



X Series Diesel / Gasoline / LPG Counterbalanced Forklift Trucks

with capacities of 5,000 to 10,000kg



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X Series

DIESEL / GASOLINE / LPG COUNTERBALANCED FORKLIFT TRUCKS

The X series is the new series of internal combustion counterbalance forklift truck developed by Hangcha independently, adopting the world advanced technologies based on the original products. Through the comprehensive upgrading of appearance molding, energy conservation, environmental protection, comfort, security and reliability, it will become the world-class forklift truck which can meet your overall demands.

Strong appearance and visual impact

The appearance of full vehicle is developed under the cooperation with professional industrial design company by adopting the appearance design methods of brand-new concept. The streamlined surface modeling design brings smooth lines, elegant appearance, vigorous and steady surface as well as the outstanding inherence, possessing the powerful visual impact.

The appearance of full vehicle is exquisite and concise. which adopting the newly designed parts with opening mould at large area, the appearance of full vehicle will be more humanized.

Innovation design



The new designed mast increase forward visibility 15%



Fuel consumption ↓ 10%
(Common rail engine)



Grade-speed ability ↑ 15%



Legroom ↑ 15%



Exhaust emission ↓ 35%
(Common rail engine)



Better cold starting performance
(Common rail engine)



High pressure common rail electronic-controlled engine provide lower failure rate
(Common rail engine)



Aluminous plate-fin radiator provides stronger structure



Water temp ↓ 10 C, oil temp ↓ 10%





Fully improved reliability and security



The radiator adopts aluminous plate-fin radiator with better performance and higher structural strength. Impendent oil radiator, optimized oil and water heat dissipation channel and double ventilation holes on counterweight can greatly improve cooling efficiency and reliability of overloaded operation and ensure reliable operation of the engine.

Overhead guard adopts special-shaped steel tube, which can reinforce the strength and improve sealing of the cab.

5.0-7.0t roller bearing on the steering axle king pin adopts large size tapered roller bearing (TRB), larger steering cylinder and bumper block assemblies on the top, which can prolong the service life of bearing and highly improve the reliability of steering axle.

Along with adopting a low height for the step, it has also been made wider, facilitating frequency entry and exit.

Energy conservation and environmental protection



The whole truck adopts LED lights as shiner and new-type panoramic retroreflector to ensure energy conservation and power saving as well as greatly improve the performance and service life of luminaires at the same time.

The full vehicles all adopt the environmental protection material to reduce environmental hazards.



Easy maintenance



Newly-developed LCD instrument has more comprehensive functions and more stable performance and entirely displays the full vehicle running state, trouble diagnosis and other important information, which can make the operator more intuitively and conveniently have a better knowledge of vehicle state and make the maintenance conveniently.

The enlarged opening angle of hood and increase of left and right hood side plates can provide you with convenient and rapid maintenance mode.

Adoption of new generation integrated electric box makes maintenance and repair convenient, layout becomes more reasonable and with better water-proof performance.

Integral locking pin structure on the baseboard can be opened without tool, which is convenient for daily repair and maintenance.

Comfort

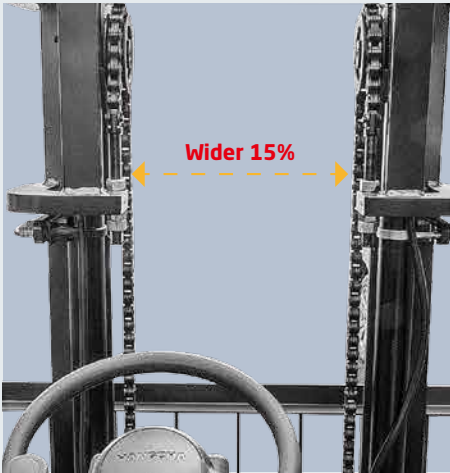
Reduce the caster angle of instrument stand and adopt the integral hood to greatly increase the space underfoot;
The orthodrome of overhead guard fore leg will expand the driving space;



Optimized air intake and exhaust system of full vehicle, high-capacity exhaust silencer and high-effect intake silencer will reduce the noise of full vehicle and reduce the vibration.



