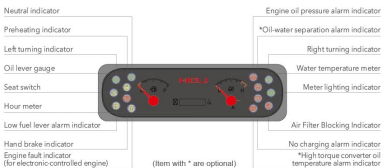


### Reliable special designed instrument



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

Hom	Standard fork
Control valve	Integrated electric box
Wholly hydraulic-powered steering	Hydraulic oil circuit filter
Half enclosed seat	Flow regulator
Backrest	Wide view mast
Back view mirror	Air intake device
Front combined lamp	Durable tread tyre
Transmission oil filter	Lifting and tilting operation lever
Engine flame out device	Lifting pin
Cable type parking brake	Head lamp
Driver's tool	Hydraulic oil dipstick
Rear combined lamp	Overhead guard
Backward buzzer	Torque converter oil dipstick
Tik oil circuit self lock valve	Combined instrument
Tik adjustable steering column	Electro-hydraulic direction changing
Overhead guard rain cover	

### Optional

Driver's cab	Torque converter oil temperature meter
Warning light	Tilting cylinder bush
High air exhausting device	Customer made color
Double air cleaner	Optional attachments
Suspension seat	Steel protection net
Double-tyre and protection device	Rotating seat for lpg
Warm air blower	Single/dual fuel system
Solid tyre	Low speed alarm
Widen fork arm carrier	
Wind shield	
Cleansing muffler	
Fire extinguisher muffler	
Fire extinguisher	
Rear working light	
Air conditioner (certain type)	
Travelling control system	

## 2-3.8 t H3 series Internal Combustion Counterbalanced Forklift Truck



### H3 SERIES 2-3.8 t

#### Improved performance, superior quality



#### Vibration reduced Noise reduced

- Cushion connection and wholly suspension driver's cab absorb whole truck's vibration effectively.
- Noise around ear is reduced through down the lifting cylinder under the floor board and using fully closed patch type driver's cab.
- Lower damping device inside the lifting system reduces mast shock and vibration, avoiding crash noise caused by goods falling to the ground.

#### Workspace increased

- Space around foot is effectively increased through up-steering unit and using suspension type inching.
- The operation space is enlarged by heightened overhead guard and using large arc shape of the overhead guard's front leg.
- Semi-suspension seat, steering wheel with small diameter, electro-hydraulic direction changing and automobile type double joystick combined switch effectively improve driving comfort.

#### Operator's view improved

- Operator's front view is improved through the assembling of stand wide view mast and lowering the dashboard.
- Operator's rear view improved through the CAE optimal designed counterweight.



#### Working efficiency improved

- Small turning radius makes steering flexible and easy.
- The truck has fast lifting speed, good gradeability and high efficiency.
- High working efficiency guarantees the truck could meet the requirements for various kinds of complicated work condition perfectly wherever at port, dock and railway station.

#### Loading capacity increased

#### Stability improved Reliability improved

- The hot air reflow isolating device, optimal thermal dissipation duct and aluminum plate-fin type radiator improve cooling ability and ensure engine work reliability.
- Automobile type oil filling cap and optimal of filling channel structure and process ensure whole truck's safety.
- The constant displacement pump load sensing steering system increases the lifting speed and reduces the hydraulic oil temperature.
- The optimal design of key parts like frame, mast, overhead guard and steering axle improve the whole truck's safety and reliability.
- The repositioning of whole truck's gravity center improve loading capacity, stability and safety.

#### Increased hood opening angle

- Enlarged internal space is convenient for engine and transmission box maintenance.
- Increased hood open angle contributes to quick and convenient maintenance.

#### HELI smart fleet management system (optional)

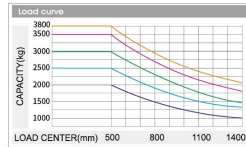
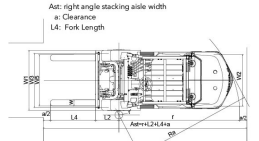
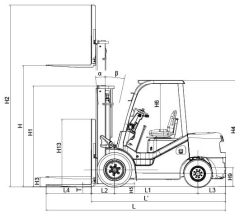
- Vehicle positioning
- Remote diagnosis
- Remote monitoring
- Maintenance reminder
- Battery management
- Statistical form
- Vehicle management
- Identification recognition (optional)
- Weight management (optional)
- Collision management (optional)





