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ISO 14001  
ISO 14001:2015



ISO 9001  
ISO 9001:2015



HANGCHA trucks conform  
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Requirements.

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# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

with capacity of 4,000 to 5,000kg



The World of Hangcha





# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

Independently developed by Hangcha on the basis of decades of deep understanding of electric forklifts and internal combustion forklifts, the dedicated XC series heavy-duty lithium battery forklifts are a new series of electric counterweight forklifts with a new energy vehicle voltage platform and a pioneered special structure that represents a breakthrough over the traditional design concept. Representing a redefinition of electric forklifts in terms of efficiency, power, reliability, etc., this series of electric forklift models will supersede the internal combustion forklifts.

THE *Plus*  
FOR YOUR  
BUSINESS

VOLTAGE

**309 V**

SPEED MODELS

**3**

100% CHARGE FOR

**1 Hour**

RUNTIME OF

**12 Hours**

WATER RESISTANCE

**IPX4**

PROTECTION RATE

**IP67**

## Exterior

/ With the inherited exterior design of the dedicated XC lithium battery forklift and a smooth and sturdy profile, the whole vehicle is impact, elegant, stylish, sturdy and powerful.



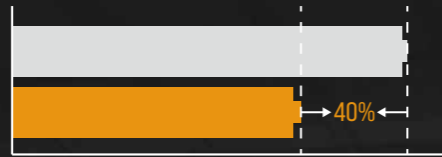


# MORE FASTER. MORE EFFICIENCY.

Compared with low-voltage lithium battery forklifts, high-voltage lithium battery technology can save about 40% of the overall cost during the service cycle.

## 40%

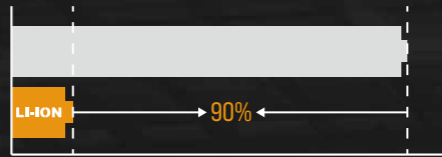
Low Voltage Lithium Battery Forklift  
Hangcha High Voltage Lithium Electric Forklift



Compared with fuel forklifts, high-voltage lithium battery technology can save about 90% of the overall cost during the service cycle.

## 90%

Fuel Forklift  
Lithium Electric Forklift



## 4000

CYCLES OF CHARGING



Under normal charging and discharging conditions, the lithium battery of Hangcha products has a capacity retention rate of more than 75% and a life span of up to 10 years after 4000 cycles of charging and discharging.

## POWER PERFORMANCE COMPARISON

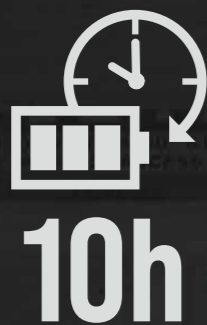
	High Voltage Lithium Electric Forklift	Fuel Forklift
Travel speed, laden/unladen	24/25km/h	20-23km/h
Lift speed, laden/unladen	480/560mm/s	380/410mm/s
Max. gradeability, S2=5min, laden/unladen	23/25%	15%-20%

Through disruptive battery and fast charging technology, the charging time is greatly shortened.

Get the battery fully charge:

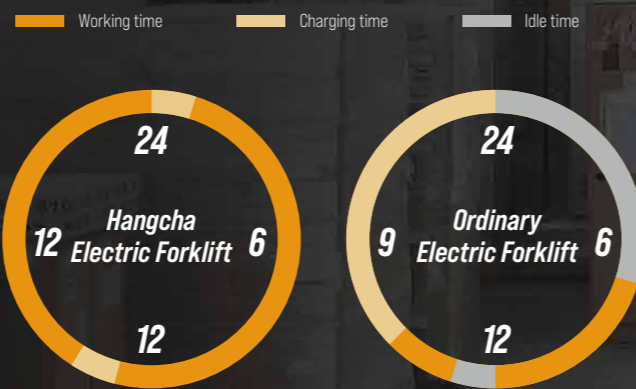


Hangcha High Voltage Electric Forklift



Electric Forklift

Fast charging makes it possible for the whole vehicle to work continuously, shortening the waiting time and greatly improving efficiency.



