

## Standard & Option

		Details	15BR-X	18BR-X	20BR-X	25BR-X
OPERATION ROOM	OHG	Over head guard	●	●	●	●
	Lever	Manual lever	●	●	●	●
MAST	Mast	V300 mast	●	●	●	●
		2 Stage standard mast	●	●	●	●
		3 stage TF/TS mast	○	○	○	○
MAST	Fork	1,050mm Fork	●	●	●	●
		Option - 15/18BR-X(~1,500mm) / 20/25BR-X(~2,100mm)	○	○	○	○
MAST	Carriage	Carriage - Shift type	○	○	○	○
		Carriage - Hook type	●	●	●	●
Attachment		Side Shift	○	○	○	○
BATTERY	Battery	Lead acid Battery(48V)	280Ah	280Ah	300Ah	300Ah
		Lead acid Battery(48V) - 15/18BR-X 335Ah, 20/25BR-X 365Ah	○	○	○	○
		Battery Trolley	○	○	○	○
	Charger	Lithium Battery(51.2V) - 15/18/20/25BR-X 300Ah	○	○	○	○
		Lead acid - 220/380V,60HZ (3 phase)	○	○	○	○
		Lead acid - 440V,60HZ (3 phase)	○	○	○	○
		Lithium Battery -380V/440V,50/60HZ (3 phase)	○	○	○	○

		Details	15BR-X	18BR-X	20BR-X	25BR-X
HYDRAULIC	MCV	3 spool MCV	●	●	●	●
		4 spool MCV	○	○	○	○
ATT.Pip		WITHOUT	●	●	●	●
		4 spool	○	○	○	○
Hyd oil		VG 15 oil for Cold Area(-30°C)	○	○	○	○
TIRE	Tires	Drive & Caster - solid rubber, Load tire - Urethane	●	●	●	●
		All Urethane, All Vulkollan or All Solid tire for 15/18BR-X only	○	○	○	○
VISIBILITY	Lamp	Drive & Caster tire - Non-Marking tire, Load tire - Urethane	○	○	○	○
CAMERA		Fron & Rear LED lamp	●	●	●	●
		LED lamp	○	○	○	○
		Blue spot	○	○	○	○
CONVENIENC		Camera	○	○	○	○
		Load Sensor	○	○	○	○
		Charging - dedicated connector	○	○	○	○
		12V power port & USB port	○	○	○	○
SAFETY		Hi-Mate (Fleet management system)	○	○	○	○
		Limited travel speed when driving with elevated load	○	○	○	○
		Front guard	○	○	○	○
		OPSS(Mast only)	●	●	●	●

● STD / ○ OPT

# 15/18 20/25BR-X

BR-X Series Battery Forklift Truck



**As a game-changer in the electric reach truck market, Hyundai BR-X series perfectly meets the needs of the market!**


The new 15/18/20/25BR-X series released in the market incorporates the improvements demanded by users on the field and addresses the trends in the market.

## PRODUCT FEATURES OVERVIEW

# ALL YOU NEED IS, BR-X

Release of the BR-X series,  
an icon of innovation

- Optimizing hydraulic systems and performance

MAX. **29%**   
Energy efficiency

EXCELLENT  
PRODUCTIVITY



### Environment - friendliness and excellent work efficiency

- TCO reduction and environments friendliness
  - increased energy efficiency
- High energy efficiency, convenient post-purchase management
  - iron phosphate lithium-ion battery **Option**
- Minimized shaking
  - a reach in - out system with a 3 point support method.
- Increased fork spacing to accommodate a wider range of cargo
- Fork camera that boosts the efficiency and safety of high rack operations **Option**
- A -30C freezer compartment **Option**

### Differentiated safety features

- Lift function suspension - OPSS **Option**
- Fast and accurate power shutdown and power return
  - Electrical emergency switch
- Protection of driver seat from falling debris - Front guard **Option**
- Synchronization of speed limit at the worksite with the maximum travel speed of the vehicle
- Password setting function - Access to the vehicle is restricted if the driver is unauthorized

### More convenient and reduced post - purchase maintenance

- Key switch that blocks the intrusion of moisture and dust
- Charging-dedicated connector
  - mitigates the hassles of charging **Option**
- Removal of battery is combined with reach-in function
- Self - diagnosis of the electronic component system and equipment characteristic tuning through the cluster
- Stiffness of the spline connecting the decelerator to the motor stiffness has been increased by 50%
- A lightweight brake system that requires no post-purchase management

