

8,000-9,000lb XF Series Mast:

Type	Model	Max. Fork Height	Overall height				Free Lift		Front Overhang	Tilt Range		Capacity			
			Lowered	Extended		Without Backrest	With Backrest	Fwd		Bwd	Load Capacity at 24in				
				Without Backrest	With Backrest						Single Tire		Dual Tire		
											8000lb	9000lb	8000lb	9000lb	
Limited Free Lift 2 Stage Mast	X45M250	98.4	78.5	131.1	144.5	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M270	106.3	82.5	139.0	152.4	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M300	118.1	88.4	150.8	164.2	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M330	129.9	94.3	162.6	176.0	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M350	137.8	98.2	170.5	183.9	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M360	141.7	100.2	174.4	187.8	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M370	145.7	102.2	178.3	191.7	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M380	149.6	104.1	182.3	195.7	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M400	157.5	110.0	190.2	203.5	6.3	6.3	21.7	6	12	8000	9000	8000	9000	
	X45M430	169.3	116.5	202.0	215.4	6.3	6.3	21.7	6	6	8000	9000	8000	9000	
	X45M450	177.2	120.9	209.8	223.2	6.3	6.3	21.7	6	6	8000	9000	8000	9000	
	X45M480	189.0	127.4	221.7	235.0	6.3	6.3	21.7	6	6	7700	8600	7800	8800	
	X45M500	196.9	131.7	229.5	242.9	6.3	6.3	21.7	6	6	7600	8000	7700	8400	
	X45M550	216.5	142.5	249.2	262.6	6.3	6.3	21.7	3	6	6000	7000	6400	7600	
X45M600	236.2	153.3	268.9	282.3	6.3	6.3	21.7	3	6	5000	6000	5600	6200		
Full Free Lift 2 Stage Mast	X45U250	98.4	77.8	132.5	144.5	43.9	31.9	21.9	6	12	8000	9000	8000	9000	
	X45U275	108.3	82.7	142.3	154.3	48.7	36.7	21.9	6	12	8000	9000	8000	9000	
	X45U300	118.1	87.6	152.2	164.2	53.7	41.5	21.9	6	12	8000	9000	8000	9000	
	X45U330	129.9	93.5	164.0	176.0	59.6	47.4	21.9	6	12	8000	9000	8000	9000	
	X45U350	137.8	97.5	171.9	183.9	63.5	51.5	21.9	6	12	8000	9000	8000	9000	
	X45U360	141.7	99.4	175.8	187.8	65.5	53.5	21.9	6	12	8000	9000	8000	9000	
	X45U370	145.7	101.4	179.7	191.7	67.5	55.5	21.9	6	12	8000	9000	8000	9000	
Full Free Lift 3 Stage Mast	X45N400	157.5	81.9	190.9	203.5	48.4	35.9	23.7	6	6	8000	9000	8000	9000	
	X45N430	169.3	85.8	203.0	215.4	52.3	39.8	23.7	6	6	8000	9000	8000	9000	
	X45N450	177.2	88.5	211.2	223.8	54.9	42.5	23.7	6	6	7600	8800	8000	9000	
	X45N470	185.0	90.9	218.5	231.1	57.4	45.0	23.7	6	6	7400	8600	7600	8800	
	X45N480	189.0	92.1	222.4	235.0	58.6	46.1	23.7	6	6	7400	8400	7600	8600	
	X45N500	196.9	94.9	230.5	242.9	61.4	48.9	23.7	6	6	7200	7600	7400	8400	
	X45N550	216.5	101.4	250.2	262.6	67.9	55.4	23.7	3	6	6000	6800	6400	7600	
	X45N600	236.2	109.8	270.3	282.7	76.3	63.9	23.7	3	6	5000	5600	5600	6200	
	X45N650	255.9	117.3	290.0	302.4	83.8	71.3	23.7	3	6	/	/	4800	5000	
	X45N700	275.6	124.2	309.4	321.9	90.7	78.3	23.7	3	6	/	/	4000	4400	

With sideshifter, subtract 440lbs. With integral sideshifter, subtract 220lbs.