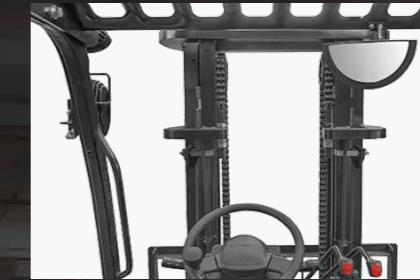
Charge for 1 hour, work for 6 hours

Slow charging, need spare battery, high cost, complicated management

# EXCELLENT ERGONOMIC DESIGN

## Comfort

The enlarged brake pedal and appropriate regenerative braking function can effectively reduce the driver's fatigue.



The multifunctional color-screen instruments are designed to have graphical interfaces and display data clearly. Three speed gears are provided to adapt to different operating environments. The interfaces can be switched to be shown in Chinese and English to meet the needs of customers at home and abroad.

The wide-view mast with optimized design is unlikely to obstruct the operator's line of sight. The enlarged opening size of the fork carriage enables a wider view, a large operation space, and excellent ergonomic design.





# COMMITTED TO IMPROVING

## Advancement

- / Both the drive and operating systems are vehicle-grade permanent magnet synchronization systems, equipped with a high-speed ratio gearbox with a driving speed, upslope degree and acceleration performance rival that of internal combustion vehicles, and the environmental performance better than that of internal combustion vehicles.
- / The vehicle uses an overall controller, and the drive system and operating system are assembled with motors electronically controlled, to form a highly independent light, efficient, and intelligent drive system.
- / The vehicle's 309V high-voltage platform is equipped with a long-lasting large-capacity lithium battery, which is powerful, efficient and energy-saving, adopts a super-fast charging technology that enables a short charging time, and is compatible with the automobile charging pile to enable more convenient charging.
- / A water-cooling system with a good heat dissipation effect is used on a new energy forklift for the first time, so that the forklift can absolutely carry out long-time and high-intensity operations as internal combustion forklifts.



## Safety

- / The cover of the vehicle is designed to be sealed to the water resistance level of IPX4. All the motor, electronic controls and high-voltage components reach the dust and water resistance level of IP67, a high protection level adequate to withstand harsh operating environments and ensure safety and reliability.
- / The electrical system is equipped with high-voltage interlocks, and insulation detection, insulation monitoring and vehicle-grade safety means. The MSD maintenance switch enables one-click power-down and safer maintenance.
- / The standard configuration provides electronic control functions for buffering the fork's descending and ascending to better protect goods.
- / The optional descending lock function can disable the descending function when the driver leaves the seat and enable high safety.
- / The handbrake can be optionally equipped with an alarm buzzer to prompt the driver to pull up the handbrake before leaving the vehicle.

## Maintainability

- / Equipped with a lock, the hood designed to be back-flipped open to and facilitate charging, liquid replenishment and maintenance.
- / The water tank lid can be removed quickly and easily without a tool to enable a large operating area for cleaning and maintenance.



## Standard Specification

- / Multi-function color-screen combination instrument
- / Large integral rubber pedal pads
- / LED combination headlights, LED rear combination three-color taillights
- / Standard duplex mast, fork, fork carriage and load backrest
- / Stamped iron hood, stamped iron side plates
- / Stamped stainless steel boarding step
- / The gas spring of the hood with a touch-proof mechanism
- / Handbrake with a touch-proof mechanism
- / Integrated fuse box
- / Charging muzzle meeting national standards
- / Reverse buzzer
- / Lithium battery pack
- / Lithium battery pack with low temperature electric heating systems
- / Maintenance-free 12V lead-acid battery
- / Two-in-one permanent magnet AC traction motor controller
- / Two-in-one permanent magnet AC oil pump motor controller
- / Two-in-one DC-DC power supply
- / VCU controller
- / MSD maintenance switch
- / Emergency power off switch
- / Mileage display, operating time display
- / Load sensing steering system
- / Turning deceleration function
- / Fork descending buffering
- / SPE power selection
- / Electronic water pump
- / Electronic fan
- / Heat dissipater
- / Expansion tank
- / Double multi-way valve
- / Silent gear pump
- / Toolbox, folder
- / Traction pin
- / Hangcha cloud intelligent management system

