

**PREMIA** EM

**PBV/PBF20N3D(R)(S) Series**

# DOUBLE PALLET HANDLER

2.0 tonnes

## ONE EXCEPTIONAL TRUCK DOUBLE THE PRODUCTIVITY

The PREMIA EM double pallet handler is built for highly demanding work where performance and precision are key. It's available in both fixed platform and folding platform configurations with fast acceleration and drive speeds, and market-leading lifting and lowering speeds. The initial lift feature allows for higher ground clearance when needed and allows for the transportation of stacked pallets, doubling productivity, and reducing the time needed to move them from A to B.

### SPECIFICATIONS

PBV20N3D  
PBF20N3DR  
PBF20N3DS



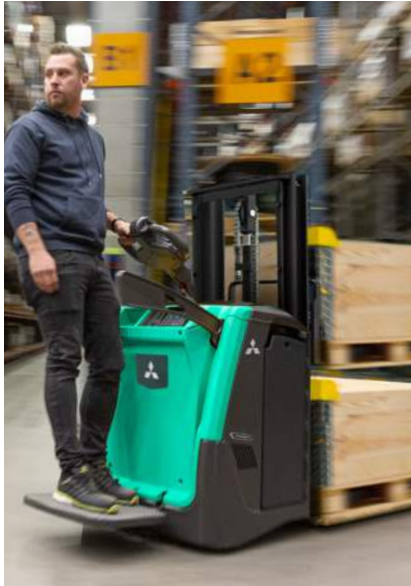
**WHEN  
RELIABILITY IS  
EVERYTHING...**

# PREMI<sup>A</sup> EM

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### DOUBLE PALLET HANDLER

2.0 tonnes



It's an ideal choice for pallet transfer work in busy logistics terminals, industrial warehouses, and for loading and unloading vehicles thanks to a host of cutting-edge features. Market-leading lifting and lowering speeds means the time per pallet moved stays as low as possible, giving a much lower total cost of operation. Robust construction and legendary Mitsubishi Forklift Trucks reliability means it can stand up to the most strenuous shifts and keep uptime at a maximum.

But high performances and long shifts aren't achieved if the operator isn't at their best. The patented DriveSteady and TractionPlus systems ensure outstanding drive wheel pressures, excellent shock absorption and side stability when cornering, making for a smoother, safer ride throughout. The best-in-class ErgoSteer tiller head makes operation simple, comfortable, and intuitive for operators, keeping them fully focused on the task in hand.

And with the option of drive speeds up to 12.5 km/h, the PREMIA EM DPH is truly a warehouse powerhouse.

#### BRAKES

- **Parking brake**  
Automatically activated when necessary for extra safety on ramps.

#### DRIVE

- **Powerful, sealed AC motor**  
High torque for greater efficiency. No carbon brushes mean lower servicing requirements.
- **Sealed transmission**  
Shock-resistant, quiet and requires little maintenance.



- **Dust-shielded load wheels**  
Less maintenance and component replacement required.

#### ELECTRICAL AND CONTROL SYSTEMS

- **Waterproof wiring and connectors**  
Sealed compartment prevents system failure and corrosion from water and dust.
- **Combi controller lift system**  
Fingertip control for speed regulated lifting and proportional valve for lowering.
- **Versatile battery compartment**  
Accommodates DIN and BS size batteries to ensure maximum compatibility with user equipment.
- **Battery access**  
Battery can be accessed from above to check electrolyte status or pulled out on steel rollers for battery change over.
- **Mounted battery plug**  
Plug is contained within a tray so there is no risk of loose cables getting caught when changing the battery.

- **Built-in Li-ion battery**  
Fast opportune charging removes the need for extra batteries and allows 24/7 operation. (Option on mini and junior chassis).

#### FORKS

- **Robust forks**  
Strong welded construction, angled at the front for effortless pallet entry with blunt tips for reduced pallet damage.

- **Lift heights of 1790mm and 2090mm**  
Ideal for handling on steep ramps, loading docks and uneven surfaces.