10,000-11,000lb XF Series Mast:

Type	Model	Max. Fork Height	Overall Height								Free Lift		Front Overhang (in)	Tilt Range		Capacity					
			Lowered (in)	Extended		Without Backrest (in)	With Backrest (in)	Without Backrest (in)	With Backrest (in)	Fwd	Bwd	Load Capacity at 24in									
				Without Backrest	With Backrest							Single Tire		Dual Tire							
												10000lb		11000lb	10000lb	11000lb					
Limited Free Lift 2 Stage Mast	XX50/XX55M250	98.4	78.5	88.4	131.1	140.9	152.4	153.5	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M270	106.3	82.5	92.3	139.0	148.8	160.2	161.4	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M300	118.1	88.4	98.2	150.8	160.6	172.0	173.2	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M330	129.9	94.3	104.1	162.6	172.4	183.9	185.0	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M350	137.8	98.2	108.1	170.5	180.3	191.7	192.9	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M360	141.7	100.2	110.0	174.4	184.3	195.7	196.9	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M370	145.7	102.2	112.0	178.3	188.2	199.6	200.8	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M380	149.6	104.1	114.0	182.3	192.1	203.5	204.7	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M400	157.5	110.0	117.9	190.2	200.0	211.4	212.6	6.3	6.7	6.3	6.7	21.9	23.0	6	12	10000	11000	10000	11000	
	XX50/XX55M430	169.3	116.5	123.8	202.0	211.8	223.2	224.4	6.3	6.7	6.3	6.7	21.9	23.0	6	6	9500	10350	10000	10850	
	XX50/XX55M450	177.2	120.9	127.8	209.8	219.7	231.1	232.3	6.3	6.7	6.3	6.7	21.9	23.0	6	6	9400	10050	9600	10450	
	XX50/XX55M480	189.0	127.4	135.6	221.7	231.5	242.9	244.1	6.3	6.7	6.3	6.7	21.9	23.0	6	6	8800	9350	9200	9550	
	XX50/XX55M500	196.9	131.7	140.2	229.5	239.4	250.8	252.0	6.3	6.7	6.3	6.7	21.9	23.0	6	6	8200	8850	8600	9250	
	XX50/XX55M550	216.5	142.5	150.4	249.2	259.1	270.5	271.7	6.3	6.7	6.3	6.7	21.9	23.0	3	6	7200	8150	8000	8650	
XX50/XX55M600	236.2	153.3	160.8	268.9	278.7	290.2	291.3	6.3	6.7	6.3	6.7	21.9	23.0	3	6	6200	6300	6600	6750		
Full Free Lift 2 Stage Mast	XX50/XX55U250	98.4	77.8	87.6	132.5	142.3	152.2	153.5	43.9	31.9	43.8	24.0	24.0	6	12	10000	11000	10000	11000		
	XX50/XX55U275	108.3	82.7	92.5	142.3	152.2	162.0	163.4	48.7	36.7	48.7	28.9	37.5	22.4	24.0	6	12	10000	11000	10000	11000
	XX50/XX55U300	118.1	87.6	97.5	152.2	162.0	171.9	173.2	53.7	41.5	53.6	33.9	42.5	22.4	24.0	6	12	10000	11000	10000	11000
	XX50/XX55U330	129.9	93.5	103.4	164.0	173.8	183.7	185.0	59.6	47.4	59.5	39.8	48.4	22.4	24.0	6	12	10000	11000	10000	11000
	XX50/XX55U350	137.8	97.5	107.3	171.9	181.7	191.5	192.9	63.5	51.5	63.5	43.7	52.3	22.4	24.0	6	12	10000	11000	10000	11000
	XX50/XX55U360	141.7	99.4	109.3	175.8	185.6	195.5	196.9	65.5	53.5	65.4	45.7	54.3	22.4	24.0	6	12	10000	11000	10000	11000
	XX50/XX55U370	145.7	101.4	111.3	179.7	189.6	199.4	200.8	67.5	55.5	67.4	47.6	56.3	22.4	24.0	6	12	10000	11000	10000	11000
Full Free Lift 3 Stage Mast	XX50/XX55N400	157.5	81.9	90.7	191.3	201.2	211.2	212.6	48.1	47.0	28.1	35.8	24.2	25.4	6	6	10000	11000	10000	11000	
	XX50/XX55N430	169.3	85.8	94.7	203.1	213.0	223.0	224.4	52.0	51.0	32.1	39.8	24.2	25.4	6	6	9450	10100	9650	10500	
	XX50/XX55N450	177.2	88.5	97.2	211.4	220.9	231.5	232.3	54.7	53.5	34.8	42.3	24.2	25.4	6	6	9250	9600	9450	9900	
	XX50/XX55N470	185.0	90.9	99.8	218.9	228.7	239.0	240.2	57.2	56.1	37.2	44.9	24.2	25.4	6	6	9050	9300	9250	9700	
	XX50/XX55N480	189.0	92.1	101.2	222.8	232.7	242.9	244.1	58.3	57.5	38.4	46.3	24.2	25.4	6	6	8650	9000	9050	9400	
	XX50/XX55N500	196.9	94.9	103.7	230.7	240.6	250.8	252.0	61.1	60.0	41.1	48.8	24.2	25.4	6	6	8050	8500	8550	9100	
	XX50/XX55N550	216.5	101.4	110.4	250.2	260.2	270.5	271.7	67.6	66.7	47.6	55.5	24.2	25.4	3	6	7200	7750	8050	8300	
	XX50/XX55N600	236.2	109.8	118.9	270.5	279.9	290.6	291.3	76.1	75.2	56.1	64.0	24.2	25.4	3	6	6000	6150	6400	6550	
	XX50/XX55N650	255.9	117.3	126.0	290.2	299.6	310.2	311.0	83.6	82.3	63.6	71.1	24.2	25.4	3	6	/	/	5300	5850	
	XX50/XX55N700	275.6																			