## Optional battery list

Capacity(Ah)	4.0-5.0t 309V
173V	●
228V	○

Note: ● Standard battery capacity; ○ Optional battery capacity;

## Options

- / Solid tire
- / Left and right rear-view mirrors
- / Reversing video
- / Front/rear blue lights
- / Rear operation lights
- / Dedicated lithium battery charger (Titan or Schneider)
- / Cold storage vehicle
- / Reverse armrest (with a horn button)
- / OPS seat sensing function
- / Triple multi-way valve
- / Quadruple multi-way valve
- / Quintuple multi-way valve
- / Widened / heightened load backrest
- / Widened fork carriage
- / Forks of other lengths
- / Free duplex mast
- / Free triplex mast
- / Built-in side shifter
- / Accessories for other specifications
- / Grammer MSG531 suspended seat
- / Start with a PIN code or by swiping a card
- / Coloring solid environmentally friendly seamless tire
- / Integrated fingertip control system including ergonomic armrests



## 4.0t Mast Specification

Type	Model	Max. Fork Height	Lowered	Overall height		Free lift		Tilt range		Capacity	
				With backrest	Without backrest	With backrest	Without backrest	F	R	load capacity at 500mm	
										Single tire	Double tire
mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	
STD Duplex	XHP45M250	2500	1995	3670	3330	160	160	6	12	4000	4000
	XHP45M270	2700	2095	3870	3530	160	160	6	12	4000	4000
	XHP45M300	3000	2245	4170	3830	160	160	6	12	4000	4000
	XHP45M330	3300	2395	4470	4130	160	160	6	12	4000	4000
	XHP45M350	3500	2495	4670	4330	160	160	6	12	4000	4000
	XHP45M360	3600	2545	4770	4430	160	160	6	12	4000	4000
	XHP45M370	3700	2595	4870	4530	160	160	6	12	4000	4000
	XHP45M380	3800	2645	4970	4630	160	160	6	12	4000	4000
	XHP45M400	4000	2795	5170	4830	160	160	6	12	4000	4000
	XHP45M430	4300	2960	5470	5130	160	160	6	6	4000	4000
	XHP45M450	4500	3070	5670	5330	160	160	6	6	4000	4000
	XHP45M480	4800	3235	5970	5630	160	160	6	6	4000	4000
	XHP45M500	5000	3345	6170	5830	160	160	6	12	4000	4000
	XHP45M550	5500	3620	6670	6330	160	160	3	6	3700	4000
	XHP45M600	6000	3895	7170	6830	160	160	3	6	3600	3700
Full Free Lift	XHP45U250	2500	1976	3670	3365	809	1114	6	12	4000	4000
	XHP45U275	2750	2100	3920	3615	933	1238	6	12	4000	4000
	XHP45U300	3000	2226	4170	3865	1055	1364	6	12	4000	4000
	XHP45U330	3300	2376	4470	4165	1205	1514	6	12	4000	4000
	XHP45U350	3500	2476	4670	4365	1309	1614	6	12	4000	4000
	XHP45U360	3600	2526	4770	4465	1359	1664	6	12	4000	4000
	XHP45U370	3700	2576	4870	4565	1409	1714	6	12	4000	4000
Triplex	XHP45N400	4000	2080	5170	4850	912	1229	6	12	4000	4000
	XHP45N430	4300	2180	5470	5155	1012	1329	6	6	4000	4000
	XHP45N450	4500	2248	5685	5365	1080	1395	6	6	4000	4000
	XHP45N470	4700	2310	5870	5550	1142	1459	6	6	4000	4000
	XHP45N480	4800	2340	5970	5650	1172	1489	6	6	4000	4000
	XHP45N500	5000	2410	6170	5855	1242	1559	6	6	3800	4000
	XHP45N550	5500	2575	6670	6355	1408	1724	3	6	3700	4000
	XHP45N600	6000	2790	7180	6865	1622	1939	3	6	3600	3700
	XHP45N650	6500	2980	7680	7365	1812	2129	3	6	3400	3600
	XHP45N700	7000	3155	8175	7860	1988	2304	3	6	3000	3400

