

VELiA ES

OPB12-25N2(X)(F)(P) Series

# LOW LEVEL ORDER PICKERS

1.2 – 2.5 tonnes

EMPOWER YOUR OPERATOR...  
TRANSFORM YOUR OPERATIONS

Despite its ultra-compact size, our VELiA ES range of low level order pickers is packed with smart features that will have your operations running more efficiently, productively and reliably. Oh, and safer, too.

## SPEC SHEET

|           |           |
|-----------|-----------|
| OPB12N2F  | OPB20N2P  |
| OPB12N2FP | OPB25N2P  |
| OPB20N2   | OPB20N2X  |
| OPB25N2   | OPB20N2XP |



WHEN  
RELIABILITY IS  
EVERYTHING...

# VELiA ES

## OPB12-25N2(X)(F)(P) Series

### LOW LEVEL ORDER PICKERS

1.2 – 2.5 tonnes



**Its energy efficiency is top of its class. It's 14% more efficient than its closest competitor meaning you can work as leanly as possible. And its market-leading ergonomics mean your operators will be as comfortable and productive as possible – even through the longest shifts.**

But, if that weren't enough, at the heart of every VELiA ES model is hyper-intelligent software that moulds the truck's behaviour to your operator and your operations for performance that is consistently easier, steadier and safer.

With drive speeds of up to 13 km/h, VELiA ES is sure to pick up the pace of your operations... whichever model you choose (standard, rising platform [P], rising fork [F] and scissor lift [X]).

#### DRIVE

- **Class-leading energy efficiency** (14% lower than nearest competitor) ensures running costs are kept to a minimum.
- **Powerful drive motor** provides excellent traction and adjustable acceleration, deceleration and brake force, for smooth, quiet, controlled operation, extended shift length and lower maintenance requirements.
- **Sensitive Drive System (SDS)** senses faster or slower operator control movements and adjusts truck performance accordingly, contributing to safety and driver performance.
- **Adaptive steering system** ensures truck performance matches operator needs – whether travelling in reverse or at speed – for calm, smooth and precise operations.



#### OPERATOR ENVIRONMENT AND CONTROLS

- **Flying start technology** shortens acceleration time for ultimate picking productivity.
- **Super-grip floor** is non-slip ensuring operators are safe, for confident operations.
- **Triple-suspension floating floor** with sideways dampening and advanced cushioning, reduces microvibrations for exceptional operator comfort.
- **Perfectly-angled footrest** ensures optimal positioning of foot and ankle for drivers of all heights.
- **Easy-access platform** features low step height and chamfered edges – minimising trip hazards for easy on/off access.
- **Next generation Maxius steering wheel** absorbs vibrations and shocks to ensure class-leading ergonomics.
- **Optional clear colour display** alerts operators and service engineers to potential problems: avoiding damage, while enhancing safety and encouraging good maintenance.
- **Rising operator platform** lifts to 1000 mm for picking heights of up to 2.5 m - minimising stretching and straining for operators [P models only].

#### FORKS

- **Bevelled easy-entry forks** offer effortless pallet entry: reducing time and risk of pallet damage for increased efficiency.
- **Choice of long forks** ensures scissor lift models can carry up to four rollcages at once for increased efficiency. [X models only].

#### FRAME AND BODY

- **Robust design** benefits from extensive testing – including safety certification – for lower service costs and enhanced safety.
- **Class-leading lift height** – up to 220 mm – offers high ground clearance for easy and safe handling on loading docks and ramps [Standard models].

#### ELECTRICAL AND CONTROL SYSTEMS

- **Full electronic steering** with no steering wheel kickback gives precise control for optimum productivity, efficiency and safety.

#### STEERING SYSTEM

- **Small turning circle** together with responsive steering and compact chassis allows exceptional manoeuvrability.
- **Advanced electric steering** allows precise control at speed, with automatic speed reduction in curves and automatic drive wheel centring.
- **100-degree steering angle** ensures exceptional manoeuvrability – even in tight spaces.

#### BRAKES

- **Regenerative braking** with no drive wheel jamming or brake wear gives effective control and excellent energy efficiency.
- **Anti-lock brakes** ensure safe stopping – even on slippery surfaces – for ultimate safety.