Smart Simple Solid

Over 40 years of building forklifts have culminated in the XF series from Hangcha Group. This experience, combined with the latest in forklift technology, the result is a line of forklifts that are efficient, environmentally conscious, comfortable, reliable, and safe. The XF Series represents the true do it all forklift from Hangcha Group.



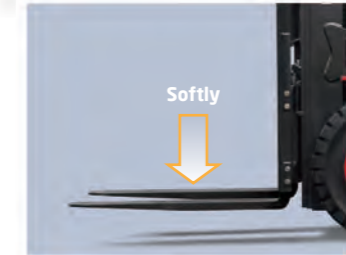
Comfortable Operation

Optimal visibility in all directions creates the best conditions for relaxed and safe working. These conditions promote high productivity among the operators.

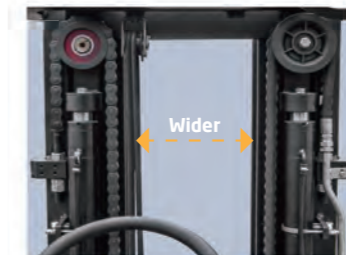


The foot space is now 90% wider to significantly reduce operator fatigue. The new wide, non-slip step makes getting in and out of the forklift safe and easy.

The easy-to-operate levers provide total load handling operation. The armrest is provided to reduce fatigue. The optional electro-hydraulic proportional control system gives the forklift the ability to make load handling more sensitive and precise.



In addition to the soft landing system, the soft lifting system is adopted (front lifting cylinders of the full free-lift stage 2 & 3 masts). As a result, the noise and shock of the mast significantly decrease when lowering materials.



The front lifting cylinders were redesigned with a smaller outer diameter to give the operator superior forward visibility.

The double lifting cylinders also provide better forward visibility.

In developing the XF Series, comfort and ease of operation were carefully considered. For example, vibration levels were improved by adding compound engine dampers and full-floating powertrain mounts. Comfortable operating environments for operators also contribute to increased productivity.