The design of steering wheel of small diameter and electro-hydraulic reversing as well as the car-type double-handle combination switch will greatly improve the driving comfort.



Adopt the new-type of box iron. Increase the inside width of inner mast and the spacing between lifting cylinders. The lowering of instruments in the driving cab will greatly increase the forward visibility; The rear visibility will also be greatly improved through the optimization design of counterweight.



Intelligentized management system (option)

Reserved plug of extending function of Intelligent module is on the wire bundles that makes truck management more convenient and rapid.

Standard Specification

- / Drum brake
- / Working light
- / Hydraulic oil filter
- / Electric Flameout
- / Seat with belt
- / Skidproof pedal
- / Air filter
- / Hydraulic oil dipstick
- / Traction device
- / Mast speed limiting valve
- / Full hydraulic power steering
- / Wide view duplex mast
- / Standard forks
- / Waterproof cover on the guard
- / Standard overhead guard
- / Rear combination LED light
- / Vacuum assisted brake(5-7t)
- / panoramic rearview mirror
- / Dynamic braking(8.5-10t)
- / Adjustable steering column
- / Pre-heating indicator
- / Engine fuel pressure warning
- / Neutral switch
- / Engine hood spring
- / Dipstick
- / Cover of tilt cylinder
- / Standard load backrest(5-7t)
- / Horn
- / Fuel gauge
- / LCD display
- / High-positioned intake system
- / High-positioned exhaust system
- / Cable parking brake
- / Tilt cylinder self-locking valve
- / Accumulator pressure alarm lamp(8.5-10t)
- / Timer
- / Port type gearbox
- / Charging indicator
- / Fork positioner(8.5-10t)
- / Water temperature gauge
- / Air filter alarm lamp
- / Reversing buzzer
- / Hand grip
- / Integrated controller
- / Oil-water separator
- / Rubber pedal
- / Multiplex hydraulic valve

Optional Mast

- / Duplex wide view full free mast
- / Trilex wide view full free mast
- / Special duplex wide view mast
- / Wider fork carriage
- / Special forks

Options

- / Imported brakes (5-7t)
- / Cabin
- / Intelligentized management system
- / Customer painting
- / Cabin heater
- / LED rear working light
- / Hood lock
- / Solid tyre
- / Non-mark tyre (white/green)
- / Middle-positioned exhaust system
- / Sparkle arrester
- / Suspension seat
- / Automatic shift system
- / Fuel tank lock
- / Extinguisher
- / Reversing assist grip with horn button
- / Height of overhead guard
- / Dual air filter
- / Toolbox
- / Wet brake(8.5-10t)
- / Emergency switch
- / Fan protector
- / Over-speed alarm
- / Warning light
- / OPS system

Optional Attachments

- | | |
|---------------------------------|-------------------------------|
| / Paper roll clamp | / String pole |
| / Fork positioner | / Sideshifter |
| / Load stabilizer | / Rotating forks |
| / Side shifting fork positioner | / Fork extensioner |
| / Bale clamp | / Tyre handler |
| / Steel pipes Hinge Fork | / Block clamp |
| / Dumping clamp | / mechanical drum clamp(5-6t) |
| / Crane arm | / Bucket |