### Game changer - New design

- VOC and market trends have been realized through productization

### Upgraded driver convenience

- Optimized MCV location and reduced lever operating force
- Steering System - reduced steer handle operating force and rotations
- USP & 12V power port **Option**
- New cluster with enhanced visibility of operating information
- Improved absorption of vibrations from road surfaces - 4-link type undercarriage
- Dedicated handle for getting in and out of the truck

OUTSTANDING OPERABILITY  
ERGONOMICS – NEW DESIGN

## Upgraded convenience

A comfortable work environment that is attentive to the needs of the vehicle driver

Drivers can work more efficiently and comfortably, thanks to the upgraded driver space and diverse functions designed with the driver's comfort in mind.



### New design-Enhanced product marketability and driver convenience

Because the needs of customers and market trends have been reflected to the design of the BR-X series, the satisfaction of operating the vehicle is cascaded to better productivity.

### MCV lever with upgraded lever manipulation

The MCV lever and driving lever were relocated to improve the lever manipulation. Moreover, the force required in MCV lever manipulation was reduced by 25%.



### A steering handle that is easy to turn quickly

To enhance convenience of operating the vehicle, the steering handle was designed to be tiltable by up to 10 degrees. In addition, the number of rotations (lock to lock) of the steering handle was increased to make the steering feel lighter.



### 12V power port & USB port Option

There is a USB port and a 12V power take-out port for supplying power to mobile devices, PDAs, and scanners.



15/18  
20/25BR-X

### Color LCD cluster

A new cluster with increased information visibility: the speed of driving and mast operation can be adjusted with the button at the bottom.



### 4-Link type Undercarriage

The vehicle has a 4-link type undercarriage that has excellent absorption characteristics against vibrations generated by road surfaces.



### Handle for getting in and out of the truck comfortably

The truck comes with a lower back cushion pad and a handle on the top panel that add to safety and convenience when getting in and out of the vehicle.



ENVIRONMENT FRIENDLY  
GREAT PRODUCTIVITY

# Amazing productivity

## Increased productivity with optimized performance

Specification and performance optimized for increased uptime and work conditions to meet customer needs.

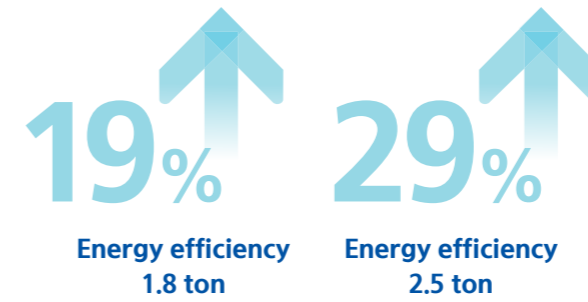


15/18  
20/25BR-X

### Enhanced energy efficiency

By adopting a linear sensor on the lift line and optimizing the performance of the forklift truck and minimizing power consumption, energy efficiency was enhanced.

\* Energy efficiency is a test result according to our test standards, VDI 2198, and may differ depending on actual usage conditions.



### Fork camera Option

A fork camera is installed on the truck to improve safety and convenience when removing pallets placed on tall racks.

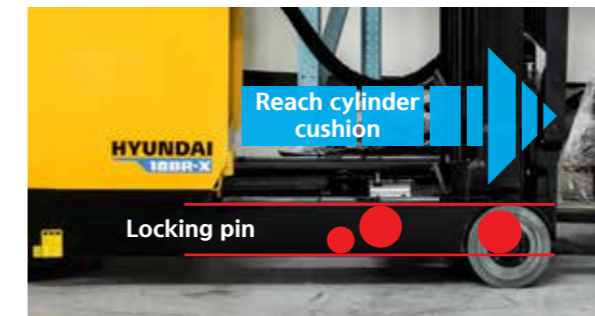


### Lithium-ion battery Option

Iron phosphate lithium-ion battery is known for convenient post-purchase maintenance and fast charging, and it can be charged anytime. The battery is available to customers as an option. At low temperatures in particular, the lithium-ion battery has excellent discharge performance, which means the forklift can be operated for longer durations in freezers.

### Reach in-out with reduced shaking

The eccentric shaft used in the mast undercarriage reduces mast shaking during reach in-out operations. In addition, the hydraulic cushion in the added reach cylinder lowers shock during reach out.



