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### **XF Series Diesel Counterbalanced Trucks**

with capacities of 8,000 to 12,000kg

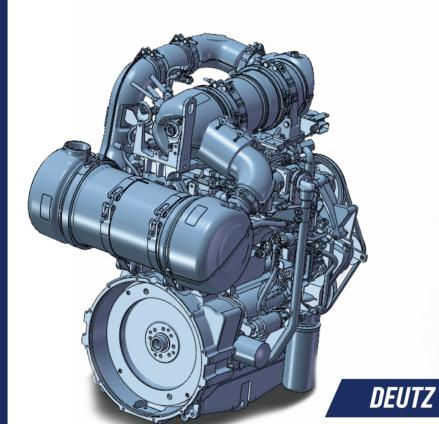


### **HANGCHA** be with you at every stage

Efficient, reliable solutions for your demands



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.





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 |1939 standards.

#### **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

### Simple/ Solid/ Smart



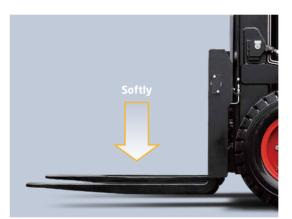


## **Comfortable Operation**

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**

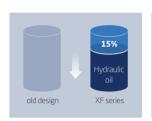
Thanks to the series technological innovations, the efficiency of the truck is improved, the energy consumption is reduced.

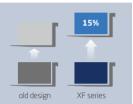


By optimizing transmission design, the power train provides higher efficiency, and the Max. driving speed is increased 20%



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.
- 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.

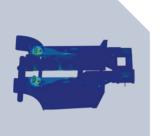






There're four levels shock absorption applied to reduced the vibration from the road to the driver. The damping pad is applied reduce the vibration, Like between the steering axle and the chassis, The engine, torque convertor and the chassis, the overhead guard and the chassis. And the suspension seat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

### **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.



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...

### **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.



- 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**

Steering	Chassiss	Control	Hydraulic
Full hydraulic power steering	/ Skidproof pedal	/ Power steering	/ Dynamic load sending control valve
Smaller diameter steering wheel	/ Rubber pedal	/ Suspension pedal	/ Hydraulic oil filter
Adjuster of steering wheel	/ Engine hood spring	/ Integrated combination switch	/ Tilt cylinder self-lock valve
Shock absorber of steering axle		/ Parking brake	/ Hydraulic oil dipstick
			/ Accumulator
			/ Hydraulic oil radiator
,	Full hydraulic power steering Smaller diameter steering wheel Adjuster of steering wheel	Full hydraulic power steering / Skidproof pedal Smaller diameter steering wheel / Rubber pedal Adjuster of steering wheel / Engine hood spring	Full hydraulic power steering / Skidproof pedal / Power steering  Smaller diameter steering wheel / Rubber pedal / Suspension pedal  Adjuster of steering wheel / Engine hood spring / Integrated combination switch

