MATERIAL HANDLING SOLUTIONS
Via Buffalora, 3 – 25135 Brescia
info@mhs.srl · www.mhs.srl



XF Series Diesel Counterbalanced Trucks

with capacities of 8,000 to 12,000kg

The World of Hangcha

HANGCHA

Factory site: 666 Xiangfu Road,

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ISO14001:2015

ISO9001:2015

HANGCHA trucks conform to the European Safety Requirements.

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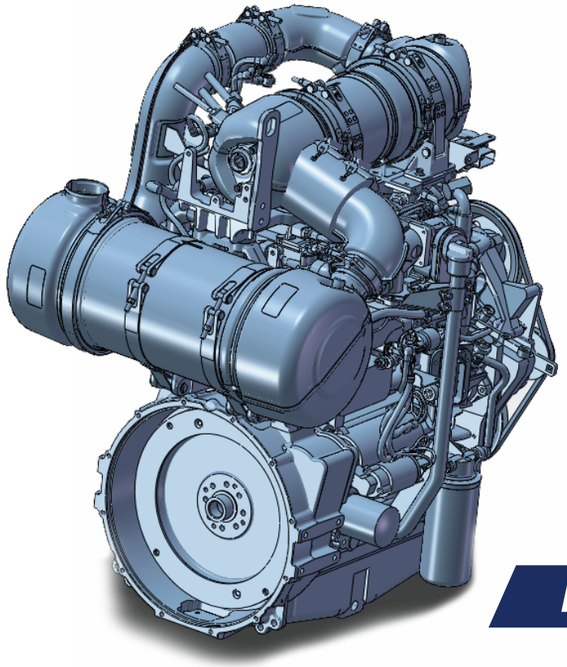
colors, equipment, or specifications detailed in this brochure, or to discontinue individual models. The colors of trucks, delivered may differ slightly from those in brochures.

HANGCHA be with you at every stage

Efficient, reliable solutions for your demands

STAGE V

With Hangcha you can meet all Stage V emissions standards which provides customer demands for value, innovation and performance. The technologies include ,TCI+CR+EGR+DOC+DPF+SCR. Designed and optimised to every engine model, our forklift truck maximises efficiency and reliability.



DEUTZ



Interactive instrument: The instrument adopts LCD display with four interactive buttons, and has one CAN bus communication function. The communication protocol is compatible with CANopen and SAE J1939 standards.

Simple/ Solid/ Smart



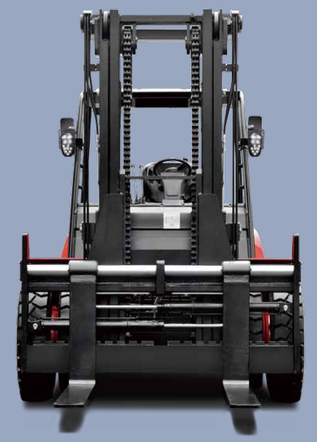
HANGCHA Forklift with StageV

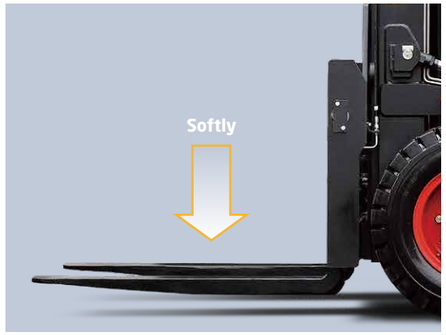
No.	Capacity	Series	Manufacturer	Engine	Drive power	Model	Emission Std.	Transmission	Power (kw/rpm)	Service brake
1	8.0t	XF	DEUTZ	TCD3.6 L4	Diesel	CPCD80-XW96G	Stage V	ZF	85/2200	Hydraulic
2	10t	XF	DEUTZ	TCD3.6 L4	Diesel	CPCD100-XW96G	Stage V	ZF	85/2200	Hydraulic
3	12t	XF	DEUTZ	TCD3.6 L4	Diesel	CPCD120-XXW96	Stage V	TCM	85/2200	Hydraulic