### Performance specification in freezing temperature Option

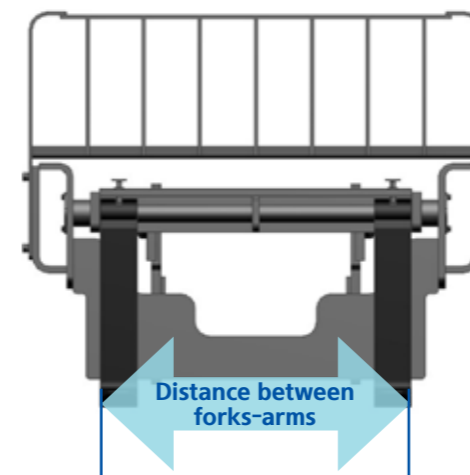
Through the use of low-temperature hydraulic oil and additional insulation on the power unit and system wire, the performance specification of the vehicle guarantees operation up to minus 30 degrees Celsius.



\* For refrigeration specifications, optimal performance is achieved when low temperature and room temperature are used alternately every 30 minutes.

### Increased spacing of forks

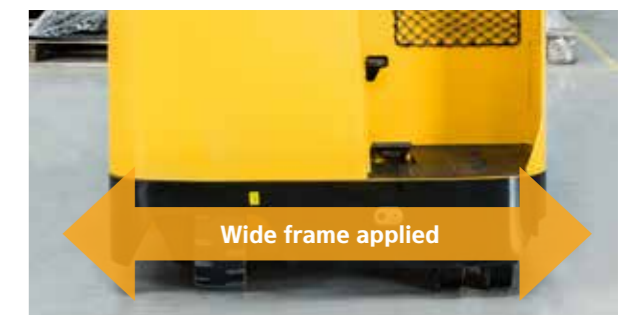
To handle a wider range of pallets, the spacing of the left-right forks of the carriage and side shift carriage was increased.



### Wide frame - improved work safety

If the triple mast is selected by the customer, the wide frame standard will be applied to increase the left-right stability of the vehicle.

\* Overall width has been increased to 120mm for the 1.5/1.8-ton model and 140 mm for the 2.0/2.5-ton model.



# Maximized safety

## Minimized risk of accidents

A vehicle body designed with safety as the most important priority and diverse and proactive safety specifications will ensure safety at the worksite.



### Mast lowering restraint - OPSS Option

When the driver raises the mast to a certain height and wants to operate the vehicle for a certain duration, the flow of hydraulic fluid to the lift line gets blocked for safety reasons.

\* Mast lowering restraint is activated only when the key is off.

OPSS solenoid valve



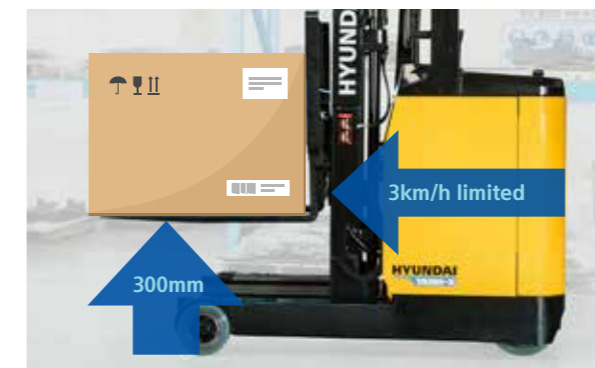
### Driver seat front guard Option

The driver seat front guard protects the driver and the top panel from falling cargo. This is a very useful option to have when handling frozen fish products.



### Travel speed limit when operating the forklift Option

For safety reasons, the travel speed is limited to 3km/h (this limit is adjustable) when the fork is raised by more than 300 mm from the ground in the case of double-stage mast or if the free lift zone is exceeded in the case of the triple mast.



### Travel speed limit on curved roads

When the vehicle enters a curved path after traveling in a straight line, the speed automatically decreases by 50% in order to prevent overturned vehicle accidents.

\* When making sudden turns, automatic speed decrease may not be that substantial.



### Maximum travel speed limit

Using the cluster, the maximum travel speed of the vehicle can be set to match the speed limit at the worksite.

\* Setting the speed limit in the production line is the best way to reduce errors.



### Panoramic mirror, LED work light, and beacon lamp

For safe operation in warehouses, panorama mirror, beacon lamp, blue spot, and LED work lights (front and rear) are installed on the vehicle to prevent overturned vehicle accidents.



## A game-changer in economics

### Effective maintenance management with outstanding benefit to cost ratio

Enhanced reliability and convenient post-purchase management allow customers to experience firsthand the improvements in the TCO as well as the excellent performance of the vehicle.



