

HELI
LIFTING THE FUTURE

1-3.5t
G Series Internal Combustion
Counterbalanced Forklift Truck (Euro Stage V)



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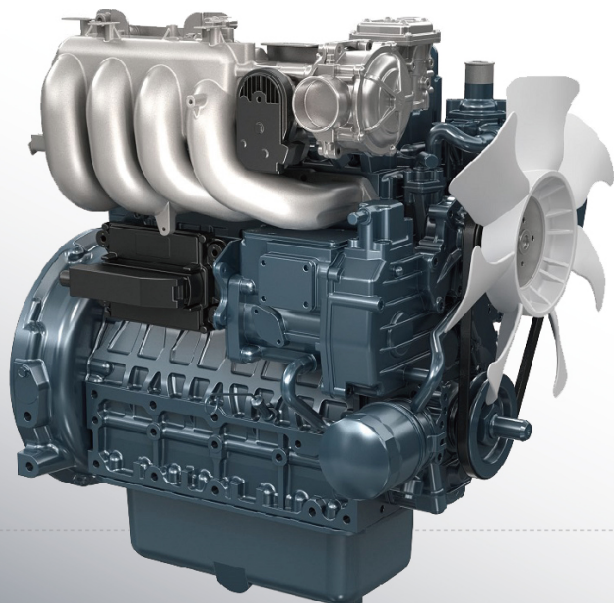
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HIGH QUALITY PRODUCT

G series 1-3.5t internal combustion counterbalance forklift truck is a perfect combination of technological innovation and lean manufacturing. Comfort and energy-saving environmental protection integration. Self-made key parts have better reliability. Hydraulic powered steering system, good maneuvering performance. It can perfectly guarantee the material handling work at ports, wharves, railway stations and other places. It can meet the requirements for various kinds of complicated work conditions, so as to make your work more convenient and create more value.



Engine Model:

KUBOTA V2403(Diesel)
KUBOTA WG2503(GAS/LPG)



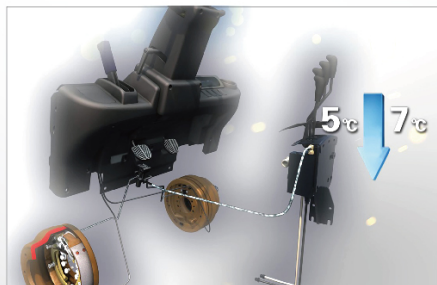
The whole machine adopts the engine conforming to the Euro stage V and the American environmental protection standard;

- The diesel engine adopts KUBOTA V2403 Euro 5 electronic high pressure common rail engine and DOC + DPF tail gas treatment technology.
- Single/Dual fuel using KUBOTA WG2503 electronic high pressure common rail engine, using three catalytic tail gas treatment technology.

Note: DOC — Diesel Oxidation Catalyst. DPF — Diesel Particulate Filters

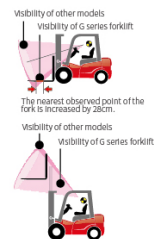
Safety and reliability

HELI keeps improving truck safety and reliability to ensure the safety of people, machine and goods.



A reliable mast

- The impact and vibration of mast are reduced significantly by using buffer device. Through finite element analysis plus optimizing the structural parameters, the vibration acceleration is reduced by 40%.



Improved cooling performance

- The hydraulic system adopts high efficiency and low loss technology, comprehensively optimizes the hydraulic piping system and sealing form, and further reduces the pressure loss, hydraulic oil temperature and sealing reliability in the hydraulic system.

Driver restraint warning system

- The vehicle is equipped with driver's safety belt restraint warning system, which makes driving safer.



Seat switch system

Excellent safety performance

- Profiled steel for overhead guard**
As the first forklift producer to use profiled steel for overhead guard in china, our g series forklift is available with embedded cabin doors to ensure more safety and seal performance.
- Greatly enhanced frame strenght**
G series forklifts have much stronger frame structure, while its structural strength meets the ANSI/ITSDFB56.1(American National Regulation)requirements.