Note: Stage V applied for European Union also including Israel and Turkey

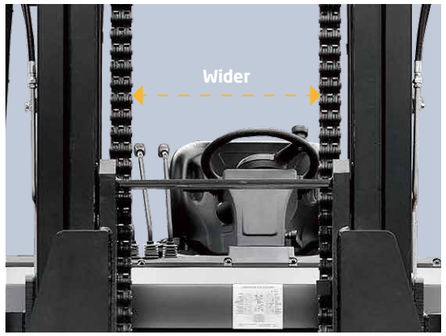
Comfortable Operation

In developing the new XF 8-12t series,comfort and easy operation is always considered, for example, inproved vibrating levels, compound engine damper and full floationg seat and cabin are applied.
Comfortable also contribute to increased productivity.





In addition to the soft landing system, the soft lifting system is adopted (front lifting cylinders of triplex mast and full free duplex mast), as a result, the noise and shock of the mast significantly decreases.



The new design mast provides broad forward visibility due to outside located hydraulic pipes of fork positioner.



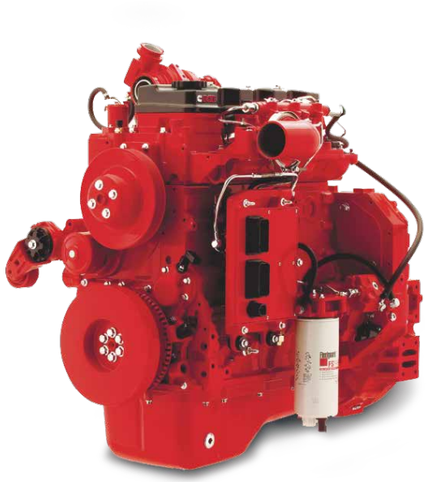
The extra foot space is provided to reduce operator fatigue significantly. The new wide-open, non-slip step makes getting in and out easy and safe.

The optional Electro-hydraulic proportional control system contributes more sensitive and precise load handling. The easy-to-operate levers provide total load handling operation. An armrest is provided to reduce fatigue.



Environmental Friendliness

Environmentally friendly material, low exhaust emission, and low noise level, all these are considered at the beginning of the product development.



Special developed engine is applied for optimum balance of power and superior environmental performance. All diesel engines are in com-pliance with EU stage-III control regulation.

The environment friendly materials, such as non-asbestosbrake shoe and new type sealing gasket, are adopted entirely to meet environmental safety.



The applied optimized exhaust muffler, intake muffler and the noise shield technologies are reduced 3dB at the driver's ear noise level.

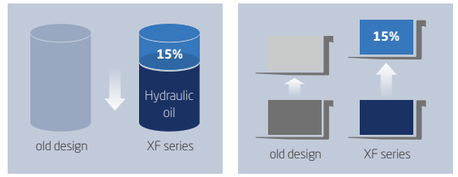
Productivity

Thanks to the series technological innovations, the efficiency of the truck is improved, the energy consumption is reduced.

By optimizing transmission design, the power train provides higher efficiency, and the Max. driving speed is increased **20%**



The new efficiency LED lighting system and new type reflector reduce energy consumption, improve illumination performance and prolong working life.



The new patent dynamic load sensing hydraulic steering system contributes to reduce loss of hydraulic, improve energy consumption and increase 15% lifting speed.



Comfortable Operation

1. The new, relocated easy-to-see LCD meter lets the operator check on all aspects of operational status at a glance.
2. The new automobile-style light/turn-signal lever and forward-reverse lever are ergonomically designed and arranged to improve comfort and productivity.
3. Only 90N parking brake force is required.
4. The small diameter steering wheel with tilt adjustment provides the ideal operating position. The superior responsiveness of the steering wheel optimizes maneuverability even in narrow spaces.
5. The automobile-style suspended pedals provide more ergonomic operation.

Reliability

By focusing on enhancing reliability, reducing downtime,the XF series is able to make the greater productivity for customer.

The patent plated-fin type aluminum radiator is applied,the heat exchanging is approved,and improves the capability for operation in severe environments.