#### Key switch

A cap is attached to the key switch that prevents the intrusion of moisture and dust into the interior of the key.



#### Charging-dedicated connector Option

There is a charging-dedicated connector located inside the cab for convenient charging of the battery. When the connector cover is opened, the vehicle cannot be operated.



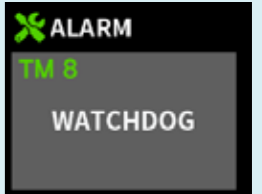
#### Convenient battery maintenance management

The customer can perform maintenance work on the battery with ease because the reach in-out function allows the customer to pull out the battery from the front.



#### Self-diagnosis of malfunctions and tuning of characteristics

Malfunctions in the controller and motor can be diagnosed using the cluster. Driving and mast operating characteristics can also be tuned.



#### Improved durability of transfer & motor (2/2.5-ton model)

The durability of the transfer and motor was improved with the revised heat treatment specification for the pinion gear and increased drive motor shaft insertion depth.



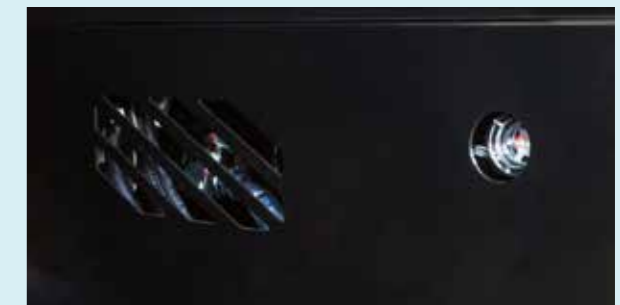
#### Brake system

By changing the routing of the brake cable, maneuverability of pedals (and how brake feel) and durability were improved.



#### Automatic inspection window for hydraulic oil level

The driver can check the remaining hydraulic oil through the inspection window on the front plate without the need to remove the cover.



## Hi-MATE, a solution for field control based on data

Data collected at the sensors and modules mounted on equipment during the operation of forklift truck at the operation control system of Hyundai Industrial Vehicle is provided to the mobile device or computer of the customer in real time through the server of Hyundai Construction Equipment. Such visual data can be used for establishing a control plan for safety control in fields, productivity improvement, and cost saving.



### Equipment operation management

\* Real-time monitoring and follow-up management of individual vehicles, drivers, equipment on-site, and operation information  
- Key-on time, travel hours, work hours, and traveling position



### Equipment status management

\* Supplying information of the forklift truck linked with operation hours, establishing a follow-up management plan  
- Indicating fuel remainder, failure information  
- Indicating consumable exchange timing, service timing



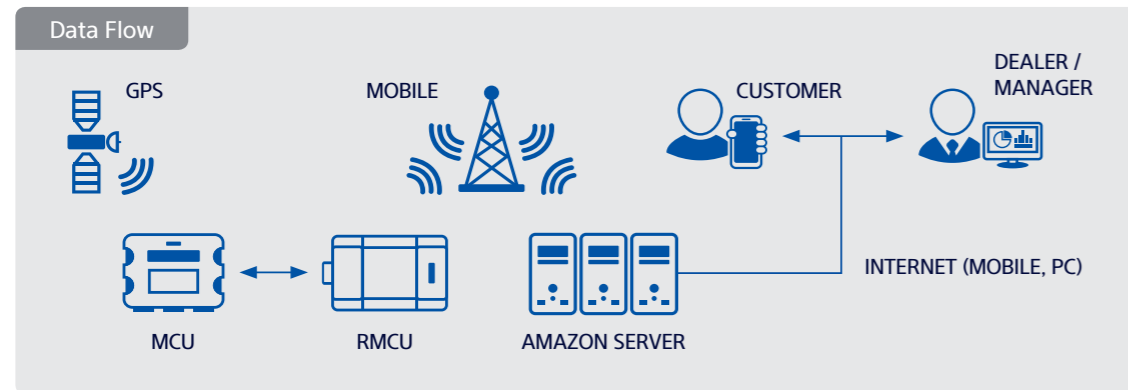
### Safe traveling control

\* Checking and follow-up management of safety accident caused by collision between the field system and forklift truck during operation  
- Count of collision, size of impact

