

**HELI**  
LIFTING THE FUTURE

**4-5t**

**G3 Series Internal Combustion  
Counterbalanced Forklift Truck (Euro Stage V)**

**HELI**

**STAGE V**



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# NEW GENERATION SUPERIOR QUALITY

G3 series 4-5t internal combustion counterbalanced forklift truck is a design model of perfect combination and functional design. It's the new generation of products with intelligent, safe, high efficient and energy saving and environmental friendly characteristics.



**Engine Model:**  
DEUTZ TCD3.6

### Reliable output

- German made diesel engine, quality of first class.
- Maintenance free "DOC+DPF only" exhaust afterment, result in low maintenance cost and better machine availability
- Best cold performance(-30°C with DEUTZ preheat system) ensures reliable operation under extreme condition.



### Best in class performance

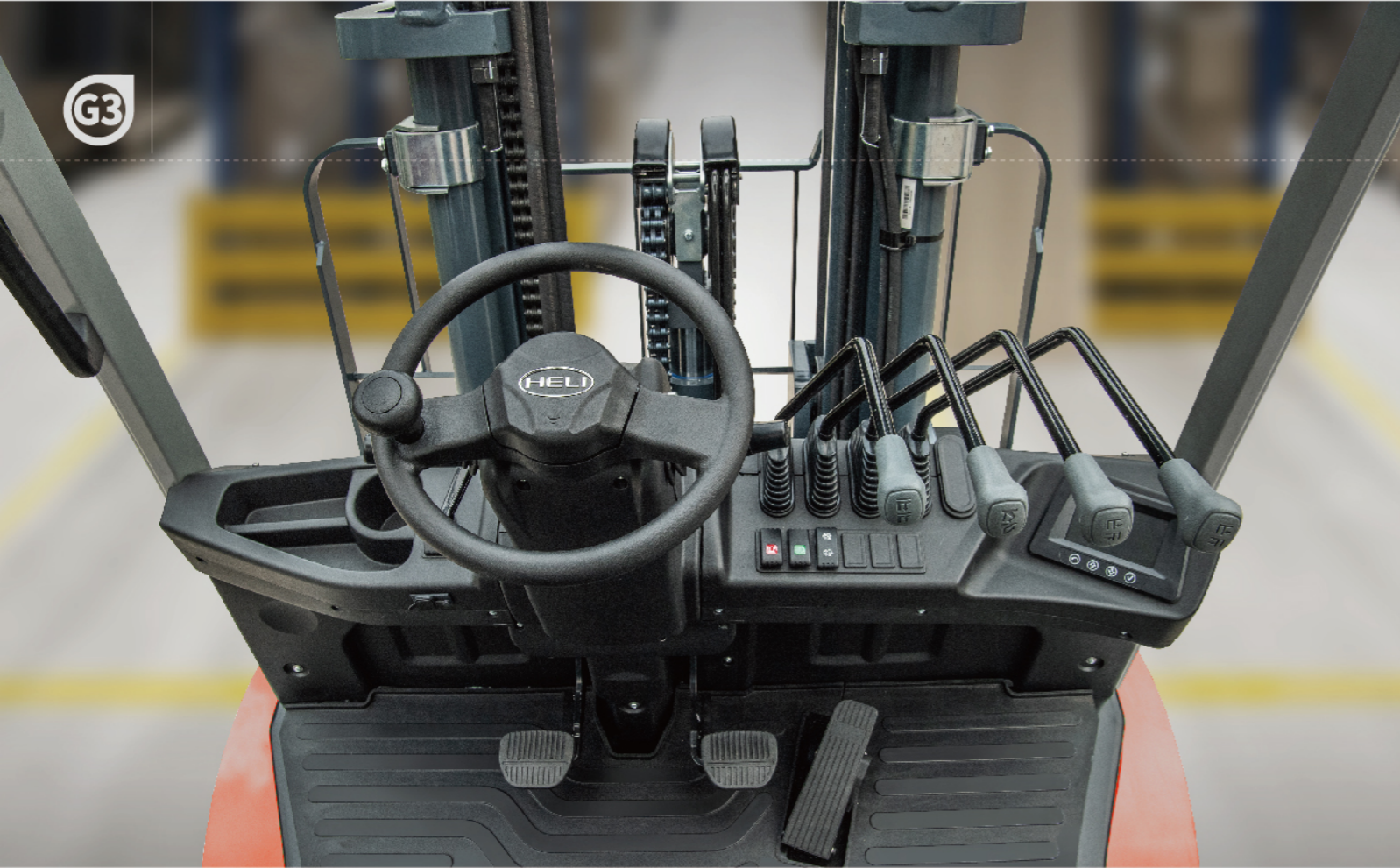
- Powerful DEUTZ Common Rail (DCR) injection system and electronic engine control (EMR4) ensure maximum engine performance at low fuel cost
- High torque output(406Nm@1300rpm) tailor made for forklift application

### Cost saving

- 500h oil change interval and a maintenance free valve train result in low maintenance cost and increase machine availability
- Oil consumption rate

### Clean power

- Meet the requirement of EU Stage V/ EPA Tier 4F emission standard.
- Future-proof, Stage V ready.