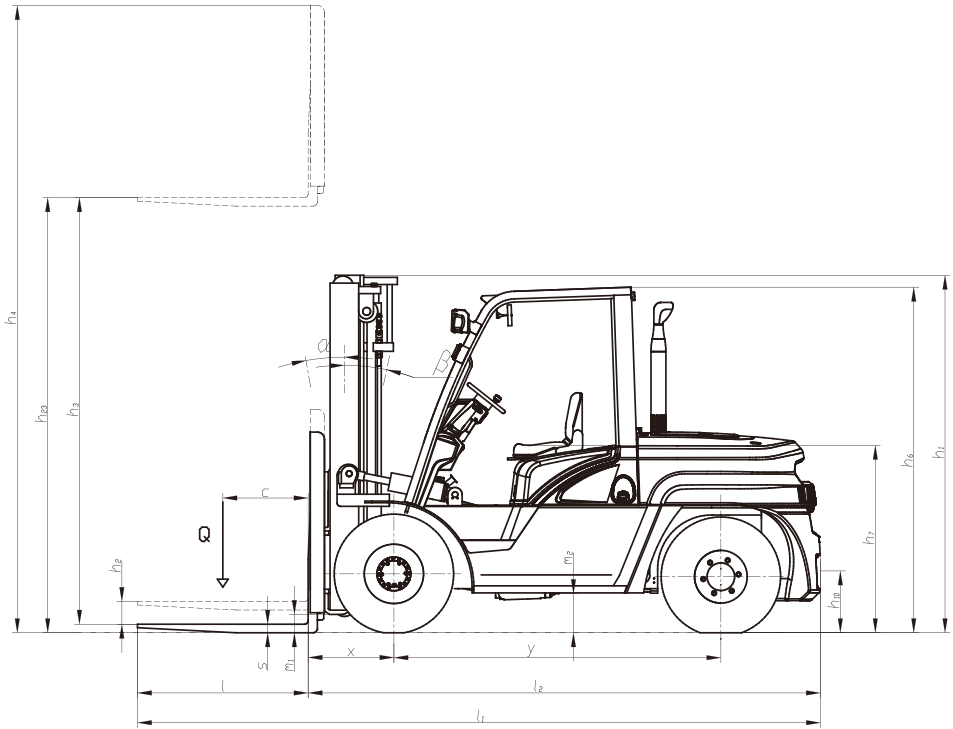


X Series Diesel / Gasoline / LPG Counterbalanced Forklift Trucks

Distinguishing mark	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.										
	1.2	Manufacturer's type designation		CPCD50-XRW14	CPCD60-XRW14	CPCD70-XRW14	CPCD85-XRW14	CPCD100-XRW14	CPCD50-XRW70	CPCD60-XRW70	CPCD70-XRW70	CPCD85-XRW70	CPCD100-XRW70
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated	Seated	Seated	Seated	Seated	Seated	Seated	Seated	Seated
	1.5	Load capacity/rated load	Q (kg)	5000	6000	7000	8500	10000	5000	6000	7000	8500	10000
	1.6	Load centre distance	c (mm)	600	600	600	600	600	600	600	600	600	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	600	600	605	710	725	600	600	605	710	725
	1.9	Wheelbase	y (mm)	2300	2300	2300	2500	2800	2300	2300	2300	2500	2800
	Weight	2.1	Service weight	kg	8150	8700	9400	11400	12900	8150	8700	9400	11400
2.2		Axle loading, laden front/rear	kg	11490/1660	12930/1770	14770/1630	18100/1800	20600/2300	11490/1660	12930/1770	14770/1630	18100/1800	20600/2300
2.3		Axle loading, unladen front/rear	kg	3860/4290	3810/4890	3910/5490	5260/6140	5810/7090	3860/4290	3810/4890	3910/5490	5260/6140	5810/7090
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic	pneumatic
	3.2	Tyre size, front		8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	9.0-20-14PR	9.0-20-14PR	8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	9.0-20-14PR	9.0-20-14PR
	3.3	Tyre size, rear		8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	9.0-20-14PR	9.0-20-14PR	8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	9.0-20-14PR	9.0-20-14PR
	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	4x/2
	3.6	Tread, front	b10 (mm)	1489	1489	1489	1628	1628	1489	1489	1489	1628	1628
	3.7	Tread, rear	b11 (mm)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	10/12	10/12	10/12	10/12	10/12	10/12	10/12	10/12	10/12	10/12
	4.2	Height, mast lowered	h1 (mm)	2500	2500	2500	2700	2850	2500	2500	2500	2700	2850
	4.3	Free lift	h2 (mm)	100	100	95	125	120	100	100	95	125	120
