

# HELI

## 5-10 t

G series Internal Combustion  
Counterbalanced  
Forklift Truck





## Technical features remarkably improved

### Damping

- > With suspension damping structure on overhead guard(cab) and optimized design for the transmission, the whole trucks's vibration reduced a lot and relieve driver's fatigue greatly.

### Noise reduction

- > Equipped with fully sealed cab and optimize designed parts around the engine, noise nearby ear and the truck sound level are reduced greatly.

### Heat dissipation

- > With the optimized cooling system and great cooling performance, highly improved the reliability and durability of the transmission and engine, etc, many key parts.

### Energy efficiency

- > With optimized hydraulic system, the truck is more energy-efficient and lower fuel consumption.



### Comfort

- > Man-machine engineering design improves operation comfort; wide view lifting system improves vision.

### Intelligent gear shifting

- > With electronic-hydraulic reversing system as standard configuration, make operation more liaght and easy; The updated new intelligent gear shifting system could avoid starting with second gear, improves the transmission box's reliability.

### Maintainability

- > Wider internal space, more reasonable parts layout and 80°hood opening angle make maintenance easy.

### Reliability

- > Key parts like frame and mast apply CAE top-down design to improve their strength and make the truck tough.



Independent integrated electric cabinet



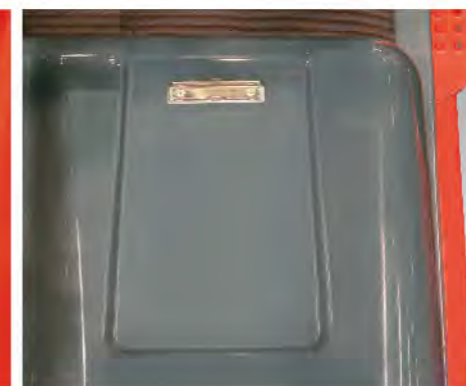
LED signal (standard configuration)



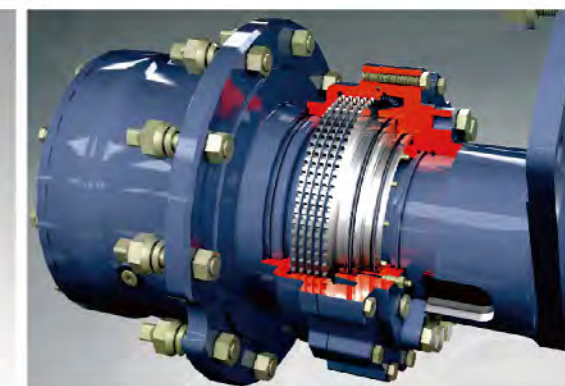
Ratchet type parking brake



Locked fuel tank cover



Folder



Wet-disc brake driving axle (optional choice):  
Advantages: the convenient operation,  
stable braking and free from maintenance.



# G SERIES 5-10 t

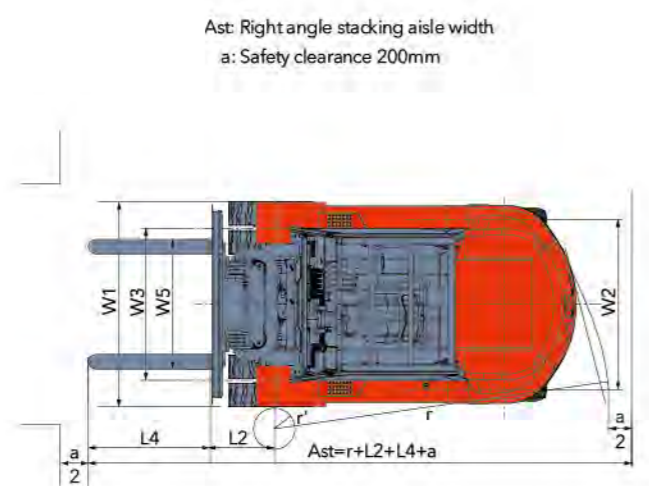
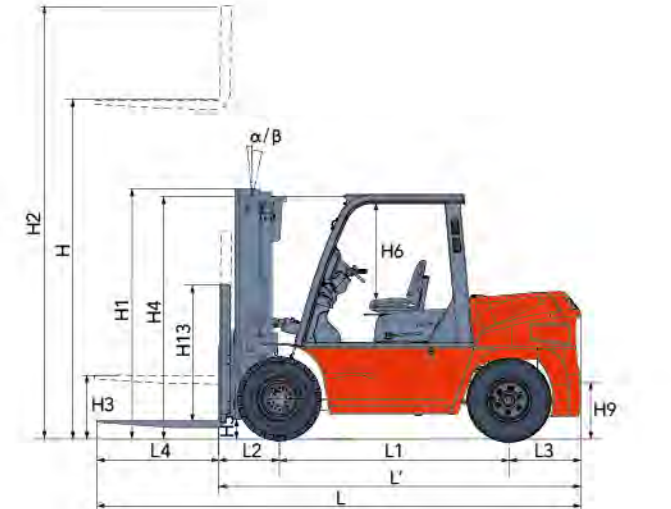
## Manufacturer and technical parameters