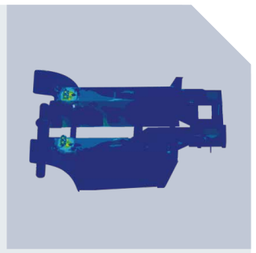






There're four levels shock absorption applied to reduced the vibration from the road to the driver. The damping pad is applied reduce the vibration, Like between the steering axle and the chassis, The engine, torque convertor and the chassis, the overhead guard and the chassis. And the suspension seat is another vibration reduction.

High strength chassis,mast and front/rear axle are to make sure the reliability of the truck,even for high strength application.





All the controllers,relays,and safety fuses are allocated in the controller box, free to water and dust.
The main electronic components are waterproof, which is capable operater in severe environment.



The new stamped air cleaner featuring tangential intake, double seal with safety filter is durable, corrosion-free and vibration-resistant, provides better filter efficiency and lower intake resistance than the previous.



The battery is located above the fuel tank, there's battery box and adiabatic plate between them to prolong the battery's workling life.





Add return oil filter of gearbox and multi-valve, improving the cleaness of transmission and hydraulic oil..

Easy Maintenance









Careful design facilitates inspection and servicing. Easy maintenance reduces the amount of downtime and helps to reduce cost also.

The location of the air-filter is easy to reach,and it's very easy to replace the filter.

Brake drum is installed outside of wheel hub, easy to remove and install when we replace the brake shoes.

All the locations of the engine oil level dipstick, filter of hydraulic,water separator are easy to reach,and very easy for engineer to check.

There's gas spring support for the front cover of radiator,and it can auto-open when the rear cover of radiator is opened.

Safety

A wide range of technologies are applied to ensure absolute safety for both the operator and those in the surrounding. Independent braking and steering circuit without interference.



There's an energy accumulator applied in the braking system, which means when the engine is shut down,it can also provides more than 4 times emergency brake.



The locking device of the engine hood damper and parking brake help add to safety.



1. The seat sensor system incorporates lifting/tilting and traveling locking function.When the operator leaves the seat,the system automatically locks lifting/tilting and disables traveling to ensure safety.

2. A throttling device is adopted to avoid the mast being out of control even some pipes are broken.

Standards

Transmission	Steering	Chassiss	Control	Hydraulic
/ Suspension transmission	/ Full hydraulic power steering	/ Skidproof pedal	/ Power steering	/ Dynamic load sending control valve
/ Oil filter	/ Smaller diameter steering wheel	/ Rubber pedal	/ Suspension pedal	/ Hydraulic oil filter
/ Dipstick	/ Adjuster of steering wheel	/ Engine hood spring	/ Integrated combination switch	/ Tilt cylinder self-lock valve
/ Oil cooler	/ Shock absorber of steering axle		/ Parking brake	/ Hydraulic oil dipstick
/ Non-asbesttos bake				/ Accumulator
/ Drum brake				/ Hydraulic oil radiator
/ Wet brake (W75)				

Truck	Power	Electronics		Mast
/ Traction device	/ Big capacity aluminum radiator	/ High-efficient front lights	/ Pre-heat indicator	/ Standard wide view duplex mast
/ Hand grip	/ Whirlwind air cleaner	/ High-efficient LED rear lights	/ Charging indicator	/ Standard forks
/ Standard seat	/ Safety filter	/ Service-free start battery	/ Engine fuel pressure warning	/ Standard fork carriage
/ Floating overhead guard	/ High-effficient intake muffler	/ Combination controller	/ Oil temperature	/ Mast speed limiting valve
/ Waterproof cover on the guard	/ High-effficient exhaust muffler	/ LCD display	/ Horn	/ Load safety valve
/ Back view mirror		/ Neutual switch	/ Reversing buzzer	/ Mast down buffer device
/ Pneumatic tyres		/ Hour meter	/ Air-filter with jam sensor	/ Mast up buffer device
/ Toolbox		/ Fuel gauge	/ Emergency power off	/ Side roller
		/ Water temperature gauge		/ Fork positioner