- **Initial lift**  
This allows for better ground clearance on ramps and inclines, and allows for double pallet handling.

- **Market-leading lifting and lowering speed**  
Productivity can be kept consistently high.

#### FRAME AND BODY

- **Sealed chassis**  
Internal components are protected against water, dirt, dust and debris, reducing downtime and servicing.
- **Two linked castor wheels**  
Unique patented castor wheel design allow both damping over dock levellers and adds stability when cornering.
- **Shared components in low lifters**  
Service costs and downtime are kept to a minimum.
- **DriveSteady**  
Innovative patented traction, dampening and stability systems are all optimised to work in close harmony and produce unequalled drivability and stability — particularly beneficial when cornering.

- **Steel-plated rear bumper**  
Bumper is angled low to prevent foot injuries.

- **Compact chassis**  
Robust and highly optimised to be the shortest in its class.



For more information on PREMIA EM DPH please visit our website



mft2.eu/premiaempbv

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#### OPERATOR COMPARTMENT AND CONTROLS

- Overhead guard**  
 Safer operation and additional protection (Option. Mandatory on lift heights above 1.8m).
- PIN-code access**  
 Stops unauthorised truck use and keeps you aware of who's operating at all times.
- Choice of three operating modes (PRO, ECO and Easy)**  
 Different driver modes: PRO for advanced drivers, ECO for low energy consumption, Easy for sensitive goods or beginners.
- Ergonomic ErgoSteer tiller head**  
 Best-in-class, weather-protected and impact-resistant tiller head with large, easy-to-reach buttons placed at a patented ergonomic distance for reduced fatigue and safer operation. IP65 rated.
- Long tiller arm**  
 The standard mechanical steering option offers easy steering for low-intensity work.
- Power steering**  
 Power steering on short tiller arm has a reduced steering angle for comfortable, precise control and smooth cornering. (Option on foldable platform models)
- TractionPlus**  
 Spring-loaded and hydraulically pressurised system works with DriveSteady to continuously increase pressure of the drive wheel. This ensures optimum traction on wet surfaces for better productivity and minimal risk of accidents.
- Pivot steering**  
 Electric-powered steering without arm offers less operator fatigue in combination with the ergonomic platform. (Standard on side entry models, option on rear entry models)
- Ultra-low step height**  
 Operators stay more productive throughout shifts thanks to easy on/off access - an important feature on side entry trucks frequently used for order picking operations.
- Dampened platform**  
 Foldable platforms and side/rear entry platforms are dampened to ensure minimum vibrations and bumps for greater operator comfort. (All models)
- Adjustable EasyRide electric dampening**  
 Unique electric dampening capability allows operator to adjust the platform to their weight - ideal for applications on ramps or loading docks. (Option on platform trucks)
- Foot protection**  
 If the operator's foot is outside of the platform, the truck reduces speeds and stops to prevent risk of injury. (rear entry models only)

- Foldable side bars**  
 High, cushioned ergonomic side bars can be moved up or down and can be quickly switched to suit different operations.
- Cast iron driver platform**  
 Robust and cushioned.
- Battery discharge indicator**  
 Fitted as standard for battery protection and preventing deep discharge.
- Multi-function display**  
 Shows truck mode, status and drive speeds using easy to read icons, as well as error codes. (Option)

#### OTHER FEATURES

- RapidAccess features**  
 These allow quick and easy entry to all areas for checks and maintenance.
- Storage compartment**  
 Operator can store tools and other required items.



For more information on PREMI<sup>IA</sup> EM DPH please visit our website





# PREMIA EM

## OPTIONAL LI-ION BATTERY SYSTEMS

### MAKE YOUR FORKLIFT GO EVEN FURTHER



**Tried, tested and proven in the field, lead-acid batteries have been the long-standing choice for companies employing electric lift trucks. However, with long charging times, demanding maintenance requirements, the need for extra batteries, and high risk of operator misuse, day-to-day use can be a challenge.**

Fortunately, there's a new battery system on the block: Li-ion from Mitsubishi Forklift Trucks.