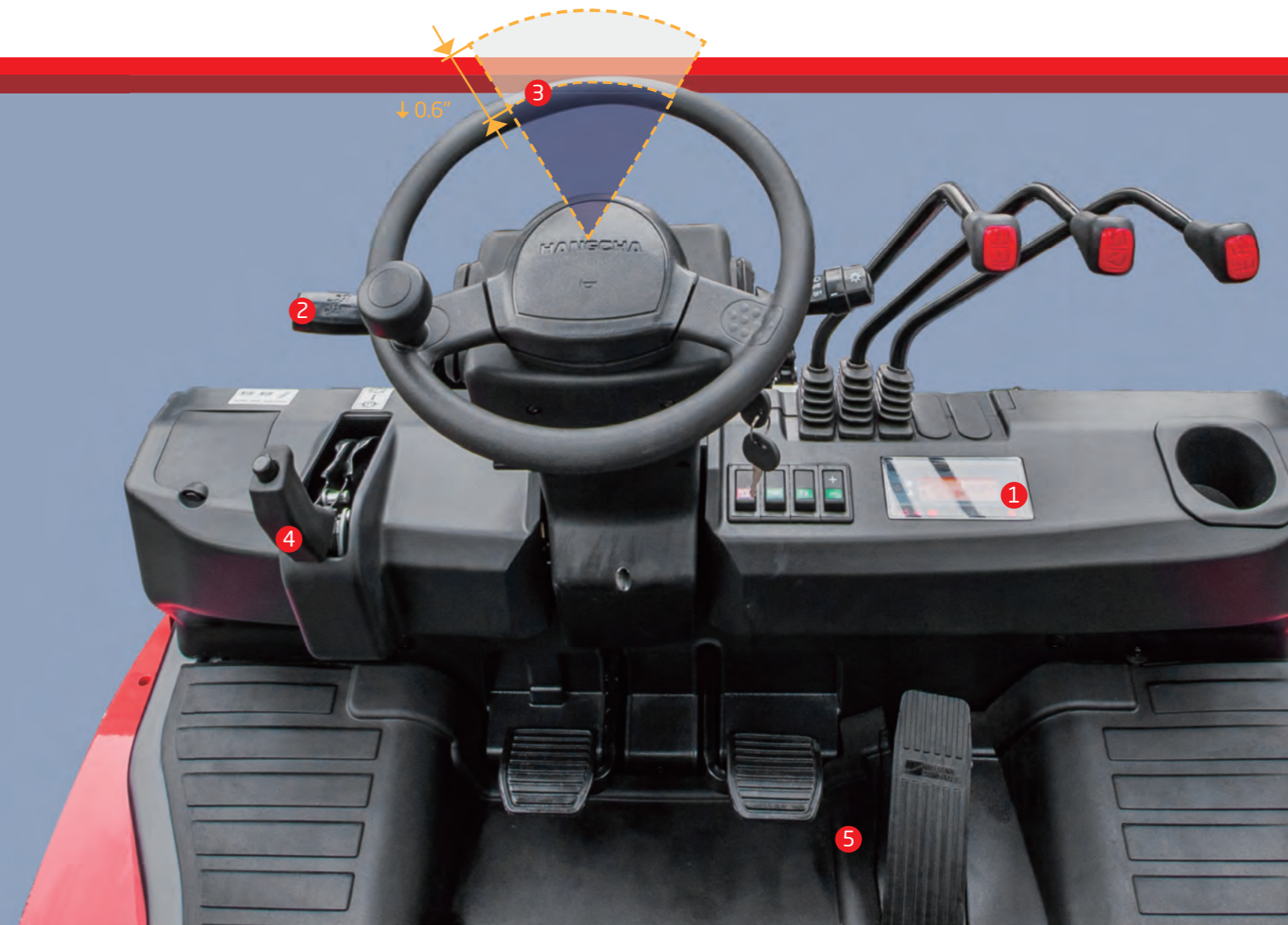


The rubber damper between the frame and the steering axle, the compound engine damper, and the full floating powertrain achieves a flexible connection between the frame and the driving system. As a result, vibrations are significantly reduced to increase operator comfort.



The increased capacity exhaust muffler, intake, and noise shield technology significantly lower the forklift's noise levels.

1. The new relocated, easy-to-see LCD instrument display lets the operator check on all aspects of operational status with a glance.
2. The new automobile-style light/turn-signal stalk and the forward-reverse lever are ergonomically designed and arranged to improve comfort and productivity.
3. The small diameter steering wheel, with tilt adjustment, provides an optimal driving position for the operator. The superior responsiveness of the steering wheel optimizes maneuverability even in narrow spaces.
4. The parking brake was developed to reduce the operational force by 30%.
5. The automobile-style suspended pedals provide a more ergonomic, operator centered experience.





Reliability

By focusing on enhancing reliability and reducing downtime, the XF series is able to increase productivity for the end-users.

<p>XF series truck is equipped with the world renowned Okamura transmission. The brake drum and hub use a monolithic style construction.</p> 		 <p>XF series features a rugged design, stamped frame, and an engine hood. The stamped instrument panel, overhead guard, and heavy profile rail mast combine to provide excellent structural rigidity to ensure outstanding reliability and stability in heavy-duty conditions.</p>
<p>The forklifts are equipped with large capacity aluminum radiators. These radiators have optimized heat dissipation channels to enhance cooling capabilities. This keeps the engine running reliably in heavy-duty applications.</p>		 <p>The steering axle uses a large-diameter steering cylinder to substantially increase the reliability and service life of the steering system.</p>

Productivity

Dynamic load sensing hydraulic steering system, efficient LED lights, and lower fuel consumption combine to provide increased productivity and reduced operating costs.