Driver restraint warning system

- Walking on site induction safety system**
When the machine is running, the operator will suddenly leave the correct operating position without releasing the accelerator pedal, and the power will be cut off to protect the safety of running.
- LHS (Load Handling System) on site induction safety system and reset control system**
When the operator leaves or returns to the correct operating position without loosening the LHS control device, the operation brought by the LHS operation will be suspended and will not occur automatically, so as to protect the LHS operation safety.
- LHS (Load Handling System) static control system**
When the LHS control device is operated and the engine is started, the operation brought by LHS control will not happen automatically after the engine is started. Only when the LHS control device is reset and then operated can the operation continue.
- Non-parking security alarm system**
When the forklift is not powered off and the driver is not using the parking brake, an audible warning is used to alert the driver.

Self-made key parts have better reliability

- High quality power system (3% improved gradeability), high efficient hydraulic system (2% reduced engine oil consumption).
- Small distance plug cylinder (5% improved lifting speed), high pressure and small flow design of hydraulic system (System pressure reaches to 21MPa) .





Easy maintenance

Easy maintenance which is good for maintaining the optimal condition of key parts and completed truck and ensures safety and work efficiency is the necessary character of a good product.

More scientific and environmental design

- Equipped with high-quality engine, the emission meets the latest European EC and the EPA environmental regulation. The use of Non-asbestos insulation equipment is very effective to lower down the noise.
- The innovative design and optimized configuration of the lifting system improve the operators' visibility greatly, and provide a clear and accessible focus of vision to ensure the safety & efficiency of operating.



DPF (Diesel Particulate Filters) automatic regeneration

- Euro 5 diesel-powered model is equipped with DPF automatic regeneration function, and the instrument is equipped with DPF blocking quantity display function (equipped with diesel vehicle), which is convenient for maintenance; When running the automatic regeneration program, the engine provides 100% power output. The DPF regeneration program can be interrupted at any time. DPF cleaning interval increased from 3000 hours to 6000 hours.

Low after-sales maintenance cost

- Equipped with Euro V diesel, liquefied gas, dual fuel power configuration to meet the needs of different users.
- Based on the same platform of a variety of fuel (diesel / liquefied gas) configuration scheme, the main parts of the general, low after-sales maintenance cost is low.

STAGE V

Excellent working efficiency

With high efficiency, the truck perfectly guarantees the material handling work at port, dock, and railway station. It can meet the requirements for various kinds of complicated work conditions.

More comfortable ergonomic design

- Through optimum design of the hood and tilt cylinder, the space for driver's leg is twice wider than other models, the bigger footplate make the operators to get on and off with ease. Such capacious space ensures the operating more comfortable.
- The sedan-type display and double-handle combined F/R direction switch to ensure more convenient and smooth operation.
- Labor-saving mini-type steering wheel. Suspension seat with armrests, seat belts. Safe and comfortable.



Needs of low-temperature areas

- The prototype was tested at -25°C in the cold storage laboratory to meet the demand for use at this temperature.



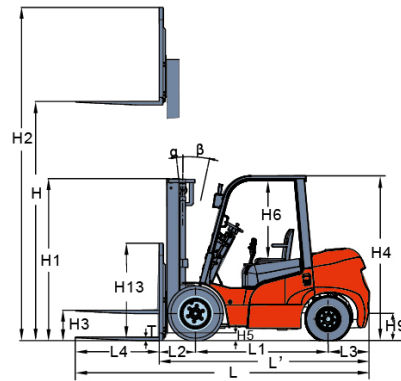
Diesel products with large capacity batteries

- Euro V diesel-powered models use large capacity batteries, vehicle start, electricity is more secure.