Designed to meet your business' demands — including multi-shift (24/7) operations — without the need for spare batteries, our high-performance Li-ion battery system is up to 30% more efficient than lead-acid counterparts. Plus, it's virtually error-proof, thanks to its ultra-low-maintenance design which prevents cell damage.

- **Gas-emission free**  
No need for air ventilation.



Li-ion battery option is available in selected regions.

Continuing improvement may lead to changes in these specifications

- **Exceptional high battery and charger efficiency**  
State-of-the-art technology delivers up to 30% more power efficiency than lead-acid batteries.
- **Maintenance-free design**  
No need for daily checks and water re-fills. This reduces the risk of operators damaging cells and reducing their lifetime. Needs a full charge each week to activate cell balancing.
- **No need for spare batteries or charging room**  
You can save both space and costs in multi-shift applications, maximising profitability.
- **Quick charge capabilities**  
Just 15 minutes is all your battery needs to keep your truck going for a few more hours. It only takes 1 to 2 hours to fully charge a completely discharged battery.
- **Higher sustained voltage**  
This gives more consistent lifting and driving performance — particularly noticeable towards the end of a shift.
- **Multiple safety features**  
This includes circuit protection, deep-discharge and overcharge protection, and individual cell temperature and voltage monitoring.
- **On-the-go performance and monitoring**  
The system's integrated monitoring system has an easy-to-read display unit.
- **Wide choice of battery and charger capacities**  
The most suitable power supply can be matched to the exact requirements of a specific application.



**Clean Li-ion batteries are ideal for sensitive environments such as those in the food or packaging industries.**

**Fully integrated Li-ion battery**

Features a sophisticated CANbus communication and an automatic ON/OFF synchronization between battery and truck. Battery level, notifications and alarms are integrated into the truck display, to secure clear and easy overview for the truck operator.

**For more information on Li-ion please visit our website**



[mft2.eu/ion](http://mft2.eu/ion)

