



## XF Series Diesel Pneumatic Tire Trucks

with capacities of 8,000 to 10,000lbs

*The World of Hangcha*



# Simple/ Solid/ Smart

In the XF Series, Hangcha brought together the experience of more than 30 years building forklifts and the latest forklift technologies, the result is superior in efficiency, environmental friendliness, comfortable operation, reliability, safety. The XF Series, produced from careful research and development, represent a true solution to needs from environment, operator and owner.







# Comfortable Operation

Optimal visibility in all directions create the best conditions for high productivity through relaxed and safe working.



*In developing the XF Series, comfort and ease of operation is carefully considered, for example, to improve vibration levels, compound engine damper and full floating power train are adopted.*

*Comfortable operating environments for operator also contribute to increased productivity.*



In addition to rubber damper between frames and steering axle, compound engine damper and full floating power train achieve flexible connection between frames and driving system, as a result, traveling vibrations and vibrations from the driving system are significantly reduced.



The enlarged capacity of optimized exhaust muffler, the intake muffler and the noise shield technologies provide significantly lower noise levels.

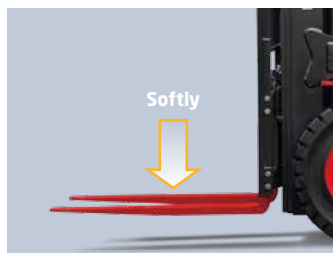
1. The new, relocated easy-to-see LCD meter lets the operator check on all aspects of operational status at a glance.
2. The new automobile-style light/turn-signal lever and forward-reverse lever are ergonomically designed and arranged to improve comfort and productivity.
3. The small diameter steering wheel with tilt adjustment provides the ideal operating position. The superior responsiveness of the steering wheel optimizes maneuverability even in narrow spaces.
4. The parking brake is specially developed. The operational force is reduced by 30%.
5. The automobile-style suspended pedals provide more ergonomic operation.



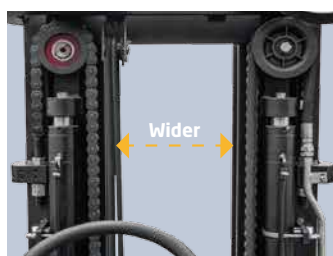


The extra foot space is provided to reduce operator fatigue significantly. The new wide-open, non-slip step makes getting in and out easy and safe.

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.



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 developed front lifting cylinders with smaller outer diameter give the operator superior forward visibility.

The double front lifting cylinders provide better forward visibility.





## Productivity

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



The new Dynamic load sensing hydraulic steering system contributes to reduce loss of hydraulic and improve energy efficiency.



The new efficiency lighting system employs LED illuminant and new type reflector to reduce energy consumption, improve significantly illumination performance and prolong work time.

# Reliability

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

XF series truck just equip with Okamura transmission. Brake drum and hub adopt monolithic construction.



XF series features rugged design, stamped frame and engine hood, stamped instrument panel and head guard, heavy profile rail mast combine to provide excellent rigidity, which ensures outstanding reliability even in heavy-duty work.

Extra capacity combined radiator with serpentine wave and optimized heat dissipation channel enhance the heat dissipation capability to keep engine reliability even in heavy-duty applications.



Bigger diameter of steering cylinder.

# Environmental Friendliness

*A lineup of powerful and clean engines and environment friendly materials help to reduce the output of undesirable substances over the lifetime of the truck, while creating a cleaner work environment.*



Each model employs a specially developed engine for the optimum balance of power and superior environmental performance. CUMMINS engine QSF2.8T4F is in compliance with EU stage-IIIb control regulation.



The exhaust treatment DOC ensure the exhaust satisfy with Europe 3B and USA T4F, it also with good noise reduction, maintenance is minimal.



# Safety

A wide range of technologies are applied to ensure absolute safety for both the operator and those in the surrounding.

*An optional rear-pillar assist grip with a horn button enhances safety of operator while traveling in reverse.*

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



1. The operator presence sensing 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.

# Easy Maintenance

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



The new controller integrates all electrical components, features excellent durability for temperature, water and vibration for most demanding operation.