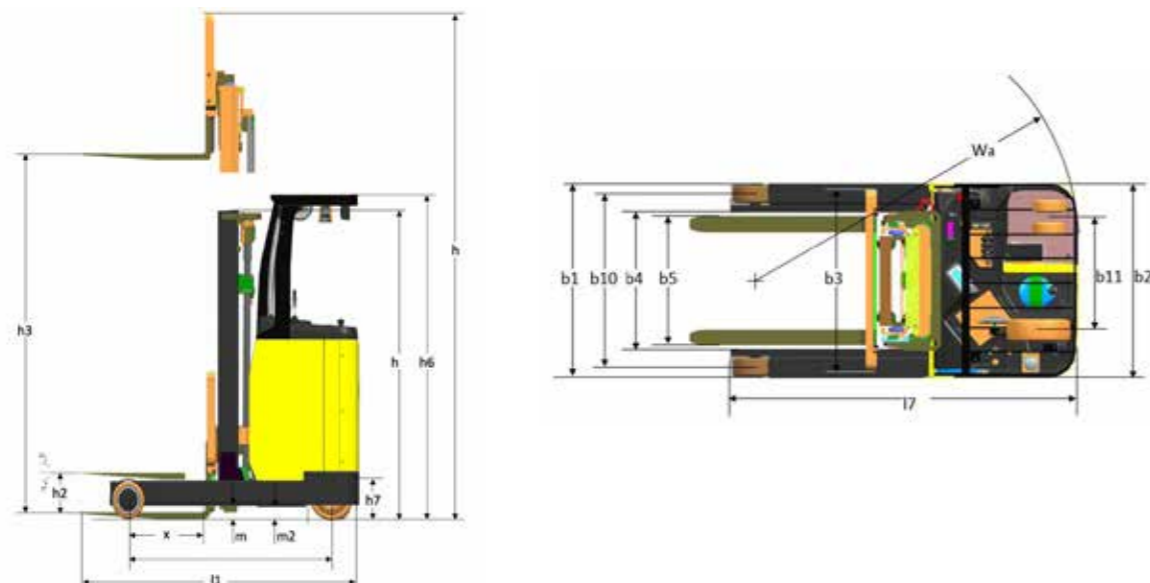


### Human resource management

\* Checking and follow-up management such as matching between self-diagnosis and equipment conditions before operation  
- Driver authorization, self-diagnosis of equipment conditions



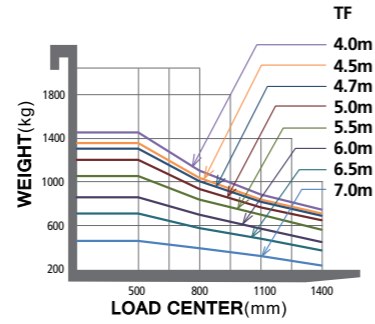
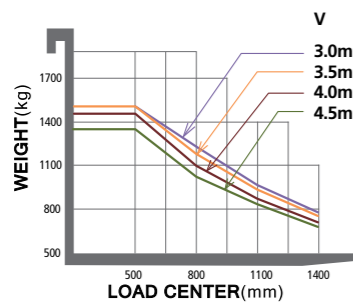
## Dimension



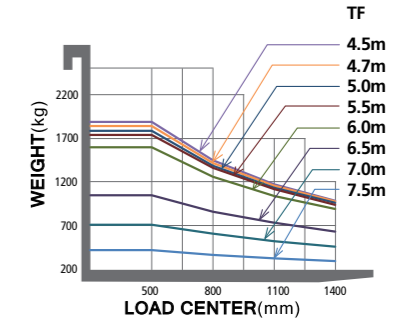
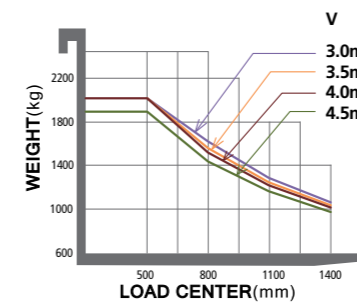
## Specification

Identification		Hyundai				
Manufacturer (Abbreviation)						
Manufacturer's Type Designation		15BR-X	18BR-X	20BR-X	25BR-X	
1.1	Load Capacity / Rated Load	Q kg	1,500	1,800	2,000	2,500
1.2	Load Center Distance	C mm	500	500	500	500
1.3	Wheelbase	y mm	1,340	1,525	1,510	1,705
Weights						
2.1	Service Weight	Kg	2,291	2,310	2,784	2,898
2.2	Axle Loading, Unloaded Front/Rear	Kg	812/1,479	748/1,562	983/1,801	906/1,992
Wheels, Chassis						
3.1	Tires : Solid Rubber, Superelastic, Pneumatic, Polyurethane	P-Ure./Rub./Rub.	P-Ure./Rub./Rub.	P-Ure./Rub./Rub.	P-Ure./Rub./Rub.	
3.2	Tires Size, Load ( $\phi$ X Width )	254 x 100	254 x 100	267 x 114	267 x 114	
3.3	Tires Size, Drive ( $\phi$ X Width )	345 x 140	345 x 140	382 x 142	382 x 142	
3.4	Tires Size, Caster ( $\phi$ X Width )	178 x 73	178 x 73	204 x 76	204 x 76	
3.5	Wheels, Number Front / Rear (X = Driven Wheels)	2 x 1 x 2	2 x 1 x 2	2 x 1 x 2	2 x 1 x 2	
3.6	Tread, Front	B10 (mm)	970	970	1,060	1,060
3.7	Tread, Rear	b11 (mm)	639	639	690	690
Basic Dimensions						
4.1	Tilt Of Mast/Fork Carriage Forward/Backward	Degrees	5 / 5	5 / 5	5 / 5	5 / 5
4.2	Height, Mast Lowered	H1 (mm)	1,991	1,991	2,025	2,025
4.3	Free Lift	H2 (mm)	210	210	212	212
4.4	Lift Height	H3 (mm)	3,000	3,000	3,000	3,000
4.5	Height, Mast Extended	H4 (mm)	4,025	4,025	4,030	4,030
4.7	Height Of Overhead Guard (Cabin)	H6 (mm)	2,275	2,275	2,293	2,293
4.9	Overall Length	L1 (mm)	2,149	2,150	2,380	2,378
4.9	Length To Face Of Forks	l2 (mm)	1,249	1,250	1,330	1,328
4.10	Overall Width	B1/b2 (mm)	1,070	1,070	1,190	1,190
4.11	Fork Dimensions	s/e/(mm)	35x100x900	35x100x900	45x100x1050	45x100x1050
4.12	Fork Carriage Iso 2328, Class / Type A, B	II , A	II , A	II , A	II , A	
4.13	Fork-Carriage Width	b3 (mm)	1,019	1,019	1,092	1,092
4.14	Distance Between Fork-Arms	b5 (mm)	722	722	782	782
4.15	Distance Between Wheel Arms / Loading Surfaces	b4 (mm)	771	771	837	837
4.16	Reach Distance	L4 (mm)	482	665	610	807
4.17	Ground Clearance, Below Mast, Loaded	m1(mm)	98.5	98.5	100	100
4.18	Ground Clearance, Center Of Wheelbase	m2(mm)	87.5	87	93	93
4.19	Aisle Width For Pallets 1000 X 1200 Crossways	Ast(mm)	2,710	2,760	2,828	2,895
4.20	Aisle Width For Pallets 800 X 1200 Lengthways	Ast(mm)	2,771	2,786	2,871	2,891
4.21	Turning Radius	Wa(mm)	1,596	1,775	1,790	1,980
4.22	Length Across Wheel Arms	l7(mm)	1,706	1,891	1,898	2,093
Performance Data						
5.1	Travel Speed, Loaded / Unloaded	Km/h	10.0	10.0	10.5	10.5
5.2	Lift Speed, Loaded / Unloaded	Mm/s	340/460	320/460	300/460	280/460
5.3	Lowering Speed, Loaded / Unloaded	Mm/s	500/450	500/450	500/450	500/450
5.4	Max. Gradeability, Loaded / Unloaded	%	23.1/14	21.4/14	21.5/14	18.5/14
5.5	Service Brake		Disc	Disc	Disc	Disc
Electric-Motor						
6.1	Drive Motor Rating S2 60 Min	V/Ah	4.5	4.5	6.0	6.0
6.2	Lift Motor Rating At S3 15%	KW	9.0	9.0	14.0	14.0
6.3	Battery Voltage, Nominal Capacity K5 (Option)	V/Ah	48/280(300,335)	48/280(300,335)	48/300(335,365)	48(335,365)
	Battery Weight (Option)	V/Ah	490(500,560)	490(500,560)	500(560,580)	500(560,580)
6.4	Battery Compartment Dimensions L/W/H	Kg(lb)	994/378/582	994/378/582	994/378/582	994/378/582
Other Details						
7.1	Type Of Drive Control		AC	AC	AC	AC
7.2	Operating Pressure, System / Attachments	bar	130	130	130	130