## More Comfortable

- Magnetic brake on driving axle , the truck can automatic parking in slope or flat.
- Rear handle with horn function contributes to stable sitting pose when travelling backward, safe and comfortable.
- Automobile type double combined switch effectively improved the driving comfort level.



- Half-enclosed high-end seat, the large angle of backrest adjustment and the side waist protector is designed to relieve the back fatigue.
- Sensor operated power steering, more comfortable (optional).
- Synchronized steering of steering wheel and tyres reduces operation fatigue.
- Switch type electronic parking brake is easy for operation.
- Wide view mast improve driving experience.
- Buffering structure of drive axle improves driving comfort.



- optimized design of counter weight improves backward view



## More Reliable

- The truck is assembled with dual guide-wheel transmission box which offers large ratio (more than 5) and thus truck acceleration and gradeability are improved largely.
- Donaldson air cleaner ensures enough clean air for engine and the total efficiency reaches to 99.8%.
- Operation safety is largely improved with maintenance-free wet type drive axle and normally closed parking brake.
- Smart instrument monitors truck status overall and thus the truck is safe and reliable.
- Enlarged aluminum fin-type radiator improves cooling performance.



## Safer

- The counter weight without tail structure reduces truck center of gravity and improves lateral stability.
- Integral type welded overhead guard with high strength improves operation safety.
- Auxiliary control system of parking improves the safety and service life of parking brake.
- OPS system improves operation safety.
- Safe starting on neutral and anti restarting of engine improves operation safety.
- Automatic alarm when over speed (optional)

## More Energy Saving

- Variable pump with load sensing system makes the truck more energy saving. ( optional )
- Optimized design of hydraulic system effectively reduces truck fuel consumption.

- LED lights make truck more energy saving.



## Easier Maintenance

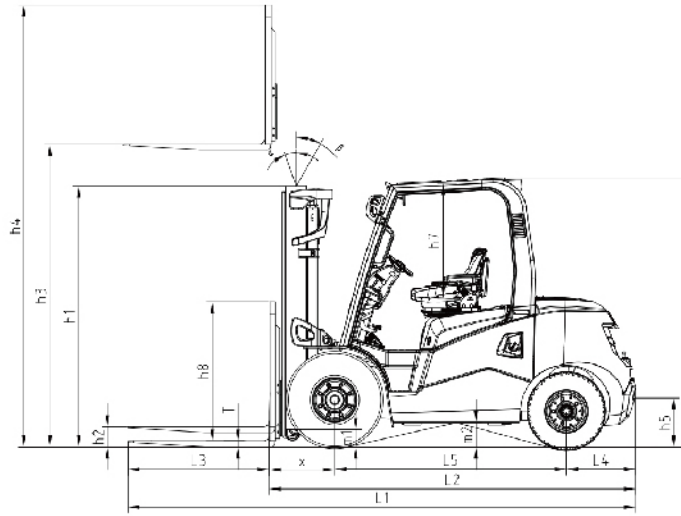
- 80° opening angle of hood makes maintenance easier.
- Removable wind gathering cover and filter screen make maintenance easy.



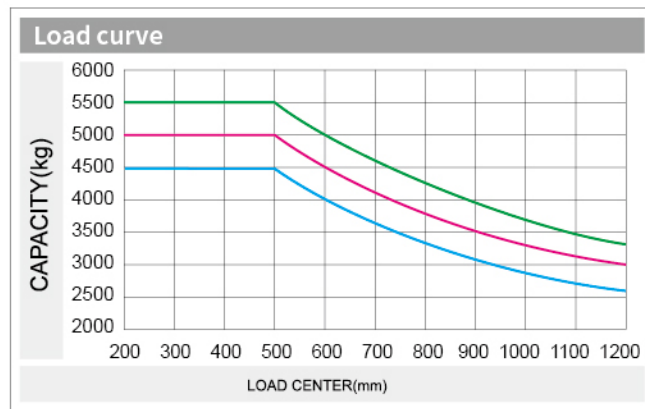
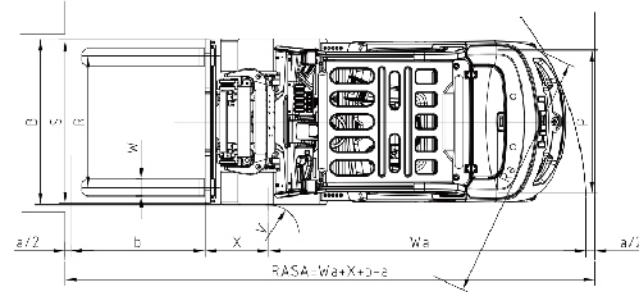
## Manufacturer and technical parameters