CUMMINS engine use the special air filter, it can reduce air intake resistance dramatically, equipped with pressure alarm to master the maintaining time.



The cover on the Panel can be lifted up simply to check the brake fluid.

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

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

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



# Standards

Transmission	Steering	Chassiss	Control	Hydraulic
<ul style="list-style-type: none"> <li>/ Suspension transmission</li> <li>/ Oil filter</li> <li>/ Dipstick</li> <li>/ Oil cooler</li> <li>/ Non-asbesttos bake</li> <li>/ Okamura</li> </ul>	<ul style="list-style-type: none"> <li>/ Full hydraulic power steering</li> <li>/ Smaller diameter steering wheel</li> <li>/ Adjuster of steering wheel</li> </ul>	<ul style="list-style-type: none"> <li>/ Anti-slip pedal</li> <li>/ Rubber pedal</li> <li>/ Engine hood spring</li> </ul>	<ul style="list-style-type: none"> <li>/ Power steering</li> <li>/ Suspension pedal</li> <li>/ Integrated combination switch</li> <li>/ Cable parking brake</li> </ul>	<ul style="list-style-type: none"> <li>/ Dynamic load sending control valve</li> <li>/ Hydraulic oil filter</li> <li>/ Tilt cylinder self-lock valve</li> <li>/ Hydraulic oil dipstick</li> <li>/ Dual pump</li> </ul>

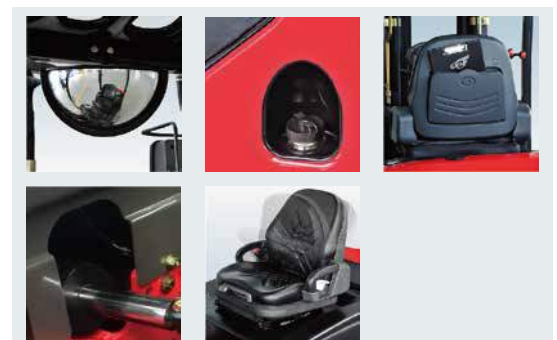
Truck	Electronics	Mast
<ul style="list-style-type: none"> <li>/ Traction device</li> <li>/ Hand grip</li> <li>/ Standard seat</li> <li>/ Standard overhead guard</li> <li>/ Waterproof cover on the guard</li> <li>/ Back view mirror</li> <li>/ Pneumatic tyres</li> <li>/ Toolbox</li> </ul>	<ul style="list-style-type: none"> <li>/ Counterweight net</li> <li>/ Fan protector</li> <li>/ Big capacity aluminum radiator</li> <li>/ Safety filter</li> <li>/ High-efficient intake muffler</li> <li>/ High-efficient exhaust muffler</li> <li>/ Upright exhaust pipe</li> <li>/ High-positioned exhaust system</li> </ul>	<ul style="list-style-type: none"> <li>/ LED headlamp</li> <li>/ High-efficient LED rear lights</li> <li>/ Maintenance-free battery</li> <li>/ Combination controller</li> <li>/ LCD display</li> <li>/ Neutual switch</li> <li>/ Hour meter</li> <li>/ Fuel gauge</li> </ul>

# Options

Truck	Transmission	Power	Hydraulic	Electronics	Mast
<ul style="list-style-type: none"> <li>/ Cabin</li> <li>/ Cabin heater</li> <li>/ Front window</li> <li>/ Super elastic tyre</li> <li>/ Non-mark tyre(white/green)</li> <li>/ Suspension seat</li> <li>/ Extinguisher</li> <li>/ Cover of tilt cylinder</li> <li>/ Heightening overhead guard</li> <li>/ Reversing assist grip</li> <li>/ Customer painting</li> <li>/ OPS(Operator Presence Sensing system)</li> <li>/ Boot for tilt cylinder</li> <li>/ Additional counterweight</li> </ul>	<ul style="list-style-type: none"> <li>/ Dual driving tyre</li> <li>/ Solid tyre</li> <li>/ Japanese drum brake</li> </ul>	<ul style="list-style-type: none"> <li>/ Big capacity copper radiator</li> <li>/ Net cover of radiator</li> <li>/ Sparkle arrester</li> <li>/ Purified exhaust system</li> </ul>	<ul style="list-style-type: none"> <li>/ Auxiliary hydraulic valve</li> <li>/ Electro-hydraulic proportional control system</li> <li>/ Return oil filter</li> </ul>	<ul style="list-style-type: none"> <li>/ OBD</li> <li>/ Front working light</li> <li>/ Rear working light</li> <li>/ Warning lamp</li> <li>/ Speed meter</li> <li>/ Over-speed alarm</li> </ul>	<ul style="list-style-type: none"> <li>/ Duplex wide view free-lift mast</li> <li>/ Triplex wide view free-lift mast</li> <li>/ Triplex wide view 4-cylinder free-lift mast</li> <li>/ Special forks</li> <li>/ Wider fork carriage</li> <li>/ Widerload back rest</li> </ul>

