

PRICING PAGE

Item No.	Description	Model No/Brand Name Bid	Unit Cost	Extended Cost
1	Pneumatic Tire Electric Forklift 4000lbs, at 24' center includes Delivery.	DOOSAN B20T-20 with BATTERY & CHARGER	\$29,919.00	\$29,919.00
	Failure to use this form may result in disqualification			
	Bidder / Vendor Information		TOTAL COST	\$29,919.00
Name:	Jeffords Corporation - Daniel Chastran			
Address:	514 29th St. Pinecasburg, WV 26101			
Phone:	304-422-6491			
Email Address:	danielchastran@jeffords.com			
Authorized Signature:	Daniel R Chastran			

07/14/16 12:03:53
WV Purchasing Division



JEFFERDS CORPORATION.....PROPOSAL CONTRACT

MATERIALS HANDLING SPECIALISTS SINCE 1947

514 29th STREET - P.O. BOX 1364 - PARKERSBURG, WV 26101

PHONE: (304) 422-6491 - TOLL FREE: (800) 511-5160 - FAX: (304) 422-6475 - EMAIL: www.jefferd.com - LICENSE #WV0002496

Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Proposal number: 0716-126-04106
Date: July 13, 2016
FOB: Ship Point
Shipping: 120 days FRO

**SEALED BID: PNEUMATIC TIRE ELECTRIC FORKLIFT
SOLICATION NO. CFRQ AGR160000028**

WE PROPOSE TO FURNISH THE FOLLOWING EQUIPMENT SUBJECT TO THE TERMS AND CONDITIONS FOLLOWING THE BODY OF THIS PROPOSAL

- One (1) new Doosan B20T-20, sit down rider forklift with the following features:
- 4,000 lbs. base capacity (derated as configured)
- 36 Volt Configuration; "E" rated
- Solid Pneumatic Tires: Drive 200 x 50-10; Steer 16 x 6-8*
- Triple Stage Mast with 216" maximum fork height; 98" Overall height lowered**; 5 fwd / 3 bwd degrees tilt*
- Class II Hook Type Carriage 38" wide with 40: high load back rest
- Two (2) Class II forks, 1.6" Thick x 4" wide x 41" long
- Overhead Guard is tapered for Drive In Rack with 79" overall height
- Cloth static seat to meet OSHA standards for proper operator compartment; no cinch seat belt;
- Two (2) Front facing Halogen Floodlights
- One (1) rear facing Halogen Floodlight
- One (1) Amber Strobe light mounted below the overhead guard
- Three (3) Hydraulic levers mounted on the seat deck ; Directional Control on "lift lever"
- One (1) Hang -On style side shifter for 38" carriage, 4" side shift in each direction
- Two (2) Rear View Mirrors
- One (1) Smart Type Back Up Alarm
- Includes Cold Storage Option to operate in below zero conditions
- Tilt steering column with steering know on the steering wheel
- Includes other standard options;
 - Rear grab bar with horn button
 - Automatic Speed Control for reduce speeds when turning corners
 - Unlimited ramp hold
 - Battery Discharge Indicator
 - Mast Lowering and Tilt Inter-Lock
 - Neutral safety Switch
 - Seat Belt Indicator
 - Brake Oil Level Indicator
 - Operator Sensing System
 - Turtle Mode Button
 - Low profile display and Neatly Arranged Hydraulic Hoses for better visibility
 - Oil Cooled Disc Brakes

Warranty: 12 months / 2000 hours full forklift; 24 months / 4,000 hours power train;

Continued page 2

CONDITIONS AND TERMS OF SALE

Seller's responsibility ceases as soon as the goods are delivered in good order and condition at the shipping point and a receipt taken from the carrier. Material will be routed over most convenient lines from Seller's shipping point, unless routing is specified elsewhere in this proposal.

Promises of shipments are estimated as closely as possible, but delivery date cannot be guaranteed. No charges for delays or damages to other trades will be made or considered, because of delay in shipment.

Only material as specifically set out in the proposal will be furnished. Reference to plans and specifications is for means of identification only.

Claims for errors must be made in writing immediately on receipt of goods. It is understood that no back charges for labor performed or material furnished by others shall be made to Seller, unless such labor is performed or materials furnished on Seller's written order. No expense incurred by Purchaser in expediting shipments shall be charged to Seller.

Contracts are made and accepted with the distinct understanding that they are not subject to cancellation, and that any cancellation on the part of the Purchaser shall in no way invalidate the right of Seller to collect in full for all materials on which drawings have been started, material in process of manufacture, fabrication, or delivery, or delivered on the work. Expense due to revision of drawings or changes of material after work is started, shall be paid by Purchaser.

Jefferds Corporation will not be held responsible for any modifications of existing building or structures unless such work is specifically covered on the face of this contract, Jefferds Corporation will not be responsible for determination of floor capacities, column and beam strengths or other architectural or structural details unless the contract specifically so states.

Where shop drawings, prepared by the seller or firms for which the Seller acts in the capacity of agent, have been approved by the Purchaser, or Purchaser's supervising architect or engineer in charge of work, such approved drawings, shall be deemed correct interpretation of all work to be performed or material furnished.

Reasonable doubt of Buyer's financial responsibility shall entitle Seller to stop operations, decline shipment, or stop material in transit without liability until satisfactory credit arrangements have been made.

Unless otherwise noted, prices are exclusive of any sales or use taxes now in force or which may be made effective in the future by any federal, state, or local governments. Buyer shall be responsible for all such taxes and shall promptly reimburse Seller for any such taxes paid thereon and save Seller harmless therefrom.

It is agreed that the Seller shall at its option have the right to avail itself of the benefits of the local lien laws.

It is understood and agreed that Jefferds Corporation has the option of furnishing the articles herein enumerated, either from its warehouse or by shipment direct from fabricators and materials houses for which Jefferds Corporation acts as agent, and that upon instruction of Jefferds Corporation, Purchaser will make payments in full accordance with the provisions of this contract to the principal furnishing materials. It is further agreed that the materials of each principal constitute a separate agreement of sale and that payment will not be withheld from any principal because of failure of another to fulfill his contract.

All material will be shipped and billed when fabricated or completed unless deferred shipment is arranged for. Partial invoices shall be paid without waiting for shipment of the balance of the material on the job. When the contract includes the erection of material, the erection portion of the contract may be assigned or subcontracted by Seller. Payment of the balance of the contract price will not be held because of deferred erection unless specific arrangements are covered by the contract.

Purchaser understands and agrees that Jefferds Corporation is the dealer or agent for the manufacturers, fabricators, and materials houses furnishing the articles described herein, and Jefferds Corporation makes no warranty, express or implied which extends beyond the description of the article sold on the face hereof. **THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY, OF FITNESS, OF TITLE, OR AGAINST INFRINGEMENT.** In no event will Jefferds Corporation be liable for consequential or special damages. A description of the warranty of the manufacturer, fabricator or materials house will be furnished purchaser upon request.

The manufacturer certifies that this unit will meet all current safety regulations and OSHA standards applicable to the manufacture and use of this unit over which the manufacturer has control.

This proposal, when accepted, constitutes the entire contract between the purchaser and Jefferds Corporation, and is intended as a complete and exclusive statement of the terms of their agreement.



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 01 - Agricultural

Proc Folder: 216430

Doc Description: Pneumatic Tire Electric Forklift

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2016-06-23	2016-07-12 13:30:00	CRFQ 1400 AGR1600000028	1

BID RECEIVING LOCATION:

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR:

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Linda Harper
 (304) 558-0468
 linda.b.harper@wv.gov

Signature X

FEIN #

DATE

All offers subject to all terms and conditions contained in this solicitation

ADDENDUM INFORMATION

The West Virginia Purchasing Division for the Agency, The West Virginia Department of Agriculture is soliciting bids from qualified vendors to establish a "One-Time" contract for the purchase of a Pneumatic Tire Electric Forklift per the Specifications, Terms & Conditions and bid requirements as attached.

INVOICE TO:		SHIP TO:	
PROCUREMENT OFFICER 304-558-2221		AUTHORIZED RECEIVER 304-558-0573	
AGRICULTURE DEPARTMENT OF ADMINISTRATIVE SERVICES		AGRICULTURE DEPARTMENT OF FOOD DISTRIBUTION PROGRAM	
1900 KANAWHA BLVD E		4496 CEDAR LAKES RD	
CHARLESTON WV25305-0173		RIPLEY WV 26271	
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Pneumatic Tire Electric Forklift	1.00000	EA		

Comm Code	Manufacturer	Specification	Model #
24101603			

Extended Description :
Pneumatic Tire Electric Forklift, Cost includes shipping charges

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Question Deadline 3:00 p.m.	2016-06-29

AGR160000028	Document Phase Final	Document Description Pneumatic Tire Electric Forklift	Page 3 of 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application is hereby made for Preference in accordance with *West Virginia Code, §5A-3-37*. (Does not apply to construction contracts). *West Virginia Code, §5A-3-37*, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. Application is made for 2.5% vendor preference for the reason checked:
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. Application is made for 2.5% vendor preference for the reason checked:
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. Application is made for 2.5% vendor preference for the reason checked:
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. Application is made for 5% vendor preference for the reason checked:
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code §5A-3-59* and *West Virginia Code of State Rules*.
 Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code, §61-5-3*), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Jefferts Corporation

Signed: [Signature]

Date: 7/13/16

Title: Contract Admin.

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: JEFFERDS CORPORATION

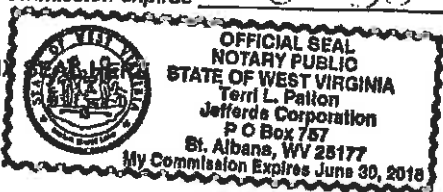
Authorized Signature: [Signature] Date: 7/13/16

State of West Virginia

County of Putnam to-wit:

Taken, subscribed, and sworn to before me this 13 day of July, 2016

My Commission expires 6-30, 2018.