Characteristics								
1.01	Manufacturer					HELI		
1.02	Model			CPCD50	CPCD60	CPCD70	CPCD85	CPCD100
1.03	Power type	Diesel						
1.04	Rated capacity	Q	kg	5000	6000	7000	8500	10000
1.05	Load center	c	mm	600				
1.06	Driving mode	Sit-on type						
Dimensions								
2.01	Mast height, extended (with backrest)	H2	mm	4400	4400	4400	4450	4415
2.02	Max fork height	H	mm	3000	3000	3000	3000	3000
2.03	Mast height, lowered	H1	mm	2500	2500	2500	2700	2850
2.04	Free lift	H3	mm	200	200	200	200	200
2.05	Backrest height (calculated from the fork surface)	H13	mm	1355	1350	1345	/	/
2.06	Overhead guard clearance (from face of seat)	H6	mm	1060	1060	1060	1060	1060
2.07	Overhead guard height	H4	mm	2450	2450	2450	2560	2560
2.08	Overall length (with forks)	L	mm	4710	4790	4840	5180	5430
2.09	Overall length (without forks)	L'	mm	3490	3570	3620	3960	4210
2.10	Front overhang	L2	mm	590	595	600	705	720
2.11	Rear overhang	L3	mm	600	675	720	755	715
2.12	Wheel base	L1	mm	2300	2300	2300	2500	2775
2.13	Traction pin center height	H9	mm	410	410	410	520	520
2.14	Min. Ground clearance (from bottom of mast)	H5	mm	200	200	200	250	250
2.15	Truck body width	W1	mm	2045	2045	2045	2165	2165
2.16	Lateral fork adjustment (outside of fork Xmax/min.)	W6	mm	300-1835	300-1835	300-1835	420-1915	420-2060
2.17	Front tread	W3	mm	1520	1520	1520	1600	1600
2.18	Rear tread	W2	mm	1700	1700	1700	1700	1700
2.19	Min. Turning radius (external)	r	mm	3240	3300	3370	3650	3900
2.20	Min. Turning radius (internal)	r'	mm	200	200	200	200	200
2.21	In.right angle stacking aisle width (standard load size 1200X1200)	Ast	mm	5250	5315	5390	5775	6040
2.23	Mast tilting angle (forward/rear)	$\alpha/\beta$	°	6/12	6/12	6/12	6/12	6/12
2.24	Fork size	L4	mm	55X1220X150	60X1220X150	65X1220X150	70X1220X175	80X1220X175
Tyre								
3.01	Wheel number (front/rear)	4X/2						
3.02	Tyre type (front/rear)	Pneumatic tyre						
3.03	Tyre size (front)	8.25-15-14PR			9.00-20-14PR			
3.04	Tyre size (rear)	8.25-15-14PR			9.00-20-14PR			
Specifications of the brake and transmission devices								
4.01	Battery (voltage/capacity)	V/Ah	2X12/80					
4.02	Service brake	Powered brake-pedal type						
4.03	Parking brake	Mechanical-hand brake lever type						
4.04	Oil tank capacity	L	160					
4.05	Transmission type	Intelligent gear shifting						
4.06	Transmission number of speed (fwd/bwd)	2/2						
Truck specifications								
5.01	Max. Travelling speed (loaded/unloaded)	km/h	28/30	28/30	28/30	27/30	27/30	27/30
5.02	Lifting speed (loaded/unloaded)	mm/s	500/520	500/520	500/520	390/420	330/350	330/350
5.03	Lowering speed (loaded/unloaded)	mm/s	WITHOUT LOAD $\geq$ 300 WITH FULL LOAD $\leq$ 600					
5.04	Max. Draw bar (loaded)	KN	62	62	62	58	58	58
5.05	Max. Gradeability (loaded/unloaded)	%	33/20	32/20	30/20	27/20	22/20	22/20
5.06	Weight (oil included)	kg	8150	8900	9500	11400	12510	12510
5.07	Axle load (loaded) front/rear	kg	11830/1320	13330/1570	14450/2050	17750/2150	20030/2480	20030/2480
5.08	Axle load (unloaded) front/rear	kg	4050/4100	4005/4895	3900/5600	6040/5360	5510/7000	5510/7000
Engine specifications								
6.01	Engine manufacturer /mode						ISUZU 6BG1	
6.02	Engine rated power/rotational speed	Kw/rpm	82/2000					
6.03	Engine rated torque/rotational speed	Nm/rpm	415/1400~1600					
6.04	Cylinder number	6						
6.05	Engine displacement	L	6.494					

