )	0.08
Power (kW/rpm)	19.2/2200
Model	3TNV88-BSSU
Bucket Digging Force (kN)	26.1
Stick Digging Force (kN)	17.82

## SWE40UB

Dimension (LxWxH/mm)	4923x1740x2540
Standard Bucket Capacity (m <sup>3</sup> )	0.11
Power (kW/rpm)	23.8/2300
Model	D1803-M-DI-E3B-SWD-1
Bucket Digging Force (kN)	27.4
Stick Digging Force (kN)	19.8

## SWE50E

Dimension (LxWxH/mm)	5515x1900x2570
Standard Bucket Capacity (m <sup>3</sup> )	0.18
Power (kW/rpm)	25.8/2200
Model	4TNV88-BSSU
Bucket Digging Force (kN)	36.5
Stick Digging Force (kN)	30

## SWE60E

Dimension (LxWxH/mm)	5875x1900x2615
Standard Bucket Capacity (m <sup>3</sup> )	0.2
Power (kW/rpm)	36.2/2100
Model	4TNV94L-BVSU
Bucket Digging Force (kN)	47
Stick Digging Force (kN)	31

## SWE70E

Dimension (LxWxH/mm)	5910x2080x2625
Standard Bucket Capacity (m <sup>3</sup> )	0.26
Power (kW/rpm)	44/2200
Model	4TNV98-ZCSSU
Bucket Digging Force (kN)	50
Stick Digging Force (kN)	31

## SWE80E

Dimension (LxWxH/mm)	6600x2160x2665
Standard Bucket Capacity (m <sup>3</sup> )	0.3
Power (kW/rpm)	44/2200
Model	4TNV98-ZCSSU
Bucket Digging Force (kN)	57
Stick Digging Force (kN)	39

## SWE90E

Dimension (LxWxH/mm)	6400x2370x2625
Standard Bucket Capacity (m <sup>3</sup> )	0.36
Power (kW/rpm)	54.6/2200
Model	4TNV98T-ZCSSU
Bucket Digging Force (kN)	67.5
Stick Digging Force (kN)	46

## SWE100E

Dimension (LxWxH/mm)	6400x2370x2660
Standard Bucket Capacity (m <sup>3</sup> )	0.4
Power (kW/rpm)	60.7/2200
Model	V3800-DI-T-E3B-CBH2-5
Bucket Digging Force (kN)	70.5
Stick Digging Force (kN)	48

## SWE150E

Dimension (LxWxH/mm)	7815x2600x2825
Standard Bucket Capacity (m <sup>3</sup> )	0.6
Power (kW/rpm)	84/2200
Model	GI-4JJ1XKSC-02
Bucket Digging Force (kN)	98
Stick Digging Force (kN)	72.5

## SWE150W

Dimension (LxWxH/mm)	7780x2510x3150
Standard Bucket Capacity (m <sup>3</sup> )	0.6
Power (kW/rpm)	124/2050
Model	QSB7
Bucket Digging Force (kN)	100
Stick Digging Force (kN)	83



medium-sized excavator

## SWE210

Dimension (LxWxH/mm)	9590x2800x3045
Standard Bucket Capacity (m <sup>3</sup> )	0.95
Power (kW/rpm)	110/2100
Model	6BGITRP-03
Bucket Digging Force (kN)	154
Stick Digging Force (kN)	110

## SWE210LC

Dimension (LxWxH/mm)	9590x2800x3055
Standard Bucket Capacity (m <sup>3</sup> )	1.05
Power (kW/rpm)	110/2100
Model	6BGITRP-03
Bucket Digging Force (kN)	147
Stick Digging Force (kN)	109

## SWE230B

Dimension (LxWxH/mm)	9550x2990x2965
Standard Bucket Capacity (m <sup>3</sup> )	1.05
Power (kW/rpm)	132/2000
Model	AH-4HK1X
Bucket Digging Force (kN)	161
Stick Digging Force (kN)	113

## SWE230E

Dimension (LxWxH/mm)	9550x2990x2965
Standard Bucket Capacity (m <sup>3</sup> )	1.05
Power (kW/rpm)	125/2100
Model	CC-6BG1TRP
Bucket Digging Force (kN)	161.3
Stick Digging Force (kN)	113.3