Options

Truck	Transmission	Power	Hydraulic	Electronics	Mast
/ Floating cabin	/ Wet brake	/ Upright exhaust system	/ Auxiliary hydraulic valve	/ OBD	/ Duplex wide view free-lift mast
/ Cabin heater		/ Air pre-cleaner	/ Elecctro-hydraulic	/ Front working light	/ Triplex wide view free-lift mast
/ Front window		/ Net cover of radiator	/ Proportional control system	/ Rear working light	/ Special forks
/ Super elastic tyre		/ Spark arrester		/ Warning lamp	/ Wider fork carriage
/ Non-mark tyre(white/green)		/ Purified exhaust system			/ Widerload back rest
/ Suspension seat		/ Fan protector			
/ Extinguisher					
/ Special given color					
/ Boot for tilt cylinder					
/ Counter weight net					
/ Seat sensor system					

Optional Attachments

/ Paper roll clamp
/ Rotating bale clamp
/ Load stabilizer
/ Multi-drum clamp
/ Bale clamp
/ Drum clamp
/ Dumping clamp
/ Crane arm
/ String Pole
/ Sideshifter
/ Rotating forks
/ Fork extensioner
/ Load release device
/ Carton clamp
/ Push-pull device
/ Bucket
/ Hook
/ Lengthened fork



8.0~10t XF series mast: (pneumatic)

Type	Model	Max.fork height	Overall height		Free lift Without backrest	Load distance, centre of drive axle to fork	Titl range	Load capacity	
			Lowered	Extended Without backrest			FWD/BWD	Load capacity at 600mm Double tire	
								8t	10t
		mm	mm	mm	mm	mm	(°)	Kg	Kg
Wide view Duplex mast	X80M250	2500	2450	3710	200	714	6/12	8000	/
	X80M270	2700	2550	3910	200	714	6/12	8000	/
	X80M300	3000	2700	4210	200	714	6/12	8000	/
	X80M330	3300	2850	4510	200	714	6/12	8000	/
	X80M350	3500	2950	4710	200	714	6/12	8000	/
	X80M360	3600	3000	4810	200	714	6/12	8000	/
	X80M400	4000	3200	5210	200	714	6/12	8000	/
	X80M430	4300	3400	5510	200	714	6/6	8000	/
	X80M450	4500	3500	5710	200	714	6/6	8000	/
	X80M480	4800	3650	6010	200	714	6/6	8000	/
	X80M500	5000	3750	6210	200	714	6/6	8000	/
	X80M550	5500	4050	6740	200	714	3/6	7400	/
	X80M600	6000	4300	7240	200	714	3/6	7000	/
	X80M650	6500	4600	7790	200	714	3/6	5800	/
	X100M250	2500	2600	4055	200	726	6/12	/	10000
	X100M270	2700	2700	4255	200	726	6/12	/	10000
	X100M300	3000	2850	4555	200	726	6/12	/	10000
	X100M330	3300	3000	4855	200	726	6/12	/	10000
	X100M350	3500	3100	5055	200	726	6/12	/	10000
	X100M360	3600	3150	5155	200	726	6/12	/	10000
	X100M400	4000	3350	5555	200	726	6/12	/	10000
	X100M430	4300	3550	5855	200	726	6/6	/	10000
	X100M450	4500	3650	6055	200	726	6/6	/	10000
	X100M480	4800	3800	6355	200	726	6/6	/	10000
	X100M500	5000	3900	6555	200	726	6/6	/	10000
	X100M550	5500	4200	7055	200	726	3/6	/	9000
	X100M600	6000	4450	7555	200	726	3/6	/	8000
	X100M650	6500	4750	8055	200	726	3/6	/	6700
Full free duplex mast	X80U230	2300	2350	3505	1145	719	6/12	8000	/
	X80U250	2500	2450	3705	1245	719	6/12	8000	/
	X80U270	2700	2550	3905	1345	719	6/12	8000	/
	X80U300	3000	2700	4205	1495	719	6/12	8000	/
	X80U330	3300	2850	4505	1645	719	6/12	8000	/
	X80U360	3600	3000	4805	1795	719	6/12	8000	/
	X80U400	4000	3200	5205	1995	719	6/12	8000	/
	X100U230	2300	2500	3845	955	744	6/12	/	10000
	X100U250	2500	2600	4045	1055	744	6/12	/	10000
	X100U270	2700	2700	4245	1155	744	6/12	/	10000
	X100U300	3000	2850	4545	1305	744	6/12	/	10000
	X100U330	3300	3000	4845	1455	744	6/12	/	10000
	X100U360	3600	3150	5145	1605	744	6/12	/	10000
	X100U400	4000	3350	5545	1805	744	6/12	/	10000
Full free triplex mast	X80N450	4500	2750	5775	1485	759	6/6	7000	/
	X80N480	4800	2850	6075	1585	759	6/6	7000	/
	X80N500	5000	2950	6360	1600	759	6/6	6500	/
	X80N550	5500	3100	6810	1800	759	3/6	6100	/
	X80N600	6000	3250	7275	1985	759	3/6	5600	/
	X80N650	6500	3530	7840	2200	759	3/6	5000	/
	X80N700	7000	3700	8310	2400	759	3/6	4200	/
	X100N450	4500	2850	6055	1305	794	6/6	/	8500
	X100N480	4800	2950	6355	1405	794	6/6	/	8500
	X100N500	5000	3050	6555	1505	794	6/6	/	8200
	X100N550	5500	3200	7055	1655	794	3/6	/	7700
	X100N600	6000	3350	7555	1805	794	3/6	/	7000
	X100N650	6500	3630	8055	2085	794	3/6	/	6200
	X100N700	7000	3800	8555	2255	794	3/6	/	5200