NOTARY PUBLIC

[Signature]

Purchasing Affidavit (Revised 07/01/2012)

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Daniel Christian, Sales
(Name, Title)

(Printed Name and Title)

514 29th St. Parkersburg, WV 26101
(Address)

304-422-6491 / 304-422-6475
(Phone Number) / (Fax Number)

danielchristian@jeffco.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Jeffco Corporation
(Company)

Daniel R. Christian, Sales
(Authorized Signature) (Representative Name, Title)

DANIEL CHRISTIAN, Sales
(Printed Name and Title of Authorized Representative)

7/13/16
(Date)

304-422-6491 / 304-422-6475
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: AGR160000028

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Jeff Frank Corporation
Company

Daniel R. Carter
Authorized Signature

5/13/16
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

SOLICITATION NUMBER: AGR160000028

Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

Description of Modification to Solicitation:

Addendum 1 issued for the following reasons:

1. To modify the bid opening date and time to July 14, 2016, 1:30 p.m.
2. To publish the vendor questions with responses.

No other changes.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.



Built to take the toughest shifts

LOADHOG[®]

First in high capacity

A proven high-performance battery with brute strength and exceptional staying power, Loadhog[®] batteries were the first to pack 100 amp-hours of capacity into a standard 85-AH compartment. That's 18% more capacity than similarly sized conventional batteries. When a Loadhog battery is installed in a DC lift truck, the benefit of higher voltage is straightforward: faster drive and lift speeds. Plus, higher amp-hour capacity ratings will ensure your lift truck runs long into the shift day and maximizes your operation's productivity.

Sustained voltages for AC trucks

Now, with the shift in electric lift trucks from DC to AC power, the staying power of the legendary Loadhog battery becomes even more apparent. Because an AC motor offsets a battery's normal voltage drop during discharge by drawing more and more amps, an AC truck sustains consistent run and lift speeds until the battery reaches the maximum discharge level. With sustained higher voltages throughout the shift plus higher amp-hour capacity ratings, the Loadhog battery is able to provide longer run times in an AC truck when compared with flat plate or round tube battery designs. It just doesn't make sense to limit the performance of your lift truck with an inferior battery!



Increased amp-hour capacity for longer run times, heavier loads.

IRONCLAD[®]

EnerSys.
Power/Full Solutions



EnForcer[®]

MOTIVE POWER CHARGERS

IMPAQ[™]

Modular Charger Solutions: Setting the Standard



EnerSys.
Power/Full Solutions

EnForcer[®]

MOTIVE POWER CHARGERS

IMPAQ[™]

*Optimized charging for
a range of applications*

The EnForcer[®] IMPAQ[™] and IMPAQ+ modular chargers from EnerSys[®] represent the best-in-class high frequency charging solutions for all applications in the field of material handling equipment, automated guided vehicle systems, cleaning machines and industrial electric vehicles.

EnForcer IMPAQ high frequency chargers, whether free-standing or wall-mounted, are the most compact EnerSys chargers to date, offering intelligent charging with advanced efficiency and flexibility to meet the demands of any application.

PEAK PERFORMANCE AND RELIABILITY

EnForcer IMPAQ charger modules are automatically switched off and on to achieve optimum charging performance and maintain peak efficiency at all times. Should a single module develop a minor fault, the charger bypasses the module and keeps running at reduced power to continue the charging process — and your business operations — without interruption.

OPTIMIZED CHARGING

EnForcer IMPAQ+ high frequency modular chargers employ the EnerSys exclusive IONIC[™] charge profile to continuously diagnose battery condition throughout the charging process. This optimizes the charging profiles and can reduce charging times from one to two hours compared to other chargers depending on battery type. The IONIC charge profile effectively brings a battery's specific gravity back to "nameplate" — that is, to virtually the same rating the battery had when new. EnForcer IMPAQ+ chargers automatically identify batteries, assuring increased efficiency and power factor control for exceptional, customized charging.

FLEXIBLE DESIGN AND SIMPLIFIED SERVICE SOLUTION

The modular charger concept adapts to a wide range of battery capacities, allowing potential reduction of the number of chargers in your fleet. Fewer chargers means more space. Plus, the self-diagnostics feature flags any possible failures and replacing modules is easy to do.

REDUCE YOUR ENERGY FOOTPRINT

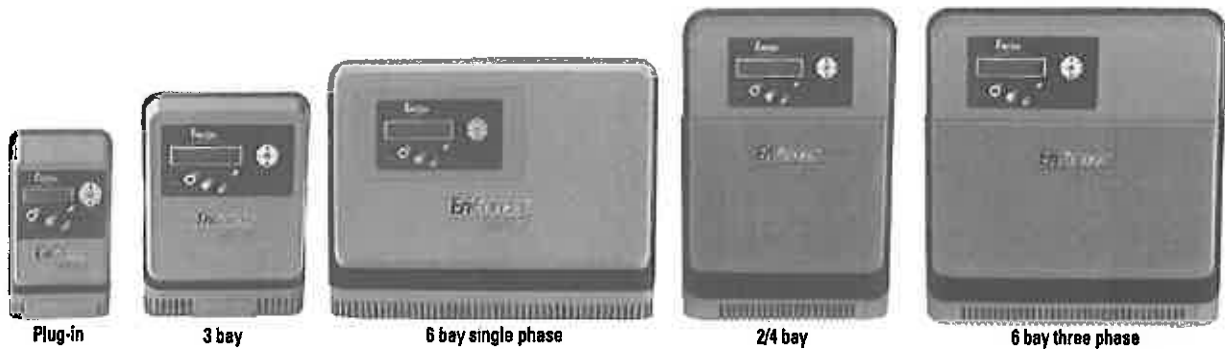
EnForcer[®] IMPAQ[™] and IMPAQ+ modular chargers

- Provide energy savings with efficiency up to 94%
- Reduce electrical infrastructure requirements with 99% power factor
- Consume below 10W in stand-by mode
- Comply with the latest global standards including the California Energy Commission (CEC) appliance efficiency standards



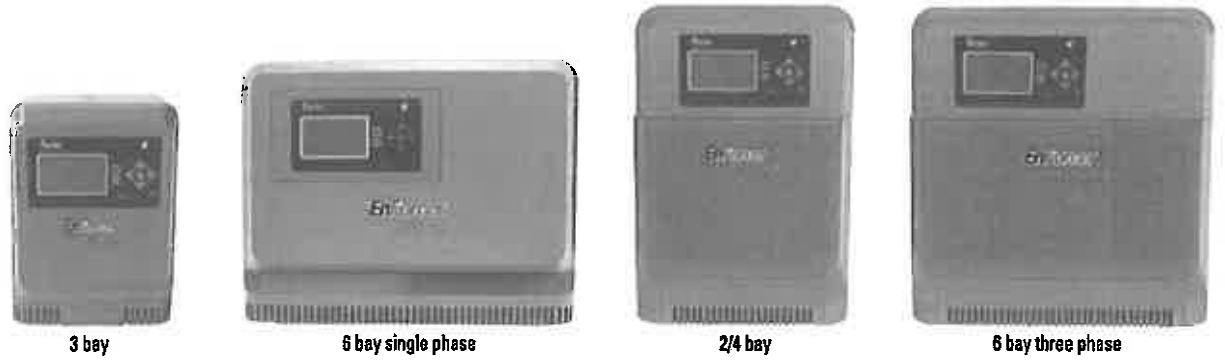
IMPAQ™ Chargers (Plug-in, 2, 3, 4 and 6 bay)

Charging	Flexibility	Communication	Construction	Single Phase	Three-Phase
<ul style="list-style-type: none"> • Flooded • Opportunity • Cold store • VRLA • Gel-bloc • De-sulphation charge • Auto equalization charge 	<ul style="list-style-type: none"> • Multiple charging profiles • Extended programmable capacity range • Future-proofing extendable output power • Charge block-out settings 	<ul style="list-style-type: none"> • USB to download and upload charger data 	<ul style="list-style-type: none"> • Free-standing or wall mounted • LCD screen with customer programmable menu • Light and modern design 	Plug-in, 3 and 6 bay <ul style="list-style-type: none"> • VAC: 120, 208, 220, 240 • Charger range: 12V, 24V and 36/48V 	2, 4, and 6 bay <ul style="list-style-type: none"> • VAC: 480 • Charger range: 24V and 36/48V <ul style="list-style-type: none"> • VAC: 208, 220, 240, 480, 600 • Charger range: 24/36/48V and 72/80V



IMPAQ™+ Chargers (2, 3, 4 and 6 bay)

Charging	Flexibility	Communication	Construction	Single Phase	Three Phase
<ul style="list-style-type: none"> • Proprietary IONIC™ profile with auto-diagnostics • Opportunity • Cold store • VRLA • Gel-bloc • De-sulphation charge • Auto equalization charge • Automatic temperature adjustment with Wi-iQ® battery device 	<ul style="list-style-type: none"> • Multiple charging profiles • IONIC profile automatically adjusts to multiple DC voltages and battery capacities • Future-proofing extendable output power • Charge block-out settings 	<ul style="list-style-type: none"> • Wireless communication between charger and battery via Wi-iQ battery device • USB to download and upload charger data • Ethernet connection 	<ul style="list-style-type: none"> • Free-standing or wall mounted • 4.3" multi-color dashboard screen with customer programmable menu • Display color changes to indicate charge condition • Light and modern design 	3 and 6 bay <ul style="list-style-type: none"> • VAC: 120, 208, 220, 240 • Charger range: 12V, 24V and 36/48V 	2, 4, and 6 bay <ul style="list-style-type: none"> • VAC: 480 • Charger range: 24V and 36/48V <ul style="list-style-type: none"> • VAC: 208, 220, 240, 480, 600 • Charger range: 24/36/48V and 72/80V



EnForcer[®] IMPAQ™ Modular Charger Overview

	Output DC Voltage	Cabinet Size	Cabinet Code	Max Battery Capacity (Standard 8 hr)	AH Battery Capacity (Opportunity Mode*)	Input AC Amps	VAC	Max Weight (LBS)	Dimensions (W x D x H)
Single-Phase Plug-In	12	1	AK	220	140	5	120	6	5.83" x 3.80" x 10.41"
	24	1	AK	125	80	6	120	6	5.83" x 3.80" x 10.41"
	36/48	1	AK	88/70	56/44	6	120	6	5.83" x 3.80" x 10.41"
Single-Phase	12	3	CM	660	420	14	120	17	9.84" x 7.22" x 13.54"
	24	3	CM	375	240	16	120	17	9.84" x 7.22" x 13.54"
	36/48	3	CM	265/210	168/132	18	120	17	9.84" x 7.22" x 13.54"
	12	3	CM	660	420	8.4/7.8/7.2	208/220/240	17	9.84" x 7.22" x 13.54"
	24	3	CM	660	420	16.2/15.4/14.1	208/220/240	17	9.84" x 7.22" x 13.54"
	36/48	3	CM	450/340	300/216	17.4/16.8/15.0	208/220/240	17	9.84" x 7.22" x 13.54"
	12	6	FP	1320	840	29	120	48	20.47" x 10.24" x 16.34"
	24	6	FP	750	480	33	120	48	20.47" x 10.24" x 16.34"
	36/48	6	FP	525/420	340/260	36	120	48	20.47" x 10.24" x 16.34"
	12	6	FP	1320	840	16.8/15.6/14.4	208/220/240	48	20.47" x 10.24" x 16.34"
	24	6	FP	1320	840	32.4/30.6/28.2	208/220/240	48	20.47" x 10.24" x 16.34"
	36/48	6	FP	900/680	600/432	34.8/33.6/30.0	208/220/240	48	20.47" x 10.24" x 16.34"
	24	2	HL	1000	640	11.6	480	67	13.18" x 13.80" x 19.50"
	36/48	2	HL	625/625	400/400	14.2	480	67	13.18" x 13.80" x 19.50"
	24	4	JN	2000	1280	23.2	480	84	13.18" x 13.80" x 19.50"
	36/48	4	JN	1250/1250	800/800	28.4	480	84	13.18" x 13.80" x 19.50"
Three-Phase	24/36/48	4	JN	1000/1000/1000	640/640/640	29.6/28.0/25.6	208/220/240	84	13.18" x 13.80" x 19.50"
	72/80	4	JN	625/625	400/400	30.8/29.2/26.8	208/220/240	84	13.18" x 13.80" x 19.50"
	24/36/48	4	JN	2000/2000/1500	1280/1280/960	19.2	480	84	13.18" x 13.80" x 19.50"
	72/80	4	JN	1000/900	640/576	19.2	480	84	13.18" x 13.80" x 19.50"
	24/36/48	4	JN	2000/2000/1500	1280/1280/960	15.6	600	84	13.18" x 13.80" x 19.50"
	72/80	4	JN	1000/900	640/576	15.6	600	84	13.18" x 13.80" x 19.50"
	24/36/48	6	LP	1500/1500/1500	960/960/960	44.4/42.0/38.4	208/220/240	106	19.10" x 13.80" x 19.50"
	72/80	6	LP	940/940	600/600	46.2/43.8/40.2	208/220/240	106	19.10" x 13.80" x 19.50"
	24/36/48	6	LP	2000/2000/2000	1280/1280/1280	28.8	480	106	19.10" x 13.80" x 19.50"
	72/80	6	LP	1500/1350	960/864	28.8	480	106	19.10" x 13.80" x 19.50"
	24/36/48	6	LP	2000/2000/2000	1280/1280/1280	23.4	600	106	19.10" x 13.80" x 19.50"
	72/80	6	LP	1500/1350	960/864	23.4	600	106	19.10" x 13.80" x 19.50"

* AH Battery Capacity (Opportunity Mode) based on 25% maximum charge rate. Larger battery capacities can be charged in opportunity mode, but cannot exceed the max battery capacity indicated in the "Max Battery Capacity (Standard 8 hr)" column.



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www.doosanlift.com

DOOSAN

**7 Series Electric Forklifts
3,000lb to 4,000lb Capacity**



Lifting Your Dreams

Doosan

A name to be proud of

The foundation on which Doosan has built its century of success is the trust in its people.

Doosan's management philosophy has always been "people first".

"Business is not meant to make profits, but to help people grow."

—Late Too Pyung Park, First Chairman

We believe this value drives our future growth and it continues to spur corporate development with global competitiveness.

Doosan – the oldest, but the fastest growing company

Doosan holds the record for having the longest business history in Korea since its inauguration in 1896. We are also the fastest growing company, with steady growth rates over the years and reaching our fastest pace in the past 10 years.

Doosan – the global Infrastructure Support Business (ISB)

Doosan has achieved an excess of 90% of its sales within the ISB sector through vigorous reorganization of its business portfolio since 1998. Prior to the transformation in the late 90s, 70% of our business was concentrated on consumer goods, but we have successfully transformed our business DNA into an ISB, that constructs and reinforces social infrastructure.

Doosan – surging as a global company

Doosan has become a global leader in the ISB by providing communities across five continents with the fundamental solutions, tools and structures they need to advance their societies.

With over 43,000 employees in 38 different countries, and 50% of its human resources being locally employed, Doosan is truly a global company.





Doosan Industrial Vehicle

Lifting Your Dreams

Since we first started out as Chosun Machinery in 1937, Doosan Industrial Vehicle has grown into Korea's largest machinery manufacturer, playing a leading role in the development of the industry in Korea.

Today, we are a global enterprise. We operate large-scale plants and sales subsidiaries in Korea and around the world, as well as maintain a massive operational network that spans over continents.

Committed To Innovation

We remain committed to the advancement of new technologies and the development of talented individuals, which drives us to respond effectively to the rapid changes taking place in the 21st century. Our mission is to strengthen our position in the international market and become a global leader in the industry.

Our Promise

Doosan Industrial Vehicle will be the partner you can count on, with our commitment to you a top priority.

Award-Winning Machines

Doosan currently holds a number of awards in the categories of export, design & safety, including five Design Excellence awards from the Forklift Truck Association.

Doosan's All-new 7 Series Electric Forklifts

Our 7 Series 3 wheel and 4 wheel electric counter balance forklift trucks continue the Doosan tradition of delivering simple, powerful performance, at the best possible value for our customers.

The operator compartment was designed specifically to keep the operator in control at all times, improving productivity while reducing stress and fatigue. The operator compartment offers improved visibility and ergonomic hydraulic controls.

Extended maintenance intervals and advanced technology componentry reduce the overall cost of maintenance. The latest AC control systems provide an unbeatable combination of power, performance and reliability. Each parameter is fully customizable to perfectly fit any individual's requirements, while providing maximum control and accuracy. The new and improved design of Doosan's 7 Series electric trucks exceeds customer demands for safety by offering excellent durability and stability.



7 SERIES ELECTRIC FORKLIFTS

3,000 lb to 4,000 lb Series





Powerful & Reliable Technology

Armed with the latest technology from Curtis Instruments, the new Doosan 7 series provide an unbeatable combination of power, performance and functionality. They are the operator's choice, being infinitely controllable and exceptionally reliable. The Curtis motor control system allows our trucks to be surprisingly versatile, maintaining high productivity in various work environments. The AC drive and hydraulic motors deliver smooth and seamless power with minimal energy consumption.

Safety and Convenience

The Electro-magnetic Auto Parking Brakes provide the operator maximum safety and convenience. Whenever the operator leaves the seat, the truck's parking brake is automatically applied with an unlimited ramp-hold function, ensuring the safety of the workplace. There is no danger of the machine rolling away, even if it is left unattended on a ramp or a slope.

7 SERIES ELECTRIC FORKLIFTS

3,000 lb to 4,000 lb Series

Curtis Controller
Reliable, Stable Operation
IP65 Rated



Enclosed Drive & Pump Motor
Simple, Powerful
IP43 Rated



Optimized Steer Angle
BI (3 Wheel Truck) : 90°
BX (4 Wheel Truck) : 86°



Rounded Counterweight Design



**Easy and Instinctive
Instrument Panel**



Maximized Productivity in Warehouse Applications

Effective storage is the primary goal for many warehouse managers. Our 3 wheel models have steer axles that turn 90°, enabling the machines to maneuver with ease even in the tightest spaces. The 4 wheel models also have brand new steer axles, which have been carefully designed to minimize the turning radius and can now achieve an outstanding 86° steer angle. In addition, the new rounded design of the counter-weight enables the truck to move comfortably in and out of narrow spaces, reducing damage costs.

Outdoor Operations

The Doosan 7 Series electric forklifts are waterproof and are safe for outdoor use. The sealed controllers are rated IP65 and the motors are rated IP43, with all related wiring & connectors being silicon-sealed. This means they are fully protected from dust, debris and liquid, which allows them to be used outdoors with no problems.

Optimum Visibility & Safety

Visibility plays a vital role in forklift safety. The root cause of many forklift accidents can be traced back to visibility issues, and when they occur, the productivity of the workplace can take a significant hit.

Designed with precision, the overhead guard profile with angled roof bars provides a clear view upwards while ensuring ultimate strength for safety. An open rear view and an optional panoramic mirror offer additional safety to reduce accidents and unnecessary damage to trucks, products or racking.

Doosan's award-winning Rear Grab Handle makes reversing all the more comfortable and safe. The easy grip handle is positioned ergonomically for your hand to locate effortlessly, instead of around the overhead guard, which could lead to hand injuries. The integrated horn button allows the operators to keep one hand on the handle without having to reach for the steering wheel, so they can continue looking in the direction they are traveling.

The chains and the hydraulic hoses are neatly arranged so that they provide a clear, unobstructed front view through the mast. All auxiliary hoses used on attachments, such as the integrated side-shift, are aligned behind the mast chain and cylinders, which allow excellent front visibility.



Panoramic Mirror

Provides the operator a clear view of the whole back & rear working area, improving work safety & efficiency.

7 SERIES ELECTRIC FORKLIFTS

3,000 lb to 4,000 lb Series



Rear Grab Handle
Adds to safety, comfort and convenience when traveling in reverse.



Neatly arranged Hydraulic Hoses
Reduce clutter and provide better visibility.



LED Lights
Brighter and longer-lasting than traditional sealed beams or halogen lights.