## SWE260LC

Dimension (LxWxH/mm)	10056x3190x3226
Standard Bucket Capacity (m <sup>3</sup> )	1.2
Power (kW/rpm)	132/2150
Model	CC-6BG1TRA-02
Bucket Digging Force (kN)	181.4
Stick Digging Force (kN)	135.8



large-sized excavator

## SWE330B

Dimension (LxWxH/mm)	11175x3190x3120
Standard Bucket Capacity (m <sup>3</sup> )	1.5
Power (kW/rpm)	202/2000
Model	AH-6HK1X-S
Bucket Digging Force (kN)	240
Stick Digging Force (kN)	177

## SWE330LC

Dimension (LxWxH/mm)	11145x3190x3380
Standard Bucket Capacity (m <sup>3</sup> )	1.5
Power (kW/rpm)	183.9/2000
Model	AA-6HK1XQP
Bucket Digging Force (kN)	240
Stick Digging Force (kN)	177

## SWE360LC

Dimension (LxWxH/mm)	11230x3190x3630
Standard Bucket Capacity (m <sup>3</sup> )	1.6 Rock bucket
Power (kW/rpm)	224/2000
Model	QSL9-3823
Bucket Digging Force (kN)	240
Stick Digging Force (kN)	177

## SWE365E

Dimension (LxWxH/mm)	11175x3190x3120
Standard Bucket Capacity (m <sup>3</sup> )	1.6
Power (kW/rpm)	183.9/2000
Model	AA-6HK1XQP
Bucket Digging Force (kN)	249
Stick Digging Force (kN)	177

## SWE470E

Dimension (LxWxH/mm)	12050x3340x3155
Standard Bucket Capacity (m <sup>3</sup> )	2.2
Power (kW/rpm)	250/2000
Model	QSM11-335
Bucket Digging Force (kN)	305
Stick Digging Force (kN)	228



## E-Series Main Parameters Small-Sized Excavators

SPECIFICATIONS		UNIT	SWE50E	SWE60E	SWE70E	SWE80E	SWE90E	SWE100E	SWE150E
Dimension (L×W×H)		mm	5515×1900×2570	5875×1900×2615	5910×2080×2625	6600×2160×2665	6400×2370×2625	6400×2370×2660	7815×2600×2825
Parameter	A Track gauge	mm	1900	1965	2240	2200	2335	2560	3000
	B Track length	mm	2425	2495	2760	2785	2920	3225	3735
	C Counterweight clearance	mm	665	700	700	745	800	845	915
	D Tail swing radius	mm	1500	1600	1580	1680	1800	1870	2350
	E Tumbler length	mm	1850	1880	2080	2150	2320	2320	2600
	F Track shoe width	mm	400	400	400	450	450	450	600
	G Ground clearance	mm	310	320	340	340	350	370	410
	H Track height	mm	575	595	580	640	660	700	825
	I Shipping length	mm	5515	5875	5910	6600	6400	6470	7815
	J Cab height	mm	2570	2615	2625	2665	2625	2660	2825
	K Transport width	mm	1900	1900	2080	2080	2250	2250	2520
Working Ranges	A Max. cutting height	mm	5635	5855	6020	6730	7275	7370	8630
	B Max. loading height	mm	3995	4175	4200	4775	5150	5200	6130
	C Max. cutting depth	mm	3595	3765	4015	4285	4205	4200	5640
	D Max. vertical wall digging depth	mm	3060	3290	2840	3565	3680	3605	4540
	E Max. digging reach	mm	5920	6175	6225	6955	6725	6760	8355
	F Max. digging reach at ground level	mm	5785	6040	6085	6830	6585	6610	8230
	G Max. digging height	mm	315	445	475	420	405	—	—
	H Max. digging depth	mm	405	340	290	480	330	—	—
	R Min. swing radius	mm	2210	2480	2305	2390	2045	2250	2510
	Bucket length×width	mm	1860×300	1900×340	2080×415	2160×449	2320×415	—	—
Overall Weight	Track with rubber	T	4.89	5.93	6.5	—	—	—	—
	Steel track	T	4.96	6	6.56	7.9	8.9	9.5	14.8
Standard bucket capacity		m <sup>3</sup>	0.18	0.2	0.26	0.3	0.36	0.4	0.6
Bucket digging force		kN	36.5	47	50	57	67.5	70.5	98
Stick digging force		kN	30	31	31	39	46	48	72.5
Max. traction force		kN	37.1	48.9	57	62	65	70	115
Boom turning angle		°	—	—	—	—	—	—	—
Travel speed ( Max./Min. )		km/h	4.7/2.4	4.07/2.43	4.0/2.3	4.0/2.4	4.5/2.5	4.5/2.7	5.4/3.3
Gradeability		°	30	35	35	35	35	35	35
Ground pressure		kPa	29.8	34.5	33.9	35.4	39	36.9	36
Swing speed		rpm	10.6	9.4	9	10	9	9	11.1
Engine	Brand		Yanmar	Yanmar	Yanmar	Yanmar	Yanmar	KUBOTA	ISUZU
	Model		4TNV88-BSSU	4TNV94L-BVSU	4TNV98-ZCSSU	4TNV98-ZCSSU	4TNV98T-ZCSSU	V3800-DI-T-E3B-CBH2-5	GI-4JJ1XKSC-02
	Type		4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled	4-Cylinder, 4-Stroke, Water-cooled
	Displacement	L	2.19	3.054	3.319	3.319	3.319	3.769	2.999
	Power	kW/rpm	25.8/2200	36.2/2100	44/2200	44/2200	54.6/2200	60.7/2200	84/2200
Cylinder capacity		L	115	113	118	118	145	145	245
Main Pump	Type		2 variable displacement pumps, 1 gear pump	2 variable displacement pumps, 1 gear pump	2 variable displacement pumps, 1 gear pump	1 Variable displacement pumps	2 variable displacement pumps, 1 gear pump	2 variable displacement pumps, 1 gear pump	2 Variable displacement pumps
	Flow	L/min	2×45+37	2×59+42	2×59+42	162	2×79+64	2×79+64	2×139
Main relief valve pressure		Mpa	2×24.5+21	2×24+21	2×24+21	28	30/24	30/24	31.4/ supercharged 34.3
Hydraulic cylinder capacity		L	73	96	96	96	140	140	152