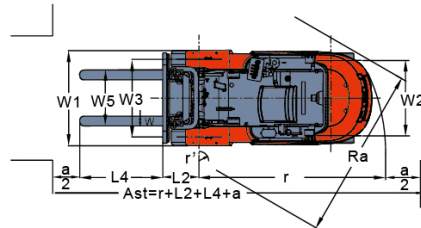




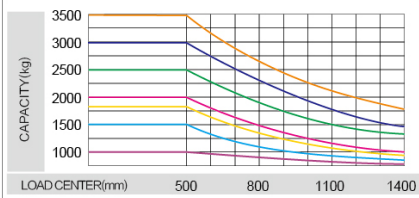
Manufacturer and technical parameters															
Character															
1.1	Manufacturer														
1.2	Model			CP(Q)YD10	CP(Q)YD15	CP(Q)YD18	CP(Q)YD20	CP(Q)YD25	CP(Q)YD30	CP(Q)YD35	CPCD15	CPCD18	CPCD20	CPCD25	CPCD30
1.3	Engine type														
1.4	Rated capacity		kg	1000	1500	1750	2000	2500	3000	3500	1500	1750	2000	2500	3000
1.5	Load center		mm				500						500		
1.6	Operation mode						Seated						Seated		
Size															
2.1	Max.fork lifting height(With backrest)	H2	mm	4039	4039	4039	4039	4039	4217	4217	4039	4039	4039	4039	4217
2.2	Max lifting height	H	mm		3000			3000			3000		3000		
2.3	Mast overall height(Fork to the ground and mast be vertical)	H1	mm	1995	1995	1995	2000	2000	2070	2180	1995	1995	2000	2000	2070
2.4	Free lift height	H3	mm	152	155	155	140	140	140	150	155	155	140	140	140
2.5	Backrest height(Calculated from the surface of the fork)	H13	mm	1017	1014	1014	1004	1004	1182	1177	1014	1014	1004	1004	1182
2.6	Distance from the surface of the seat to the overhead guard	H6	mm	1030	1030	1030	1035	1035	1035	1035	1030	1030	1035	1035	1035
2.7	Overall height(Overhead guard)	H4	mm	2140	2140	2140	2140	2140	2170	2170	2140	2140	2140	2140	2170
2.8	Overall length(With fork)	L	mm	2936	3150	3193	3430	3650	3770	3840	3150	3193	3430	3650	3770
2.9	Overall length(Without fork)	L'	mm	2166	2230	2273	2510	2580	2700	2770	2230	2273	2510	2580	2700
2.10	Wheel base	L1	mm	1410	1410	1410	1600	1600	1700	1700	1410	1410	1600	1600	1700
2.11	Min.ground clearance(At the mast)	H5	mm	110	110	110	110	110	135	135	110	110	110	110	135
2.12	Overall width	W1	mm	1075	1075	1090	1150	1150	1225	1285	1075	1090	1150	1150	1225
2.13	Fork adjustable range(the external of the fork)(Max./Min.)	W5	mm	950/200	950/200	950/200	1024/200	1024/200	1060/250	1060/250	950/200	950/200	1024/200	1024/200	1060/250
2.14	Tread (Front tread)	W3	mm	900	900	930	970	970	1000	1060	900	930	970	970	1000
2.15	Tread (Rear tread)	W2	mm	930	930	930	970	970	970	970	930	930	970	970	970
2.16	Min.turning radius(Exterior)	r	mm	1870	1950	1980	2170	2240	2400	2420	1950	1980	2170	2240	2400
2.17	Min.right angle stacking aisle width	Ra	mm	1945	2025	2055	2200	2280	2380	2400	2025	2055	2200	2280	2380
2.18	Mast tilting angle	/ β			5°/10°			6°/12°			5°/10°			6°/12°	