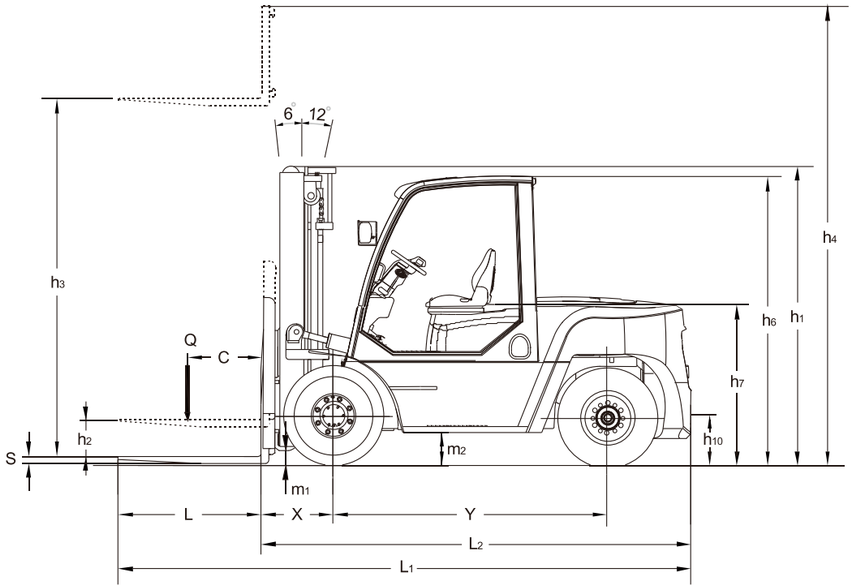
With sideshifter minus 500Kg,with integral sideshifter minus 400kg.

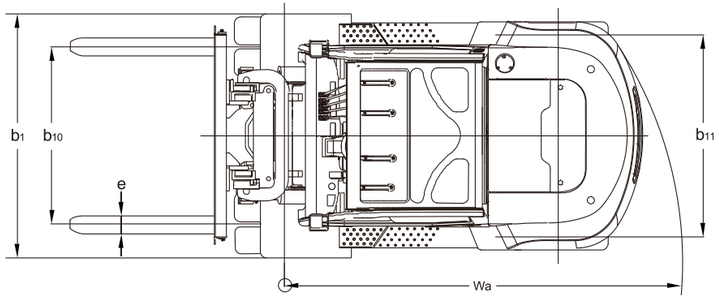
12t XF series mast: (pneumatic)