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

### **Options**

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

## Optional Attachments

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



#### 8.0~10t XF series mast: (pneumatic)

	I	I	0	l b a l a b a	I		Tiel	1		
			Uverai	l height I	Free lift	Load distance,	Titl range		apacity	
a		Max.fork		Extended	Without	centre of drive	FWD/BWD	Load capacity at 600mm  Double tire		
Туре	Model	height	Lowered	Without backrest	backrest	axle to fork	I WU/UWU	8t	10t	
		mm	mm	mm	mm	mm	(°)	Kg	Kg	
	X80M250	2500	2450	3710	200	714	6/12	8000	Ng /	
	X80M270	2700	2550	3910	200	714	6/12	8000	/	
		3000	2700	4210	200	714	6/12	8000	/	
	X80M300								/	
	X80M330	3300	2850	4510	200	714	6/12	8000	· ·	
	X80M350	3500	2950	4710	200	714	6/12	8000	1	
	X80M360	3600	3000	4810	200	714	6/12	8000	1	
	X80M400	4000	3200	5210	200	714	6/12	8000	1	
	X80M430	4300	3400	5510	200	714	6/6	8000	1	
	X80M450	4500	3500	5710	200	714	6/6	8000	1	
	X80M480	4800	3650	6010	200	714	6/6	8000	/	
ast	X80M500	5000	3750	6210	200	714	6/6	8000	1	
Ē	X80M550	5500	4050	6740	200	714	3/6	7400	1	
ě	X80M600	6000	4300	7240	200	714	3/6	7000	1	
ğ	X80M650	6500	4600	7790	200	714	3/6	5800	1	
wide view Duplex mast	X100M250	2500	2600	4055	200	726	6/12	1	10000	
Ş	X100M270	2700	2700	4255	200	726	6/12	/	10000	
de	X100M300	3000	2850	4555	200	726	6/12	1	10000	
3	X100M330	3300	3000	4855	200	726	6/12	1	10000	
	X100M350	3500	3100	5055	200	726	6/12	1	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	1	10000	
	X100M480	4800	3800	6355	200	726	6/6	1	10000	
	X100M500	5000	3900	6555	200	726	6/6	1	10000	
	X100M550	5500	4200	7055	200	726	3/6	1	9000	
	X100M600	6000	4450	7555	200	726	3/6	1	8000	
	X100M650	6500	4750	8055	200	726	3/6	1	6700	
	X80U230	2300	2350	3505	1145	719	6/12	8000	1	
	X80U250	2500	2450	3705	1245	719	6/12	8000	1	
	X80U270	2700	2550	3905	1345	719	6/12	8000	1	
-	X80U300	3000	2700	4205	1495	719	6/12	8000	1	
Jas	X80U330	3300	2850	4505	1645	719	6/12	8000	1	
×	X80U360	3600	3000	4805	1795	719	6/12	8000	/	
퓔	X80U400	4000	3200	5205	1995	719	6/12	8000	1	
큥	X100U230	2300	2500	3845	955	744	6/12	/	10000	
ree	X100U250	2500	2600	4045	1055	744	6/12	/	10000	
Full free duplex mast	X100U270	2700	2700	4245	1155	744	6/12	1	10000	
£	X100U300	3000	2850	4545	1305	744	6/12	1	10000	
	X100U330	3300	3000	4845	1455	744	6/12	1	10000	
	X100U360	3600	3150	5145	1605	744	6/12	1	10000	
	X100U400	4000	3350	5545	1805	744	6/12	/	10000	
	X80N450	4500	2750	5775	1485	759	6/6	7000	1	
	X80N480	4800	2850	6075	1585	759	6/6	7000	1	
	X80N500	5000	2950	6360	1600	759	6/6	6500	1	
-	X80N550	5500	3100	6810	1800	759	3/6	6100	1	
Full free triplex mast	X80N600	6000	3250	7275	1985	759	3/6	5600	1	
×	X80N650	6500	3530	7840	2200	759	3/6	5000	1	
声	X80N700	7000	3700	8310	2400	759	3/6	4200	1	
Ξ	X100N450	4500	2850	6055	1305	794	6/6	/	8500	
ē	X100N480	4800	2950	6355	1405	794	6/6	/	8500	
<b>=</b>	X100N500	5000	3050	6555	1505	794	6/6	/	8200	
æ	X100N550	5500	3200	7055	1655	794	3/6	1	7700	
	X100N600	6000	3350	7555	1805	794	3/6	1	7000	
	X100N650	6500	3630	8055	2085	794	3/6	1	6200	
	X100N700	7000	3800	8555	2255	794	3/6	1	5200	
	V10014/00	/000	3000	ددده ا	223	/ 34	3/0	,	7200	

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

#### 12t XF series mast: (pneumatic)

			Overall height		Free lift		Titl range	Capacity
		Max.fork		Extended	1 Cabarra	Front		Load capacity 600mm
Туре	Model	height	Lowered	Without	Without backrest	overhang	FWD/BWD	Double tire
-	riodei			backrest	Dackiest			12t
		mm	mm	mm	mm	mm	(°)	kg
	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
mast	XX120M360	3600	3300	5305	200	739	6/12	12000
	XX120M400	4000	3550	5705	200	739	6/12	12000
e.	XX120M430	4300	3700	6005	200	739	6/6	12000
>	XX120M450	4500	3800	6205	200	739	6/6	12000
Wide	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