## 5.0t Mast Specification

Type	Model	Max. Fork Height	Lowered	Overall height		Free lift		Tilt range		Capacity	
				With backrest	Without backrest	With backrest	Without backrest	F	R	load capacity at 500mm	
										Single tire	Double tire
mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	
STD Duplex	XHPX50M250	2500	1995	3870	3330	160	160	6	12	4990	4990
	XHPX50M270	2700	2095	4070	3530	160	160	6	12	4990	4990
	XHPX50M300	3000	2245	4370	3830	160	160	6	12	4990	4990
	XHPX50M330	3300	2395	4670	4130	160	160	6	12	4990	4990
	XHPX50M350	3500	2495	4870	4330	160	160	6	12	4990	4990
	XHPX50M360	3600	2545	4970	4430	160	160	6	12	4990	4990
	XHPX50M370	3700	2595	5070	4530	160	160	6	12	4990	4990
	XHPX50M380	3800	2645	5170	4630	160	160	6	12	4990	4990
	XHPX50M400	4000	2795	5370	4830	160	160	6	12	4990	4990
	XHPX50M430	4300	2960	5670	5130	160	160	6	6	4990	4990
	XHPX50M450	4500	3070	5870	5330	160	160	6	6	4990	4990
	XHPX50M480	4800	3235	6170	5630	160	160	6	6	4990	4990
	XHPX50M500	5000	3345	6370	5830	160	160	6	12	4700	4990
	XHPX50M550	5500	3620	6870	6330	160	160	3	6	4400	4700
	XHPX50M600	6000	3895	7370	6830	160	160	3	6	4000	4200
Full Free Lift	XHPX50U250	2500	1976	3865	3365	610	1114	6	12	4990	4990
	XHPX50U275	2750	2100	4115	3615	735	1238	6	12	4990	4990
	XHPX50U300	3000	2226	4365	3865	860	1364	6	12	4990	4990
	XHPX50U330	3300	2376	4665	4165	1010	1514	6	12	4990	4990
	XHPX50U350	3500	2476	4865	4365	1110	1614	6	12	4990	4990
	XHPX50U360	3600	2526	4965	4465	1160	1664	6	12	4990	4990
	XHPX50U370	3700	2576	5065	4565	1210	1714	6	12	4990	4990
Triplex	XHPX50N400	4000	2080	5365	4860	715	1222	6	12	4990	4990
	XHPX50N430	4300	2180	5665	5160	815	1322	6	6	4990	4990
	XHPX50N450	4500	2248	5880	5370	883	1390	6	6	4800	4990
	XHPX50N470	4700	2310	6070	5560	945	1452	6	6	4700	4800
	XHPX50N480	4800	2340	6170	5660	975	1482	6	6	4700	4800
	XHPX50N500	5000	2410	6370	5860	1045	1552	6	6	4500	4700
	XHPX50N550	5500	2575	6870	6360	1210	1718	3	6	4400	4500
	XHPX50N600	6000	2790	7380	6870	1425	1932	3	6	4100	4400
	XHPX50N650	6500	2980	7880	7370	1615	2123	3	6	3900	4100
	XHPX50N700	7000	3155	8375	7865	1790	2298	3	6	3500	3800

