HELI

LIFTING THE FUTURE

2-3.5t

G2 Series Internal Combustion Counterbalanced Forklift Truck (Euro Stage V)

www.heliforklift.net

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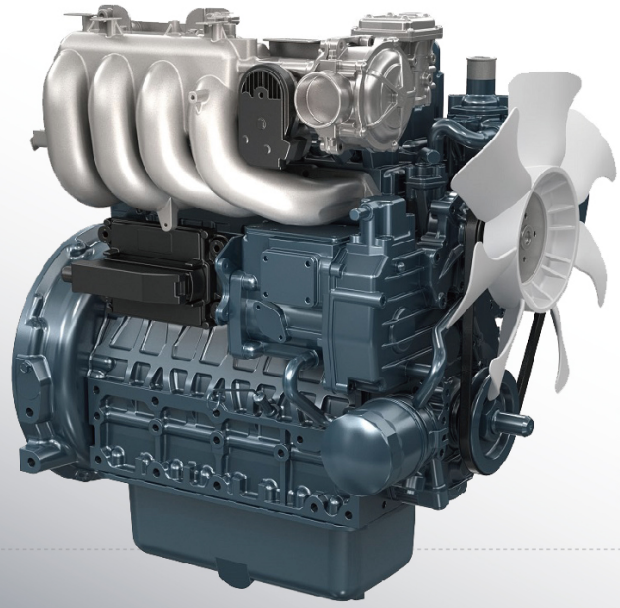
HIGH QUALITY
PRODUCT

G2 series products are fully upgraded to optimize the human-machine interface, vision and operating space. While improving durability and ensuring safety, it also provides driver's with more comfortable and convenient operating environment.



Engine Model:

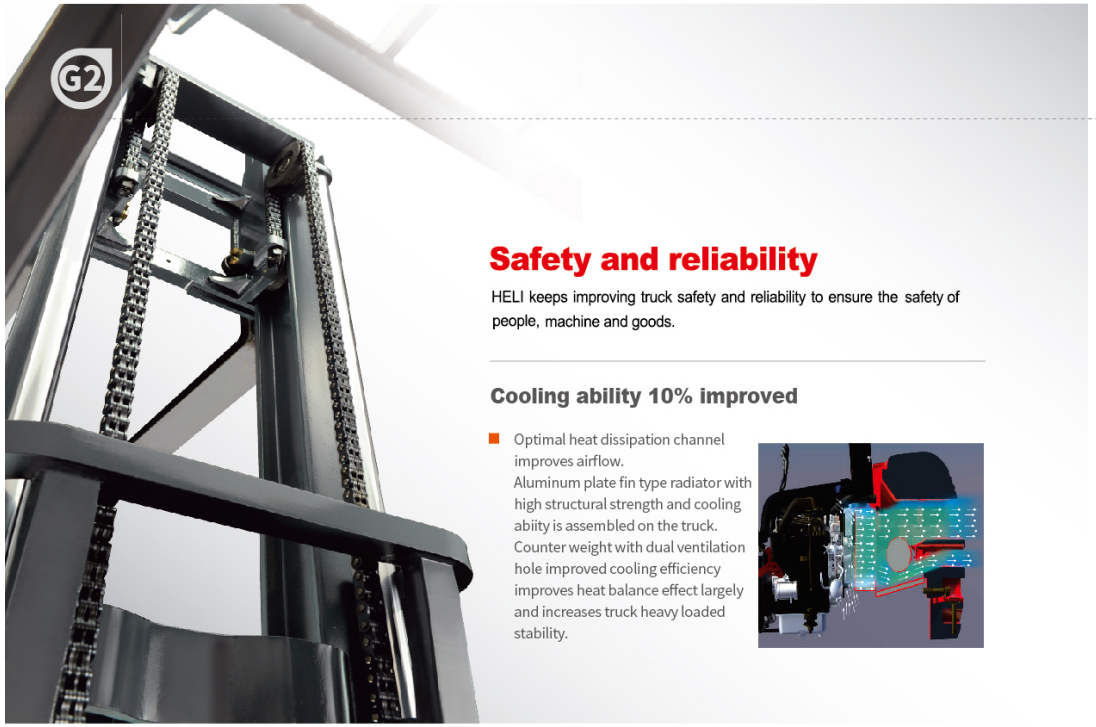
KUBOTA V2403(Diesel)
KUBOTA WG2503(GAS/LPG)

STAGE V

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.

