



## XF Series Diesel / LPG Pneumatic Tire Trucks

with capacities of 8,000 to 11,000lbs

*The World of Hangcha*

**HANGCHA**  
AMERICA

# 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.



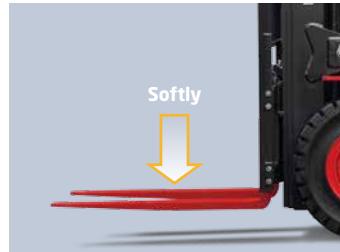
The enlarged capacity of optimized exhaust muffler, the intake muffler and the noise shield technologies provide significantly lower noise levels.

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.

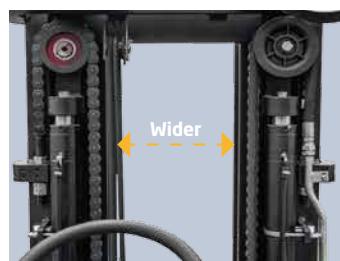


The extra foot space is provided to reduce operator fatigue significantly. The new wide-open, non-slip step makes getting in and out easy and safe.

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.



# 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 Tier 4 Final control regulation.



The exhaust treatment DOC ensure the exhaust satisfy with 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	Chassis	Control	Hydraulic
/ Suspension transmission	/ Full hydraulic power steering	/ Anti-slip 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			/ Cable parking brake	/ Hydraulic oil dipstick
/ Non-asbestos bake				/ Dual pump
/ Okamura				

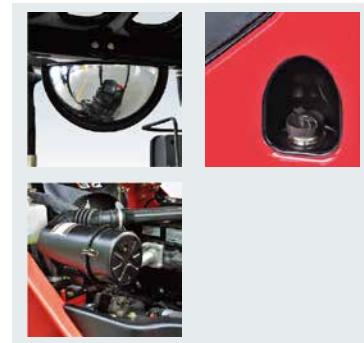
Truck	Electronics	Mast
/ Traction device	/ Counterweight net	/ LED headlamp
/ Hand grip	/ Fan protector	/ High-efficient LED rear lights
/ Standard seat	/ Big capacity aluminum radiator	/ Maintenance-free battery
/ Standard overhead guard	/ Safety filter	/ Combination controller
/ Waterproof cover on the guard	/ High-efficient intake muffler	/ LCD display
/ Back view mirror	/ High-efficient exhaust muffler	/ Neutral switch
/ Pneumatic tyres	/ Upright exhaust pipe	/ Hour meter
	/ High-positioned exhaust system	/ Fuel gauge
		/ Water temperature gauge
		/ Pre-heat indicator
		/ Charging indicator
		/ Oilpressure warning
		/ Transmission oil pressure warning
		/ Horn
		/ Reversing buzzer
		/ Standard wide view duplex mast
		/ Standard forks
		/ Standard fork carriage
		/ Standard load backrest
		/ Mast speed limiting valve
		/ Loading relieve valve
		/ Soft landing system
		/ Soft lifting system
		/ Sideshifter

# Options

Truck	Transmission	Power	Hydraulic	Electronics	Mast
/ Full cabin					
/ Cabin heater	/ Dual driving tyre	/ Big capacity copper radiator		/ Front working light	/ Duplex wide view free-lift mast
/ Front window		/ Radiator screen		/ Rear working light	/ Triple wide view free-lift mast
/ Solid pneumatic tires				/ Warning lamp	/ Triple wide view free-lift mast
/ Non-mark tyre(white)				/ Over-speed alarm	/ Special forks
/ Suspension seat					/ Wider fork carriage
/ Fire extinguisher					/ Widerload back rest
/ Cover of tilt cylinder					
/ Heightening overhead guard					
/ Rear handle with horn					
/ Customer painting					
/ OPS(Operator Presence Sensing system)					
/ Boot for tilt cylinder					