2.19	Fork size	L4xWxT	mm	770×100×32	920×100×35	920×100×35	920×122×40	1070×122×40	1070×125×45	1070×125×50	920×100×35	920×100×35	920×122×40	1070×122×40	1070×125×45
Weight															
3.1	Total weight		kg	2330	2780	2940	3440	3790	4400	4710	2780	2940	3440	3790	4400
3.2	Loadability (loaded) (Front/Rear)		kg	2920/410	3720/560	4070/670	4840/600	5600/690	6590/810	7380/830	3720/560	4070/670	4840/600	5600/690	6590/810
3.3	Loadability (unloaded) (Front/Rear)		kg	1060/1270	1200/1580	1120/1820	1380/2060	1520/2270	1760/2640	1890/2820	1200/1580	1120/1820	1380/2060	1520/2270	1760/2640
Wheel and tyre															
4.1	Wheel number x = drive wheel (Front/Rear)				2X/2			2X/2			2X/2		2X/2		
4.2	Tyre type(Front/Rear)				Pneumatic			Pneumatic			Pneumatic		Pneumatic		
4.3	Tyre size(Front)				6.50-10-10PR			7.00-12-12PR		28×9-15-14PR	6.50-10-10PR		7.00-12-12PR		28X9-15-14PR
4.4	Tyre size(Rear)				5.00-8-8PR			6.00-9-10PR		6.50-10-10PR	5.00-8-8PR		6.00-9-10PR		6.50-10-10PR
4.5	Service brake							Hydraulic-Foot Pedal					Hydraulic-Foot Pedal		
4.6	Parking brake							Mechanical-Hand Lever					Mechanical-Hand Lever		
Performance															
model				CP(Q)YD10	CP(Q)YD15	CP(Q)YD18	CP(Q)YD20	CP(Q)YD25	CP(Q)YD30	CP(Q)YD35	CPCD15	CPCD18	CPCD20	CPCD25	CPCD30
Configuration number							KU1G						KU18G		
Max.traveling speed		km/h			17/18		17/18	17/18	17/18	18/19		16/17		17/18	17/18
Lifting Speed (Loaded/Unloaded)		mm/s			570/600		550/600	550/600	500/550	450/480		540/600		500/540	420/450
Lowing Speed (Loaded/Unloaded)		mm/s			450/550		450/550	450/550	450/550	450/550		450/550		450/550	
Max.drawbar pull (Loaded/Unloaded)		kN		17/11	19/11	19/11	24/13	24/14	23/15	22/16		19/12		19/10	18/15
Max.Gradeability (Loaded/Unloaded)		%		40/24	40/29	39/17	42/23	36/22	36/22	31/22		20/38	20/38	32/22	30/22
Drive and transmission control device															
Battery(Voltage/Capacity)					12/60			12/60				12/95			12/95
Engine mode							Kubota WG2503						Kubota V2403-CR-E5B		
Engine rated power		kW/rpm					GAS:42.8/2600, LPG:43.5/2600						33.6/2400		
Engine rated torque		Nm/rpm					GAS:163/1800, LPG:173.7/1400						157.4/1500		
Cylinder number-Bore×stroke							4-88×102.4						4-87×102.4		
Engine displacement		L					2.491						2.434		
Emission		L					Euro V						Euro V		
Engine fuel tank capacity					46		66		70	70		46		66	70
Transmission type					Power Shift			Power Shift			Power Shift			Power Shift	
Transmission Number of speed Fwd/Bwd					1/1			1/1			1/1			1/1	