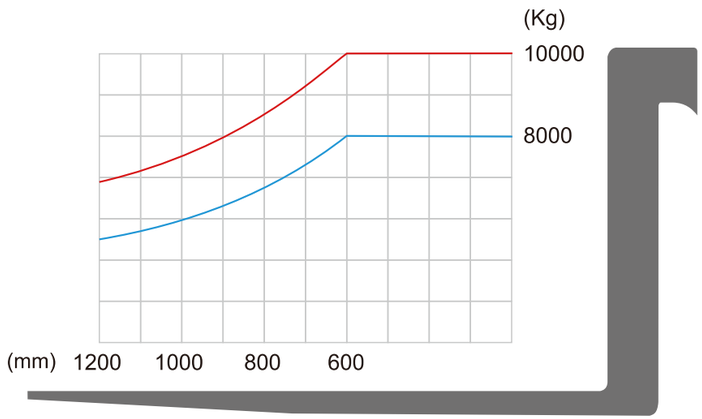
Type	Model	Max.fork height	Overall height		Free lift	Front overhang	Titl range	Capacity
			Lowered	Extended Without backrest	Without backrest		FWD/BWD	Load capacity 600mm Double tire 12t
		mm	mm	mm	mm	mm	(°)	kg
Wide view mast	XX120M270	2700	2850	4405	200	739	6/12	12000
	XX120M300	3000	3000	4705	200	739	6/12	12000
	XX120M330	3300	3150	5005	200	739	6/12	12000
	XX120M360	3600	3300	5305	200	739	6/12	12000
	XX120M400	4000	3550	5705	200	739	6/12	12000
	XX120M430	4300	3700	6005	200	739	6/6	12000
	XX120M450	4500	3800	6205	200	739	6/6	12000
	XX120M480	4800	3950	6505	200	739	6/6	12000
	XX120M500	5000	4050	6705	200	739	6/6	12000
	XX120M550	5500	4350	7205	200	739	3/6	10500
	XX120M600	6000	4600	7705	200	739	3/6	9000
	XX120M650	6500	4900	8205	200	739	3/6	7500