Manufacturer and technical parameters

Character							
1.01	Manufacturer	<b>HELIX</b>					CPD03B
1.02	Model	CP03B/CP03D5/CP03D8/CP03E/CP03E2/CP03E3/CP03E4/CP03E5/CP03E6/CP03E7/CP03E8/CP03E9	CP03B/CP03D5/CP03D8/CP03E/CP03E2/CP03E3/CP03E4/CP03E5/CP03E6/CP03E7/CP03E8/CP03E9	CP03B/CP03D5/CP03D8/CP03E/CP03E2/CP03E3/CP03E4/CP03E5/CP03E6/CP03E7/CP03E8/CP03E9	CP03B/CP03D5/CP03D8/CP03E/CP03E2/CP03E3/CP03E4/CP03E5/CP03E6/CP03E7/CP03E8/CP03E9	CP03B/CP03D5/CP03D8/CP03E/CP03E2/CP03E3/CP03E4/CP03E5/CP03E6/CP03E7/CP03E8/CP03E9	CPD03B
1.03	Rated capacity	kg	2000	2500	3000	3500	3800
1.04	Load center	mm	500				
1.05	Operation mode	Seat-type					
Size							
2.01	Max.lifting height	H	mm	3000	3000	3000	3000
2.02	Max.overall height (Fork to the ground and mast be vertical)	H1	mm	2000	2000	2065	2180
2.03	Max.fork lifting height(With backrest)	H2	mm	4030	4030	4245	4235
2.04	Free lift height	H3	mm	165	165	160	170
2.05	Overall height (Overhead guard)	H4	mm	2150	2150	2170	2170
2.06	Min.ground clearance (At the mast)	H5	mm	115	115	135	135
2.07	Distance from the surface of the seat to the overhead guard	H6	mm	1030	1030	1030	1030
2.08	Traction pin height	H9	mm	275	275	280	280
2.09	Backrest height (Calculated from the surface of the fork)	H13	mm	1000	1000	1227	1222
2.10	Overall length (With fork/Without fork)	(L/L1)	mm	3500/2580	3708/2638	3818/2748	3836/2766
2.11	Wheel base	L1	mm	1650	1650	1700	1700
2.12	Front overhang	L2	mm	473	473	478	484
2.13	Rear overhang	L3	mm	457	515	570	602
2.14	Overall width	W1	mm	1150	1150	1225	1225
2.15	Tread (Front tread/Rear tread)	(W2/W2')	mm	970/970	970/970	1000/970	1000/970
2.16	Fork adjustable range (the external of the fork) (Max./Min.)	WS	mm	1030/244	1030/244	1060/250	1060/250
2.17	Min.turning radius (Exterior)	r	mm	2170	2240	2400	2480
2.18	Min.turning radius (Interior)	r'	mm	180	180	200	200
2.19	Min.right angle stacking aisle width	Ra	mm	2200	2280	2380	2470
2.20	Max.steering angle	α/β	%	6°/12°	6°/12°	6°/12°	6°/12°
2.21	Fork size	L4-W*W'	mm	920*122*40	1070*122*40	1070*125*45	1070*125*50
Weight							
3.01	Total weight	kg	3370	3740	4340	4700	4930
3.02	Weight distribution loaded (Front/Rear)		4740/630	5440/800	6440/900	7380/820	7630/1100
3.03	Weight distribution unloaded (Front/Rear)	kg	1570/1800	1520/2220	1700/2640	1850/2850	1630/3300
Wheel and tyre							
4.01	Wheel number x drive wheel (Front/Rear)	2X/2					
4.02	Type tyre (Front/Rear)	Pneumatic tyre					
4.03	Type size (Front/Rear)	28+9-15-12PR/ 6.50-10-10PR      28+9-15-12PR/ 6.50-10-10PR      28+9-15-14PR/ 6.50-10-10PR					
4.04	Service brake	Hydraulic-Foot Pedal					
4.05	Parking brake	Mechanical-Hand Lever					