Ast: Aisle width with load
a: Clearance
b: Length Of Loading



Load curve



CP(Q)YD10 CP(Q)YD15/CPD15 CP(Q)YD18/CPD18 CP(Q)YD20/CPD20
CP(Q)YD35/CPD35 CP(Q)YD30/CPD30 CP(Q)YD25/CPD25

Note: The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front of the fork.
The base point of the standard load refers to the center position of the cube with 1000mm length of side. When mast is tilted forward, nonstandard fork usage or load with over wide goods, load capacity will be reduced. Different load capacity in different load center can be known in time through load chart.

WIDE VIEW FULL FREE 2-STAGE MAST

Mast model	Max. lifting height (mm)	Load capacity (load center 500mm) (kg)							Mast overall height (fork to the ground) (mm)				Free lifting height (with backrest) (mm)				Mast tilting angle (°) α/β		Service weight (kg)						
		1t	1.5t	1.8t	2.0t	2.5t	3.0t	3.5t	1-1.8t	2-2.5t	3t	3.5t	1-1.8t	2-2.5t	3t	3.5t	1-1.8t	3-3.5t	α/β	1t	1.5t	1.8t	2.0t	2.5t	3.0t
ZM200	2000	1000	1500	1750	2000	2500	3000	3500	1495	1495	1570	1680	470	490	388	503	5-10°	6-12°	2280	2730	2890	3350	3700	4320	4640
ZM250	2500	1000	1500	1750	2000	2500	3000	3500	1745	1745	1820	1930	720	740	638	753	5-10°	6-12°	2310	2760	2920	3400	3750	4360	4690
ZM300	3000	1000	1500	1750	2000	2500	3000	3500	1995	1995	2070	2180	970	990	888	1003	5-10°	6-12°	2350	2800	2960	3440	3790	4410	4740
ZM330	3300	1000	1500	1750	2000	2500	3000	3500	2145	2145	2220	2330	1120	1140	1038	1153	5-10°	6-12°	2370	2820	2980	3470	3820	4440	4770
ZM350	3500	1000	1500	1750	2000	2500	3000	3500	2245	2245	2320	2430	1220	1240	1138	1253	5-10°	6-12°	2380	2830	2990	3490	3840	4460	4780
ZM370	3700	1000	1500	1750	2000	2500	3000	3500	2370	2345	2420	2530	1345	1340	1238	1353	5-10°	6-12°	2400	2850	3010	3510	3860	4480	4800
ZM400	4000	1000	1500	1750	2000	2500	3000	3500	2545	2545	2620	2730	1520	1540	1438	1553	5-10°	6-12°	2450	2900	3060	3560	3930	4550	4880
ZM425	4250	950	1400	1650	1900	2250	2850	3100	2670	2670	2745	2855	1645	1665	1563	1678	5-10°	6-12°	2470	2920	3080	3580	3960	4580	4900
ZM450	4500	950	1400	1650	1900	2250	2850	3100	2795	2795	2870	2980	1770	1790	1688	1803	5-10°	6-12°	2490	2940	3100	3630	3980	4600	4930
ZM500	5000	930	1300	1600	1900	2200	2850	3045	3045	3120	3230	2020	2040	1938	2053	5-10°	6-12°	2520	2970	3130	3670	4020	4650	4970	
ZM550	5500	900	1350	1600	1900	2200	2850	3345	3345	3420	3530	2320	2340	2238	2353	3-6°	3-6°	2560	3050	3210	3710	4120	4740	5070	
ZM600	6000	850	1050	1400	1500	1800	2200	3300	3595	3595	3670	3780	2570	2590	2488	2603	3-6°	3-6°	2630	3080	3240	3810	4160	4840	5110

NOTE: 1-1.8T(1)Max lifting without lift-bracket:-370mm.
(2)Free lifting height without bracket:-+370mm.
(3)(Front wheel) is dual wheels load capacity.
2-3.5T(1)Free lifting height without bracket:-+397mm.
3t Free lifting height without bracket:-+490mm.
3.5t Free lifting height without bracket:-+412mm.
(2)Dual wheels weight:-+110kg.
(3)(Front wheel) is dual wheels load capacity.

WIDE VIEW FULL FREE 3-STAGE MAST

Mast model	Max. lifting height mm	Load capacity (load center 500mm) (kg)							Mast overall height (fork to the ground) (mm)				Free lifting height (with backrest) (mm)				Mast tilting angle (α/β)	Service weight (kg)							
		1t	1.5t	1.8t	2.0t	2.5t	3.0t	3.5t	1-1.8t	2-2.5t	3t	3.5t	1-1.8t	2-2.5t	3t	3.5t		1-1.8t	3-3.5t	1t	1.5t	1.8t	2.0t	2.5t	3.0t
ZSM360	3600	1000	1450	1750	2000	2400	2900	3300	1790	1795	1930	1930	770	785	740	745	5-6°	6-6°	2460	2910	3070	3600	3950	4590	4860
ZSM400	4000	1000	1400	1600	1900	2400	2900	3300	1920	1920	2055	2055	900	910	865	870	5-6°	6-6°	2490	2940	3100	3630	3980	4620	4890
ZSM430	4350	900	1350	1550	1850	2200	2800	3000	2040	2045	2180	2180	1020	1035	990	995	5-6°	6-6°	2510	2960	3120	3660	4010	4650	4920
ZSM450	4500	900	1350	1550	1850	2200	2800	3000	2090	2095	2230	2230	1070	1085	1040	1045	5-6°	6-6°	2520	2970	3130	3680	4030	4670	4930
ZSM470	4700	900	1350	1450	1720	2000	2600	2650	2160	2160	2230	2230	1140	1150	1104	1105	5-6°	6-6°	2530	2980	3140	3690	4040	4680	4940
ZSM480	4800	900	1350	1450	1720	2000	2600	2650	2160	2195	2230	2230	1170	1185	1140	1145	5-6°	6-6°	2540	2990	3150	3700	4050	4690	4960
ZSM500	5000	900	1350	1550	1850	2200	2800	2850	2290	2295	2430	2430	1270	1285	1240	1245	5-6°	6-6°	2560	3010	3170	3730	4080	4720	4980
ZSM540	5400	850	1050	1400	1500	1800	2200	2300	2420	2420	2555	2555	1390	1410	1365	1370	3-6°	3-6°	2590	3040	3200	3760	4110	4750	5010
ZSM600	6000	850	1050	1400	1600	1800	2200	2200	2650	2645	2780	2780	1620	1635	1590	1595	3-6°	3-6°	2660	3110	3270	3860	4210	4850	5110