XF series 8.0-12.0t forklift specification

Distinguishing mark	1.1	Manufacturer										
	1.2	Manulacturer's type designation		CPCD80-XW41B	CPCD100-XW41B	CPCD120-XXW41	CPCD80-XW75G	CPCD100-XW75G	CPCD120-XXW75	CPCD80-XW96G	CPCD100-XW96G	CPCD120-XXW96
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seat	Seat	Seat	Seat	Seat	Seat	Seat	Seat	Seat
	1.5	Rated capacity/rated load	Q (kg)	8000	10000	12000	8000	10000	12000	8000	10000	12000
	1.6	Load centre distance	c(mm)	600	600	600	600	600	600	600	600	600
	1.8	Load distance, centre of drive axle to fork	x(mm)	714	726	739	714	726	739	714	726	739
	1.9	Wheelbase	y(mm)	2500	2800	2800	2600	2800	2800	2600	2800	2800
Weight	2.1	Service weight	kg	11200	13000	14300	12000	13800	14800	12000	13800	14800
	2.2	Axle loading, laden front/rear	kg	17280/1920	20940/2060	24100/2200	17980/2020	21515/2285	24500/2300	17980/2020	21515/2285	24500/2300
	2.3	Axle loading, unladen front/rear	kg	4480/6720	6040/6960	6220/8080	4820/7180	6430/7370	6400/8400	4820/7180	6430/7370	6400/8400
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic
	3.2	Tyre size, front		9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR
	3.3	Tyre size, rear		9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR	9.00-20-14PR
	3.5	Wheels， number front rear (x = driven wheels)		4x/2	4x/2	4x/2	4x/2	4x/2	4x/2	4x/2	4x/2	4x/2
	3.6	Tread, front	b_{10} (mm)	1628	1628	1628	1628	1628	1628	1628	1628	1628
	3.7	Tread, rear	b_{11} (mm)	1700	1700	1722	1700	1700	1722	1700	1700	1722
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12
	4.2	Height, mast lowered	h_1 (mm)	2700	2850	3000	2700	2850	3000	2700	2850	3000
	4.3	Free lift	h_2 (mm)	200	200	200	200	200	200	200	200	200
	4.4	Lift	h_3 (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000
	4.5	Height, mast extended	h_4 (mm)	4210	4555	4705	4210	4555	4705	4210	4555	4705
	4.7	Height of overhead guard	h_6 (mm)	2580	2580	2580	2580	2580	2580	2580	2580	2580
	4.8	Seat height	h_7 (mm)	1505	1505	1505	1505	1505	1505	1505	1505	1505
	4.12	Coupling height	h_{10} (mm)	505	505	505	505	505	505	505	505	505
	4.19	Overall length	l_1 (mm)	5404	5736	5849	5504	5736	5849	5504	5736	5849
	4.20	Length to face of forks	l_2 (mm)	3904	4236	4349	4004	4236	4349	4004	4236	4349
	4.21	Overall width	b_1(mm)	2165	2165	2165	2165	2165	2165	2165	2165	2165
	4.22	Fork dimensions	s/e/l (mm)	75×160×1500	80×160×1500	80×200×1500	75×160×1500	80×160×1500	80×200×1500	75×160×1500	80×160×1500	80×200×1500
	4.23	Fork carriage DIN 15173, class/type A, B		/	/	/	/	/	/	/	/	/
	4.24	Fork-carriage width	b_3 (mm)	2000	2000	2000	2000	2000	2000	2000	2000	2000
	4.31	Ground clearance, laden, mast	m_1 (mm)	250	250	250	250	250	250	250	250	250
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	339	339	339	339	339	339	339	339	339
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	A_{st} (mm)	5544	5866	5979	5644	5866	5979	5644	5866	5979
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	A_{st} (mm)	5744	6066	6179	5844	6066	6179	5844	6066	6179
	4.35	Turning radius	W_a (mm)	3630	3940	4040	3730	3940	4040	3730	3940	4040
	4.36	Internal turning radius	b_{13} (mm)	1327	1396	1396	1350	1396	1396	1350	1396	1396
Performance data	5.1	Travel speed, laden/unladen	km/h	-/28.5	-/28.5	-/27	-/28.5	-/28.5	-/29	-/28.5	-/28.5	-/29
	5.2	Lift speed, laden/unladen	m/s	0.440/-	0.330/-	0.360/-	0.390/-	0.317/-	0.330/-	0.390/-	0.317/-	0.330/-
	5.3	Lowering speed, laden/unladen	m/s	0.455/-	0.455/-	0.455/-	0.455/-	0.455/-	0.455/-	0.455/-	0.455/-	0.455/-
	5.5	Drawbar pull,laden/unden	N	65000/45000	65000/49000	65000/49000	65000/45000	65000/49000	65000/49000	65000/45000	65000/49000	65000/49000
	5.7	Gradeability, laden/unladen	%	>20/-	>20/-	>20/-	>20/-	>20/-	>20/-	>20/-	>20/-	>20/-
	5.10	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Combustion-engine	7.1	Engine manufacturer/type		BB-6BG1TRC-06	BB-6BG1TRC-06	BB-6BG1TRC-06	TCD 3.6 L4 f	TCD 3.6 L4 f	TCD 3.6 L4 f	TCD 3.6 L4	TCD 3.6 L4	TCD 3.6 L4
		Engine standard		G 2	G 2	G 2	Stage IV	Stage IV	Stage IV	Stage V	Stage V	Stage V
	7.2	Engine power according to DIN ISO 1585	kW	97.7	97.7	97.7	85	85	85	85	85	85
	7.3	Rated speed	r/min	2200	2200	2200	2200	2200	2200	2200	2200	2200
	7.4	No. of cylinders/displacement	(-)/(cm^3)	6/6494	6/6494	6/6494	4/3600	4/3600	4/3600	4/3600	4/3600	4/3600
Addition data	10.1	Operating pressure for attachments	bar	195	195	215	195	195	215	195	195	215
	10.2	Oil volume for attachments	l/min	180	180	180	155	155	155	155	155	155
	10.8	Towing coupling,type DIN 15170		Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin


6°
12°
h3
h4
h1
h6
h7
h10
h2
S
Q
C
m2
m1
L
X
Y
L2
L1


b1
b10
e
b11
Wa


(Kg)
10000
8000
(mm)
1200
1000
800
600


HANGCHA