Ergonomic Interior Design

Operators perform best when their working conditions are ideal, and the Doosan 7 Series has been designed to make this a reality. The steering column, full suspension comfort seat, armrest and even the optional headrest are all fully adjustable to accommodate any operators' individual preferences. All of the control functions and displays are ideally situated for maximum comfort. In addition, operators can control the truck's performance settings during operation, simply by navigating the instrument panel. The new Doosan finger tip control system and the mechanical hydraulic levers enable the easiest operation imaginable.

In addition, specifically designed for operator comfort, the Convenience Box was conceived by adopting combinations of new and old favorites to give the best operator experience. Some of the features include: a large cup holder, a USB port, 12V power outlet, and a clipboard holder.



Easy to Control

Hydraulic Levers. Simple, reliable and familiar. The direction switch is located on the hydraulic lift lever, enabling a quick change from forward to reverse motion safely. There is no need to take your hands off the steering wheel or the hydraulic levers.

The all-new Finger-tip Controls. Optimal ergonomics giving optimal performance. These fast, precise and instinctive controllers make operating the new Doosan 7 Series effortless and efficient.



Ease of Access Ensures Maximum Safety

Operators have the need to get on and off the truck regularly for different reasons. With this in mind, a number of new features were added to make this process easier and safer than ever before.

- Large step plate with an anti-slip pattern ensures firm footing even for large safety boots
- Easy grip entry bar makes entering and exiting the machine safer
- Large uncluttered floor plate with no trip hazards provide improved comfort and more leg room
- Angled floor plate reduces strain on the ankles, and large pedals ensure maximum safety and ease of operation





Maximum Safety & Stability in Operation

All Doosan equipment are designed to promote a safe and stable operation. Adding the Guardian Stability System (GSS) will dynamically protect the operator and the load to reduce the risk of accidents. The 7 series meets all of the current, as well as the emerging demands for operator safety and machine stability in every application.

Unlimited Ramp Hold

The Electro-magnetic Auto Parking Brake (EPB) prevents the forklift from rolling back if the truck is stopped on a slope. Operators can get off the truck easily without braking.

Quiet & Smooth Operation

The modulating hydraulic cushioned valve is included in secondary cylinder of FF and FFT mast to prevent staging noise which will result in quiet operation and longer mast life.

Seat Belt Indicator

When the key is switched on, a warning light in the instrumental panel will flash if the seat belt is not fastened.

Automatic Speed Control

The angle sensor controls the travel speed in sharp turns. The truck automatically reduces the travel speed for safety when turning corners.

Neutral Safety Switch

If the truck is in forward or reverse mode, the truck will have to be returned to neutral before operation.

Brake Oil Level Indicator

The low brake oil level indicator in the instrumental panel will flash when the oil level in the brake oil reservoir is lower than minimum level.

Battery Discharge Indicator

Lifting will be disabled when the battery is discharged to 20% during operation. This function is to protect the battery from damage and prevent sudden loss of power due to a dead battery.

OSS (Operator Sensing System)

This OSS prevents the truck from traveling or lifting when the operator leaves the seat.

Mast Lowering Inter-Lock (ISO3691)

If the operator keys off or gets off the seat, the hydraulic lift & tilt locking system will limit the motion of the truck.



Turtle Mode

Pressing the Turtle Mode button will reduce travel speed to a previously set parameter without affecting the lift speed.

Mast Tilt Lock (ISO3691)

Hydraulic locks prevent hydraulic drift when lowering and tilting.

Guardian Stability System (Optional)

- Decreased Travel Speed (50%) when mast is raised above primary stage
- Forward tilt reduced 2 degrees when mast is raised above primary stage
- Alarm when mast is raised above primary stage with mast tilted more than 2 degrees

Auto Tilt Leveling (Optional)

Returns the mast to vertical position easily by tilt angle sensing





B18T-7 Series
B15/18/20T-7, B18/20TL-7
36 or 48V 3 Wheel Truck



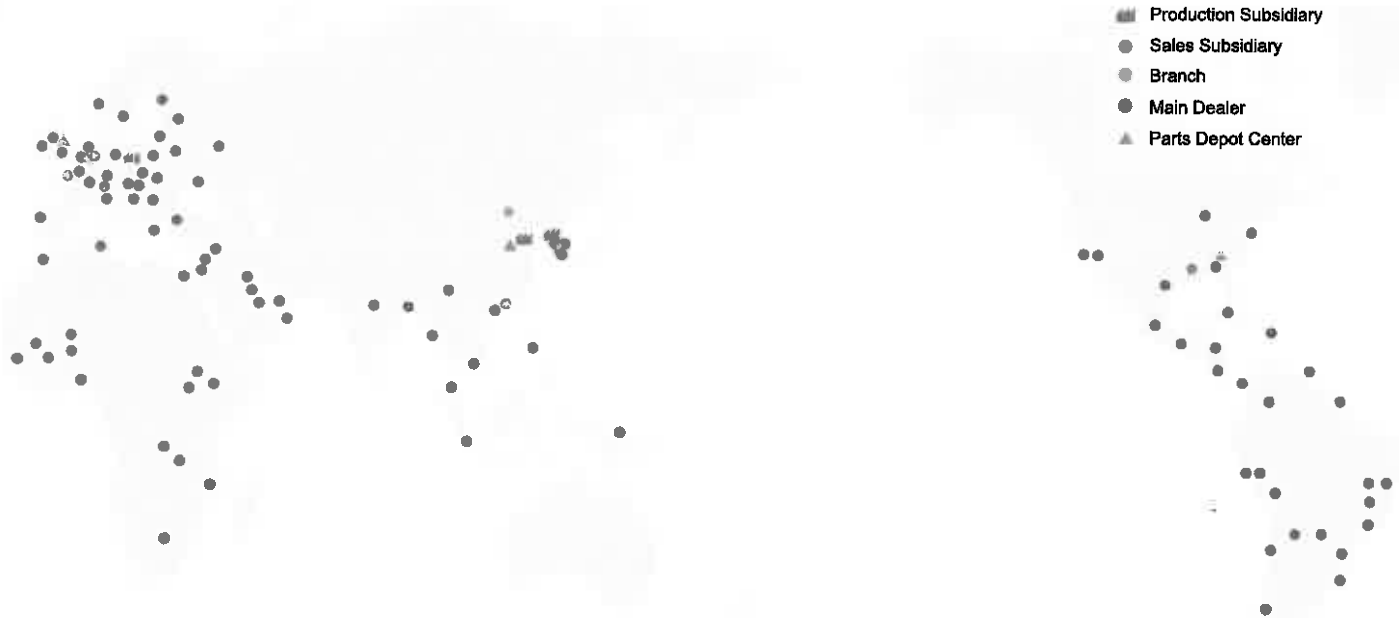
B18X-7 Series
B16/18/20X-7
48V, 4 Wheel truck

Major Specification		B15T-7	B18T-7	B18TL-7	B20T-7	B20TL-7	B16X-7	B18X-7	B20X-7
Classification		3 Wheel Electric					4 Wheel Electric		
Capacity	lb	3,000	3,500	3,500	4,000	4,000	3,000	3,500	4,000
Load Center	in	20							
Wheel Base	in	52.1	56.0	61.2	56.9	61.2	58.9	58.9	58.9
Turning Radius	in	59.7	63.6	69.1	64.9	69.1	74.3	74.3	74.3
Load Moment Center	in	14.8	14.8	14.8	15	15	14.8	14.8	15
Travel speed	mph	10.6							
Lift speed (U/L)	ft/s	1.3 / 2.0							
Lowering speed (U/L)	ft/s	1.6 / 1.5							
Max. Gradeability (at 1.0 mph, Loaded)	%	26	25	25	24	24	26	25	24
Max. Drawbar Pull (Loaded)	ft.lbf	9402.9							
Right Angle Stacking Aisle Width; 39.4x47.2	in	126.6	130.6	136.1	132.1	136.3	135.7	136.5	136.7
Right Angle Stacking Aisle Width; 31.5x47.2	in	131.5	135.5	141.0	137.0	141.2	144.3	144.3	144.5
Steer Angle	deg.	90	90	90	90	90	86	86	86

Standard & Optional Features

3,000 lb to 4,000 lb Series

	Standard	Option
Safety & Stability, Guardian Stability System (GSS)		
GSS (Operator Sensing System)	●	
Neutral Safety Switch	●	
Unlimited Ramp Hold	●	
Battery Discharge Indicator	●	
Brake Oil & Seat Belt Indicator	●	
(ISO 3691) Mast Lowering, Inter-Lock & Tilt Lock	●	
Emergency Stop Switch		●
Rear Grab Handle		●
Auto Tilt Leveling		●
Guardian Stability System		●
- Decreased Travel Speed (Up to 50%) When Mast is Raised Above Primary Stage		
- Forward Tilt Reduced 2 Degrees when Mast is Raised Above Primary Stage		
- Alarm when Mast is Raised Above Primary Stage with Mast Tilted more than 2 Degrees		
Productivity		
Full AC System Chassis	●	
Rounded Counterweight	●	
IP65 Rated Curtis Controller	●	
IP43 Rated PAI Enclosed Motors	●	
86° (BX)/ 90° (BT) Steer Angle	●	
Electro-Magnetic Automatic Parking Brake (EPB)	●	
Hydraulic Cushioned Valve in Secondary Cylinder (FFL & FFT)	●	
Accessory for DIN Type Battery Installation		●
Battery Roller System		●
Cooling Options : Fans & Fin Type Controller		●
Application Packages : Cooler & Freezer, Beverage, Fishery		●
Operator Comfort (Ergonomics)		
Easy Grip Entry Bar & Large Step Plate with Anti-Slip Pattern	●	
Large & Angled Floor Plate (Leg Room) with Rubber Cushion	●	
Rounded Battery Cover	●	
Easy to Read Instrument Panel	●	
Adjustable Tilt Steering Column & Easy Grip (Size Φ 280) Steering Wheel	●	
Hydraulic Control Lever with Direction Switch	●	
Large Cup Holder, USB Port & 12V Power Outlet, Clipboard Holder	●	
Finger-Tip Control		●
Power Grip Knob		●
Premium Seat: Grammer MSG65 Series		●
Panoramic Mirror		●
LED Lights		●
Special Height Overhead Guards		●
Mono Pedals		●
Modular Cabin		●
Durability & Serviceability		
Robust Frame & Overhead Guard	●	
Easy to Access Controller & Motors Room	●	
Wide Open Battery Cover	●	
Tool-Less Side Cover with Air Ventilation	●	
Oil-Cooled Disc Brakes (ODB)	●	
Durable Heat-Resisting (38" SQ) Cables	●	
Easy Diagnostic & Fine-Tune	●	