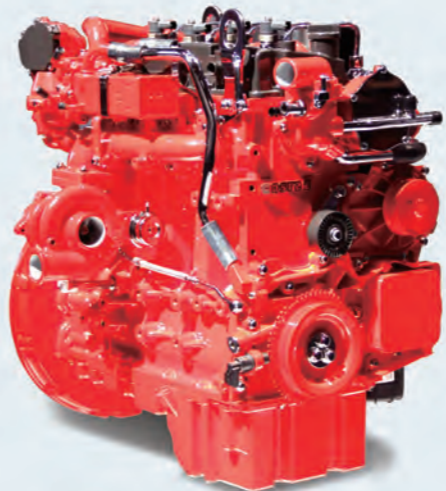
The new dynamic load sensing hydraulic steering system improves hydraulic efficiency and reliability.



The new efficient lighting system uses LED's and a new type of reflector to reduce energy consumption. This significantly improves illumination performance while also prolonging operation time.

Environmentally Friendly

Hangcha offers these forklifts with either an LPG or Diesel engine. These powerful engines are respectively built to EPA standards and Tier 4F standards. The engines release fewer emissions and create a cleaner work environment.



TIER 4F CUMMINS QSF2.8T4F Diesel Engine

CUMMINS engine QSF2.8T4F complies with Tier 4 Final control regulation. The DOC exhaust treatment found on the CUMMINS engine ensures the exhaust satisfy with USA T4F standards. It also provides a reduction in noise. There is also minimal maintenance required when operating the CUMMINS engine.

Safety

A wide range of technology is applied to ensure absolute safety for both the operator and those in the vicinity.

An optional rear grip with a horn button enhances operational safety while traveling in reverse.

There is a locking mechanism found on the engine hood, damper, and parking brake for the operator's safety.



1. The Operator Presence Sensing (OPS) System incorporates a lifting, tilting, and traveling stop function. When the operator leaves the seat, the system automatically locks the lifting/tilting functions and disables the forklift from traveling to ensure safety.
2. The throttling device locks the mast in place if there is a hydraulic failure. This adds to the operational safety of the truck.

Easy Maintenance

The XF Series is designed to facilitate easy inspections and servicing. Easy maintenance reduces the amount of downtime & cost of ownership.



The new controller is integrated into all of the electrical components. It also features excellent durability in harsh temperatures, water, and vibrations. This promotes reliability in the most demanding operations.



The CUMMINS engine uses a special air filter to dramatically reduce air intake resistance. It is also equipped with a pressure alarm to prolong service life.



The cover on the dash can be lifted to easily check the brake fluid.

The two-piece design makes the floorboard easy to lift and remove for access to the powertrain.

The easy-to-operate latch provides quick access to the engine compartment.

The radiator cover fasteners can be turned by hand easily to enable quick inspections or servicing.

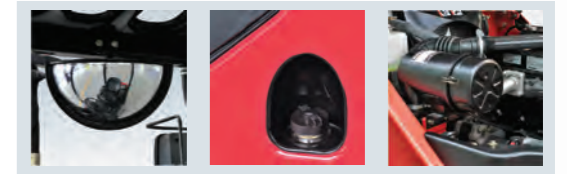
Standards

Transmission	Steering	Chassis	Control	Hydraulic
<ul style="list-style-type: none"> / Okamura Transmission / Suspended Transmission / Oil Filter / Dipstick / Oil Cooler / Non-Asbestos Brake Pads 	<ul style="list-style-type: none"> / Full Hydraulic Power Steering / Smaller Diameter Steering Wheel / Adjustable Steering Column 	<ul style="list-style-type: none"> / Anti-Slip, Rubber Pedal / Engine Compartment Hood Strut 	<ul style="list-style-type: none"> / Power Steering / Suspension Pedal / Integrated Combination Switch / Parking Brake 	<ul style="list-style-type: none"> / Dynamic Load Sensing Control Valve / Hydraulic Oil Filter / Tilt Cylinder Self-Lock Valve / Hydraulic Oil Dipstick / Dual Hydraulic Pump