Cooling ability 10% improved

- Optimal heat dissipation channel improves airflow.
  Aluminum plate fin type radiator with high structural strength and cooling abiity is assembled on the truck.
  Counter weight with dual ventilation hole improved cooling efficiency improves heat balance effect largely and increases truck heavy loaded stability.

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.

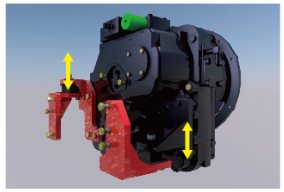
Driver restraint warning system

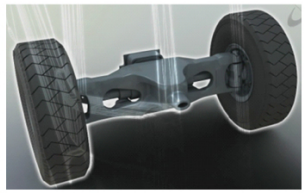
- The vehicle is equipped with driver's safety belt restraint warning system, which makes driving safer.

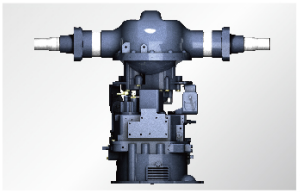
Improved stability and mean-time between failtures (MTBF)40% longer

- The truck stability is improved with the using of flexible connected transmission box, casting steering axle and improvements on important structural parts such as frame, mast and overhead guard. The MTBF of the truck is 40% longer and truck maitenance cost is reduced.

STAGE V







Enhanced Operator Presence System with comprehensive security upgrade

- **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.

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.

Easier and quicker maintenance

- Flexible connected transmission box can be dismounted independently for maintenance and repair without affecting engine and drive axle.
- what is more, coarse filter can be cleaned or replaced without removing and maintenance efficiency is improved.

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.

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.

10% enlarged driving space

- The tilting cylinder is installed under the floor board .
- The tilting angle of floor board is reduced to 15°.
- Enlarged space around foot improves operation comfort and reduces leg fatigue when operating.
- The space getting on or off the truck is enlarged by using large arc shape of the overhead guard' s front leg.

Needs of low-temperature areas

- The prototype was tested at -25℃ 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.

Thumb control system（optional）

- Thumb control system makes truck control comfort, convenient and user-friendly and reduces driver's fatigue. With Grammer multi-functional armrest, seat and Rexroth electromagnetism, the thumb control system controls the truck operation. The control has the characteristics such as more accuracy, good inch control, low noise and long service life.