## E-Series Main Parameters Medium-Sized Excavators

SPECIFICATIONS		UNIT	SWE210	SWE210LC	SWE230E	SWE260LC
Dimension (L×W×H)		mm	9590×2800×3045	9590×2800×3055	9550×2990×3165	
Parameter	A Track gauge	mm	3465	3655	3655	3845
	B Track length	mm	4220	4450	4450	4640
	C Counterweight clearance	mm	1060	1065	1070	1070
	D Tail swing radius	mm	2750	2750	2750	2950
	E Shipping width	mm	2710	2710	2710	2850
	F Track gauge	mm	2200	2390	2390	2590
	G Transport width	mm	2800	2990	2990	3190
	H Shoe width	mm	600	600	600	600
	I Ground clearance	mm	470	480	480	475
	J Cab height	mm	2965	2965	2965	2940
	L Shipping length	mm	9590	9590	9550	10056
	K Shipping height	mm	3045	3045	3165	3226
	Working Ranges	A Max. cutting height	mm	9740	9780	9830
B Max. loading height		mm	6980	6870	6950	6950
C Max. cutting depth		mm	6690	6800	6685	7030
D Max. depth cut at ground level (8')		mm	6500	6505	6510	6870
E Max. vertical wall digging depth		mm	6040	6150	6085	6370
F Max. digging reach		mm	9950	10055	9980	10140
G Max. digging reach at ground level		mm	9785	9890	9810	10153
H Min. swing radius		mm	3530	3528	3545	3850
Overall Weight		Steel track	T	21.3	21.7	22.6
Standard bucket capacity		m <sup>3</sup>	0.95	1.05	1.05	1.02
Bucket digging force		kN	154	147	161.3	181.4
Stick digging force		kN	110	109	113.3	135.8
Travel speed ( Max./Min. )		km/h	4.9/3.1	4.9/3.1	5.6/3.5	5.5/3.2
Gradeability		°	35	35	35	35
Ground pressure		kPa	43.2	42.5	45.8	49
Swing speed		rpm	11.8	11.8	13.4	11.2
Engine	Brand		Isuzu	Isuzu	Isuzu	Isuzu
	Model		6BG1TRP-03	6BG1TRP-03	CC-6BG1TRP	CC-6BG1TRP-02
	Type		DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled
	Displacement	L	6.494	6.494	6.494	6.494
	Power	kW/rpm	110/2200	110/2200	125/2100	132/2150
Cylinder capacity		L	370	370	360	410
Main Pump	Type		2×Plunger pump	2×Plunger pump	2×Plunger pump	2×Plunger pump
	Pressure	Mpa	32.4/34.3	32.4/34.3	31.4/34.3	34/36.5
	Flow	L/min	2×212	2×212	2×246	2×236
Pilot Pump	Pressure	Mpa	3.9	3.9	3.9	3.9
	Flow	L/min	21	21	21	21
Hydraulic cylinder capacity		L	250	250	250	275