Truck	Electronics	Mast
<ul style="list-style-type: none"> / Traction Device / Hand Grip / Standard Seat / Standard Overhead Guard / Waterproof Cover on the Guard / Rearview Mirror / Air Pneumatic Tires / Tilt Cylinder Cover / Tilt Cylinder Boot 	<ul style="list-style-type: none"> / Counterweight Grill / Fan Protector / Large Capacity Aluminum Radiator / Pre-Cleaner / Highly Efficient Intake Muffler / Highly Efficient Exhaust Muffler / Counterweight Exhaust System / Overhead Exhaust System 	<ul style="list-style-type: none"> / LED Headlights / LED Rear Lights / Maintenance-Free Battery / Combination Controller / LCD Display / Neutral Switch / Hour Meter / Fuel Gauge / Strobe Light
	<ul style="list-style-type: none"> / Water Temperature Gauge / Pre-Heat Indicator / Charging Indicator / Oil Pressure Warning / Transmission Oil Pressure Warning / Horn / Reversing Buzzer / Operator Presence Sensing System (OPS) 	<ul style="list-style-type: none"> / Limited Free Lift 2 Stage Mast / Standard Forks / Standard Fork Carriage / Standard Load Backrest / Mast Speed Limiting Valve / Loading Relief Valve / Soft Landing System / Soft Lifting System / Sideshifter

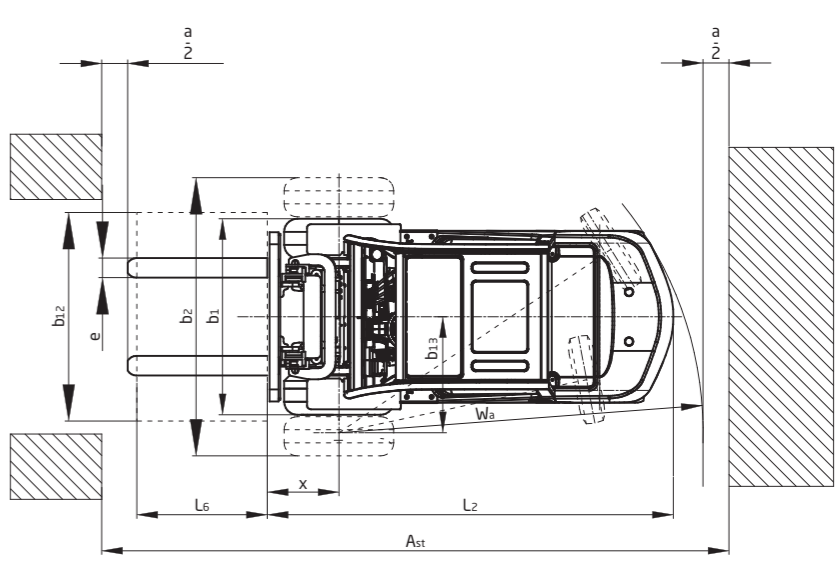
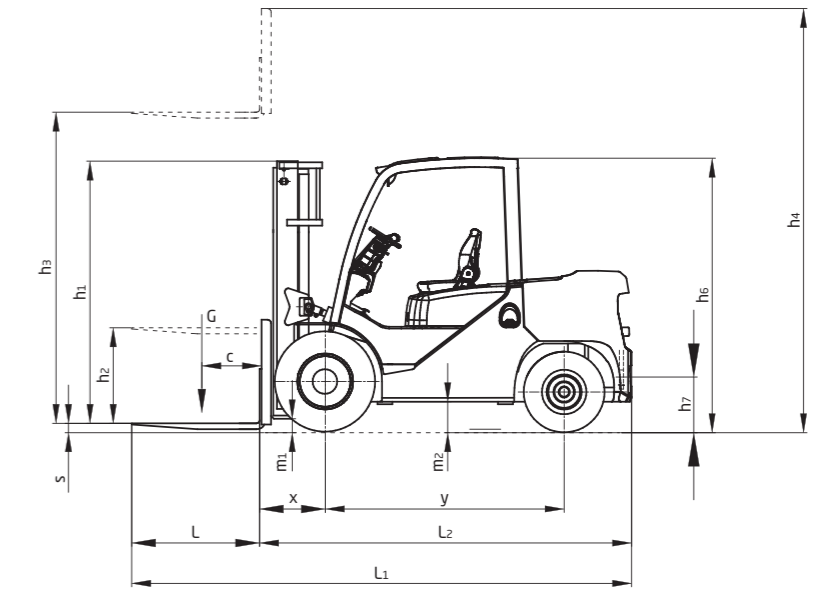
Options