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www.doosanlift.com

7-Series Electric Forklifts
3,000lb to 4,000lb Capacity
3-wheel and 4-wheel



Lifting Your Dreams

MAST SPECIFICATIONS and RATED CAPACITIES

B15T-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)						
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg		
STD	118.1	3,000	78.7	2,000	159.3	4,045	141.7	3,600	5.1	130	5.1	130	5	7	3000	1,500	5	7	3000	1,500	5	7	3000	1,500
	129.9	3,300	84.6	2,150	171.1	4,345	153.5	3,900	5.1	130	5.1	130	5	7	3000	1,500	5	7	3000	1,500	5	7	3000	1,500
	137.8	3,500	88.6	2,250	178.9	4,545	161.4	4,100	5.1	130	5.1	130	5	7	3000	1,500	5	7	3000	1,500	5	7	3000	1,500
	145.7	3,700	92.5	2,350	186.8	4,745	169.3	4,300	5.1	130	5.1	130	5	7	3000	1,500	5	7	3000	1,500	5	7	3000	1,500
	157.5	4,000	100.4	2,550	198.6	5,045	181.1	4,600	5.1	130	5.1	130	5	7	3000	1,500	5	7	3000	1,500	5	7	3000	1,500
	177.2	4,500	110.2	2,800	218.3	5,545	200.8	5,100	5.1	130	5.1	130	5	7	2850	1,425	5	7	2900	1,450	5	7	2900	1,450
FF	106.3	2,700	72.8	1,850	147.4	3,745	130.9	3,325	33.3	845	49.8	1,265	5	5	3000	1,500	5	5	3000	1,500	5	5	3000	1,500
	118.1	3,000	78.7	2,000	159.3	4,045	142.7	3,625	39.2	995	55.7	1,415	5	5	3000	1,500	5	5	3000	1,500	5	5	3000	1,500
	129.9	3,300	84.6	2,150	171.1	4,345	154.5	3,925	45.1	1,145	61.6	1,565	5	5	3000	1,500	5	5	3000	1,500	5	5	3000	1,500
FFT	157.5	4,000	74.0	1,880	198.8	5,050	182.3	4,630	34.4	875	51.0	1,295	5	5	2900	1,450	5	5	2950	1,475	5	5	2950	1,475
	177.2	4,500	80.5	2,045	218.3	5,545	201.8	5,125	40.9	1,040	57.5	1,460	5	5	2800	1,400	5	5	2850	1,425	5	5	2850	1,425
	187.0	4,750	83.9	2,130	228.1	5,795	211.6	5,375	44.3	1,125	60.8	1,545	5	5	2700	1,350	5	5	2750	1,375	5	5	2750	1,375
	196.9	5,000	88.4	2,245	238.0	6,045	221.5	5,625	48.8	1,240	65.4	1,660	5	5	2600	1,300	5	5	2700	1,350	5	5	2700	1,350
	216.5	5,500	97.6	2,480	257.9	6,550	241.3	6,130	58.1	1,475	74.6	1,895	5	5	1950	975	5	5	2550	1,275	5	5	2550	1,275
	236.2	6,000	104.1	2,645	277.4	7,045	260.8	6,625	64.6	1,640	81.1	2,060	5	5	1300	650	5	5	2450	1,225	5	5	2450	1,225

B18T-7, B18TL-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)						
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg	deg	deg	lb	kg
STD	118.1	3,000	78.7	2,000	159.3	4,045	141.7	3,600	5.1	130	5.1	130	5	7	3500	1,750	5	7	3500	1,750	5	7	3500	1,750
	129.9	3,300	84.6	2,150	171.1	4,345	153.5	3,900	5.1	130	5.1	130	5	7	3500	1,750	5	7	3500	1,750	5	7	3500	1,750
	137.8	3,500	88.6	2,250	178.9	4,545	161.4	4,100	5.1	130	5.1	130	5	7	3500	1,750	5	7	3500	1,750	5	7	3500	1,750
	145.7	3,700	92.5	2,350	186.8	4,745	169.3	4,300	5.1	130	5.1	130	5	7	3500	1,750	5	7	3500	1,750	5	7	3500	1,750
	157.5	4,000	100.4	2,550	198.6	5,045	181.1	4,600	5.1	130	5.1	130	5	7	3500	1,750	5	7	3500	1,750	5	7	3500	1,750
	177.2	4,500	110.2	2,800	218.3	5,545	200.8	5,100	5.1	130	5.1	130	5	7	3300	1,650	5	7	3300	1,650	5	7	3300	1,650
FF	106.3	2,700	72.8	1,850	147.4	3,745	130.9	3,325	33.3	845	49.8	1,265	5	5	3500	1,750	5	5	3500	1,750	5	5	3500	1,750
	118.1	3,000	78.7	2,000	159.3	4,045	142.7	3,625	39.2	995	55.7	1,415	5	5	3500	1,750	5	5	3500	1,750	5	5	3500	1,750
	129.9	3,300	84.6	2,150	171.1	4,345	154.5	3,925	45.1	1,145	61.6	1,565	5	5	3500	1,750	5	5	3500	1,750	5	5	3500	1,750
FFT	157.5	4,000	74.0	1,880	198.8	5,050	182.3	4,630	34.4	875	51.0	1,295	5	5	3350	1,675	5	5	3400	1,700	5	5	3400	1,700
	177.2	4,500	80.5	2,045	218.3	5,545	201.8	5,125	40.9	1,040	57.5	1,460	5	5	3200	1,600	5	5	3300	1,650	5	5	3300	1,650
	187.0	4,750	83.9	2,130	228.1	5,795	211.6	5,375	44.3	1,125	60.8	1,545	5	5	3050	1,525	5	5	3250	1,625	5	5	3250	1,625
	196.9	5,000	88.4	2,245	238.0	6,045	221.5	5,625	48.8	1,240	65.4	1,660	5	5	2800	1,400	5	5	3150	1,575	5	5	3150	1,575
	216.5	5,500	97.6	2,480	257.9	6,550	241.3	6,130	58.1	1,475	74.6	1,895	5	5	2050	1,025	5	5	3000	1,500	5	5	3000	1,500
	236.2	6,000	104.1	2,645	277.4	7,045	260.8	6,625	64.6	1,640	81.1	2,060	5	5	1400	700	5	5	2800	1,400	5	5	2800	1,400

B20T-7, B20TL-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)						
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg	deg	deg	lb	kg
STD	118.1	3,000	78.7	2,000	159.4	4,050	141.9	3,605	5.1	130	5.1	130	5	7	4000	2,000	5	7	4000	2,000	5	7	4000	2,000
	129.9	3,300	84.6	2,150	171.3	4,350	153.7	3,905	5.1	130	5.1	130	5	7	4000	2,000	5	7	4000	2,000	5	7	4000	2,000
	137.8	3,500	88.6	2,250	179.1	4,550	161.6	4,105	5.1	130	5.1	130	5	7	4000	2,000	5	7	4000	2,000	5	7	4000	2,000
	145.7	3,700	92.5	2,350	187.0	4,750	169.5	4,305	5.1	130	5.1	130	5	7	4000	2,000	5	7	4000	2,000	5	7	4000	2,000
	157.5	4,000	100.4	2,550	198.8	5,050	181.3	4,605	5.1	130	5.1	130	5	7	4000	2,000	5	7	4000	2,000	5	7	4000	2,000
	177.2	4,500	110.2	2,800	218.5	5,550	201.0	5,105	5.1	130	5.1	130	5	7	3900	1,950	5	7	4000	2,000	5	7	4000	2,000
FF	106.3	2,700	72.8	1,850	147.6	3,750	131.1	3,330	33.3	845	49.8	1,265	5	5	4000	2,000	5	5	4000	2,000	5	5	4000	2,000
	118.1	3,000	78.7	2,000	159.4	4,050	142.9	3,630	39.2	995	55.7	1,415	5	5	4000	2,000	5	5	4000	2,000	5	5	4000	2,000
	129.9	3,300	84.6	2,150	171.3	4,350	154.7	3,930	45.1	1,145	61.6	1,565	5	5	4000	2,000	5	5	4000	2,000	5	5	4000	2,000
FFT	157.5	4,000	74.0	1,880	199.0	5,055	182.5	4,635	34.4	875	51.0	1,295	5	5	3900	1,950	5	5	4000	2,000	5	5	4000	2,000
	177.2	4,500	80.5	2,045	218.5	5,550	202.0	5,130	40.9	1,040	57.5	1,460	5	5	3750	1,875	5	5	3950	1,975	5	5	3950	1,975
	187.0	4,750	83.9	2,130	228.3	5,800	211.8	5,380	44.3	1,125	60.8	1,545	5	5	3650	1,825	5	5	3850	1,925	5	5	3850	1,925
	196.9	5,000	88.4	2,245	238.2	6,050	221.7	5,630	48.8	1,240	65.4	1,660	5	5	3600	1,800	5	5	3800	1,900	5	5	3800	1,900
	216.5	5,500	97.6	2,480	258.1	6,555	24																	