# VDI - PERFORMANCE & DIMENSIONS

| CHARACTERISTICS     |   |       |      | Mitsubishi Forklift Trucks | Mitsubishi Forklift Trucks | Mitsubishi Forklift Trucks |
|---------------------|---|-------|------|----------------------------|----------------------------|----------------------------|
| 1.1                 | Manufacturer  |       |      | PBV20N3D                   | PBF20N3DR                  | PBF20N3DS                  |
| 1.2                 | Manufacturer's model designation  |       |      | Battery                    | Battery                    | Battery                    |
| 1.3                 | Power source  |       |      | Pedestrian / stand-on      | Stand-on                   | Stand-on                   |
| 1.4                 | Operator type   |       |      | 2000 / 1000+1000           | 2000 / 1000+1000           | 2000 / 1000+1000           |
| 1.5                 | Load capacity   | Q     | kg   | 600                        | 600                        | 600                        |
| 1.6                 | Load center distance  | c     | mm   | 975                        | 975                        | 975                        |
| 1.8                 | Load wheel axle to fork face (forks lowered)  | x     | mm   | 1613                       | 1613                       | 1613                       |
| 1.9                 | Wheelbase   | y     | mm   |                            |                            |                            |
| WEIGHT              |   |       |      |                            |                            |                            |
| 2.1b                | Truck weight without load, with maximum battery weight  |       | kg   | 1050                       | 1220                       | 1220                       |
| 2.2                 | Axle loadings with nominal load & maximum battery weight, drive / load side                         |       | kg   | 1230 / 1820                | 1400 / 1820                | 1400 / 1820                |
| 2.3                 | Axle loadings without load & with maximum battery weight, drive / load side                         |       | kg   | 780 / 270                  | 960 / 260                  | 960 / 260                  |
| WHEELS, DRIVE TRAIN |   |       |      |                            |                            |                            |
| 3.1                 | Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side |       |      | Vulkollan                  | Vulkollan                  | Vulkollan                  |
| 3.2                 | Tyre dimensions, drive side   |       | mm   | 235 x 75                   | 235 x 75                   | 235 x 75                   |
| 3.3                 | Tyre dimensions, load side  |       | mm   | 85 x 75                    | 85 x 75                    | 85 x 75                    |
| 3.4                 | Castor wheel dimensions (diameter x width)  |       | mm   | 150 x 55                   | 150 x 55                   | 150 x 55                   |
| 3.5                 | Number of wheels, load / drive side (x = driven)  |       |      | 4 / 1x + 2                 | 4 / 1x + 2                 | 4 / 1x + 2                 |
| 3.6                 | Track width (center of tyres), drive side   | b10   | mm   | 520                        | 520                        | 520                        |
| 3.7                 | Track width (center of tyres), load side  | b11   | mm   | 390                        | 390                        | 390                        |
| DIMENSIONS          |   |       |      |                            |                            |                            |
| 4.2a                | Height with mast lowered  | h1    | mm   | 1320 / 1470                | 1320 / 1470                | 1320 / 1470                |
| 4.3                 | Free lift   | h2    | mm   | 0                          | 0                          | 0                          |
| 4.4                 | Lift height   | h3    | mm   | 1700 / 2000                | 1700 / 2000                | 1700 / 2000                |
| 4.5                 | Height with mast extended   | h4    | mm   | 2170 / 2470                | 2170 / 2470                | 2170 / 2470                |
| 4.6                 | Initial lift  | h5    | mm   | 120                        | 120                        | 120                        |
| 4.7                 | Height to top of overhead guard   | h6    | mm   | 2283                       | 2283                       | 2283                       |
| 4.8                 | Seat- or stand height   | h7    | mm   | 171                        | 170                        | 170                        |
| 4.10                | Height of support legs  | h8    | mm   | 87                         | 87                         | 87                         |
| 4.15                | Fork height, fully lowered  | h13   | mm   | 90                         | 90                         | 90                         |
| 4.19                | Overall length  | l1    | mm   | 2142 / 2500                | 2532                       | 2532                       |
| 4.20                | Length to fork face   | l2    | mm   | 972 / 1330                 | 1362                       | 1362                       |
| 4.21                | Overall width   | b1/b2 | mm   | 740                        | 740                        | 740                        |
| 4.22                | Fork dimensions (thickness, width, length)  | s/e/l | mm   | 70 / 180 / 1170            | 70 / 180 / 1170            | 70 / 180 / 1170            |
| 4.24                | Fork carriage width   | b3    | mm   | 670                        | 670                        | 670                        |
| 4.25                | Outside width over forks (minimum / maximum)  | b5    | mm   | 570                        | 570                        | 570                        |
| 4.32                | Ground clearance at center of wheelbase, (forks lowered)  | m2    | mm   | 20-140                     | 20-140                     | 20-140                     |
| 4.34a               | Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise                               | Ast   | mm   | 2585 / 2943                | 2980                       | 2980                       |
| 4.34c               | Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down             | Ast   | mm   | 2585 / 2943                | 2980                       | 2980                       |
| 4.35                | Turning radius  | Wa    | mm   | 1902 / 2260                | 2292                       | 2292                       |
| PERFORMANCE         |   |       |      |                            |                            |                            |
| 5.1                 | Travel speed, with / without load   |       | km/h | 10.0 / 10.0                | 10.0 / 10.0                | 10.0 / 10.0                |
| 5.2                 | Lifting speed, with / without load  |       | m/s  | 0.22 / 0.43                | 0.22 / 0.43                | 0.22 / 0.43                |
| 5.3                 | Lowering speed, with / without load   |       | m/s  | 0.50 / 0.53                | 0.50 / 0.53                | 0.50 / 0.53                |
| 5.7                 | Gradeability, with / without load   |       | %    | 11.6 / 19.4                | 11.6 / 17.5                | 11.6 / 17.5                |
| 5.9                 | Acceleration time (10 metres) with / without load   |       | s    | 6.1 / 4.9                  | 6.2 / 5.0                  | 6.2 / 5.0                  |
| 5.10                | Service brakes (mechanical / hydraulic / electric / pneumatic)                                      |       |      | Electric                   | Electric                   | Electric                   |
| ELECTRIC MOTORS     |   |       |      |                            |                            |                            |
| 6.1                 | Drive motor capacity (60 min. short duty)   |       | kW   | 2.4                        | 2.4                        | 2.4                        |
| 6.4                 | Battery voltage/capacity at 5-hour discharge  |       | V/Ah | 24 / 222-400               | 24 / 222-400               | 24 / 222-400               |
| 6.5                 | Battery weight  |       | kg   | 285-350                    | 285-350                    | 285-350                    |
| MISCELLANEOUS       |   |       |      |                            |                            |                            |
| 8.1                 | Type of drive control   |       |      | AC                         | AC                         | AC                         |