	4.4	Lift	h3 (mm)	2940	2940	2935	2925	2920	2940	2940	2935	2925	2920
		Lift height	h23 (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	4.5	Height, mast extended	h4 (mm)	4407	4407	4407	4210	4555	4407	4407	4407	4210	4555
	4.7	Height of overhead guard (cabin)	h6 (mm)	2400	2400	2400	2580	2580	2400	2400	2400	2580	2580
	4.8	Seat height relating to SIP	h7 (mm)	1320	1320	1320	1505	1505	1320	1320	1320	1505	1505
	4.12	Coupling height	h10 (mm)	430	430	430	505	505	430	430	430	505	505
	4.19	Overall length	l1 (mm)	4720	4750	4825	5420	5750	4720	4750	4825	5420	5750
	4.20	Length to face of forks	l2 (mm)	3500	3530	3530	3900	4230	3500	3530	3605	3900	4230
	4.21	Overall width	b1 (mm)	1990	1990	1990	2197	2197	1990	1990	1990	2197	2197
	4.22	Fork dimensions	s/e/l (mm)	60x150x1220	60x150x1220	65x150x1220	75x160x1520	80x160x1520	60x150x1220	60x150x1220	65x150x1220	75x160x1520	80x160x1520
	4.23	Fork carriage DIN 15 173, class/type A, B		IV A	IV A	IV A	/	/	IV A	IV A	IV A	/	/
	4.24	Fork-carriage width	b3 (mm)	1850	1850	1850	2000	2000	1850	1850	1850	2000	2000
	4.31	Ground clearance, laden, below mast	m1 (mm)	190	190	190	250	250	190	190	190	250	250
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	270	270	270	357	357	270	270	270	357	357
	4.33	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	5030	5080	5155	5540	5865	5030	5080	5155	5540	5865
	4.34	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	5230	5280	5355	5740	6065	5230	5280	5355	5740	6065
	4.35	Turning radius	Wa (mm)	3230	3280	3350	3630	3940	3230	3280	3350	3630	3940
4.36	Internal turning radius	b13 (mm)	1150	1150	1150	1325	1395	1150	1150	1150	1325	1395	
Performance data	5.1	Travel speed, laden/unladen	km/h	27/30	27/30	27/30	28/31	28/31	27/30	27/30	27/30	28/31	28/31
	5.2	Lift speed, laden/unladen	m/s	0.540/0.580	0.540/0.580	0.480/0.510	0.390/0.420	0.330/0.350	0.440/0.480	0.440/0.480	0.400/0.430	0.360/0.390	0.300/0.320
	5.3	Lowering speed, laden/unladen	m/s	0.480/0.420	0.480/0.420	0.480/0.420	0.460/0.400	0.460/0.400	0.480/0.420	0.480/0.420	0.480/0.420	0.460/0.400	0.460/0.400