1	1.1 Manufacturer HANGCHA GROUP CO.,LTD.											
	-	Manulacturer's type designation		CPCD80-XW41B	CPCD100-XW41B	CPCD120-XXW41	CPCD80-XW75G	CPCD100-XW75G	CPCD120-XXW75	CPCD80-XW96G	CPCD100-XW96G	CPCD120-XXW96
	_	Drive: electric (battery or mains), diesel, petrol, fuel gas		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
_ ლ ⊢	-	Operator type: hand, pedestrian, standing, seated, order-picker		Seat	Seat	Seat	Seat	Seat	Seat	Seat	Seat	Seat
l sig k ⊢	-		Q (kg)	8000	10000	12000	8000	10000	12000	8000	10000	12000
ig  -			(mm)	600	600	600	600	600	600	600	600	600
	-+		c(mm)	714	726	739	714	726	739	714	726	739
_	-		/(mm)	2500	2800	2800	2600	2800	2800	2600	2800	2800
2	2.1		kg	11200	13000	14300	12000	13800	14800	12000	13800	14800
<u> </u>	-		kg	17280/1920	20940/2060	24100/2200	17980/2020	21515/2285	24500/2300	17980/2020	21515/2285	24500/2300
3 -	-		kg	4480/6720	6040/6960	6220/8080	4820/7180	6430/7370	6400/8400	4820/7180	6430/7370	6400/8400
	-	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic
-	-	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
SS:	-	Гуre 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
s, c		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
	_	Fread, front bio	.o (mm)	1628	1628	1628	1628	1628	1628	1628	1628	1628
_	_		1 (mm)	1700	1700	1722	1700	1700	1722	1700	1700	1722
	-		α/β(°)	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12
-	_		1 (mm)	2700	2850	3000	2700	2850	3000	2700	2850	3000
4	4.3 f	Free lift h2	2 (mm)	200	200	200	200	200	200	200	200	200
4	1.4 l	ift ha	3 (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000
4	4.5 H	Height, mast extended h4	4 (mm)	4210	4555	4705	4210	4555	4705	4210	4555	4705
4	4.7 I	Height of overhead guard	6 (mm)	2580	2580	2580	2580	2580	2580	2580	2580	2580
4	4.8	Seat height h7	7 (mm)	1505	1505	1505	1505	1505	1505	1505	1505	1505
4.	.12 (	Coupling height his	.o (mm)	505	505	505	505	505	505	505	505	505
4.	.19 (	Overall length I1	(mm)	5404	5736	5849	5504	5736	5849	5504	5736	5849
<u>د</u> 4.	.20 l	ength to face of forks	2 (mm)	3904	4236	4349	4004	4236	4349	4004	4236	4349
ensio 4.	.21 (	Overall width b1	1(mm)	2165	2165	2165	2165	2165	2165	2165	2165	2165
E 4.	.22 f	ork dimensions s/e/	e/I (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		1	I	1	I	I	1	1	I	1
4.	.24 f	Fork-carriage width bs	3 (mm)	2000	2000	2000	2000	2000	2000	2000	2000	2000
4.	.31 (	Ground clearance, laden, mast mı	1 (mm)	250	250	250	250	250	250	250	250	250
4.	.32	Ground clearance, centre of wheelbase ma	2 (mm)	339	339	339	339	339	339	339	339	339
4.3	34.1	Aisle width for pallets 1000 x 1200 crossways Ast	st (mm)	5544	5866	5979	5644	5866	5979	5644	5866	5979
4.3	34.2	Aisle width for pallets 800 x 1200 lengthways Ast	st (mm)	5744	6066	6179	5844	6066	6179	5844	6066	6179
4.	.35	Furning radius Wa	a (mm)	3630	3940	4040	3730	3940	4040	3730	3940	4040
4.	.36	nternal turning radius b13	3 (mm)	1327	1396	1396	1350	1396	1396	1350	1396	1396
5	5.1	Fravel speed, laden/unladen k	km/h	-/28.5	-/28.5	-/27	-/28.5	-/28.5	-/29	-/28.5	-/28.5	-/29
<b>1 2</b> 5	5.2 l	ift speed, laden/unladen	m/s	0.440/-	0.330/-	0.360/-	0.390/-	0.317/-	0.330/-	0.390/-	0.317/-	0.330/-
9 5 5	5.3 l	owering 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	Orawbar pull,laden/unden	N	65000/45000	65000/49000	65000/49000	65000/45000	65000/49000	65000/49000	65000/45000	65000/49000	65000/49000
<b>a</b> 5	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
7	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
tion-		Engine standard		G 2	G 2	G 2	Stage IV	Stage IV	Stage IV	Stage V	Stage V	Stage V
E =			kW	97.7	97.7	97.7	85	85	85	85	85	85
5   7	7.3 F	Rated speed r.	r/min	2200	2200	2200	2200	2200	2200	2200	2200	2200
7	7.4	No. of cylinders/displacement (-)	)/(cm³)	6/6494	6/6494	6/6494	4/3600	4/3600	4/3600	4/3600	4/3600	4/3600
.e. e 10	0.1	Operating pressure for attachments	bar	195	195	215	195	195	215	195	195	215
Addit dat.	0.2	Dil volume for attachments	I/min	180	180	180	155	155	155	155	155	155
10	0.8	Towing coupling, type DIN 15170		Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin

