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Doosan Infracore
Forklifts

TECHNICAL SPECIFICATIONS

B22X/B25X/B30X/B35X-5
4 *Wheel Electric Forklift Trucks*
2,200*kg to* 3,500*kg capacity*

PRO 5 SERIES

2,200/2,500/3,000/3,500 kg Capacities

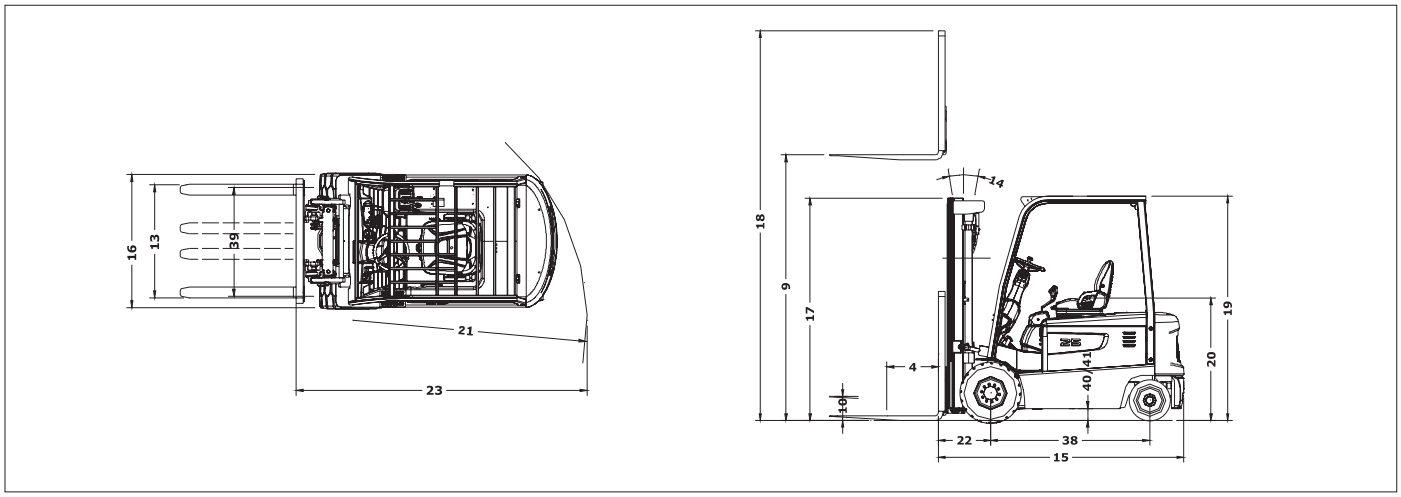
4 Wheel Electric Forklift Trucks

Pneumatic Models, 80V-AC

MAIN VEHICLE SPECIFICATIONS

CHARACTERISTICS	1	Manufacturer			DOOSAN	DOOSAN	DOOSAN	DOOSAN
	2	Model			B22X-5	B25X-5	B30X-5	B35X-5
	3	Load Capacity	at rated load center	kg	2200	2500	3000	3500
	4	Load Center		mm	500	500	500	500
	5	Power Type			AC electric	AC electric	AC electric	AC electric
	6	Operator Type			driver seated	driver seated	driver seated	driver seated
	7	Tire Type	P: Pnu, E: Solid Soft, C: Cush		E	E	E	E
	8	Wheels (x=Driven)			x 2 / 2	x 2 / 2	x 2 / 2	x 2 / 2
DIMENSIONS	9	Max. Fork Height	with STD 2-stage mast	mm	3230	3230	3230	3000
	10	Free Lift		mm	140	140	140	140
	12	Fork Carriage	ISO Class		II	II	III	III
	13	Forks	Length x Width x Thickness	mm	1050 x 100 x 40	1050 x 100 x 40	1050 x 125 x 45	1050 x 125 x 45
			Fork Spacing(Min x Max)	mm	200 x 1040	200 x 1040	200 x 1040	200 x 1040
	14	Tilt of Mast	Forward/Backward	deg	6/9	6/9	6/9	6/9
	15	Overall Dimensions	Length to Fork Face	mm	2360	2360	2505	2600
	16		Overall Width	mm	1245	1245	1245	1245
	17		Mast Lowered Height	mm	2160	2160	2160	2160
	18		Mast Extended Height	mm	4480	4480	4480	4265
	19		Overhead Guard Height	mm	2185	2185	2210	2210
	20	Seat Height	mm	1070	1070	1070	1070	
	21	Turning Radius	Minimum outside	mm	1980	1980	2100	2180
	22	Load Moment Center		mm	500	500	508	508
	23	Aisle 90 degree stacking(add load length & clearance)		mm	2480	2480	2608	2688
PERFORMANCECF	24	Travel Speed	Loaded/Unloaded	km/h	16.0 / 16.0	16.0 / 16.0	16.0 / 16.0	16.0 / 16.0
	25	Lifting Speed	Loaded/Unloaded	mm/s	500 / 550	480 / 550	420 / 550	380 / 550
	26	Lowering Speed	Loaded/ Unloaded	mm/s	490 / 460	490 / 460	490 / 460	500 / 460
	28	Max. drawbar pull	Loaded/Unloaded(5 min. rating)	kgf	1955 / 1905	1955 / 1900	1922 / 1880	1701 / 1685
	30	Max. gradeability	Loaded/Unloaded(5 min. rating)	%	27 / 41	24 / 39	24 / 31	19 / 31
WEIGHTT	32	Total Service Weight	with minimum weight of battery	kg	4588	4755	5282	5630
	33	Axle Load at Loaded	Front / Rear	kg	6001 / 787	6353 / 902	7312 / 970	8056 / 1074
	34	Axle Load at Unloaded	Front / Rear	kg	2371 / 2217	2224 / 2531	2511 / 2771	2455 / 3175
CHASSIS	35	Tires	Number of wheels (F/R)		2/2	2/2	2/2	2/2
	36		Size , Front		23 x 10 -12	23 x 10 -12	23 x 10 -12	23 x 10 -12
	37	Size , Rear		18 x 7 - 8	18 x 7 - 8	18 x 7 - 8	18 x 7 - 8	
	38	Wheel Base	Distance	mm	1535	1535	1679	1679
	39	Tread Width	Front	mm	998	998	998	998
			Rear	mm	998	998	998	998
	40	Ground Clearance	at the lowest point	mm	130	130	130	130
	41		at center of wheelbase	mm	140	140	140	140
	42	Brakes	Service		foot / hydraulic	foot / hydraulic	foot / hydraulic	foot / hydraulic
	43		Parking		hand / mech	hand / mech	hand / mech	hand / mech
POWER TRAIN	45	Battery	Type		DIN43536A	DIN43536A	DIN43536A	DIN43536A
			Capacity (5 Hours Rating)	V/AH	80 / 500	80 / 500	80 / 600	80 / 600
			Battery compartment sizes(WxLxH) mm		1040 x 723 x 825		1040 x 868 x 825	
			Weight (Minimun)	kg	1560	1560	1870	1870
	47	Electric Motors	Drive motor(1 HR Rating)	kW	10.0 X 2	10.0 X 2	10.0 X 2	10.0 X 2
	48		Hyd. motor(15% Duty)	kW	21.0	21.0	21.0	21.0
	54	Control Type	Drive and Hydraulic		MOSFET Inverter	MOSFET Inverter	MOSFET Inverter	MOSFET Inverter
	57	Relief Pressure	System	bar	166	193	207	235
			Attachment	bar	155	155	155	155