CPD03B  
CP03E9  
CP03E8  
CP03E7  
CP03E6  
CP03E5  
CP03E4  
CP03E3  
CP03E2  
CP03E  
CP03D8  
CP03D5  
CP03B

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 load center 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 MAST																	
Mast model	Max. lifting height (mm)	Load capacity (load center 500mm)						Mast overall height (fork to the ground) (mm)						Mast tilt angle (°) α/β			
		2t	2.5t	3t	3.5t	3.8t	2.2-5t	3t	3.5t	3.8t	2t	2.5t	3t		3.5t	3.8t	
M200	2000	2000	2500	3000	3500	3800	1459	1570	1680	1800	1920	2040	2160	2280	2400	6°/12	
M250	2500	2000	2500	3000	3500	3800	1459	1570	1680	1800	1920	2040	2160	2280	2400	6°/12	
M300	3000	2000	2500	3000	3500	3800	1995	2080	2180	2180	3370	3740	4340	4700	4930	6°/12	
M330	3300	2000	2500	3000	3500	3800	2145	2220	2330	2430	3400	3770	4360	4730	4960	6°/12	
M350	3500	2000	2500	3000	3500	3800	2245	2320	2430	2430	3420	3790	4380	4750	4980	6°/12	
M370	3700	2000	2500	3000	3500	3800	2345	2420	2530	2530	3400	3800	4400	4760	4990	6°/12	
M400	4000	2000	2400	2800	3200	3400	2545	2620	2730	2730	3510	3880	4490	4840	5070	6°/12	
M425	4250	2000	2400	2800	3200	3400	2670	2745	2855	2855	3530	3900	4510	4870	5100	6°/12	
M450	4500	1850	2250	2650	3050	3200	2795	2870	2980	2980	3540	3910	4520	4880	5110	6°/12	
M500	5000	1850	2250	2650	3050	3200	2900	3045	3120	3230	3230	3600	4070	4580	4950	5000	
M550	5500	*1750	*2100	*2500	*2800		-	3345	3420	3530	3530	3700	4270	4690	4990	5220	*6/6
M600	6000	*1700	*1800	*2200	*2350		-	3595	3670	3780	3780	3740	4110	4730	5040	5270	*6/6

Note: (1) \*stands for the rated capacity when the front tyre is double tyre. (2) When the front tyre of the 2.3-3t truck is double tyre, the service weight of the truck is the weight in the table plus 110kg. (3) The free lifting height (without backrest) of the 2.2-3t truck is the height (with backrest) in the table plus 455mm. The free lifting height (without backrest) of the 3.3-3t truck is the height (with backrest) in the table plus 505mm.

Performance													
Model	CP2C	CP2D0	CP2S	CP2D2S	CP30	CP3D0	CP3S	CP3D3S	CP3B	CP3D3B	CP04(Y)20	CP04(Y)D20	
Max. drawbar pull (Loaded/Unloaded)	kN	17.5/12.3	19/12.8	18/12.4	18/13.8	18/17.4/5	19/14.5	18/14.5	21/14.5	23/15	23/15	15/12.5	16/12.8
Max. gradability (Loaded/Unloaded)	%	30/25	39/28	27/23	35/23	21/23	29/22	15/22	23/22	27/32	27/32	30/25	39/28
Max. trailing speed (Loaded/Unloaded)	km/h	17/19		17/19	19/20		19/19		20/19		17/19		19/20
Lifting Speed (Loaded/Unloaded)	mm/s	560/600			500/550		400/420		450/480		520/570		420/480
Lowering Speed (Loaded/Unloaded)	mm/s	450/500			450/500		450/500		350/400		440/540		450/500
Drive and transmission control device													
Engine model	ISUZU C240					ISUZU 4J52					QUANCHAI 4C4-63C31		GCT K25
Engine rated power	35.4/2500					35/2450					37.4/2500		37.4/2500
Engine rated torque	139.9/1800					170/1700					200/1500-1875		174.5/1600
Engine cylinder number-bore/stroke	4-86*102					4-86*102					4-96*107		4-89*100
Engine displacement	L					2.369					3.059		3.17
Engine type						Diesel					Euro Stage II A/ China Stage II		China Stage II
Emission						Euro Stage II A / China Stage II					Euro Stage II A/ China Stage II		China Stage II
Battery(Voltage/Capacity)	V/Ah					12/80					60		12/60
Engine fuel tank capacity	L					60					60		12/60
Transmission (forking gears)						1-1 Power Shift T/M / 2-2 Manual Shift T/M							
Transmission (backing gears)													
Transmission (Front/Rear type)													

Note: \* indicates the theoretical calculation value.