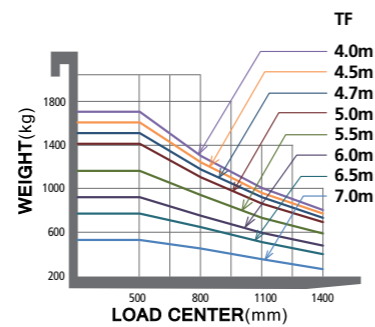
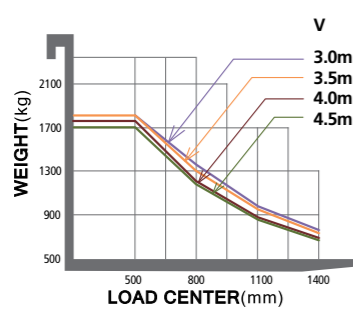
15BR-X												
Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Overall Mast Height (Raised)		Free Lift Height		Tilting Angle		Load Capacity W/O Side Shift	Load Capacity W/ Side Shift	Gross Vehicle Weight (No load)	
			With Backrest	Without Backrest	With Backrest	Without Backrest	Fwd	Bwd	500mm LC	500mm LC		
			mm	mm	mm	mm	deg	deg	kg	kg		
2-Stage Full Free Lift	*V300	3,025	1,991	4,025	3,584	245	245	5	5	1,500	1,400	2,291
	V350	3,525	2,241	4,525	4,084	245	245	5	5	1,500	1,360	2,324
	V400	4,025	2,491	5,025	4,584	245	245	5	5	1,450	1,310	2,374
	V450	4,525	2,841	5,525	5,084	245	245	5	5	1,350	1,220	2,459
3-Stage Full Free Lift	TF400	4,035	1,907	5,035	4,594	872	1,313	5	5	1,450	1,310	2,439
	TF450	4,535	2,107	5,535	5,094	1,072	1,513	5	5	1,350	1,220	2,481
	TF470	4,735	2,157	5,735	5,294	1,122	1,563	5	5	1,300	1,170	2,491
	TF500	5,035	2,257	6,035	5,594	1,222	1,663	5	5	1,200	1,080	2,511
	TF550	5,535	2,457	6,535	6,094	1,422	1,863	5	5	1,050	940	2,572
	TF600	6,035	2,657	7,035	6,594	1,622	2,063	5	5	850	760	2,617
	TF650	6,535	2,857	7,535	7,094	1,822	2,263	5	5	700	620	2,666
	TF700	7,035	3,057	8,035	7,594	2,022	2,463	5	5	450	390	2,712



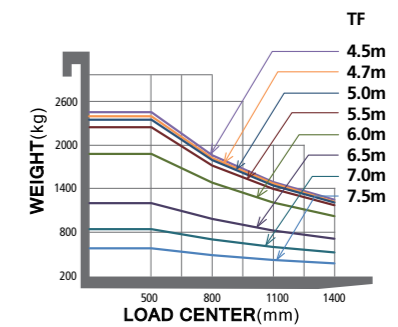
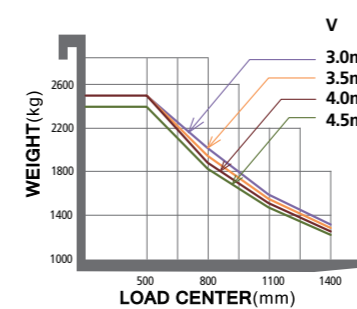
20BR-X												
Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Overall Mast Height (Raised)		Free Lift Height		Tilting Angle		Load Capacity W/O Side Shift	Load Capacity W/ Side Shift	Gross Vehicle Weight (No load)	
			With Backrest	Without Backrest	With Backrest	Without Backrest	Fwd	Bwd	500mm LC	500mm LC		
			mm	mm	mm	mm	deg	deg	kg	kg		
2-Stage Full Free Lift	*V300	3,005	2,027	4,030	3,626	257	257	5	5	2,000	1,820	2,784
	V350	3,505	2,277	4,530	4,126	257	257	5	5	2,000	1,820	2,824
	V400	4,005	2,577	5,030	4,626	257	257	5	5	2,000	1,820	2,896
	V450	4,505	2,877	5,530	5,126	257	257	5	5	1,880	1,710	2,978
3-Stage Full Free Lift	TF450	4,505	2,127	5,530	5,066	1,057	1,466	5	5	1,900	1,730	3,044
	TF470	4,705	2,177	5,730	5,266	1,107	1,516	5	5	1,850	1,680	3,058
	TF500	5,005	2,277	6,030	5,566	1,207	1,616	5	5	1,800	1,630	3,082
	TF550	5,505	2,477	6,530	6,066	1,407	1,816	5	5	1,750	1,590	3,171
	TF600	6,005	2,677	7,030	6,566	1,607	2,016	5	5	1,600	1,450	3,221
	TF650	6,505	2,877	7,530	7,066	1,807	2,216	5	5	1,040	930	3,271
	TF700	7,005	3,077	8,030	7,566	2,007	2,416	5	5	700	620	3,320
	TF750	7,505	3,227	8,530	8,066	2,157	2,566	5	5	400	340	3,367