## PREMIA EM

### PBV/PBF20N3D(R)(S) Series

### DOUBLE PALLET HANDLER

2.0 tonnes



PBV20N3D



PBF20N3DR



PBF20N3DS

Ast = Wa-x+l6+200  
Ast = Working aisle width  
Wa = Turning radius

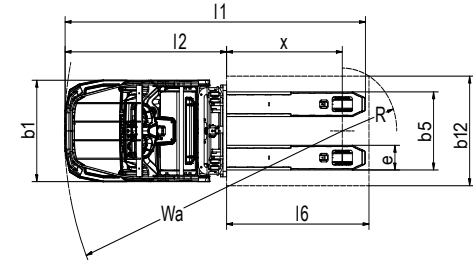
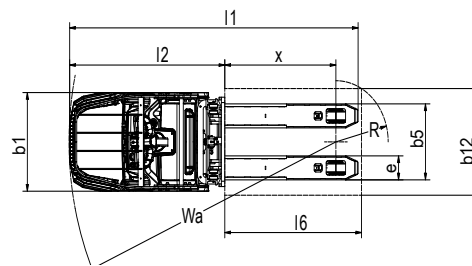
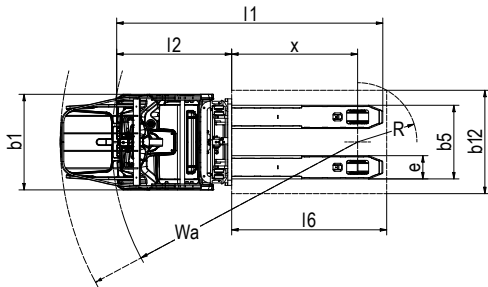
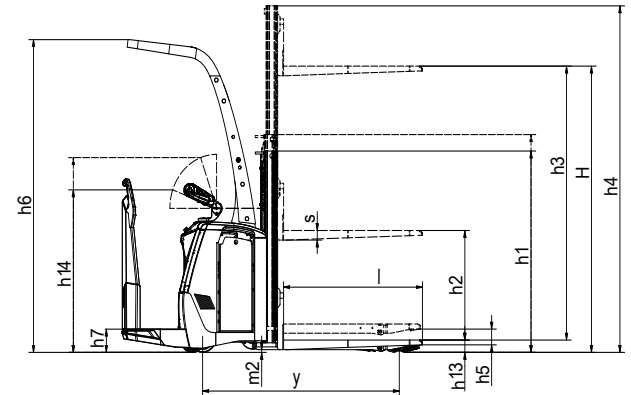
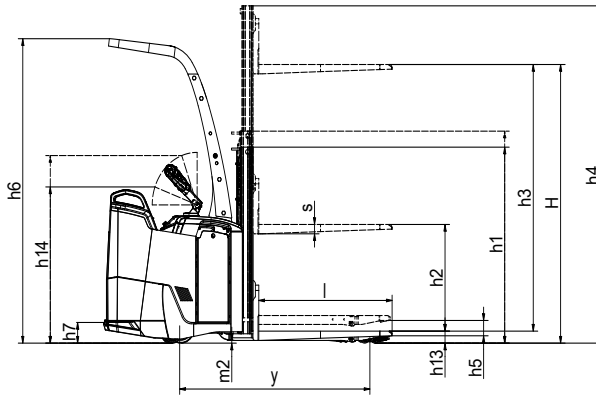
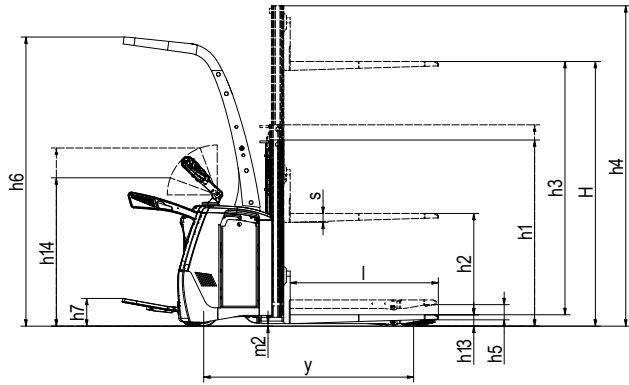
# VDI-DIMENSIONS, MAST PERFORMANCE AND CAPACITY