Engine Model and Main Specification for Option									
Engine model	Rated power/rotating speed(Kw/rpm)	Torque (Nm/rpm)	Displacement	Cylinder number	Cylinder number Bore*stroke	Engine type	Emission		
CA498 DACHAI CA498	45/2500	176/1800	3.168	4	4-98*105	Diesel	China Stage III		
GCT K21	31.2/2200	143.7/1600	2.065	4	4-89*83	Gasoline or LPG			
QSF2.8 Cummins QSF2.8	36/2500	186/1100-1500	2.8	4	4-94*100	Diesel	Euro II A/Beijing IV / CHINA STAGE III		
QSF2.8 Cummins QSF2.8	43/2500	186/1100-1500	2.8	4	4-94*100	Diesel	Euro Stage IIIA / CHINA Stage III		
4C3-60C31 QUANCHAI 4C3-60C31	42/2500	190/1800	2.97	4	4-95*105	Diesel	China Stage III		
4D32XG30 XINCHAI 4D32XG30	45/2500	200/1500-1800	3.168	4	4-98*105	Diesel	China Stage III		
Mitsubishi 4G64 (PSI)	GAS: 48/2700 LPG: 46/2700	GAS: 170/2400 LPG: 168/1800	2.351	4	4-86*5-120	Gasoline or LPG	CARB4		
Mitsubishi S45	35.3/2250	177/1700	3.331	4	4-94*100	Diesel	Euro Stage IIIA / China Stage III		
HJ493G43	36.5/2500	156/1800	2.771	4	4-93*102	Diesel	Euro Stage IIIA / China Stage III		
QUANCHAI 4C4-63C31	46/2500	200/1500-1875	3.17	4	4-98*105	Diesel	China Stage III		
QUANCHAI QC498G	46/2500	185/1800-2000	3.17	4	4-98*105	Diesel	China Stage II		

WIDE VIEW FULL FREE 2-STAGE MAST																
Mast model	Max. lifting height (mm)	Load capacity (load center 500mm)						Mast overall height (fork to the ground)(mm)						Mast tilt angle (°) α/β		
		2t	2.5t	3t	3.5t	3.8t	2-2.5t	3t	3.5t	3.8t	2t	2.5t	3t		3.5t	3.8t
ZM200	2000	2000	2500	3000	3500	3800	1459	1570	1680	1800	1920	2040	2160	2280	2400	6°/12
ZM250	2500	2000	2500	3000	3500	3800	1459	1570	1680	1800	1920	2040	2160	2280	2400	6°/12
ZM300	3000	2000	2500	3000	3500	3800	1995	2070	2180	2180	3370	3740	4340	4700	4930	6°/12
ZM330	3300	2000	2500	3000	3500	3800	2145	2220	2330	2430	3400	3770	4360	4730	4960	6°/12
ZM350	3500	2000	2500	3000	3500	3800	2245	2320	2430	2430	3420	3790	4380	4750	4980	6°/12
ZM370	3700	2000	2500	3000	3500	3800	2345	2420	2530	2530	3400	3800	4400	4760	4990	6°/12
ZM400	4000	2000	2400	2800	3200	3400	2545	2620	2730	2730	3510	3880	4490	4840	5070	6°/12
ZM425	4250	2000	2400	2800	3200	3400	2670	2745	2855	2855	3530	3900	4510	4870	5100	6°/12
ZM450	4500	1850	2250	2650	3050	3200	2795	2870	2980	2980	3540	3910	4520	4880	5110	6°/12
ZM500	5000	1850	2250	2650	3050	3200	2900	3045	3120	3230	3230	3600	4070	4580	4950	5000
ZM550	5500	*1850	*2250	*2650	*3050	*3200	2900	3045	3120	3230	3230	3600	4070	4580	4950	5000
ZM600	6000	*1750	*2100	*2500	*2800		-	3345	3420	3530	3530	3700	4270	4690	4990	5220
ZM600	6000	*1700	*1800	*2200	*2350		-	3595	3670	3780	3780	3740	4110	4730	5040	5270

Note: (1) \*stands for the rated capacity when the front tyre is double tyre. (2) When the front tyre of the 2.3-3t truck is double tyre, the service weight of the truck is the weight in the table plus 110kg. (3) The free lifting height (without backrest) of the 2.2-3t truck is the height (with backrest) in the table plus 455mm. The free lifting height (without backrest) of the 3.3-3t truck is the height (with backrest) in the table plus 505mm.