## E-Series Main Parameters Large-Sized Excavators

SPECIFICATIONS		UNIT	SWE330B	SWE330LC	SWE360LC	SWE365E	SWE470E	
Dimension (LxWxH)		mm	11145×3190×3380	11145×3190×3380	11230×3190×3630	11175×3190×3580	12050×3340×3665	
Parameter	A	Track gauge	mm	4030	4030	4030	4030	4350
	B	Track length	mm	4945	4945	4945	4945	5355
	C	Counterweight clearance	mm	1195	1195	1195	1195	1270
	D	Tail swing radius	mm	3390	3390	3390	3390	3650
	E	Shipping width	mm	2960	2960	3100	3100	3230
	F	Track gauge	mm	2590	2590	2590	2590	2740
	G	Transport width	mm	3190	3190	3190	3190	3340
	H	Shoe width	mm	600	600	600	600	600
	I	Ground clearance	mm	510	510	510	540	550
	J	Cab height	mm	3130	3130	3130	3120	3155
	L	Shipping length	mm	11145	11145	11230	11175	12050
K	Shipping height	mm	3380	3380	3630	3580	3665	
Working Ranges	A	Max. cutting height	mm	10620	10620	10260	10530	10885
	B	Max. loading height	mm	7580	7580	7235	7420	7770
	C	Max. cutting depth	mm	7450	7450	6790	7485	7775
	D	Max. depth cut at ground level (8')	mm	7260	7260	6610	7330	7550
	E	Max. vertical wall digging depth	mm	6590	6590	5810	6475	6800
	F	Max. digging reach	mm	11300	11300	10690	11370	12095
	G	Max. digging reach at ground level	mm	11100	11100	10485	11170	11890
	H	Min. swing radius	mm	4425	4425	4460	4440	4860
Overall Weight	Steel track	T	33.2	33.2	34.6	35.8	45.8	
Standard bucket capacity		m <sup>3</sup>	1.5	1.5	1.6 Rock bucket	1.6 Rock bucket	2.2	
Bucket digging force		kN	240	240	240	249	305	
Stick digging force		kN	177	177	210	177	228	
Travel speed ( Max./Min. )		km/h	4.8/3.2	4.8/3.2	4.8/3.2	5.5/3.3 (4.8/3.2)	4.8/3.0	
Gradeability		°	35	35	35	35	35	
Ground pressure		kPa	61	61	63.6	63.6	83.5	
Swing speed		rpm	10.3	10.3	10.3	9.1	8.6	
Engine	Brand		Isuzu	Isuzu	Isuzu	Isuzu	Cummins	
	Model		AH-6HK1X-S	AA-6HK1XQP	AA-6HK1XQP	AA-6HK1XQP	QSM11-335	
	Type		DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	DI, Water-cooled, 4-Stroke, Supercharged, Intercooled	
	Displacement	L	7.79	7.79	7.79	7.79	10.8	
	Power	kW/rpm	202/2000	183.9/2000	183.9/2000	183.9/2000	263/1900	
Cylinder capacity		L	642	642	642	650	650	
Main Pump	Type		2xPlunger pump	2xPlunger pump	2xPlunger pump	2xPlunger pump	2xPlunger pump	
	Pressure	Mpa	31.4/34.3	31.4/34.3	31.4/34.3	32.4/34.3	32.4/34.3	
	Flow	L/min	2×268	2×268	2×268	2×304	2×360	
Pilot Pump	Pressure	Mpa	3.9	3.9	3.9	3.9	3.9	
	Flow	L/min	30	30	30	30	27	
Hydraulic cylinder capacity		L	290	290	290	290	350	



### Pre-sales services

- We offer sufficient consultations and suggestions for customers.
- Assist customers to select suitable equipment for the rock conditions.
- Design and manufacture products according to customers' requirements.
- Provide technical training for customers.

### Services during sales

- Fulfill contract and commitments in good faith.

### After-sales services

- Install and debug equipments and train operators on site.
- Timely troubleshoot problems on site.
- Supply spare parts in time.
- Periodically offer routine inspection services to the equipments.
- Periodically revisit customers and know their needs.



# Construction Cases