DIMENSIONAL DRAWING



MAST SPECIFICATIONS and RATED CAPACITIES

Mast Type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height With Load Backrest		Free Lift With Load Backrest		Rated Load Capacities B22X-5 Tilt Angle FWD	B22X-5 Tilt Angle BWD	B22X-5 LC500 mm	B25X-5 Tilt Angle FWD	B25X-5 Tilt Angle BWD	B25X-5 LC500 mm	B30X-5 Tilt Angle FWD	B30X-5 Tilt Angle BWD	B30X-5 LC500 mm
	mm	in	mm	in	mm	in	mm	in	deg	deg	kg	deg	deg	kg	deg	kg	lb
STD	2030	80	1560	61	3280	129	147	6	6	9	2200	6	9	2500	6	9	3000
	2580	102	1835	72	3830	151	147	6	6	9	2200	6	9	2500	6	9	3000
	2950	116	2020	80	4200	165	147	6	6	9	2200	6	9	2500	6	9	3000
	3230	127	2160	85	4480	176	147	6	6	9	2200	6	9	2500	6	9	3000
	3500	138	2410	95	4755	187	147	6	6	9	2200	6	9	2500	6	9	3000
	3800	150	2560	101	5055	199	147	6	6	9	2200	6	9	2500	6	9	3000
	3950	156	2635	104	5205	205	147	6	6	9	2200	6	9	2500	6	9	3000
	4350	171	2835	112	5605	221	147	6	6	9	2200	6	9	2450	6	9	3000
	4960	195	3135	123	6205	244	147	6	6	9	2150	6	9	2350	6	9	2900
FF	2580	102	1835	72	3830	151	630	25	6	9	2200	6	9	2500	6	9	3000
	2950	116	2020	80	4200	165	815	32	6	9	2200	6	9	2500	6	9	3000
	3230	127	2160	85	4480	176	955	38	6	9	2200	6	9	2500	6	9	3000
	3600	142	2410	95	4855	191	1205	47	6	9	2200	6	9	2500	6	9	3000
FFT	3900	154	1885	74	5155	203	680	27	6	9	2200	6	9	2500	6	9	3000
	4290	169	2020	80	5560	219	815	32	6	9	2200	6	9	2450	6	9	3000
	4730	186	2160	85	5980	235	955	38	6	9	2200	6	9	2350	6	9	2950
	5560	219	2510	99	6805	268	1305	51	6	5	2050	6	5	2200	6	5	2750
	6010	237	2660	105	7255	286	1455	57	6	5	2000	6	5	2150	6	5	2700

Mast Type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height With Load Backrest		Free Lift With Load Backrest		Rated Load Capacities B35X-5 Tilt Angle FWD	B35X-5 Tilt Angle BWD	B35X-5 Load Capacities LC500 mm
	mm	in	mm	in	mm	in	mm	in	deg	deg	kg
STD	1800	71	1560	61	3050	120	152	6	6	9	3500
	2350	93	1835	72	3600	142	152	6	6	9	3500
	2720	107	2020	80	3970	156	152	6	6	9	3500
	3000	118	2160	85	4250	167	152	6	6	9	3500
	3495	138	2410	95	4750	187	152	6	6	9	3500
	3655	144	2560	101	4905	193	152	6	6	9	3500
	3805	150	2635	104	5055	199	152	6	6	9	3500
	4205	166	2835	112	5455	215	152	6	6	9	3400
	4805	189	3135	123	6055	238	152	6	6	9	3250
FF	2350	93	1835	72	3600	142	635	25	6	9	3500
	2720	107	2020	80	3970	156	820	32	6	9	3500
	3000	118	2160	85	4250	167	960	38	6	9	3500
	3495	138	2410	95	4745	187	1210	48	6	9	3500
FFT	3555	140	1885	74	4805	189	685	27	6	9	3500
	3960	156	2020	80	5210	205	820	32	6	9	3400
	4380	172	2160	85	5630	222	960	38	6	9	3300
	4820	190	2330	92	6070	239	1130	44	6	5	3175
	5205	205	2510	99	6455	254	1310	52	6	5	3100

Note: Mast specifications & Rated Capacities are based on standard chassis with solid soft tire and without sideshifter.

Standard Equipment

- 80V electrical control system
- Enclosed 3 phase AC twi n dri ve motors and a hydrauli c motor
- Fully hydraulic power steering with load sensing system
- Multi-functional LED and LCD display panel
- Built in self-diagnostics and programming without hand set or laptop
- Three (3) performance selection modes (High, Standard, Energy Efficient)
- Turtle mode for travel speed reduction only
- Doosan's Operator Sensing System for power interruption
- Double acting parking brake with warning buzzer
- Oil cooled Disc Brakes
- Infinitely adjustable tilt steering wheel
- Static seat with retractable seat belt and seat belt indicator
- 2 front halogen flood lights with 12 volt DC to DC converter
- Active Control Technology
- Reinforced anisometric overhead guard
- Steer angle sensing and indicator with stability control
- Anti roll back & roll down
- Three modes of regenerative braking - accelerator release, pedal braking, and reversal
- Lift and Tilt Locking Hydraulic Control Valve

Mast

Doosan forklift trucks offer a full range of wide view masts;

- STD double mast : 2.0m ~ 5.0m ; Standard cost-effective features for many applications.
- FFL double full free lift mast : 2.6m ~ 3.6m ; Ideal for stacking in containers or buildings with low roofs, to optimize space utilization.
- FFT triple full free mast : 3.9m ~ 6.0m ; Suitable for stacking applications in areas with limited height clearance but where maximum lift is also required.