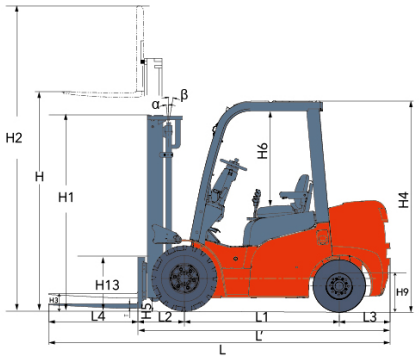
MANUFACTURER' S DATA AND DESIGN CHARACTERISTICS

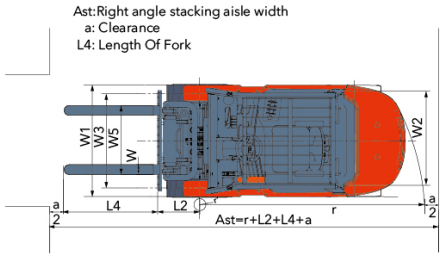
	Character						
1.01	Manufacturer			HELI			
1.02	Model			CPCD20/CP(Q)YD20	CPCD25/CP(Q)YD25	CPCD30/CP(Q)YD30	CPCD35/CP(Q)YD35
1.03	Rated capacity		kg	2000	2500	3000	3500
1.04	Load center		mm	500			
1.05	Operation mode			Sit-on type			
	Size						
2.01	Max. Lifting height	H	mm	3000	3000	3000	3000
2.02	Mast overall height (fork to the ground and mast be vertical)	H1	mm	2000	2000	2070	2180
2.03	Max. Fork lifting height (with backrest)	H2	mm	4039	4039	4217	4217
2.04	Free lift height	H3	mm	145	145	155	160
2.05	Overall height (overhead guard)	H4	mm	2150	2150	2170	2170
2.06	Min. Ground clearance(at the mast)	H5	mm	110	110	135	135
2.07	Distance from the surface of the seat to the overhead guard)	H6	mm	1035	1035	1035	1035
2.08	Backrest height (calculated from the surface of the fork)	H13	mm	1004	1004	1182	1177
2.09	Overall length (with fork/without fork)	(L/L')	mm	3450/2530	3675/2605	3800/2730	3845/2775
2.10	Wheel base	L1	mm	1600	1600	1700	1700
2.11	Overall width	W1	mm	1150	1150	1225	1225
2.12	Tread (front tread/rear tread)	(W3/W2)	mm	970/970	970/970	1000/970	1000/970
2.13	Fork adjustable range (the external of the fork)(max./min.)	W5	mm	1030/244	1030/244	1060/250	1060/250
2.14	Min. Turning radius (exterior)	r	mm	2180	2250	2400	2440
2.15	Min.Right angle stacking aisle width	Ra	mm	2210	2280	2380	2420
2.16	Mast tilting angle	α/β	deg	6/10	6/10	6/10	6/10
2.17	Fork size	L4×W×T	mm	920×122×40	1070×122×40	1070×125×45	1070×125×50
	Weight						
4.01	Total weight		kg	3440	3790	4400	4710
	Wheel and tyre						
5.01	Tyre type (front/rear)			Pneumatic tyre			
5.02	Tyre size (front/rear)			7.00-12-12PR/6.00-9-10PR	7.00-12-12PR/6.00-9-10PR	28×9-15-14PR/6.50-10-10PR	28×9-15-14PR/6.50-10-10PR

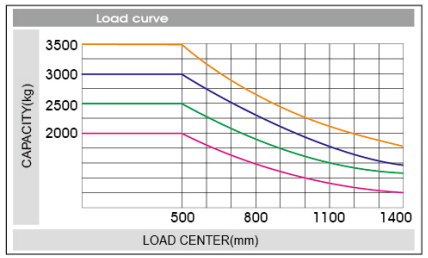
DESIGN CHARACTERISTICS

	Performance									
6.01	Model		CPCD20	CPCD25	CPCD30	CPCD35	CP(Q)YD20	CP(Q)YD25	CP(Q)YD30	CP(Q)YD35
6.02	Configuration number		KU19G2				KU1G2			
6.03	Max. Travelling speed (loaded/unloaded)	Km/h	17/18	17/18	17/18	17.5/18	17/18	17/18	18/19	18/19
6.04	Lifting speed (loaded/unloaded)	mm/s	550/600	550/600	480/530	420/450	560/590	560/590	520/560	440/460
6.05	Lowering speed (loaded/unloaded)	mm/s	420/400	420/400	420/400	420/400	420/400	420/400	420/400	420/400
6.06	Max. Drawbar pull (loaded/unloaded)	KN	20.8/12.3	21.6/12.3	19.6/13.1	20/14.6	19.8/10.4	20.2/11.5	19.2/13.4	18.9/14.4
6.07	Max. Gradability (loaded/unloaded)	%	34/26	32/22	26/20	24/21	37/23	34/22	26/22	24/21
	Drive and transmission control device									
7.01	Battery (voltage/capacity)	V/Ah	12/95				12/60			
7.02	Engine mode		V2403-CR-TE5B				WG2503			
7.03	Engine rated power	KW/rpm	42.6/2400				GAS:42.8/2600，LPG:43.5/2600			
7.04	Engine rated torque	Nm/rpm	195.6/1500				GAS:163/1800，LPG:173.7/1400			
7.05	Engine cylinder number-borexstroke		4-87×102.4				4-87×102.4			
7.06	Engine displacement	L	2.434				2.491			
7.07	Engine type		Diesel				GAS/LPG			
7.08	Emission		Euro stage V				Euro stage V			
7.09	Engine fuel tank capacity	L	66		70		66		70	
7.10	Transmission box shifting gears (front/rear type)		1-1Power Shift T/M							

NOTE:* stands for theoretical calculating value.