	5.5	Drawbar pull,laden/unden	N	68000/24000	68000/24000	68000/24000	78000/45000	78000/50000	60000/24000	60000/24000	60000/24000	70000/45000	70000/50000
	5.7	Gradeability, laden/unladen	%	43/20	41/20	39/20	24/20	24/20	36/20	34/20	32/20	22/20	22/20
	5.10	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
		Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
Combustion-engine	7.1	Engine manufacturer/type		ISUZU/6BG1QP	ISUZU/6BG1QP	ISUZU/6BG1QP	ISUZU/6BG1QP	ISUZU/6BG1QP	CUMMINS/QSF3.8	CUMMINS/QSF3.8	CUMMINS/QSF3.8	CUMMINS/QSF3.8	CUMMINS/QSF3.8
		Emission standard		/	/	/	/	/	StageIIIA	StageIIIA	StageIIIA	StageIIIA	StageIIIA
	7.2	Engine power acc.to ISO 1585	kW	85.3	85.3	85.3	85.3	85.3	86	86	86	86	86
	7.3	Rated speed	r/min	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	7.4	No. of cylinders/displacement	(-) / (cm ³)	6/6494	6/6494	6/6494	6/6494	6/6494	4/3760	4/3760	4/3760	4/3760	4/3760
	7.9	Vehicle electrical system voltage	V	24	24	24	24	24	24	24	24	24	24
	7.10	Battery voltage/nominal capacity	V/Ah	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90	2-12/90
		Rated torque	N·m/r/min	410.9/1500	410.9/1500	410.9/1500	410.9/1500	410.9/1500	470/1100-1700	470/1100-1700	470/1100-1700	470/1100-1700	470/1100-1700
		Transmissions Manufacturer		China	China	China	China	China	China	China	China	China	China
		Transmissions Type		Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift
Addition data				2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	10.1	Operating pressure for attachments	bar	190	190	190	195	195	190	190	190	195	195
	10.2	Oil volume for attachments	l/min	132	132	132	119	119	103	103	103	103	103
	10.3	Hydraulic Tank - Capacity (drain & refill)	liter	120	120	120	160	160	120	120	120	160	160
	10.4	Fuel tank capacity	liter	150	150	150	180	180	150	150	150	180	180
	10.7	Sound level at the driver's ear according to DIN 12053	dB (A)	89	89	89	89	89	89	89	89	89	89
	10.8	Towing coupling,type DIN 15170		Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin

5-7t X series mast:(penumatic)

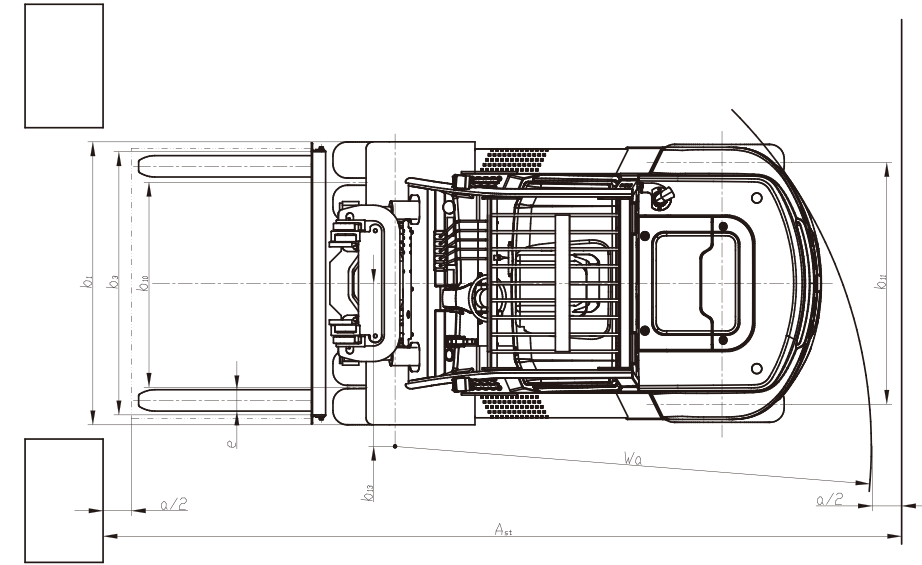
Type	Model	Max. fork height	Overall height		Free lift		Load distance, centre of drive axle to fork	Tilt range	Capacity			
			Lowered	Extended		Without backrest			With backrest	Load capacity at 600mm		
				w/without backrest	w/ith backrest					Dual tire		
										5t	6t	7t
		mm	mm	mm	mm	mm	(°)	kg	kg	kg		
Wide view mast	XR50/70M250	2500	2250	3495/3667	3907	160	160	600/605	10/12	5000	6000	7000
	XR50/70M270	2700	2350	3695/3867	4107	160	160	600/605	10/12	5000	6000	7000
	XR50/70M300	3000	2500	3995/4167	4407	160	160	600/605	10/12	5000	6000	7000
	XR50/70M330	3300	2650	4295/4467	4707	160	160	600/605	10/12	5000	6000	7000
	XR50/70M360	3600	2800	4595/4767	5007	160	160	600/605	10/12	5000	6000	7000
	XR50/70M400	4000	3000	4995/5167	5407	160	160	600/605	10/12	5000	6000	7000
	XR50/70M430	4300	3200	5300/5467	5707	160	160	600/605	6/6	5000	6000	7000
	XR50/70M450	4500	3300	5500/5667	5907	160	160	600/605	6/6	5000	6000	7000
	XR50/70M480	4800	3450	5800/5967	6207	160	160	600/605	6/6	5000	6000	7000
	XR50/70M500	5000	3550	6000/6167	6407	160	160	600/605	6/6	5000	6000	7000
	XR50/70M550	5500	3850	6550/6667	6907	160	160	600/605	6/6	4750	5700	6600
	XR50/70M600	6000	4100	7050/7167	7407	160	160	600/605	6/6	4400	5400	6400
Wide view mast Duplex mast	XR50/70U250	2500	2185	3455/3615	3637	1230/1070	1048	631/636	10/12	5000	6000	7000
	XR50/70U270	2700	2300	3655/3815	3837	1345/1185	1163	631/636	10/12	5000	6000	7000
	XR50/70U300	3000	2450	3955/4115	4137	1495/1335	1313	631/636	10/12	5000	6000	7000
	XR50/70U330	3300	2600	4255/4415	4437	1645/1485	1463	631/636	10/12	5000	6000	7000
	XR50/70U360	3600	2750	4555/4715	4737	1795/1635	1613	631/636	10/12	5000	6000	7000
	XR50/70U400	4000	2950	4955/5115	5137	1995/1835	1813	631/636	10/12	5000	6000	7000
Wide view mast Triplex mast	XR50/70N450	4500	2725	5735	5907	1500	1328	667/672	6/6	4500	5500	6400
	XR50/70N480	4800	2825	6035	6207	1600	1428	667/672	6/6	4500	5500	6300
	XR50/70N500	5000	2875	6213	6407	1672	1478	667/672	6/6	4500	5500	6300
	XR50/70N550	5500	3075	6785	6907	1800	1678	667/672	6/6	4200	5200	6100
	XR50/70N600	6000	3225	7235	7407	2000	1828	667/672	6/6	4000	5000	5500
	XR50/70N700	7000	3675	8385	8407	2300	2278	667/672	6/6	3000	3300	3800



8.5-10t X series mast:(penumatic)