# 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

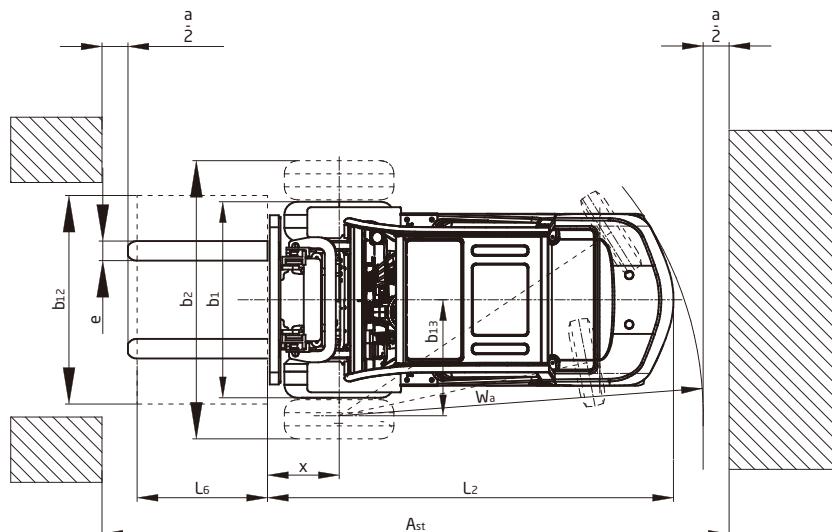
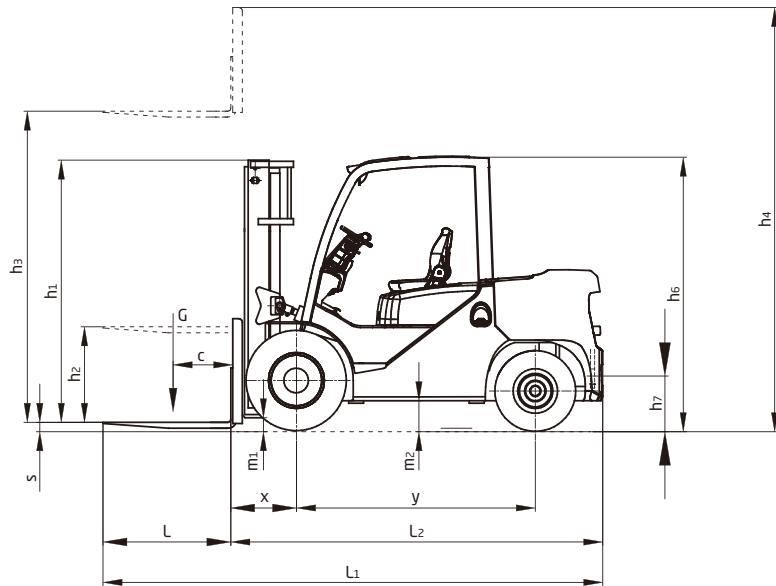


# XF series 8,000~11,000lbs Pneumatic Tire Forklift Specification

Distinguishing mark	1.1	Manufacturer				
	HCFA Model		FD40B	FD45B	FD50BS	
	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	Seated	Seated	Seated	
	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	14300	14800	15100
	2.2	Axle loading, laden front/rear	lb	19260/3040	20740/3060	22000/3100
		Conterweight	lb	4690	5100	5400
	2.3	Axle loading, unladen front/rear	lb	6640/7660	6640/8160	6640/8460
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	a/b(°)	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	172
	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	2/5.9/42.1	2/5.9/42.1
	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	Ast (in)	174.8	176	182.3
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (in)	182.7	183.9	190.2
	4.35	Turning radius	Wa (in)	105.9	107.1	113.2
	4.36	Internal turning radius	b <sub>13</sub> (in)	33.3	33.3	34.4
		Min. right angle stacking aisle width(Ast)	in	127.6	128.7	135
Performance data	5.1	Travel speed, laden/unladen	mph	(-/14.9)	(-/14.9)	(-/14.9)
	5.2	Lift speed, laden/unladen	ft/min	90.6/-	90.6/-	78.6/-
	5.3	Lowering speed, laden/unladen	ft/min	98.4/-	98.4/-	98.4/-
	5.5	Drawbar pull, laden/unladen	lbf	9000/-	9000/-	9000/-
	5.7	Gradeability, laden/unladen	%	35/-	33/-	31/-
	5.10	Service brake		Hydraulic	Hydraulic	Hydraulic
		Parking brake		Mechanical	Mechanical	Mechanical
Combustion-engine	7.1	Engine manufacturer/type		QSF2.8T4F	QSF2.8T4F	QSF2.8T4F
		Emission STD		Tier4 F	Tier4 F	Tier4 F
	7.2	Engine power according to DIN ISO 1585	HP	73.8	73.8	73.8
	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 x stroke	in	3.7×3.9	3.7×3.9	3.7×3.9
		Transmissions Type		Powershift	Powershift	Powershift
Addition data	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