CPCD35 CP(Q)YD20 | CPCD30 CP(Q)YD25 | CPCD25 CP(Q)YD30 | CPCD20 CP(Q)YD35

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 1000mm 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.

WIDE VIEW MAST

Mastmodel	Max. lifting height mm	Load capacity(load center 500mm) (Kg)				Mast overall height (mm)				Service weight				Mast tilt angle (°) α/β
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	
M200	2000	2000	2500	3000	3500	1495	1495	1570	1680	3350	3700	4310	4610	6/10 *6/10
M250	2500	2000	2500	3000	3500	1745	1745	1820	1930	3400	3750	4350	4660	6/10 *6/10
M300	3000	2000	2500	3000	3500	1995	1995	2080	2180	3440	3790	4400	4710	6/10 *6/10
M330	3300	2000	2500	3000	3500	2145	2145	2220	2330	3470	3820	4430	4740	6/10 *6/10
M350	3500	2000	2500	3000	3500	2245	2245	2320	2430	3490	3840	4450	4760	6/10 *6/10
M370	3700	2000	2500	3000	3500	2345	2345	2420	2530	3500	3850	4470	4780	6/6 *6/10
M400	4000	2000	2500	3000	3200 *3500	2545	2545	2620	2730	3580	3930	4540	4850	6/6 *6/10
M425	4250	1900 *2000	2250 *2500	2850 *3000	3100 *3200	2670	2670	2745	2855	3600	3950	4570	4870	6/6 *6/10
M450	4500	1800 *1900	2150 *2400	2750 *3000	3000 *3050	2795	2795	2870	2980	3630	3980	4590	4900	6/6 *6/10
M500	5000	1600 *1700	1650 *2200	2400 *2850	2500 *2850	3045	3045	3120	3230	3670	4020	4640	4950	6/6 *6/6
M550	5500	*1600	*1950	*2450	*2500	3345	3345	3420	3530	3770	4120	4730	5040	*3/6
M600	6000	*1500	*1800	*2200	*2300	3595	3595	3670	3780	3810	4160	4830	5090	*3/6

NOTE: (1)When the front tyre is double tyre, the service weight of the truck is the weight in the table plus 110kg.
(2)* Refers to rated capacity with dual front tires or widen tires;

WIDE VIEW FULL FREE 2-STAGE MAST

Mastmodel	Max. lifting height mm	Load capacity (load center 500mm)(kg)				Mast overall height(mm)				Free lifting height (with backrest)				Service weight(kg)				Mast tilt angle (°) α/β
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	
ZM200	2000	2000	2500	3000	3500	1495	1495	1570	1680	490	490	388	503	3350	3700	4320	4640	6/10 *6/10
ZM250	2500	2000	2500	3000	3500	1745	1745	1820	1930	740	740	638	753	3400	3750	4360	4690	6/10 *6/10
ZM300	3000	2000	2500	3000	3500	1995	1995	2070	2180	990	990	888	1003	3440	3790	4410	4740	6/10 *6/10
ZM330	3300	2000	2500	3000	3500	2145	2145	2220	2330	1140	1140	1038	1153	3470	3820	4440	4770	6/10 *6/10
ZM350	3500	2000	2500	3000	3500	2245	2245	2320	2430	1240	1240	1138	1253	3490	3840	4460	4780	6/10 *6/10
ZM370	3700	2000	2500	3000	3500	2345	2345	2420	2530	1340	1340	1238	1353	3510	3860	4480	4800	6/6 *6/10
ZM400	4000	2000	2500	3000	3200 *3500	2545	2545	2620	2730	1540	1540	1438	1553	3580	3930	4550	4880	6/6 *6/10
ZM425	4250	1900 *2000	2250 *2500	2850 *3000	3100 *3200	2670	2670	2745	2855	1665	1665	1563	1678	3610	3960	4580	4900	6/6 *6/10
ZM450	4500	1800 *1900	2150 *2400	2750 *3000	3000 *3050	2795	2795	2870	2980	1790	1790	1688	1803	3630	3980	4600	4930	6/6 *6/10
ZM500	5000	1600 *1700	1650 *2200	2400 *2850	2500 *2850	3045	3045	3120	3230	2040	2040	1938	2053	3670	4020	4650	4970	6/6 *6/6
ZM550	5500	*1600	*1950	*2450	*2500	3345	3345	3420	3530	2340	2340	2238	2353	3770	4120	4740	5070	*3/6
ZM600	6000	*1500	*1800	*2200	*2300	3595	3595	3670	3780	2590	2590	2488	2603	3810	4160	4840	5110	*3/6