All masts are J beam uprights with rigid cross members for strength and reliability. Primary lift cylinders have cushioning valves to ensure smooth and silent staging during lifting and lowering.

Carriage

B25X-5 series is equipped with ITA class II or III hook-on type mounting carriage. An optional carriage-mounted sideshifter is available.

AC Electronic Controls

The 3-phase AC controller and enclosed motors ensure the lowest maintenance cost. The elimination of all motor brushes, commutators, and all but one contactor, significantly reduce maintenance and decrease overall operating costs.

The MOSFET inverter controls, mounted on the frame behind the counterweight, are environmentally protected but easily accessible for service. The standard LCD and LED instrumentation package displays battery charge, travel speed, hour meter and many other truck parameters, but also provides run and self-diagnostic information, and can be programmed without the use of an expensive hand-set or software package. Control system is fully lap-top compatible.

ACT(Active Control technology)

Doosan's exclusive and innovative ACT provides several productivity advantages.

a) Active Performance Control - adapts to operating conditions beyond set parameters resulting in predictable and responsive operation.

b) Active Heat Control - continuously monitors motors and inverters and automatically corrects temperature imbalance instead of tripping alarms.

c) Active Energy Control - provide consistent truck performance throughout the entire 80% discharge cycle of the battery.

d) Active Operator Comfort Control - customize truck parameters to fit operator driving style and preference providing the operator with self-confidence and control.

Performance Selection

Operator is in control of the truck's power and can optimize productivity and battery consumption rate with a simple push of a button.

a) H - mode : High Performance

b) S - mode : Standard Performance

c) E - mode : Energy Efficient Performance

d) Turtle mode : Speed governor that can be chosen to slow down a previously set travel speed without reducing lifting speed

Intelligent Torque Control

Closed-loop speed feedback system monitors loads on traction and hydraulic motors to maintain speed consistency whether the truck is loaded or unloaded.

a) Detects ramp stop time for controlled roll back

b) Continuous temperature monitoring of controller and motors

c) Full protection against short or open circuits

Twin Drive Axle and Brakes

Twin drive motors are IP20 insulated and equipped with an internal cooling fan. Drive-end bearing and drive shaft are lubricated by drive axle oil for long life. The reliable drive axle with enclosed oil cooled disc brakes ensures long service life and the lowest maintenance cost.

The large-capacity oil cooled disc brake for stopping and ensure light brake pedal effort and easy parking brake engagement.

Steering System

One-pump, full hydrostatic power steering, with "On-demand" control, is a standard feature to ensure easy and quiet maneuvering in tight spaces. There is no separate steering motor and pump, thus providing increased reliability. A steer axle sensor provides information back to the main logic to limit travel speeds during tight turning, and provides the operator with a continuous LCD display of steer axle position.

Operator Area

Wide open entry and egress steps, rounded hood, anti-skid rubber floor mat, and two hand grips provide easy operator access to and from the seat. Expansive and inclined floor plate, infinitely adjustable tilt steer column, and deck-mounted control levers, ensure operator comfort and reduced fatigue. The full-suspension seat with weight and back-rest adjustment, and fore and aft positioning, provide comfortable working positions for all sizes of operators. A convenience tray with cup holder and clipboard is a standard feature to provide ample storage for those miscellaneous workplace items.

Optional Equipment

- Non-marking Tires
- Operator Cab
- Mono-ped Foot Direction and Acceleration Control
- Emergency Switch
- Finger Tip Control Hydraulic Valve
- Auto Tilt Leveling
- Integral Sideshifter or Integral Sideshifting Fork Positioner
- Cold Storage Package
- Operator Cab
- Two Front and Rear Combination Lights
- One Rear Flood Light
- Back-up Alarm
- Rear Strobe Light
- Rear View Mirror

DOOSAN **Doosan Infracore**
Forklifts

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