## 4.5t Mast Specification

Type	Model	Max. Fork Height	Lowered	Overall height		Free lift		Tilt range		Capacity	
				With backrest	Without backrest	With backrest	Without backrest	F	R	load capacity at 500mm	
										Single tire	Double tire
mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	
STD Duplex	XHP45M250	2500	1995	3670	3330	160	160	6	12	4500	4500
	XHP45M270	2700	2095	3870	3530	160	160	6	12	4500	4500
	XHP45M300	3000	2245	4170	3830	160	160	6	12	4500	4500
	XHP45M330	3300	2395	4470	4130	160	160	6	12	4500	4500
	XHP45M350	3500	2495	4670	4330	160	160	6	12	4500	4500
	XHP45M360	3600	2545	4770	4430	160	160	6	12	4500	4500
	XHP45M370	3700	2595	4870	4530	160	160	6	12	4500	4500
	XHP45M380	3800	2645	4970	4630	160	160	6	12	4500	4500
	XHP45M400	4000	2795	5170	4830	160	160	6	12	4500	4500
	XHP45M430	4300	2960	5470	5130	160	160	6	6	4500	4500
	XHP45M450	4500	3070	5670	5330	160	160	6	6	4500	4500
	XHP45M480	4800	3235	5970	5630	160	160	6	6	4450	4500
	XHP45M500	5000	3345	6170	5830	160	160	6	12	4450	4400
	XHP45M550	5500	3620	6670	6330	160	160	3	6	4000	4200
	XHP45M600	6000	3895	7170	6830	160	160	3	6	3600	3800
Full Free Lift	XHP45U250	2500	1976	3670	3365	809	1114	6	12	4500	4500
	XHP45U275	2750	2100	3920	3615	933	1238	6	12	4500	4500
	XHP45U300	3000	2226	4170	3865	1055	1364	6	12	4500	4500
	XHP45U330	3300	2376	4470	4165	1205	1514	6	12	4500	4500
	XHP45U350	3500	2476	4670	4365	1309	1614	6	12	4500	4500
	XHP45U360	3600	2526	4770	4465	1359	1664	6	12	4500	4500
	XHP45U370	3700	2576	4870	4565	1409	1714	6	12	4500	4500
Triplex	XHP45N400	4000	2080	5170	4850	912	1229	6	12	4500	4500
	XHP45N430	4300	2180	5470	5155	1012	1329	6	6	4500	4500
	XHP45N450	4500	2248	5685	5365	1080	1395	6	6	4400	4500
	XHP45N470	4700	2310	5870	5550	1142	1459	6	6	4300	4400
	XHP45N480	4800	2340	5970	5650	1172	1489	6	6	4300	4400
	XHP45N500	5000	2410	6170	5855	1242	1559	6	6	4250	4300
	XHP45N550	5500	2575	6670	6355	1408	1724	3	6	4200	4250
	XHP45N600	6000	2790	7180	6865	1622	1939	3	6	3800	4000
	XHP45N650	6500	2980	7680	7365	1812	2129	3	6	3600	3800
	XHP45N700	7000	3155	8175	7860	1988	2304	3	6	3200	3400

## 5.0t Mast Specification

Type	Model	Max. Fork Height	Lowered	Overall height		Free lift		Tilt range	
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# XH Series 4.0-5.0t High-voltage Lithium Battery Forklift Specification