PREMIA EM

## PBV20N3D

## PBF20N3DR

## PBF20N3DS



DS = Duplex with clear view mast  
 h3 + h13 = Lifting height  
 h1 = Lowered mast height  
 h4 = Raised mast height  
 h2 + h13 = Free lift

| MAST TYPE<br>Narrow | h3 + h13<br>mm | h1<br>mm | h4<br>mm | h2 + h13<br>mm |
|---------------------|----------------|----------|----------|----------------|
| DS                  | 1790           | 1320     | 2170     | 90(h2=0)       |
|                     | 2090           | 1470     | 2470     | 90(h2=0)       |

# STANDARD EQUIPMENT & OPTIONS

- = Standard
- = Option

|  | PBV20N3D | PBF20N3DR | PBF20N3DS |
|--|----------|-----------|-----------|
| <b>GENERAL</b>   |          |           |           |
| Micro-computer with standard display incl. hour meter and battery indicator                                      | ●        | ●         | ●         |
| Initial straddle lift  | ●        | ●         | ●         |
| Foldable platform with foldable side protection bars   | ●        | -         | -         |
| Fixed platform, rear entry   | -        | ●         | -         |
| Fixed platform, side entries   | -        | -         | ●         |
| Mechanical steering tiller arm   | ●        | -         | -         |
| Power steering tiller arm  | ●        | ●         | -         |
| Pivot (comfort) steering   | -        | ●         | ●         |
| Crossway pallet indication on forks, for EU pallet long side handling  | ●        | ●         | ●         |
| Vulkollan® drive wheel   | ●        | ●         | ●         |
| Tandem load wheels dia 85 mm, Vulkollan®   | ●        | ●         | ●         |
| Single load wheel dia 85 mm (max. load weight = 1600 kg)   | ●        | ●         | ●         |
| Closed pallet entry/exit, climbing wheels  | ●        | ●         | ●         |
| Quick release of battery lock  | ●        | ●         | ●         |
| Battery steel rollers  | ●        | ●         | ●         |
| <b>POWER SOURCE</b>  |          |           |           |
| Li-ion batteries*  | ●        | ●         | ●         |
| Lead-acid batteries  | ●        | ●         | ●         |
| <b>ENVIRONMENT</b>   |          |           |           |
| Grease nipples in lifting profiles and rust protected axles  | ●        | ●         | ●         |
| Chill store design, down to -10°C  | ●        | ●         | ●         |
| Cold store design, down to -30C**  | ●        | ●         | ●         |
| <b>DRIVE AND LIFT CONTROLS</b>   |          |           |           |
| Speed regulated lift motor and proportional valve for lowering, controlled by large rocker switch on tiller head | ●        | ●         | ●         |
| Tiller-up drive  | ●        | -         | -         |
| <b>WHEEL OPTIONS</b>   |          |           |           |
| Vulkollan®   | ●        | ●         | ●         |
| Tractothan   | ●        | ●         | ●         |
| Super grip   | ●        | ●         | ●         |
| <b>OTHER OPTIONS</b>   |          |           |           |
| Power steering   | ●        | ●         | ●         |
| Multi-function display incl. BDI and hourmeter,  | ●        | ●         | ●         |
| PIN code log in (99 codes) and graphic icons   | ●        | ●         | ●         |
| Load guard backrest  | ●        | ●         | ●         |
| Key switch entry   | ●        | ●         | ●         |
| 12V DC power socket  | ●        | ●         | ●         |
| 5V USB socket  | ●        | ●         | ●         |
| Accessory rack   | ●        | ●         | ●         |
| Writing desk incl. RAM C holder  | ●        | ●         | ●         |
| Equipment holder RAM system size C   | ●        | ●         | ●         |
| Equipment holder RAM system size C, 2 pcs  | ●        | ●         | ●         |
| Equipment holder RAM size D  | ●        | ●         | ●         |
| Working lights LED   | ●        | ●         | ●         |
| Increased drive speed with/without load 10.0/12.5 km/h (only available with power steering)                      | ●        | ●         | ●         |
| Active Spin Reduction, ASR   | ●        | ●         | ●         |
| Special RAL colour   | ●        | ●         | ●         |
| Battery creep  | ●        | ●         | ●         |
| Battery level audible warning  | ●        | ●         | ●         |
| Service alarm  | ●        | ●         | ●         |
| Automatic log off  | ●        | ●         | ●         |
| Revert to low speed at log off   | ●        | ●         | ●         |
| Revert to low speed at operator absent   | ●        | ●         | ●         |