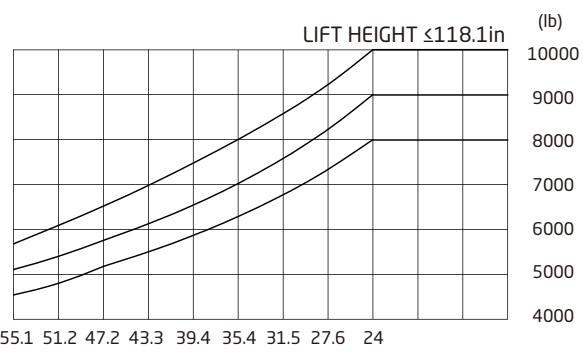
## HANGCHA GROUP CO., LTD.

FD55BS	FP40B	FP45B	FP50BS	FP55B
CPCD55-XXW58B	CPYD40-XW24B	CPYD45-XW24B	CPYD50-XXW24B	CPYD55-XXW24B
Diesel	LPG	LPG	LPG	LPG
Seated	Seated	Seated	Seated	Seated
11000	8000	9000	10000	11000
24	24	24	24	24
23	21.7	21.7	21.9	23
23.4	21	22.2	22	23.4
85	79	79	85	85
16000	14300	14800	15100	16000
24200/2800	19260/3040	20740/3060	22000/3100	24200/2800
6130	4690	5100	5400	6130
7250/8750	6640/7560	6640/8150	6640/8460	7250/8750
Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
300-15-18PR	8.25-15-14PR	300-15-18PR	300-15-18PR	300-15-18PR
7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR
2	2	2	2	2
47.4	46.2	47.4	47.4	47.4
44.5	44.5	44.5	44.5	44.5
6/12	6/12	6/12	6/12	6/12
94.3	88.4	88.4	88.4	94.3
6.7	6.3	6.3	6.3	6.7
118	118	118	118	118
173.2	164.2	164.2	172	173.2
89.4	89.4	89.4	89.4	89.4
51.4	51.4	51.4	51.4	51.4
17.7	17.7	17.7	17.7	17.7
177.2	163.6	164.8	170.7	177.2
131.1	121.5	122.6	128.5	131.1
59.2	55.9	59.2	59.2	59.2
2.4/5.9/47.2	2/4.8/42.1	2/5.9/42.1	2/5.9/42.1	2.4/5.9/47.2
49.2	49.2	49.2	49.2	49.2
12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2
6.7	6.7	6.7	6.7	6.7
9	9	9	9	9
184.6	174.8	176	182.3	184.6
192.6	182.7	183.9	190.2	192.6
114.4	105.9	107.1	113.2	114.4
34.4	33.3	33.3	34.4	34.4
137.4	127.6	128.7	135	137.4
(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)	(-/14.9)
78.6/-	90.6/-	90.6/-	78.6/-	78.6/-
98.4/-	98.4/-	98.4/-	98.4/-	98.4/-
9000/-	8550/-	8550/-	8550/-	8550/-
28/-	33/-	31/-	29/-	27/-
Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
QSF2.8T4F	PSI4.3L	PSI4.3L	PSI4.3L	PSI4.3L
Tier4 F	EPA Tier2	EPA Tier2	EPA Tier2	EPA Tier2
73.8	103	103	103	103
2200	2300	2300	2300	2300
4/170.9	6/262	6/262	6/262	6/262
60	100	100	100	100
12	12	12	12	12
12/105	12/60	12/60	12/60	12/60
298/1600	332.85/1400	332.85/1400	332.85/1400	332.85/1400
OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA
2/1	2/1	2/1	2/1	2/1
3.7×3.9	4x3.5	4x3.5	4x3.5	4x3.5
Powershift	Powershift	Powershift	Powershift	Powershift
190	190	190	190	190
19.8	17.6	17.6	19.8	19.8
19.8	17.6	17.6	19.8	19.8
85	85	85	85	85



$$A_{st} = w_a + x + L_6 + a;$$

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







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