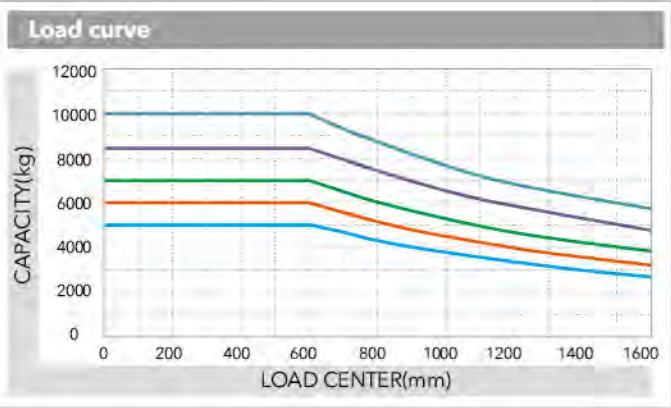


**Optional engine model and truck main specifications**

Truck specifications		CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100										
Manufacturer		CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100	CPCD50	CPCD60	CPCD70	CPCD85	CPCD100										
Max. Travelling speed (loaded/unloaded)	km/h	26/30	26/30	26/30	26/30	26/30	26/30	26/30	26/30	26/30	26/30	24/29	24/29	24/29	24/28	24/28	26/30	26/30	26/30	26/27	26/27	26/27	26/30	26/30	26/30	26/30	26/30									
Lifting speed (loaded/unloaded)	mm/s	500/520	500/520	485/520	390/420	330/350	530/550	530/550	510/540	390/420	330/350	510/530	510/530	500/530	390/420	330/350	450/470	440/470	420/460	470/430	470/430	400/370	550/570	550/570	550/570	430/450	350/370									
Lowering speed (loaded/unloaded)	mm/s	WITHOUT LOAD≥300										WITH FULL LOAD≤600																								
Max. Draw bar (loaded)	KN	62	62	62	60	60	60	60	60	60	58	63	63	62	60	58	42	40	40	52	52	52	62	62	62	56	56									
Max. Gradeability (loaded/unloaded)	%	39/20	34/20	30/20	22/20	20/20	34/19	31/19	29/19	23/20	21/20	38/19	35/19	32/19	23/20	21/20	23/19	20/19	20/19	32/20	30/20	28/20	42/22	36/20	32/20	24/20	21/20									
Weight (oil included)	kg	8150	8900	9500	9500	11400	12510	8150	8900	9500	11400	12510	8300	9050	9650	11550	12660	8300	9050	9650	8150	8900	9500	8150	8900	9500	11400	12510								
Axle load (loaded) front/rear	kg	11830/1320	13330/1570	14450/2050	17750/2150	20030/2480	11830/1320	13330/1570	14450/2050	17750/2150	20030/2480	11940/1360	13400/1650	14500/2150	17845/2205	20167/2493	11940/1360	13400/1650	14500/2150	11830/1320	13330/1570	14450/2050	11830/1320	13330/1570	14450/2050	17750/2150	20030/2480									
Axle load (unloaded) front/rear	kg	4050/4100	4005/4895	3900/5600	6040/5360	5510/7000	4050/4100	4005/4895	3900/5600	5360/6040	5510/7000	4130/4170	4060/4990	3870/5780	5082/6468	5570/7090	4130/4170	4060/4990	3870/5780	4050/4100	4005/4895	3900/5600	4050/4100	4005/4895	3900/5600	5360/6040	5510/7000									
Engine specifications		Cummins QSF3.8(Euro IIIA, CHINA STAGE III)										Perkins 1104D-44TA					XICAI CA6110					Mitsubishi S6S-T					Kubota /WG3800					Cummins QSB4.5(EU Stage IIIB- US EPA Tier 4(i)- CHINA STAGE III)				
Engine manufacturer /mode		Cummins QSF3.8(Euro IIIA, CHINA STAGE III)										Perkins 1104D-44TA					XICAI CA6110					Mitsubishi S6S-T					Kubota /WG3800					Cummins QSB4.5(EU Stage IIIB- US EPA Tier 4(i)- CHINA STAGE III)				
Engine rated power/rotational speed	Kw/rpm	86/2200										83/2200					83/2000					63.9/2300					82/2200									
Engine rated torque/rotational speed	Nm/rpm	470/1100-1700										418/1400					450/1400-1500					285/1700					489/1500									
Cylinder number		4										4					6					6					4									
Engine displacement	L	3.8										4.4					7.127					4.29					3.8					4.5				