NOTE: 1-1.8T(1)Max lifting without lift-bracket:-370mm.
(2)Free lifting height without bracket:-+370mm.
(3)(Front wheel) is dual wheels load capacity.
2-3.5T(1)Free lifting height without bracket:-+397mm.
3t Free lifting height without bracket:-+490mm.
3.5t Free lifting height without bracket:-+412mm.
(2)Dual wheels weight:-+110kg.
(3)(Front wheel) is dual wheels load capacity.

WIDE VIEW MAST

Mast model	Max. lifting height (mm)	Load capacity (load center 500mm) (kg)							Mast overall height (fork to the ground) (mm)					Mast tilting angle (°) α/β		Service weight (kg)						
		1t	1.5t	1.8t	2.0t	2.5t	3.0t	3.5t	1-1.8t	2-2.5t	3t	3.5t	1-1.8t	3-3.5t	α/β	1t	1.5t	1.8t	2.0t	2.5t	3.0t	3.5t
M200	2000	1000	1500	1750	2000	2500	3000	3500	1495	1495	1570	1680	5-10°	6-12°	2260	2710	2870	3350	3700	4310	4610	
M250	2500	1000	1500	1750	2000	2500	3000	3500	1745	1745	1820	1930	5-10°	6-12°	2290	2740	2900	3400	3750	4350	4660	
M300	3000	1000	1500	1750	2000	2500	3000	3500	1995	1995	2070	2180	5-10°	6-12°	2330	2780	2940	3440	3790	4400	4710	
M330	3300	1000	1500	1750	2000	2500	3000	3500	2145	2145	2220	2330	5-10°	6-12°	2350	2800	2960	3470	3820	4430	4740	
M350	3500	1000	1500	1750	2000	2500	3000	3500	2245	2245	2320	2430	5-10°	6-12°	2360	2810	2970	3480	3840	4450	4760	
M370	3700	1000	1500	1750	2000	2500	3000	3500	2345	2345	2420	2530	5-6° 5-10° 5-12°	6-8° 6-12° 6-15°	2370	2820	2980	3500	3850	4470	4780	
M400	4000	1000	1500	1750	2000	2500	3000	3500	2545	2545	2620	2730	5-6° 5-10° 5-12°	6-8° 6-12° 6-15°	2430	2880	3040	3580	3930	4540	4850	
M425	4250	950	1400	1650	1900	2250	2850	3100	2670	2670	2745	2855	5-6° 5-10° 5-12°	6-8° 6-12° 6-15°	2450	2900	3060	3600	3950	4570	4870	
M450	4500	950	1400	1650	1900	2250	2850	3100	2795	2795	2870	2980	5-6° 5-10° 5-12°	6-8° 6-12° 6-15°	2470	2920	3080	3630	3980	4590	4900	
M500	5000	900	1350	1600	1850	2200	2800	3050	3045	3045	3120	3230	5-6° 5-10° 5-12°	6-8° 6-12° 6-15°	2500	2950	3110	3670	4020	4640	4950	
M550	5500	900	1350	1600	1850	2200	2800	3050	3345	3345	3420	3530	3-6°	3-6°	2570	3020	3180	3740	4120	4730	5040	
M600	6000	850	1050	1400	1500	1800	2200	2300	3595	3595	3670	3780	3-6°	3-6°	2610	3060	3220	3810	4160	4830	5090	

NOTE: 1-1.8T(1)(Front wheel) is dual wheels load capacity.
(2)Max lifting without lift-bracket:-370mm.
2-3.5T(1)Dual wheels weight:-+110kg.
(2)(Front wheel) is dual wheels load capacity.