Type	Model	Max. fork height	Overall height				Free lift		Load distance, centre of drive axle to fork	Tilt range	Capacity		
			Lowered	Extended		Without backrest	With backrest	Load capacity at 600mm					
				Without backrest	With backrest			Dual tire					
								8.5t kg			10t kg		
		mm	mm	mm	mm	mm	mm	(°)					
Wide view mast	XR85/100M250	2500	2450/2600	3710/4050	/	200	/	710/725	10/12	8500	10000		
	XR85/100M270	2700	2550/2700	3910/4255	/	200	/	710/725	10/12	8500	10000		
	XR85/100M300	3000	2700/2850	4210/4555	/	200	/	710/725	10/12	8500	10000		
	XR85/100M330	3300	2850/3000	4510/4855	/	200	/	710/725	10/12	8500	10000		
	XR85/100M350	3500	2950/3100	4710/5055	/	200	/	710/725	10/12	8500	10000		
	XR85/100M360	3600	3000/3150	4810/5155	/	200	/	710/725	10/12	8500	10000		
	XR85/100M400	4000	3200/3350	5210/5555	/	200	/	710/725	10/12	8500	10000		
	XR85/100M430	4300	3400/3550	5510/5855	/	200	/	710/725	6/6	8500	10000		
	XR85/100M450	4500	3500/3650	5710/6055	/	200	/	710/725	6/6	8500	10000		
	XR85/100M480	4800	3650/3800	6010/6355	/	200	/	710/725	6/6	8500	10000		
	XR85/100M500	5000	3750/3900	6210/6555	/	200	/	710/725	6/6	8500	10000		
	XR85/100M550	5500	4050/4200	6740/7055	/	200	/	710/725	6/6	7900	9000		
Wide view Duplex mast	XR85/100M600	6000	4300/4450	7240/7555	/	200	/	710/725	6/6	7500	8000		
	XR85/100M650	6500	4600/4750	7790/8055	/	200	/	710/725	6/6	6300	6700		
	XR85/100U230	2300	2350/2500	3505/3845	/	1145/955	/	719/744	10/12	8500	10000		
	XR85/100U250	2500	2450/2600	3705/4045	/	1245/1055	/	719/744	10/12	8500	10000		
	XR85/100U270	2700	2550/2700	3905/4245	/	1345/1155	/	719/744	10/12	8500	10000		
	XR85/100U300	3000	2700/2850	4205/4545	/	1495/1305	/	719/744	10/12	8500	10000		
	XR85/100U330	3300	2850/3000	4505/4845	/	1645/1455	/	719/744	10/12	8500	10000		
	XR85/100U360	3600	3000/3150	4805/5145	/	1795/1605	/	719/744	10/12	8500	10000		
	XR85/100U400	4000	3200/3350	5205/5545	/	1995/1805	/	719/744	10/12	8500	10000		
	XR85/100N450	4500	2750/2850	5775/6055	/	1485/1305	/	759/794	6/6	7500	8500		
	XR85/100N480	4800	2850/2950	6075/6355	/	1585/1405	/	759/794	6/6	7500	8500		
	Wide view Triplex mast	XR85/100N500	5000	2950/3050	6360/6555	/	1600/1505	/	759/794	6/6	7500	8200	
XR85/100N550		5500	3100/3200	6810/7055	/	1800/1655	/	759/794	6/6	7000	7700		
XR85/100N600		6000	3250/3350	7275/7555	/	1985/1805	/	759/794	6/6	6400	7000		
XR85/100N650		6500	3530/3630	7840/8055	/	2200/2085	/	759/794	6/6	5800	6200		
XR85/100N700		7000	3700/3800	8310/8555	/	2400/2255	/	759/794	6/6	4800	5200		

With sideshifter minus 300kg,with integral sideshifter minus 200kg.



Optional Engine / Transmission

Engine	Engine manufacturer/type			ISUZU/6BG1QP	CUMMINS/QSB4.5	CUMMINS/QSF3.8	YUCHAI/YC4A115-T300	PSI-4.3L
	Manufacturer's type designation			W14	W28	W70	G77	W57
	Drive			Diesel	Diesel	Diesel	Diesel	Gasoline/LPG
	Emission STD			/	StagellIA/Tier 3	StagellIA	/	/
	Engine power		kw/r/min	85.3/2200	82/2200	86/2200	85/2200	74/2300
	Rated torque		N·m/r/min	410.9/1500	488/1500	470/1100-1700	450/1400-1700	301/1700
	Number of cylinders/displacement		ml	6/6494	4/4460	4/3760	4/4836	6/4294
Transmission	Powershift	CHINA		✓	✓	✓	✓	✓
		OKAMURA	B	✓	✓	✓	✗	✗
Rated capacity/rated load			Q (kg)	5000-10000	5000-10000	5000-10000	5000-10000	5000-7000