# 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 extensiorer
- / Load release device
- / Carton clamp
- / Push-pull device
- / Bucket
- / Hook
- / Lengthened fork



## XF series 8,000~10,000lbs Pneumatic Tire Forklift Specification

Distinguishing mark	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.		
	1.2	Manufacturer's type designation		CPCD40-XW58B	CPCD45-XW58B	CPCD50-XXW58B
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Diesel	Diesel	Diesel
	1.4	Operator type: hand, pedestrian, stand-up, sit-down, order-picker		Sit-down	Sit-down	Sit-down
	1.5	Rated capacity/rated load	Q (lb)	8000	9000	10000
	1.6	Load centre distance	c (in)	24	24	24
	1.8	Load distance, centre of drive axle to fork	x (in)	21.7	21.7	21.9
		Rear overhang	in	21	22.2	22
	1.9	Wheelbase	y (in)	79	79	85
Weight	2.1	Service Weight	lb	14400	14800	15100
	2.2	Axle loading, laden front/rear	lb	20100/2300	21500/2300	22700/2400
		Counterweight	lb	4690	5100	5400
	2.3	Axle loading, unladen front/rear	lb	6660/7740	6660/8140	6660/8440
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic
	3.2	Tyre size, front		8.25-15-14PR	300-15-18PR	300-15-18PR
	3.3	Tyre size, rear		7.00-12-12PR	7.00-12-12PR	7.00-12-12PR
	3.5	Wheels, number front / rear (x = driven wheels)		2	2	2
	3.6	Tread, front	b <sub>10</sub> (in)	46.2	47.4	47.4
	3.7	Tread, rear	b <sub>11</sub> (in)	44.5	44.5	44.5
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	6/12	6/12	6/12
	4.2	Height, mast lowered	h <sub>1</sub> (in)	88.4	88.4	88.4
	4.3	Free lift	h <sub>2</sub> (in)	6.3	6.3	6.3
	4.4	Lift	h <sub>3</sub> (in)	118	118	118
	4.5	Height, mast extended	h <sub>4</sub> (in)	164.2	164.2	170
	4.7	Height of overhead guard (cabin)	h <sub>6</sub> (in)	89.4	89.4	89.4
	4.8	Seat height relating to SIP	h <sub>7</sub> (in)	51.4	51.4	51.4
	4.12	Coupling height	h <sub>10</sub> (in)	17.7	17.7	17.7
	4.19	Overall length	l <sub>1</sub> (in)	163.6	164.8	170.7
	4.20	Length to face of forks	l <sub>2</sub> (in)	121.5	122.6	128.5
	4.21	Overall width	b <sub>1</sub> (in)	55.9	59.2	59.2
	4.22	Fork dimensions	s/e/l (in)	2/4.8/42.1	2/4.9/42.1	2/4.9/42.1
	4.24	Fork-carriage width	b <sub>3</sub> (in)	49.2	49.2	49.2
	4.25	Distance between fork-arms	b <sub>5</sub> (in)	12.2~47.2	12.2~47.2	12.2~47.2
	4.31	Ground clearance, laden, below mast	m <sub>1</sub> (in)	6.7	6.7	6.7
	4.32	Ground clearance, centre of wheelbase	m <sub>2</sub> (in)	9	9	9
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	A <sub>st</sub> (in)	174.8	176	182.3
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	A <sub>st</sub> (in)	174.8	176	182.3
	4.35	Turning radius	W <sub>a</sub> (in)	105.9	107.1	113.2
	4.36	Internal turning radius	b <sub>13</sub> (in)	33.3	33.3	34.4
Performance data		Min. right angle stacking aisle width(A <sub>st</sub> )	in	127.6	128.7	135
	5.1	Travel speed, laden/unladen	mph	(-/14.9)	(-/14.9)	(-/14.9)
	5.2	Lift speed, laden/unladen	ft/min	90/-	90/-	78/-
	5.3	Lowering speed, laden/unladen	ft/min	98/-	98/-	98/-
	5.5	Drawbar pull, laden/unladen	lbf	8990/-	8990/-	8990/-
	5.7	Gradeability, laden/unladen	%	35/-	33/-	31/-
	5.10	Service brake		Mechanical	Mechanical	Mechanical
Combustion-engine		Parking brake		Mechanical	Mechanical	Mechanical
	7.1	Engine manufacturer/type		QSF2.8T4F	QSF2.8T4F	QSF2.8T4F
	7.2	Engine power according to DIN ISO 1585	HP	74	74	74
	7.3	Rated speed	r/min	2200	2200	2200
	7.4	Number of cylinders/displacement	(-) / (in <sup>3</sup> )	4/170.9	4/170.9	4/170.9
	7.8	Generator	A	60	60	60
	7.9	Vehicle electrical system voltage	V	12	12	12
	7.10	Battery voltage/nominal capacity	V/Ah	12/105	12/105	12/105
		Rated torque	N·m/r/min	298/1600	298/1600	298/1600
		Transmissions Manufacturer		OKAMURA	OKAMURA	OKAMURA
		Stage FWD/RVS		2/1	2/1	2/1
		Bore × stroke	in	3.7×3.9	3.7×3.9	3.7×3.9
Addition data		Transmissions Type		Powershift	Powershift	Powershift
	10.1	Operating pressure for attachments	bar	190	190	190
	10.3	Hydraulic Tank - capacity (drain & refill)	gal	17.6	17.6	19.8
	10.4	Fuel tank capacity	gal	17.6	17.6	19.8
	10.7	Sound pressure level at the driver's seat	dB (A)	85	85	85