18BR-X												
Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Overall Mast Height (Raised)		Free Lift Height		Tilting Angle		Load Capacity W/O Side Shift	Load Capacity W/ Side Shift	Gross Vehicle Weight (No load)	
			With Backrest	Without Backrest	With Backrest	Without Backrest	Fwd	Bwd	500mm LC	500mm LC		
			mm	mm	mm	mm	deg	deg	kg	kg		
2-Stage Full Free Lift	*V300	3,025	1,991	4,025	3,584	245	245	5	5	1,800	1,630	2,310
	V350	3,525	2,241	4,525	4,084	245	245	5	5	1,800	1,630	2,343
	V400	4,025	2,491	5,025	4,584	245	245	5	5	1,750	1,590	2,393
	V450	4,525	2,841	5,525	5,084	245	245	5	5	1,700	1,540	2,478
3-Stage Full Free Lift	TF400	4,035	1,907	5,035	4,594	872	1,313	5	5	1,700	1,540	2,458
	TF450	4,535	2,107	5,535	5,094	1,072	1,513	5	5	1,600	1,450	2,500
	TF470	4,735	2,157	5,735	5,294	1,122	1,563	5	5	1,500	1,360	2,510
	TF500	5,035	2,257	6,035	5,594	1,222	1,663	5	5	1,400	1,270	2,529
	TF550	5,535	2,457	6,535	6,094	1,422	1,863	5	5	1,150	1,040	2,591
	TF600	6,035	2,657	7,035	6,594	1,622	2,063	5	5	900	800	2,636
	TF650	6,535	2,857	7,535	7,094	1,822	2,263	5	5	750	670	2,685
	TF700	7,035	3,057	8,035	7,594	2,022	2,463	5	5	500	440	2,731



25BR-X												
Mast Type	Maximum Fork Height	Overall Mast Height (Lowered)	Overall Mast Height (Raised)		Free Lift Height		Tilting Angle		Load Capacity W/O Side Shift	Load Capacity W/ Side Shift	Gross Vehicle Weight (No load)	
			With Backrest	Without Backrest	With Backrest	Without Backrest	Fwd	Bwd	500mm LC	500mm LC		
			mm	mm	mm	mm	deg	deg	kg	kg		
2-Stage Full Free Lift	*V300	3,005	2,027	4,030	3,626	257	257	5	5	2,500	2,280	2,898
	V350	3,505	2,277	4,530	4,126	257	257	5	5	2,500	2,280	2,938
	V400	4,005	2,577	5,030	4,626	257	257	5	5	2,500	2,280	3,010
	V450	4,505	2,877	5,530	5,126	257	257	5	5	2,400	2,190	3,092
3-Stage Full Free Lift	TF450	4,505	2,127	5,530	5,066	1,057	1,466	5	5	2,400	2,190	3,158
	TF470	4,705	2,177	5,730	5,266	1,107	1,516	5	5	2,350	2,140	3,172
	TF500	5,005	2,277	6,030	5,566	1,207	1,616	5	5	2,300	2,100	3,196
	TF550	5,505	2,477	6,530	6,066	1,407	1,816	5	5	2,200	2,000	3,286
	TF600	6,005	2,677	7,030	6,566	1,607	2,016	5	5	1,850	1,680	3,335
	TF650	6,505	2,877	7,530	7,066	1,807	2,216	5	5	1,200	1,080	3,385
	TF700	7,005	3,077	8,030	7,566	2,007	2,416	5	5	850	760	3,434
	TF750	7,505	3,227	8,530	8,066	2,157	2,566	5	5	600	530	3,481



\* If you select TF mast, a wide frame is applied, which changes the overall width to 1,190mm for 15/18BR-X and 1,310mm for 20/25BR-X.

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