Ast: Right angle stacking aisle width  
a: Safety clearance 200mm



**Note:** The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front surface of the forks to the gravity of the standard load. The standard load means a cubic with 1200mm edge length. When mast is tilted forward, using non-standard forks or loading large goods, the load capacity will be reduced. The load capacity of standard mast at different load center can be known from this load chart.

5-7t WIDE VIEW MAST									
Mast mode	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)	Service weight (kg)			Mast tilting angle α/β
		CPCD50	CPCD60	CPCD70		CPCD50/60/70	CPCD50	CPCD60	
M200	2000	5000	6000	7000	2000	8005	8755	9409	6°/12°
M250	2500	5000	6000	7000	2250	8069	8819	9473	6°/12°
M270	2700	5000	6000	7000	2350	8101	8851	9451	6°/12°
M300	3000	5000	6000	7000	2500	8150	8900	9500	6°/12°
M330	3300	5000	6000	7000	2650	8199	8949	9549	6°/12°
M350	3500	5000	6000	7000	2750	8231	8981	9581	6°/12°
M375	3750	5000	6000	7000	2875	8272	9022	9622	6°/12°
M400	4000	5000	6000	7000	3050	8438	9188	9788	6°/12°
M425	4250	5000	6000	7000	3175	8478	9228	9828	6°/12°
M450	4500	5000	6000	7000	3300	8519	9269	9869	6°/12°
M475	4750	5000	6000	7000	3425	8560	9310	9910	6°/16°
M500	5000	5000	6000	7000	3550	8600	9350	9950	6°/16°
M550	5500	4750	5700	6600	3850	8794	9544	10144	6°/16°
M600	6000	4400	5400	6400	4100	8876	9626	10226	6°/16°

5-7t WIDE VIEW FULL FREE 2-STAGE MAST										
Mast model	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)	Free lift (with backrest) (mm)	Service weight (kg)			Mast tilting angle α/β
		CPCD50	CPCD60	CPCD70			CPCD50/60/70	CPCD50	CPCD60	
ZM250	2500	5000	6000	7000	2210	840	8189	8939	9539	6°/12°
ZM270	2700	5000	6000	7000	2310	940	8226	8976	9576	6°/12°
ZM300	3000	5000	6000	7000	2460	1090	8283	9033	9633	6°/12°
ZM330	3300	5000	6000	7000	2610	1240	8340	9090	9690	6°/12°
ZM350	3500	5000	6000	7000	2710	1340	8377	9127	9727	6°/12°
ZM375	3750	5000	6000	7000	2835	1465	8425	9175	9775	6°/12°
ZM400	4000	5000	6000	7000	3010	1640	8600	9350	9950	6°/12°
ZM425	4250	5000	6000	7000	3135	1765	8652	9402	10002	6°/12°
ZM450	4500	5000	6000	7000	3260	1890	8695	9445	10045	6°/12°
ZM475	4750	5000	6000	7000	3385	2015	8742	9492	10092	6°/16°
ZM500	5000	5000	6000	7000	3510	2140	8779	9529	10129	6°/16°
ZM550	5500	4750	5700	6600	3810	2440	8999	9749	10349	6°/16°
ZM600	6000	4400	5400	6400	4060	2690	9094	9844	10444	6°/16°

**Note:** (1) 5-6t: the free lift without backrest 465mm increased, (2) 7t: the free lift without backrest 310mm increased.