Distinguishing mark	HANGCHA GROUP CO.,LTD.						
	1.1	1.2	1.3	1.4	1.5	1.6	1.7
1.1	Manufacturer						
1.2	Manufacturers type designation		CPD40-XHY2G	CPD45-XHY2G	CPD50-XHY2G	CPD50-XHY2G	CPD50-XHY2G
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric	Electric	Electric	Electric	Electric
1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated	Seated	Seated	Seated
1.5	Load capacity/rated load	Q (kg)	4000	4500	5000	5000	5000
1.6	Load centre distance	c (mm)	500	500	500	600	600
1.8	Load distance, centre of drive axle to fork	x (mm)	545	550	555	585	585
1.9	Wheelbase	y (mm)	2000	2000	2000	2000	2000
2.1	Service Weight	kg	6150	6350	6750	7100	7100
2.2	Axle loading, laden front/rear	kg	8995/1155	9645/1205	10390/1350	10710/1390	10710/1390
2.3	Axle loading, unladen front/rear	kg	2585/3565	2670/3680	2870/3880	3020/4080	3020/4080
3.1	Tyres: solid rubber, super elastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
3.2	Tyre size, front		8.25-15-14PR	300-15-18PR	300-15-18PR	300-15-18PR	300-15-18PR
3.3	Tyre size, rear		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)		2x/2	2x/2	2x/2	2x/2	2x/2
3.6	Tread, front	b10 (mm)	1160	1190	1190	1190	1190
3.7	Tread, rear	b11 (mm)	1130	1130	1130	1130	1130
4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	6/12	6/12	6/12	6/12	6/12
4.2	Height, mast lowered	h1 (mm)	2245	2245	2245	2495	2495
4.3	Free lift	h2 (mm)	160	160	160	160	160
4.4	Lift	h3 (mm)	3000	3000	3000	3000	3000
4.5	Height, mast extended	h4 (mm)	4170	4170	4170	4400	4400
4.7	Height of overhead guard STD.	h6 (mm)	2300	2300	2300	2300	2300
4.8	Seat height/stand height	h7 (mm)	1280	1280	1280	1280	1280
4.12	Coupling height	h10 (mm)	660	660	660	660	660
4.19	Overall length	l (mm)	4035	4040	4090	4255	4255
4.20	Length to face of forks	l2 (mm)	2965	2970	3020	3050	3050
4.21	Overall width	b1 (mm)	1420	1490	1490	1490	1490
4.22	Fork dimensions	s/e/l (mm)	50/150/1070	50/150/1070	55/150/1070	60/150/1220	60/150/1220
4.23	Fork carriage DIN 15 173 --- ISO 2328, class/type A,B		ISO2328 3A	ISO2328 3A	ISO2328 4A	ISO2328 4A	ISO2328 4A
4.24	Fork-carriage width	b3 (mm)	1250	1250	1250	1250	1250
4.25	Distance between fork-arms	b5 (mm)	310-1200	310-1200	310-1200	310-1200	310-1200
4.31	Ground clearance, laden, below mast	m1 (mm)	170	170	170	170	170
4.32	Ground clearance, centre of wheelbase	m2 (mm)	200	200	200	200	200
4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	4435	4435	4485	4485	4485
4.34.2	Aisle width for pallets 800 x 1200 Lengthways	Ast (mm)	4235	4235	4285	4285	4285
4.35	Turning radius	Wa (mm)	2650	2650	2700	2700	2700
4.36	Internal turning radius	b13 (mm)	750	750	750	750	750
5.1	Travel speed, laden/unladen	km/h	24/25	24/25	24/25	24/25	24/25
5.2	Lift speed, laden/unladen	m/s	0.480/0.560	0.480/0.560	0.460/0.520	0.460/0.520	0.460/0.520
5.3	Lowering speed, laden/unladen	m/s	0.410/0.420	0.410/0.420	0.410/0.420	0.410/0.420	0.410/0.420
5.5	Drawbar pull, laden/unladen	N	28000/30000	29000/31000	30000/33000	31000/35000	31000/35000
5.6	Max. Drawbar pull, laden/unladen	N	30000	31000	33000	35000	35000
5.7	Gradeability, laden/unladen	%	23/25	23/25	23/25	23/25	23/25
5.9	Acceleration time, laden/unladen (0-10m)	s	4.8/4.7	4.9/4.8	4.9/4.8	5.0/4.9	5.0/4.9
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
5.11	Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
6.1	Drive motor rating S2 60 min	kW	30AC	30AC	30AC	30AC	30AC
6.2	Lift motor rating at S3 15%	kW	35AC	35AC	35AC	35AC	35AC
6.3	Battery voltage, Std.	V/Ah	309/173	309/173	309/173	309/173	309/173
	Battery voltage, Opt.	V/Ah	309/228	309/228	309/228	309/228	309/228
6.5	Min. battery weight	kg	500	500	500	500	500
	Max. battery weight	kg	650	650	650	650	650
8.1	Type of drive control		MOSFET/AC	MOSFET/AC	MOSFET/AC	MOSFET/AC	MOSFET/AC
9.1	Manufacturer		Enpower	Enpower	Enpower	Enpower	Enpower
10.1	Operating pressure for attachments	bar	185	185	185	185	185
10.2	Oil volume for attachments	l/min	36	36	36	36	36
10.3	Hydraulic Tank - capacity (drain & refill)	liter	42L	42L	42L	42L	42L
10.7	Sound level at the driver's ear according to EN / DIN 12 053	dB (A)	72	72	72	72	72
10.8	Towing coupling, type DIN		Φ35 Pin	Φ35 Pin	Φ35 Pin	Φ35 Pin	Φ35 Pin