B16X-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg	deg	deg	lb	kg
STD	118.1	3,000	78.7	2,000	159.3	4,045	141.7	3,600	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600
	129.9	3,300	84.6	2,150	171.1	4,345	153.5	3,900	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600
	137.8	3,500	88.6	2,250	178.9	4,545	161.4	4,100	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600
	145.7	3,700	92.5	2,350	186.8	4,745	169.3	4,300	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600
	157.5	4,000	100.4	2,550	198.6	5,045	181.1	4,600	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600
177.2	4,500	110.2	2,800	218.3	5,545	200.8	5,100	5.1	130	5.1	130	5	7	3200	1,600	5	7	3200	1,600	5	7	3200	1,600	
FF	106.3	2,700	72.8	1,850	147.4	3,745	130.9	3,325	33.3	845	49.8	1,265	5	5	3200	1,600	5	5	3200	1,600	5	5	3200	1,600
	118.1	3,000	78.7	2,000	159.3	4,045	142.7	3,625	39.2	995	55.7	1,415	5	5	3200	1,600	5	5	3200	1,600	5	5	3200	1,600
	129.9	3,300	84.6	2,150	171.1	4,345	154.5	3,925	45.1	1,145	61.6	1,565	5	5	3200	1,600	5	5	3200	1,600	5	5	3200	1,600
FFT	157.5	4,000	74.0	1,880	198.8	5,050	182.3	4,630	34.4	875	51.0	1,295	5	5	3200	1,600	5	5	3200	1,600	5	5	3200	1,600
	177.2	4,500	80.5	2,045	218.3	5,545	201.8	5,125	40.9	1,040	57.5	1,460	5	5	3100	1,550	5	5	3050	1,525	5	5	2950	1,475
	187.0	4,750	83.9	2,130	228.1	5,795	211.6	5,375	44.3	1,125	60.8	1,545	5	5	3000	1,500	5	5	2950	1,475	5	5	2900	1,450
	196.9	5,000	88.4	2,245	238.0	6,045	221.5	5,625	48.8	1,240	65.4	1,660	5	5	2900	1,450	5	5	2900	1,450	5	5	2700	1,350
	216.5	5,500	97.6	2,480	257.9	6,550	241.3	6,130	58.1	1,475	74.6	1,895	5	5	2700	1,350	5	5	2700	1,350	5	5	2700	1,350
	236.2	6,000	104.1	2,645	277.4	7,045	260.8	6,625	64.6	1,640	81.1	2,060	5	5	2500	1,250	5	5	2150	1,075	5	5	2150	1,075

B18X-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg	deg	deg	lb	kg
STD	118.1	3,000	78.7	2,000	159.3	4,045	141.7	3,600	5.1	130	5.1	130	5	7	3600	1,800	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	129.9	3,300	84.6	2,150	171.1	4,345	153.5	3,900	5.1	130	5.1	130	5	7	3600	1,800								
	137.8	3,500	88.6	2,250	178.9	4,545	161.4	4,100	5.1	130	5.1	130	5	7	3600	1,800								
	145.7	3,700	92.5	2,350	186.8	4,745	169.3	4,300	5.1	130	5.1	130	5	7	3600	1,800								
	157.5	4,000	100.4	2,550	198.6	5,045	181.1	4,600	5.1	130	5.1	130	5	7	3600	1,800								
177.2	4,500	110.2	2,800	218.3	5,545	200.8	5,100	5.1	130	5.1	130	5	7	3400	1,700									
FF	106.3	2,700	72.8	1,850	147.4	3,745	130.9	3,325	33.3	845	49.8	1,265	5	5	3600	1,800	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	118.1	3,000	78.7	2,000	159.3	4,045	142.7	3,625	39.2	995	55.7	1,415	5	5	3600	1,800								
	129.9	3,300	84.6	2,150	171.1	4,345	154.5	3,925	45.1	1,145	61.6	1,565	5	5	3600	1,800								
FFT	157.5	4,000	74.0	1,880	198.8	5,050	182.3	4,630	34.4	875	51.0	1,295	5	5	3600	1,800	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	177.2	4,500	80.5	2,045	218.3	5,545	201.8	5,125	40.9	1,040	57.5	1,460	5	5	3500	1,750								
	187.0	4,750	83.9	2,130	228.1	5,795	211.6	5,375	44.3	1,125	60.8	1,545	5	5	3200	1,600								
	196.9	5,000	88.4	2,245	238.0	6,045	221.5	5,625	48.8	1,240	65.4	1,660	5	5	3100	1,550								
	216.5	5,500	97.6	2,480	257.9	6,550	241.3	6,130	58.1	1,475	74.6	1,895	5	5	2950	1,475								
	236.2	6,000	104.1	2,645	277.4	7,045	260.8	6,625	64.6	1,640	81.1	2,060	5	5	2700	1,350								

B20X-7

Mast type	Maximum Fork Height		Fully Lowered Height		Fully Extended Height				Free Lift				Rated Load Capacities											
					with Load Backrest		without Load Backrest		with Load Backrest		without Load Backrest		Single Solid Tire				Single Cushion Tire							
					Tilt Angle		Load Cap.		Tilt Angle		Load Cap.		FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)	FWD	BWD	LC 24" (500mm)
					deg	deg	lb	kg	deg	deg	lb	kg												
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	deg	lb	kg	deg	deg	lb	kg	deg	deg	lb	kg
STD	118.1	3,000	78.7	2,000	159.4	4,050	141.9	3,605	5.1	130	5.1	130	5	7	4000	2,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	129.9	3,300	84.6	2,150	171.3	4,350	153.7	3,905	5.1	130	5.1	130	5	7	4000	2,000								
	137.8	3,500	88.6	2,250	179.1	4,550	161.6	4,105	5.1	130	5.1	130	5	7	4000	2,000								
	145.7	3,700	92.5	2,350	187.0	4,750	169.5	4,305	5.1	130	5.1	130	5	7	4000	2,000								
	157.5	4,000	100.4	2,550	198.8	5,050	181.3	4,605	5.1	130	5.1	130	5	7	4000	2,000								
177.2	4,500	110.2	2,800	218.5	5,550	201.0	5,105	5.1	130	5.1	130	5	7	3800	1,900									
FF	106.3	2,700	72.8	1,850	147.6	3,750	131.1	3,330	33.3	845	49.8	1,265	5	5	4000	2,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	118.1	3,000	78.7	2,000	159.4	4,050	142.9	3,630	39.2	995	55.7	1,415	5	5	4000	2,000								
	129.9	3,300	84.6	2,150	171.3	4,350	154.7	3,930	45.1	1,145	61.6	1,565	5	5	4000	2,000								
FFT	157.5	4,000	74.0	1,880	199.0	5,055	182.5	4,635	34.4	875	51.0	1,295	5	5	3800	1,900	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	177.2	4,500	80.5	2,045	218.5	5,550	202.0	5,130	40.9	1,040	57.5	1,460	5	5	3800	1,900								
	187.0	4,750	83.9	2,130	228.3	5,800	211.8	5,380	44.3	1,125	60.8	1,545	5	5	3600	1,800								
	196.9	5,000	88.4	2,245	238.2	6,050	221.7	5,630	48.8	1,240	65.4	1,660	5	5	3450	1,725								
	216.5	5,500	97.6	2,480	258.1	6,555	241.5	6,135	58.1	1,475	74.6	1,895	5	5	3300	1,650								
	236.2	6,000	104.1	2,645	277.6	7,050	261.0	6,630	64.6	1,640	81.1	2,060	5	5	3000	1,500								

Note: These load capacities are based on the standard chassis without side shifter.