5-7t WIDE VIEW FULL FREE 3-STAGE MAST										
Mast model	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)	Free lift (with backrest) (mm)	Service weight (kg)			Mast tilting angle α/β
		CPCD50	CPCD60	CPCD70			CPCD50/60/70	CPCD50	CPCD60	
ZSM360	3600	4500	5600	6200	2335	910	8833	9583	10083	6°/6°
ZSM400	4000	4500	5600	6200	2470	1040	8893	9643	10143	6°/6°
ZSM435	4350	4500	5600	6200	2585	1156	8951	9701	10201	6°/6°
ZSM450	4500	4500	5600	6200	2635	1205	8988	9748	10248	6°/6°
ZSM480	4800	4500	5600	6200	2740	1310	9148	9898	10398	6°/6°
ZSM500	5000	4500	5600	6200	2805	1380	9179	9929	10429	6°/6°
ZSM540	5400	4200	5300	6000	2940	1510	9248	9998	10498	6°/6°
ZSM600	6000	4000	5000	5600	3140	1710	9337	10087	10587	6°/6°
ZSM650	6500	3500	4500	5000	3405	1975	9426	10176	10676	6°/6°
ZSM700	7000	3200	4000	4500	3515	2085	9479	10229	10729	6°/6°

**Note:** (1) 5-6t: the free lift without backrest 380mm increased, (2) 7t: the free lift without backrest 225mm increased.

8.5-10t WIDE VIEW MAST									
Mast model	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)		Service weight (kg)		Mast tilting angle α/β
		CPCD85	CPCD100	CPCD85	CPCD100	CPCD85	CPCD100		
M250	2500	8500	10000	2450	2600	10721	12389	6°/12°	
M270	2700	8500	10000	2550	2700	10775	12429	6°/12°	
M300	3000	8500	10000	2700	2850	11400	12510	6°/12°	
M330	3300	8500	10000	2850	3000	11501	12558	6°/12°	
M350	3500	8500	10000	2950	3100	11646	12603	6°/12°	
M375	3750	8500	10000	3075	3225	11726	12653	6°/12°	
M400	4000	8500	10000	3250	3400	11901	12793	6°/12°	
M425	4250	8500	10000	3375	3525	12056	12848	6°/12°	
M450	4500	8500	10000	3500	3650	12176	12898	6°/12°	
M475	4750	8200	10000	3625	3775	12321	12955	6°/16°	
M500	5000	8200	10000	3750	3900	12436	13010	6°/16°	
M550	5500	7850	9000	4050	4200	12758	13311	6°/16°	
M600	6000	7400	8000	4300	4450	12961	13361	6°/16°	