NOTE: (1) The free lifting height (without backrest) of the 2-2.5t truck is the height (with backrest) in the table plus 392mm. The free lifting height (without backrest) of the 3t truck is the height (with backrest) in the table plus 485mm. The free lifting height (without backrest) of the 3.5t truck is the height (with backrest) in the table plus 407mm.
(2)When the front tyre is double tyre, the service weight of the truck is the weight in the table plus 110kg.
(3)* Refers to rated capacity with dual front tires or widen tires.

WIDE VIEW FULL FREE 3-STAGE MAST

Mastmodel	Max. lifting height mm	Load capacity (load center 500mm)(kg)				Mast overall height(mm)				Free lifting height (with backrest)				Service weight(kg)				Mast tilt angle (°) α/β
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	
ZSM360	3600	2000	2400	2900	3300	1795	1795	1930	1930	785	785	748	753	3600	3950	4590	4860	6/6 *6/6
ZSM400	4000	1900	2400	2900	3300	1920	1920	2055	2055	910	910	873	878	3630	3980	4620	4890	6/6 *6/6
ZSM435	4350	1850 *1900	2200 *2400	2800 *2900	2900 *3000	2045	2045	2180	2180	1035	1035	998	1003	3660	4010	4650	4920	6/6 *6/6
ZSM450	4500	1750 *1800	2150 *2300	2700 *2800	2800 *2900	2095	2095	2230	2230	1085	1085	1048	1053	3680	4030	4670	4930	6/6 *6/6
ZSM470	4700	1720 *1800	2000 *2300	2600 *2800	2650 *2900	2160	2160	2230	2230	1150	1150	1048	1053	3690	4040	4680	4940	6/6 *6/6
ZSM480	4800	1700 *1800	1950 *2300	2500 *2800	2600 *2900	2195	2195	2330	2330	1185	1185	1148	1153	3700	4050	4690	4960	6/6 *6/6
ZSM500	5000	1600 *1750	1650 *2250	2400 *2750	2450 *2850	2295	2295	2430	2430	1285	1285	1248	1253	3730	4080	4720	4980	6/6 *6/6
ZSM540	5400	1450 *1700	1500 *2150	2250 *2650	2300 *2700	2420	2420	2555	2555	1410	1410	1373	1378	3760	4110	4750	5010	3/6 *3/6
ZSM600	6000	950 *1600	1000 *1800	1500 *2150	1550 *2200	2645	2645	2780	2780	1635	1635	1598	1603	3860	4210	4850	5110	3/6 *3/6

NOTE: (1) The free lifting height (without backrest) of the 2-2.5t truck is the height (with backrest) in the table plus 441mm. The free lifting height (without backrest) of the 3-3.5t truck is the height (with backrest) in the table plus 411mm.
(2)When the front tyre is double tyre, the service weight of the truck is the weight in the table plus 110kg.
(3)* Refers to rated capacity with dual front tires or widen tires.