Characteristics						
1.01	Manufacturer			<b>HELI</b>		
1.02	Model			CPCD40	CPCD45	CPCD50
1.03	Load center	mm		600(500)		
1.04	Rated capacity	kg		4000(4500)	4500(5000)	5000(5500)
1.05	Power type			Diesel		
1.06	Driving mode			Sit-on type		
Dimensions						
2.01	Max.fork lifting height(With backrest)	h4	mm	4235	4235	4395
2.02	Max.lifting height	h3	mm	3000	3000	3000
2.03	Mast overall height (Fork to the ground and mast be vertical)	h1	mm	2250	2250	2250
2.04	Backrest height (Calculated from the surface of the fork)	h8	mm	1210	1210	1395
2.05	Free lift height	h2	mm	150	150	150
2.06	Fork thickness	T	mm	50	50	55
2.07	Fork length	L3	mm	1220	1220	1220
2.08	Fork width	W	mm	150	150	150
2.09	Min.ground clearance(At the mast)	m1	mm	150	150	150
2.10	Overall length(With fork)	L1	mm	4340	4385	4455
2.11	Overall length(Without fork)	L2	mm	3120	3165	3235
2.12	Front overhang	X	mm	565	565	570
2.13	Wheel base	L5	mm	2000	2000	2000
2.14	Rear overhang	L4	mm	555	600	660
2.15	Traction pin height	h5	mm	420	420	420
2.16	Distance from the surface of the seat to the overhead guard	h7	mm	1020	1020	1020
2.17	Overall height(Overhead guard)	h6	mm	2320	2320	2320
2.18	Overall width	B	mm	1450	1450	1450
2.19	Fork adjustable range(the external of the fork)	S	mm	300/1374	300/1374	300/1374
2.20	Front tread	R	mm	1150	1150	1150
2.21	Rear tread	P	mm	1190	1190	1190
2.22	Turning radius(Interior)	V	mm	250	250	250
2.23	Min.turning radius	Wa	mm	2835	2880	2940
2.24	Min.right angle aisle width	Ra	mm	2715	2760	2820
2.25	Mast tilting angle	$\alpha / \beta$	deg.	6°- 12°	6°- 12°	6°- 12°
Weight						
3.01	Total weight	kg		6510	6840	7450
Wheel and tyre						
4.01	Wheel number x = drive wheel (Front/Rear)			2X/2		
4.02	Tyre type(Front/Rear)			Pneumatic tyre		
4.03	Tyre size(Front/Rear)			2-300-15-18PR / 2-7.00-12-14PR		
4.04	Wheels load (loaded)front/rear			9130/1380	9820/1520	10860/1590
4.05	Wheels load (unloaded) front/rear			2800/3710	2700/4140	2940/4510
4.06	Service brake			Hydraulic assisted-pedal type-wet type brake		
4.07	Parking brake			Electronic rocker switch-wet type brake		

Performance				
Model		CPCD40-DE2G3	CPCD45-DE2G3	CPCD50-DE2G3
Lifting speed (loaded/unloaded)	mm/s	530/560	500/520	500/520
Lowering speed (loaded/unloaded)	mm/s	500/520		
Max. Operation speed (loaded/unloaded)	km/h	23/25		
Max. Gradeability (loaded/unloaded)	%	46/28	41/28	36/28
Max. Drawbar(loaded)	N	43000		
Drive and transmission devices				
Engine model		DEUTZ TCD3.6		
Engine rated power	kW/rpm	55.4/2300		
Engine rated torque	Nm/rpm	390/1300		
Engine cylinder number		4		
Engine displacement	L	3.6		
Capacity of engine fuel tank	L	100		
Emission		Stage V / EPA T4F		
Transmission gears (front/rear)		1/1- POWER SHIFT		



RASA: Right-Angle Stack Asile  
a: Clearance  
b: Length of Loading



CPCD 40    CPCD 45    CPCD 50

NOTE:  
Vertical axle stands for load capacity while horizontal axle stands for load center. Load center is the distance counted from the front of the fork. The base point of the standard load is the center point of the cubic with the same 1200mm dimension in length, width and height. The load capacity should be down, if mast tilts forward, using non-standard forks or loading goods with extra width. Please notice the different load capacity between different load centers according to load chart.