MAIN SPECIFICATIONS - 48V

CHARACTERISTICS	1	Model			B16X-7	B18X-7	B20X-7			
	2	Load Capacity	at rated load center		lb(kg)	3200 (1600)	3600 (1800)	4000 (2000)		
	3	Load Center			in(mm)	24 (500)	24 (500)	24 (500)		
	4	Power type				AC Electric	AC Electric	AC Electric		
	5	Operator type				Driver Seated	Driver Seated	Driver Seated		
DIMENSIONS	6	Tire type	P= pneumatic, E= solid, C= cushion			SE / P*	SE	SE		
	7	Wheels (x = driven)	number of front/rear			x 2/2	x 2/2	x 2/2		
	8	Max. Fork Height	with STD 2-stage mast		in(mm)	130 (3300)	130 (3300)	130 (3300)		
	9	Free Lift			in(mm)	5.1 (130)	5.1 (130)	5.3 (135)		
	10	Fork carriage	ISO Class			II	II	II		
	11	Forks	Thickness x Width x Length	in(mm)		1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.6 / 3.9 / 41.3 (40 / 100 / 900)		
			Fork Spacing (min. x max.)	in(mm)		9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)		
	12	Tilt of Mast	Forward / Backward		deg	5/7	5/7	5/7		
	13-19	Overall Dimensions	Length to Fork Face	in(mm)		83.4 (2120)	83.4 (2120)	83.6 (2125)		
			Overall Length	in(mm)		124.7 (3020)	124.7 (3020)	124.9 (3025)		
			Overall Width	in(mm)		42.9 (1090)	44.1 (1119)	44.1 (1119)		
			Mast Lowered Height	in(mm)		84.6 (2150)	84.6 (2150)	84.6 (2150)		
			Mast Extended Height	in(mm)		171 (4345)	171 (4345)	171.3 (4350)		
			Overhead Guard Height	in(mm)		79 (2010)	79 (2010)	79 (2010)		
			Seat Height	in(mm)		36.2 (919)	36.2 (919)	36.2 (919)		
	20	Outer Turning Radius			in(mm)	74.2 (1886)	74.2 (1886)	74.2 (1886)		
	21	Inner Turning Radius			in(mm)	19.4 (494)	19.4 (494)	19.4 (494)		
	22	Load Moment Center	Center of drive axle to fork face		in(mm)	14.8 (376)	14.8 (376)	15.0 (381)		
	23	Right Angle Stacking Aisle Width (with Pallets & Clearance)	48" x 40" (1000 x 1200) Pallet		in(mm)	136.4 (3466)	136.4 (3466)	136.6 (3471)		
			48" x 31" (800 x 1200) Pallet		in(mm)	144.3 (3665)	144.3 (3665)	144.5 (3670)		
PERFORMANCE	25-27	Speed	Travel	Loaded / Unloaded	mph(km/h)	10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)		
			Lifting	Loaded / Unloaded	fpm(mm/s)	79 / 118 (400 / 600)	79 / 118 (400 / 600)	79 / 118 (400 / 600)		
			Lowering	Loaded / Unloaded	fpm(mm/s)	98/89 (500/450)	98/89 (500/450)	98/89 (500/450)		
	28	Max. Drawbar pull	Loaded at 1.0 mph		lb(kg)	2864 (1300)	2864 (1300)	2864 (1300)		
	29	Max. Gradeability	Loaded at 1.0 mph		%	26	25	24		
WEIGHT	30	Total weight	with min. weight of battery		lb(kg)	6858 (3111)	7233 (3281)	7630 (3461)		
	31	Axle Load	Loaded, Front / Rear		lb(kg)	9341 / 1045 (4237 / 474)	10033 / 1168 (4551 / 530)	10738 / 1301 (4871 / 590)		
			Unloaded, Front / Rear		lb(kg)	3748 / 3111 (1700 / 1411)	3739 / 3494 (1696 / 1585)	3730 / 3900 (1692 / 1769)		
CHASSIS	33-34	Tires	Size	Front		18x7-8 (a)	200x50-10	200x50-10		
			Rear		16x6-8 (b)	16x6-8	16x6-8			
	35	Wheel Base	Distance		in(mm)	58.8 (1495)	58.8 (1495)	58.8 (1495)		
	36	Tread Width	Front		in(mm)	35.5 (902)	35.9 (912)	35.9 (912)		
			Rear		in(mm)	35 (890)	35 (890)	35 (890)		
	38	Ground clearance	Loaded	at lowest		in(mm)	3.4 (86)	3.4 (86)	3.4 (86)	
				at center of wheel base		in(mm)	3.9 (100)	3.9 (100)	3.9 (100)	
	40	Brakes	Service			hydraulic	hydraulic	hydraulic		
Parking				auto-electric	auto-electric	auto-electric				
POWER TRAIN	41	Battery	Type			lead-acid	lead-acid	lead-acid		
			Voltage		V		48	48	48	
			Capacity (5 Hours Rating)	Nominal	BS type	AH		585	585	585
					DIN type	AH		575	575	575
				Max.	BS type	AH		690	690	690
					DIN type	AH		625	625	625
			Battery compartment sizes (W x L x H) Max.		Normal	in(mm)		25.1 x 39.1 x 27.5 (638 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)
					BS Type	in(mm)		25.1 (23.9) x 39.1 x 27.5 (638 (608) x 992 x 698)**	25.1 (23.9) x 39.1 x 27.5 (638 (608) x 992 x 698)**	25.1 (23.9) x 39.1 x 27.5 (638 (608) x 992 x 698)**
					DIN Type	in(mm)		25.1 x 39.1 (33.1) x 27.5 (638 x 992 (842) x 698)***	25.1 x 39.1 (33.1) x 27.5 (638 x 992 (842) x 698)***	25.1 x 39.1 (33.1) x 27.5 (638 x 992 (842) x 698)***
			Weight (min/max)		lb(kg)		2315 / 2755 (1050 / 1250)	2315 / 2755 (1050 / 1250)	2315 / 2755 (1050 / 1250)	
			42	Electric Motors	Drive motor rating at S2 60 minute		kW	6.0 x 2	6.0 x 2	6.0 x 2
Lifting motor rating at S3 15%		kW			14	14	14			
43	Control Type	Drive and Hydraulic		type	AC	AC	AC			
44	Drive Axle	Brake type		type	ODB	ODB	ODB			
45	Relief Pressure	System		psi (kPa)	2880 (19860)	2880 (19860)	3125 (21550)			
		Attachment		psi (kPa)	2040 (14000)	2040 (14000)	2040 (14000)			
47	Hydraulic oil tank	Capacity		L	20	20	20			

*Optional (a) Pneumatic Tires 18 x 7 - 8 ** If the operator uses a BS Type Battery (608mm length/575, 630, 690AH/5h capacity), a special accessory (stopper) should be chosen.
 (b) Pneumatic Tires 16 x 6 - 8 ***If the operator uses a DIN Type Battery (842mm width), a special accessory (bracket) should be chosen.

B15T-7	B18T-7	B18TL-7	B20T-7	B20TL-7
3000 (1500)	3500 (1750)	3500 (1750)	4000 (2000)	4000 (2000)
24 (500)	24 (500)	24 (500)	24 (500)	24 (500)
AC Electric	AC Electric	AC Electric	AC Electric	AC Electric
Driver Seated	Driver Seated	Driver Seated	Driver Seated	Driver Seated
SE / C*	SE / C*	SE / C*	SE / C*	SE / C*
x 2 / 1	x 2 / 1	x 2 / 1	x 2 / 1	x 2 / 1
130 (3300)	130 (3300)	130 (3300)	130 (3300)	130 (3300)
5.1 (130)	5.1 (130)	5.1 (130)	5.3 (135)	5.3 (135)
II	II	II	II	II
1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.6 / 3.9 / 41.3 (40 / 100 / 900)	1.6 / 3.9 / 41.3 (40 / 100 / 900)
9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)
5/7	5/7	5/7	5/7	5/7
74.4 (1891)	78.4 (1991)	83.9 (2132)	79.9 (2029)	84.1 (2137)
115.7 (2791)	119.7 (2891)	125.2 (3032)	121.2 (2929)	125.4 (3037)
42.9 (1090)	42.9 (1090)	42.9 (1090)	44.1 (1119)	44.1 (1119)
84.6 (2150)	84.6 (2150)	84.6 (2150)	84.6 (2150)	84.6 (2150)
171 (4345)	171 (4345)	171 (4345)	171.3 (4350)	171.3 (4350)
79 (2010)	79 (2010)	79 (2010)	79 (2010)	79 (2010)
36.2 (919)	36.2 (919)	36.2 (919)	36.2 (919)	36.2 (919)
59.6 (1515)	63.6 (1615)	69.1 (1756)	64.9 (1648)	69.1 (1756)
-	-	-	-	-
14.8 (376)	14.8 (376)	14.8 (376)	15.0 (381)	15.0 (381)
126.6 (3216)	130.5 (3316)	136.1 (3457)	132 (3354)	136.3 (3462)
131.5 (3341)	135.5 (3441)	141.0 (3582)	137 (3479)	141.2 (3587)
10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)	10.6 / 10.6 (17 / 17)
79 / 118 (400 / 600)	79 / 118 (400 / 600)	79 / 118 (400 / 600)	79 / 118 (400 / 600)	79 / 118 (400 / 600)
98/89 (500/450)	98/89 (500/450)	98/89 (500/450)	98/89 (500/450)	98/89 (500/450)
2864 (1300)	2864 (1300)	2864 (1300)	2864 (1300)	2864 (1300)
26	25	25	24	24
6675 (3028)	6927 (3142)	7348 (3333)	7654 (3472)	7348 (3333)
8792 / 1190 (3988 / 540)	9607 / 1177 (4358 / 534)	9638 / 1569 (4372 / 712)	10672 / 1391 (4841 / 631)	10513 / 1243 (4769 / 564)
3296 / 3379 (1495 / 1533)	3373 / 3553 (1530 / 1612)	3604 / 3743 (1635 / 1698)	3578 / 4076 (1623 / 1849)	3604 / 3743 (1635 / 1698)
18x7-8 (c)	18x7-8 (c)	18x7-8 (c)	200x50-10 (c)	200x50-10 (c)
15x4.5-8 (d)	15x4.5-8 (d)	15x4.5-8 (d)	16x6-8 (d)	16x6-8 (d)
52 (1323)	56 (1423)	61.2 (1554)	57 (1446)	61.2 (1554)
35.5 (902)	35.5 (902)	35.5 (902)	35.9 (912)	35.9 (912)
6.6 (167)	6.6 (167)	6.6 (167)	7.9 (201)	7.9 (201)
3.4 (86)	3.4 (86)	3.4 (86)	3.4 (86)	3.4 (86)
3.9 (100)	3.9 (100)	3.9 (100)	3.9 (100)	3.9 (100)
hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
auto-electric	auto-electric	auto-electric	auto-electric	auto-electric
lead-acid	lead-acid	lead-acid	lead-acid	lead-acid
48	48	48	48	48
440	510	600	585	600
460	525	690	575	690
575	690	-	690	-
500	625	750	625	750
20.8 x 39.1 x 27.5 (528 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	29.4 x 39.1 x 27.5 (746 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	29.4 x 39.1 x 27.5 (746 x 992 x 698)
20.8 x 39.1 x 27.5 (528 x 992 x 698)	25.1 (23.9) x 39.1 x 27.5 (638 (608) x 992 x 698) (c)	-	25.1 (23.9) x 39.1 x 27.5 (638 (608) x 992 x 698) (c)	-
20.8 x 39.1 (33.1) x 27.5 (528 x 992 (842) x 698) (d)	25.1 x 39.1 (33.1) x 27.5 (638 x 992 (842) x 698) (d)	29.4 x 39.1 (33.1) x 27.5 (746 x 992 (842) x 698) (d)	25.1 x 39.1 (33.1) x 27.5 (638 x 992 (842) x 698) (d)	29.4 x 39.1 (33.1) x 27.5 (746 x 992 (842) x 698) (d)
1543 / 1836 (700 / 833)	1764 / 2330 (800 / 1057)	2205 / 2330 (1000 / 1057)	2205 / 2755 (1000 / 1250)	2205 / 2755 (1000 / 1250)
6.0x2	6.0x2	6.0x2	6.0x2	6.0x2
14	14	14	14	14
AC	AC	AC	AC	AC
ODB	ODB	ODB	ODB	ODB
2550 (17600)	2880 (19860)	2880 (19860)	3125 (21550)	3125 (21550)
2040 (14000)	2040 (14000)	2040 (14000)	2040 (14000)	2040 (14000)
20	20	20	20	20