- / Full Cabin
- / Cabin Heater
- / Front Window
- / Solid Pneumatic Tires
- / Non-Marking Tires
- / Full Suspension Seat
- / Fire Extinguisher
- / Higher Overhead Guard
- / Rear Handle with Horn Button
- / Custom Paint Colors
- / Dual Front Wheels
- / Large Capacity Copper Radiator
- / Radiator Screen
- / Auxiliary Hydraulic Valve
- / Electro-Hydraulic Proportional Control System
- / Return Oil Filter
- / Front & Rear Working Light
- / Special Forks
- / Wider Fork Carriage
- / Wider Load Back Rest
- / Sideshifter
- / Various Specialty Attachments



XF Series Pneumatic Tire Forklift 8,000-11,000lb Specification

		HANGCHA GROUP CO.,LTD.										
Distinguishing Marks	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.									
		HCFA Model	FD40B	FD45B	FD50BS	FD55BS	FP40B	FP45B	FP50BS	FP55B		
	1.2	Manufacturer's Type Designation	CPD40-XW58B	CPD45-XW58B	CPD50-XXW58B	CPD55-XXW58B	CPYD40-XW24B	CPYD45-XW24B	CPYD50-XXW24B	CPYD55-XXW24B		
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Diesel	Diesel	Diesel	Diesel	LPG	LPG	LPG	LPG		
	1.4	Operator Type: hand, pedestrian, stand-up, sit-down, order-picker	Seated	Seated	Seated	Seated	Seated	Seated	Seated	Seated		
	1.5	Rated Capacity/Rated Load	Q (lb)	8000	9000	10000	11000	8000	9000	10000	11000	
	1.6	Load Centre Distance	c (in)	24	24	24	24	24	24	24	24	
	1.8	Load Distance, centre of drive axle to fork	x (in)	21.7	21.7	21.9	23	21.7	21.7	21.9	23	
Weight		Rear Overhang	in	21	22.2	22	23.4	21	22.2	22	23.4	
	1.9	Wheelbase	y (in)	79	79	85	85	79	79	85	85	
	2.1	Service Weight	lb	14300	14800	15100	16000	14300	14800	15100	16000	
	2.2	Axle Loading, laden front/rear	lb	19260/3040	20740/3060	22000/3100	24200/2800	19260/3040	20740/3060	22000/3100	24200/2800	
		Counterweight	lb	4690	5100	5400	6130	4690	5100	5400	6130	
	2.3	Axle Loading, unladen front/rear	lb	6640/7660	6640/8160	6640/8460	7250/8750	6640/7660	6640/8160	6640/8460	7250/8750	
	3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	
	3.2	Tire Size, front		8.25-15-14PR	300-15-18PR	300-15-18PR	300-15-18PR	8.25-15-14PR	300-15-18PR	300-15-18PR	300-15-18PR	
Tires & Chassis	3.3	Tire Size, rear		7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	
	3.5	Wheels, number front / rear (x = driven wheels)		2	2	2	2	2	2	2	2	
	3.6	Tread, front	b10 (in)	46.2	47.4	47.4	47.4	46.2	47.4	47.4	47.4	
	3.7	Tread, rear	b11 (in)	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	
	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
		4.2	Height, mast lowered	h1 (in)	88.4	88.4	88.4	94.3	88.4	88.4	88.4	94.3
		4.3	Free Lift	h2 (in)	6.3	6.3	6.3	6.7	6.3	6.3	6.3	6.7
		4.4	Lift	h3 (in)	118	118	118	118	118	118	118	118
		4.5	Height, mast extended	h4 (in)	164.2	164.2	172	173.2	164.2	164.2	172	173.2
		4.7	Height of Overhead Guard (cabin)	h6 (in)	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4
4.8		Seat Height Relating to SIP	h7 (in)	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4	
4.12		Coupling Height	h10 (in)	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	
4.19		Overall Length	l1 (in)	163.6	164.8	170.7	177.2	163.6	164.8	170.7	177.2	
4.20		Length to Face of Forks	l2 (in)	121.5	122.6	128.5	131.1	121.5	122.6	128.5	131.1	