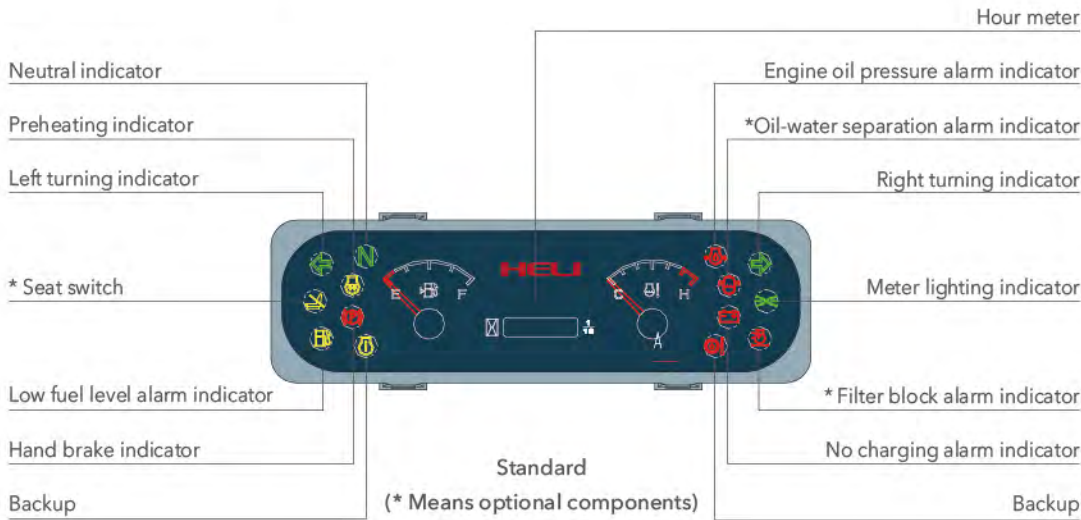
8.5-10t WIDE VIEW FULL FREE 2-STAGE MAST											
Mast model	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)		Free lift (with backrest) (mm)		Service weight (kg)		Mast tilting angle α/β
		CPCD85	CPCD100	CPCD85	CPCD100	CPCD85	CPCD100	CPCD85	CPCD100		
ZM250	2500	8500	10000	2450	2600	1090	1302	11447	12371	6°/12°	
ZM270	2700	8500	10000	2550	2700	1190	1402	11473	12399	6°/12°	
ZM300	3000	8500	10000	2700	2850	1340	1552	11515	12442	6°/12°	
ZM330	3300	8500	10000	2850	3000	1490	1702	11556	12470	6°/12°	
ZM350	3500	8500	10000	2950	3100	1590	1802	11584	12513	6°/12°	
ZM375	3750	8500	10000	3075	3225	1715	1927	11619	12556	6°/12°	
ZM400	4000	8500	10000	3250	3400	1890	2102	11756	12584	6°/12°	
ZM425	4250	8500	10000	3375	3525	2015	2227	11790	12619	6°/12°	
ZM450	4500	8500	10000	3500	3650	2140	2352	11825	12665	6°/12°	
ZM475	4750	8200	9500	3625	3775	2265	2477	11860	12800	6°/16°	
ZM500	5000	8200	9500	3750	3900	2390	2602	11865	12837	6°/16°	
ZM550	5500	7850	9000	4050	4200	2690	2902	12067	12873	6°/16°	
ZM600	6000	7400	8000	4300	4450	2940	3152	12136	12908	6°/16°	

**Note:** (1) 8.5t: the free lift without backrest 222mm increased, (2) 10t: free lift without backrest.

8.5-10t WIDE VIEW FULL FREE 3-STAGE MAST									
Mast model	Max. fork height (mm)	Load capacity (load center 600mm)(kg)			Mast height, lowered (mm)		Free lift (with backrest) (mm)		



## Reliable special designed instrument



■ Reliable special meter display the whole truck's working condition, fault detect and other important information completely which make the operator master the whole truck condition directly and conveniently.

### Standard configuration

Hour meter  
Horn  
Oil pressure alarm  
Control valve  
Wholly hydraulic-powered steering  
Rubber pad  
Backrest  
Rear view mirror  
Front combined lamp (LED light)  
Transmission oil filter  
Engine flame out device  
Ratchet type parking brake  
Water temperature meter  
Driver's tools  
Rear combined lamp(LED)  
Reversing buzzer  
Tilt-lock valve  
Tilt adjustable steering column  
Back view mirror

Overhead guard  
Standard fork  
Neutral gear switch  
Hydraulic circuit oil filter  
Electro-hydraulic changing-over  
Intelligent shift  
Speed-limiting valve  
Oil level gauge  
Charging indicator  
Wide view mast  
Air intaking device  
Durable tire with decorative pattern  
Lifting and tilting operating handles  
Traction pin  
Semi-suspension seat  
Hydraulic oil dipstick  
Overhead guard rain cover  
Torque converter oil dipstick  
Combined instrument

### Optional

Driver's cab  
Warning light  
High air exhausting device  
Double air cleaner  
Suspension seat  
Fork extension  
Heater  
Solid tyre  
Widen fork carriage  
Wind shield  
Purifying muffler  
Fire extinguisher muffler  
Fire extinguisher  
Rear working light  
Air conditioner (certain type)  
OPS (travelling function)  
Torque converter oil temperature meter  
Tilting cylinder sleeve  
Steering cylinder sleeve

User-specified color  
Optional attachments  
Sling  
Full LED light ass'y  
Power switch  
Reversing voice speaker  
Universal key  
Overspeed 10km/h alarm  
Electric fan  
OPS(Travelling function and loading function)  
Drive axle with wet disc type brak