*Optional (c) Cushion Tires 18 x 7 - 12.12 (d) Cushion Tires 15 x 6 - 11.25

MAIN SPECIFICATIONS - 36V

CHARACTERISTICS	1 Model			B15T-7	B18T-7	B20T-7			
	2	Load Capacity	at rated load center	lb(kg)	3000 (1500)	3500 (1750)	4000 (2000)		
3	Load Center		in(mm)	24 (500)	24 (500)	24 (500)			
4	Power type			AC Electric	AC Electric	AC Electric			
5	Operator type			Driver Seated	Driver Seated	Driver Seated			
6	Tire type	P= pneumatic, E= solid, C= cushion		C / SE*	C / SE*	C / SE*			
7	Wheels (x = driven)	number of front/rear		x 2 / 1	x 2 / 1	x 2 / 1			
DIMENSIONS	8	Max. Fork Height	with STD 2-stage mast	In(mm)	130 (3300)	130 (3300)	130 (3300)		
	9	Free Lift		In(mm)	5.1 (130)	5.1 (130)	5.3 (135)		
	10	Fork carriage	ISO Class		II	II	II		
	11	Forks	Thickness x Width x Length	in(mm)	1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.4 / 3.9 / 41.3 (35 / 100 / 900)	1.6 / 3.9 / 41.3 (40 / 100 / 900)		
			Fork Spacing (min. x max.)	in(mm)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)	9.5 / 35.6 (240 / 905)		
	12	Tilt of Mast	Forward / Backward	deg	5/7	5/7	5/7		
	13-19	Overall Dimensions	Length to Fork Face	In(mm)	74.4 (2891)	78.4 (2991)	79.9 (2029)		
			Overall Length	In(mm)	115.7 (2791)	119.7 (2891)	121.2 (2929)		
			Overall Width	In(mm)	42.9 (1090)	42.9 (1090)	42.9 (1090)		
			Mast Lowered Height	In(mm)	78.7 (2000)	78.7 (2000)	78.7 (2000)		
			Mast Extended Height	In(mm)	159.3 (4045)	159.3 (4045)	159.4 (4050)		
			Overhead Guard Height	In(mm)	79 (2010)	79 (2010)	79 (2010)		
	19	Seat Height		In(mm)	36.2 (919)	36.2 (919)	36.2 (919)		
	20	Outer Turning Radius		In(mm)	59.6 (1515)	63.6 (1615)	64.9 (1648)		
	21	Inner Turning Radius		In(mm)	-	-	-		
	22	Load Moment Center	Center of drive axle to fork face	In(mm)	14.8 (376)	14.8 (376)	15.0 (381)		
	23	Right Angle Stacking Aisle Width (with Pallets & Clearance)	48" x 40" (1000 x 1200) Pallet	In(mm)	126.6 (3216)	130.5 (3316)	132 (3354)		
			48" x 31" (800 x 1200) Pallet	In(mm)	131.5 (3341)	135.5 (3441)	137 (3479)		
	PERFORMANCE	25-27	Speed	Travel	Loaded / Unloaded	mph(km/h)	8.7/8.7 (14.0/14.0)	8.7/8.7 (14.0/14.0)	8.7/8.7 (14.0/14.0)
Lifting				Loaded / Unloaded	fpm(mm/s)	61/108 (310/550)	61/108 (310/550)	61/108 (310/550)	
Lowering				Loaded / Unloaded	fpm(mm/s)	98/89 (500/450)	98/89 (500/450)	98/89 (500/450)	
28		Max. Drawbar pull	Loaded at 1.0 mph	lb(kg)	2734 (1240)	2734 (1240)	2734 (1240)		
29	Max. Gradeability	Loaded at 1.0 mph	%	24	23	22			
WEIGHT	30	Total weight	with min. weight of battery	lb(kg)	6821 (3094)	7072 (3208)	7910 (3588)		
	31	Axle Load	Loaded, Front / Rear	lb(kg)	8858 / 1269 (4018 / 576)	9673 / 1256 (4388 / 570)	10785 / 1534 (4892 / 696)		
			Unloaded, Front / Rear	lb(kg)	3362 / 3459 (1525 / 1569)	3439 / 3633 (1560 / 1648)	3688 / 4221 (1673 / 1915)		
CHASSIS	33	Tires	Size	Front	18x7x12.12	18x7x12.12	18x7x12.12		
			Rear	15x6x11.25	15x6x11.25	15x6x11.25			
	34	Wheel Base	Distance	In(mm)	52 (1323)	56 (1423)	57 (1446)		
	36	Tread Width	Front	In(mm)	35.5 (902)	35.5 (902)	35.5 (902)		
			Rear	In(mm)	7.8 (198)	7.8 (198)	7.8 (198)		
	38	Ground clearance	Loaded	at lowest	In(mm)	3.4 (86)	3.4 (86)	3.4 (86)	
at center of wheel base				In(mm)	3.9 (100)	3.9 (100)	3.9 (100)		
40	Brakes	Service		hydraulic	hydraulic	hydraulic			
		Parking		auto-electric	auto-electric	auto-electric			
POWER TRAIN	41	Battery	Type		lead-acid	lead-acid	lead-acid		
			Voltage	V	36	36	36		
			Capacity (5 Hours Rating)	Nominal	BS type	AH	660	825	825
				Max.	BS type	AH	770	970	970
			Battery compartment sizes (W x L x H) Max.	Normal	In(mm)	20.8 x 39.1 x 27.5 (528 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	
					BS Type	In(mm)	20.8 x 39.1 x 27.5 (528 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)	25.1 x 39.1 x 27.5 (638 x 992 x 698)
	Weight (min/max)		lb(kg)	1543 / 2083 (700 / 945)	1764 / 2645 (800 / 1200)	2315 / 2645 (1050 / 1200)			
	42	Electric Motors	Drive motor rating at S2 60 minute	kW	6.0 x 2	6.0 x 2	6.0 x 2		
			Lifting motor rating at S3 15%	kW	14	14	14		
	43	Control Type	Drive and Hydraulic	type	AC	AC	AC		
44	Drive Axle	Brake type	type	ODB	ODB	ODB			
45	Relief Pressure	System	psi (kPa)	2550 (17600)	2880 (19860)	3125 (21550)			
		Attachment	psi (kPa)	2040 (14000)	2040 (14000)	2040 (14000)			
47	Hydraulic oil tank	Capacity	L	20	20	20			

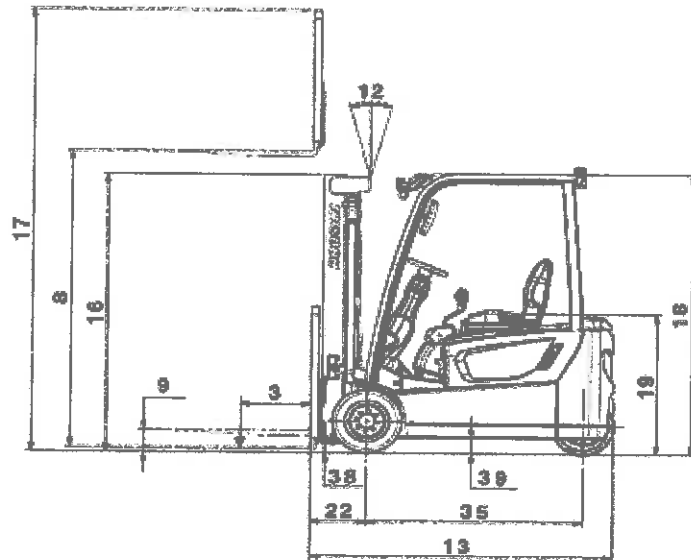
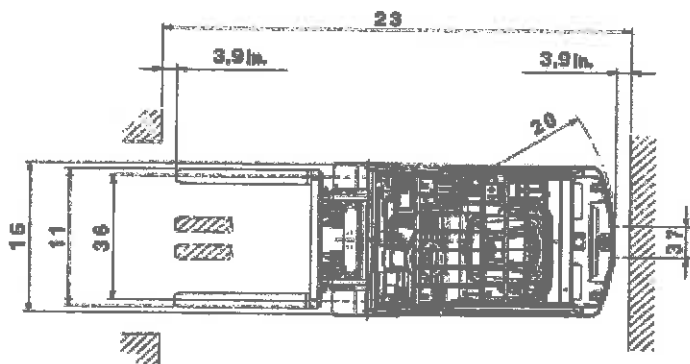
*Optional (a) Superelastic Tires_18 x 7-8

(c) Superelastic Tires_200 x 50-10

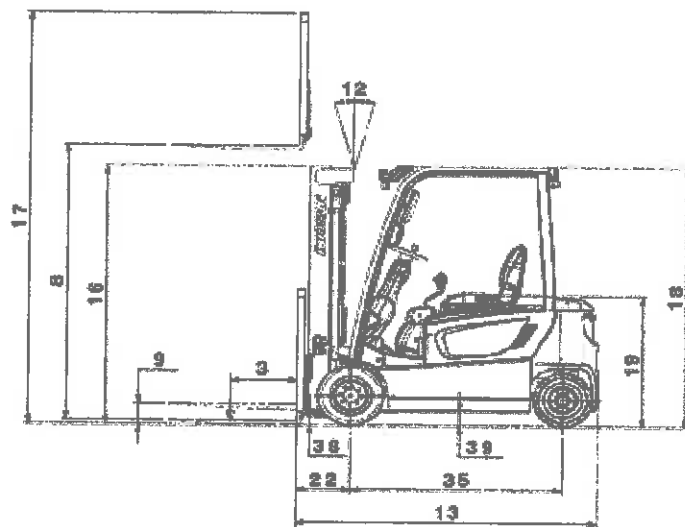
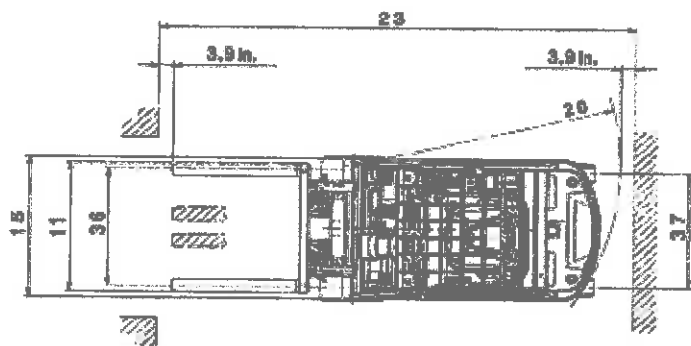
(b) Superelastic Tires_15 x 4.5-8

(d) Superelastic Tires_16 x 6-8

DIMENSIONAL DRAWING - 3-wheel



DIMENSIONAL DRAWING - 4-wheel





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