WIDE VIEW MAST										
mast model	Max. lifting height (mm)	load capacity (load center 600mm)(kg)			mast overall height (fork to the ground) (mm)	free lifting height (mm)	Service Weight(unload)(kg)			mast tilting angle (°) α/β
		4t	4.5t	5t			4t	4.5t	5t	
M250	2500	4000	4500	5000	2000	150	6457	6787	7397	6°/12°
M300	3000	4000	4500	5000	2250	150	6517	6847	7457	6°/12°
M330	3300	4000	4500	5000	2400	150	6547	6877	7487	6°/12°
M350	3500	4000	4500	5000	2500	150	6572	6902	7512	6°/12°
M370	3700	4000	4500	5000	2600	150	6597	6927	7537	6°/12°
M400	4000	4000	4500	5000	2800	150	6697	7027	7637	6°/12°
M425	4250	4000	4500	5000	2925	150	6722	7052	7662	6°/16°
M450	4500	3800	4300	4700	3050	150	6752	7082	7692	6°/16°
M475	4750	*4000	*4500	*5000	3175	150	6782	7112	7722	6°/16°
M500	5000	3500	4000	4250	3300	150	6807	7137	7747	6°/16°
M550	5500	*3700	*4200	*4600	3600	150	6932	7262	7872	6°/16°
M600	6000	*3400	*4000	*4200	3850	150	6992	7322	7932	6°/16°

WIDE VIEW FULL FREE 2-STAGE MAST											
mast model	Max. lifting height (mm)	load capacity (load center 600mm)(kg)			mast overall height (fork to the ground) (mm)	free lifting height (mm)		Service Weight(unload)(kg)			mast tilting angle (°) α/β
		4t	4.5t	5t		4t/4.5t	5t	4t	4.5t	5t	
ZM250	2500	4000	4500	5000	2000	790	640	6462	6792	7402	6°/12°
ZM300	3000	4000	4500	5000	2250	1040	890	6527	6857	7467	6°/12°
ZM330	3300	4000	4500	5000	2400	1190	1040	6562	6892	7502	6°/12°
ZM350	3500	4000	4500	5000	2500	1290	1140	6592	6922	7532	6°/12°
ZM370	3700	4000	4500	5000	2600	1390	1240	6617	6947	7557	6°/12°
ZM400	4000	4000	4500	5000	2800	1590	1440	6707	7037	7647	6°/12°
ZM425	4250	4000	4500	5000	2925	1715	1565	6737	7067	7677	6°/16°
ZM450	4500	3800	4300	4700	3050	1840	1690	6772	7102	7712	6°/16°
ZM475	4750	*4000	*4500	*5000	3175	1965	1815	6807	7137	7747	6°/16°
ZM500	5000	3500	4000	4250	3300	2090	1940	6837	7167	7777	6°/16°
ZM550	5500	*3700	*4200	*4600	3600	2390	2240	6947	7277	7887	6°/16°
ZM600	6000	*3200	*3600	*3800	3850	2640	2490	7007	7337	7947	6°/16°

Note: Free lift for 4-4.5t (without backrest):+290mm;  
Free lift for 5t (without backrest):+410mm

WIDE VIEW FULL FREE 3-STAGE MAST												
mast model	Max. lifting height (mm)	load capacity (load center 600mm)(kg)			mast overall height (fork to the ground)(mm)		free lifting height (mm)		Service Weight(unload)(kg)			mast tilting angle (°) α/β
		4t	4.5t	5t	4t/4.5t	5t	4t/4.5t	5t	4t	4.5t	5t	
ZSM360	3600	*3800	*4350	*4800	1950	2000	740	640	6722	7052	7662	6°/16°
ZSM400	4000	*4000	*4500	*5000	2090	2140	880	780	6767	7097	7707	6°/16°
ZSM435	4350	*3800	*4350	*4800	2200	2250	990	890	6807	7137	7747	6°/16°
ZSM450	4500	*4000	*4500	*5000	2250	2300	1040	940	6822	7152	7762	6°/16°
ZSM470	4700	*3800	*4350	*4800	2365	2365	1155	1005	6847	7177	7787	6°/16°
ZSM500	5000	*3500	*4000	*4200	2500	2500	1290	1140	6892	7222	7832	6°/16°
ZSM540	5400	*3250	*3700	*3800	2635	2635	1425	1275	6997	7327	7937	6°/16°
ZSM600	6000	*3200	*3400	*3800	2870	2870	1660	1510	7077	7407	8017	6°/16°

Note: Free lift for 4-4.5t (without backrest):+290mm;  
Free lift for 5t (without backrest):+410mm