## 8,000~9,000lbs XF series mast: (pneumatic)

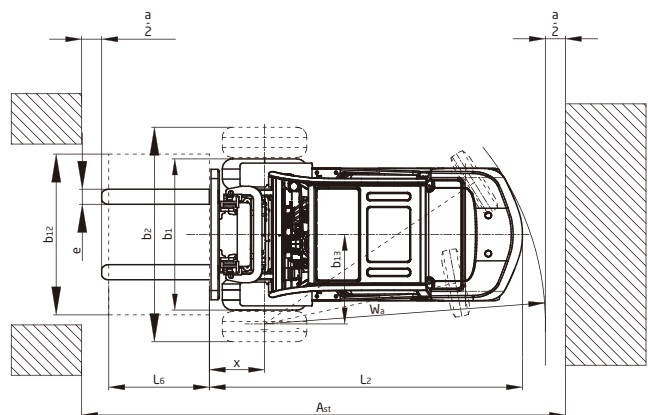
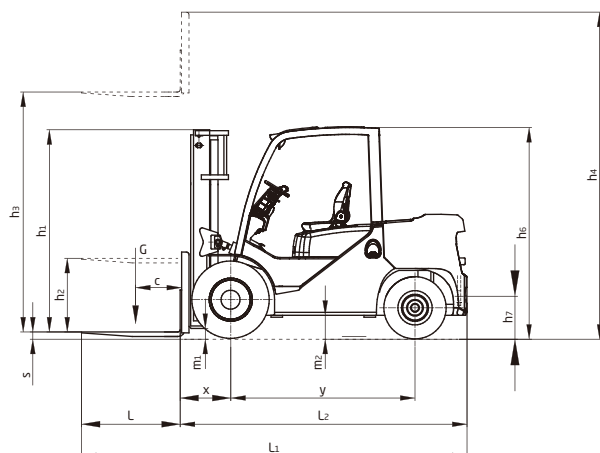
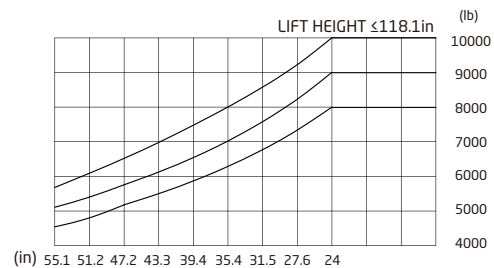
Type	Model	Max. fork height	Overall height			Free lift		Front Overhang	Tilt range		Capacity			
			Lowered	Extended		Without backrest	With backrest				Load capacity at 24in			
				Without backrest	With backrest						Single tire		Dual tire	
											8000lb	9000lb	8000lb	9000lb
		in	in	in	in	in	in	(°)	(°)	lb	lb	lb	lb	
Wide view mast	X45M270	106.3	82.5	139.0	152.4	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
	X45M400	157.5	110.0	190.2	203.5	6.3	6.3	21.7	6	12	7600	8500	8000	9000
Wide view full free duplex mast	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
Wide view full free triplex mast	X45N430	169.3	85.8	203.0	215.4	52.3	39.8	23.7	6	6	6800	7600	7200	8100
	X45N450	177.2	88.5	211.2	223.8	54.9	42.5	23.7	6	6	6400	7200	6800	7700
	X45N470	185.0	90.9	218.5	231.1	57.4	45.0	23.7	6	6	6000	6700	6400	7200
	X45N500	196.9	94.9	230.5	242.9	61.4	48.9	23.7	6	6	5600	6300	6000	6800
	X45N550	216.5	101.4	250.2	262.6	67.9	55.4	23.7	3	6	4500	5100	5600	6200

With sideshifter minus 440lb, with integral sideshifter minus 220lb.

## 10,000lbs XF series mast: (pneumatic)

Type	Model	Max. fork height	Overall height			Free lift		Front Overhang (in)	Tilt range		Capacity	