\* Li-ion battery option is available in selected regions.

\*\* Not in combination with Li-ion battery

Continuing improvement may lead to changes in these specifications

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### DOUBLE PALLET HANDLER

2.0 tonnes



Multifunction colour display



Standard display



Crossway pallet indication on forks



Mechanical tiller arm



Power tiller arm



Pivot (comfort) steering

# WHEN RELIABILITY IS EVERYTHING...



**PREMIA**  
THE NUMBER ONE

Number one for reliability... number one for productivity... whatever the conditions.

Compact, efficient and resilient, PREMIA powered pallet trucks meet every need.

Like any product bearing the "MITSUBISHI" name our materials handling equipment benefits from the tremendous heritage, huge resources and cutting-edge technology of one of the world's largest corporations – Mitsubishi Heavy Industries Group.

Engineering spacecraft, jet planes, power plants and more, MHI specialises in those technologies where performance, dependability and superiority decide your success or failure...

So when we promise you quality, reliability and value for money, you know it's a guarantee we have the power to deliver.

That's why every model in our award-winning and comprehensive range of lift trucks and warehouse equipment is built to a high specification – to ensure it keeps working for you. Day after day. Year after year. Whatever the job. Whatever the conditions.

## YOU'LL NEVER WORK ALONE

As your local authorised dealer, we are here to keep your trucks working – through our extensive experience, our technical excellence and our commitment to customer care.

We are your local experts, backed by efficient channels to the entire organisation of Mitsubishi Forklift Trucks.

No matter where you are, we are close by – with the capability to meet your needs.

Discover how Mitsubishi Forklift Trucks give you more from your local authorised dealer or when you visit our website [www.mitforklift.com](http://www.mitforklift.com)

Performance specifications may vary depending on standard manufacturing tolerances, vehicle condition, types of tyres, floor or surface conditions, applications or operating environment. Trucks may be shown with non-standard options. Specific performance requirements and locally available configurations should be discussed with your distributor of Mitsubishi forklift trucks. We follow a policy of continual product improvement. For this reason, some materials, options and specifications could change without notice.

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