4.21		Overall Width	b1 (in)	55.9	59.2	59.2	59.2	55.9	59.2	59.2	59.2	
4.22		Fork Dimensions	s/e/l (in)	2/4.8/42.1	2/5.9/42.1	2/5.9/42.1	2/4.8/42.1	2/4.8/42.1	2/5.9/42.1	2/5.9/42.1	2/4.8/42.1	
4.24		Fork-Carriage Width	b3 (in)	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	
4.25		Distance between Fork-Arms	b5 (in)	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	
4.31		Ground Clearance, laden, below mast	m1 (in)	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	
4.32		Ground Clearance, centre of wheelbase	m2 (in)	9	9	9	9	9	9	9	9	
4.34.1		Aisle Width for Pallets 39" x 47" Crossways	Ast (in)	174.8	176	182.3	184.6	174.8	176	182.3	184.6	
4.34.2		Aisle width for pallets 31.5" x 47" Lengthways	Ast (in)	182.7	183.9	190.2	192.6	182.7	183.9	190.2	192.6	
4.35	Turning Radius	Wa (in)	105.9	107.1	113.2	114.4	105.9	107.1	113.2	114.4		
4.36	Internal Turning Radius	b13 (in)	33.3	33.3	34.4	34.4	33.3	33.3	34.4	34.4		
	Min. Right Angle Stacking Aisle Width (Ast)	in	127.6	128.7	135	137.4	127.6	128.7	135	137.4		
Performance Data	5.1	Travel Speed, laden/unladen	mph	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	
	5.2	Lift Speed, laden/unladen	ft/min	90.6/-	78.6/-	90.6/-	78.6/-	90.6/-	78.6/-	90.6/-	78.6/-	
	5.3	Lowering Speed, laden/unladen	ft/min	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	
	5.5	Drawbar Pull, laden/unladen	lbf	9000/-	9000/-	9000/-	9000/-	8550/-	8550/-	8550/-	8550/-	
	5.7	Gradeability, laden/unladen	%	35/-	31/-	28/-	31/-	29/-	29/-	27/-	27/-	
	5.10	Service Brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	
		Parking Brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	
Combustion Engine	7.1	Engine Manufacturer/Type		QSF2.8T4F	QSF2.8T4F	QSF2.8T4F	PSI4.3L	PSI4.3L	PSI4.3L	PSI4.3L	PSI4.3L	
		Emission STD		Tier4 F	Tier4 F	Tier4 F	Tier4 F	EPA Certified	EPA Certified	EPA Certified	EPA Certified	
	7.2	Engine Power According to DIN ISO 1585	HP	73.8	73.8	73.8	73.8	103	103	103	103	
	7.3	Rated Speed	r/min	2200	2200	2200	2200	2300	2300	2300	2300	
	7.4	Number of Cylinders/Displacement	(-) / (in³)	4/170.9	4/170.9	4/170.9	4/170.9	6/262	6/262	6/262	6/262	
	7.8	Generator	A	60	60	60	60	100	100	100	100	
	7.9	Vehicle Electrical System Voltage	V	12	12	12	12	12	12	12	12	
	7.10	Battery Voltage/Nominal Capacity	V/Ah	12/105	12/105	12/105	12/105	12/60	12/60	12/60	12/60	
		Rated Torque	Nm/r/min	298/1600	298/1600	298/1600	298/1600	332.85/1400	332.85/1400	332.85/1400	332.85/1400	
		Transmissions Manufacturer		OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	
	Stage FWD/RVS		2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1		
	Bore × Stroke	in	3.7×3.9	3.7×3.9	3.7×3.9	3.7×3.9	4×3.5	4×3.5	4×3.5	4×3.5		
	Transmission Type		Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift		
Additional Data	10.1	Operating Pressure for Attachments	bar	190	190	190	190	190	190	190	190	
	10.3	Hydraulic Tank - Capacity (drain & refill)	gal	17.6	17.6	19.8	19.8	17.6	17.6	19.8	19.8	
	10.4	Fuel Tank Capacity	gal	17.6	17.6	19.8	19.8	17.6	17.6	19.8	19.8	
	10.7	Sound Pressure Level at the Driver's Seat	dB (A)	85	85	85	85	85	85	85	85	



$$A_{st} = W_a + x + L_6 + a_2$$

applies only if $\frac{b_{12}}{2} \leq b_{13}$