			Lowered (in)	Extended							Load capacity at 24in	
				Without backrest(in)	With backrest(in)	Without backrest(in)	With backrest(in)		Single tire	Dual tire		
				10000lb	10000lb				10000lb	10000lb		
		in	10000lb	10000lb	10000lb	10000lb	10000lb	(°)	(°)	lb	lb	
Wide view mast	XX50/XX55M270	106.3	82.5	139.0	160.2	6.3	6.3	21.9	6	12	10000	10000
	XX50/XX55M330	129.9	94.3	162.6	183.9	6.3	6.3	21.9	6	12	10000	10000
	XX50/XX55M400	157.5	110.0	190.2	211.4	6.3	6.3	21.9	6	12	9500	10000
Wide view full free duplex mast	XX50/XX55U275	108.3	82.7	142.3	162.0	48.7	28.9	22.4	6	12	10000	10000
	XX50/XX55U300	118.1	87.6	152.2	171.9	53.7	33.9	22.4	6	12	10000	10000
	XX50/XX55U330	129.9	93.5	164.0	183.7	59.6	39.8	22.4	6	12	10000	10000
	XX50/XX55U350	137.8	97.5	171.9	191.5	63.5	43.7	22.4	6	12	10000	10000
Wide view full free triplex mast	XX50/XX55N430	169.3	85.8	203.1	223.0	52.0	32.1	24.2	6	6	8500	9000
	XX50/XX55N450	177.2	88.5	211.4	231.5	54.7	34.8	24.2	6	6	8000	8500
	XX50/XX55N470	185.0	90.9	218.9	239.0	57.2	37.2	24.2	6	6	7500	8000
	XX50/XX55N500	196.9	94.9	230.7	250.8	61.1	41.1	24.2	6	6	7000	7500
	XX50/XX55N550	216.5	101.4	250.4	270.5	67.6	47.6	24.2	3	6	5700	6700

With sideshifter minus 440lb, with integral sideshifter minus 220lb.



$$A_{st} = W_a + X \cdot L_6 + a_1$$

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



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