There is more information on VELiA ES on [mitforklift.com](http://mitforklift.com)

For more extensive information please visit our website [mitforklift.com](http://mitforklift.com)



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



# VELIA ES

## OPTIONAL LI-ION BATTERY SYSTEMS

### MAKE YOUR FORKLIFT (AND ITS FUEL) GO EVEN FURTHER



Tried, tested and proven in the field, lead-acid batteries have been the long-standing top 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, it 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 40 per cent more efficient than lead-acid counterparts. Plus, it's virtually error-proof, thanks to its ultra-low-maintenance design which prevent cell damage.

- **Exceptional, zero-emissions efficiency** 40% more efficient than lead-acid batteries and free from gases.
- **Ultra-low maintenance design** demands just a full charge each week to activate cell balancing, as well as an annual CSV export/update.
- **No space required** with no need for charging areas, there's no cost to set up and you can keep your profitable space just that: profitable.
- **Quick charge capabilities** mean that just 15 minutes is all your battery needs to keep your truck going a few more hours. (It only takes 1 to 2 hours to fully charge a completely discharged battery.)
- **Higher sustained voltage** ensures more consistent lifting and driving performance, which is particularly noticeable towards the end of a shift.
- **TriCOM Technology** delivers exceptionally high system efficiency (up to 97%).
- **Water-free design** With no water in the battery and no need to top up, there's no risk of operators damaging cells.
- **Active protection componentry** This continuously monitors the system, highlighting potential issues, including misuse.
- **Short circuit protection** is offered by system safeguards including: deep-discharge and overcharge protection, individual cell temperature and voltage monitoring.
- **On-the-go performance and monitoring** is possible thanks to the system's integrated monitoring system with easy-to-read display unit, as well as an opportunity charger on board.



|                             |     |     |
|-----------------------------|-----|-----|
| Battery capacity, Ah        | 208 | 312 |
| Charger capacity, Ah 1 hour | 100 | 300 |

There is more information on Li-ion on [mitforklift.com](http://mitforklift.com)

For more extensive information please visit our website [mitforklift.com](http://mitforklift.com)



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

# VDI - PERFORMANCE & DIMENSIONS

| CHARACTERISTICS     |   |           |       |                           |                           |
|---------------------|---|-----------|-------|---------------------------|---------------------------|
| 1.1                 | Manufacturer  |           |       | Mitsubishi                | Mitsubishi                |
| 1.2                 | Manufacturer's model designation  |           |       | OPB20N2                   | OPB25N2                   |
| 1.3                 | Power source  |           |       | Battery                   | Battery                   |
| 1.4                 | Operator type   |           |       | Stand-on                  | Stand-on                  |
| 1.5                 | Load capacity   | Q         | kg    | 2000                      | 2500                      |
| 1.6                 | Load center distance  | c         | mm    | 600                       | 600                       |
| 1.8                 | Load wheel axle to fork face (forks lowered)  | x         | mm    | 960                       | 960                       |
| 1.9                 | Wheelbase   | y         | mm    | 2054 <sup>5)</sup>        | 2054 <sup>5)</sup>        |
| WEIGHT              |   |           |       |                           |                           |
| 2.1                 | Truck weight without load, with maximum battery weight  |           | kg    | 1079 <sup>1)</sup>        | 1079 <sup>1)</sup>        |
| 2.2                 | Axle loadings with nominal load & maximum battery weight, drive/load side                                       |           | kg    | 1082 / 1997               | 1178 / 2401               |
| 2.3                 | Axle loadings without load & with maximum battery weight, drive/load side                                       |           | kg    | 829 / 250                 | 829 / 250                 |
| WHEELS, DRIVE TRAIN |   |           |       |                           |                           |
| 3.1                 | Tyres: PT=Power Thane, Vul=Vulkollan, P=Polyurethane, N=Nylon, R=Rubber drive/load side                         |           |       | Vul / Vul                 | Vul / Vul                 |
| 3.2                 | Tyre dimensions, drive side   |           | mm    | ø250                      | ø250                      |
| 3.3                 | Tyre dimensions, load side  |           | mm    | ø85                       | ø85                       |
| 3.4                 | Castor wheel dimensions (diameter × width)  |           | mm    | ø180 × 65                 | ø180 × 65                 |
| 3.5                 | Number of wheels, load/drive side (x=driven)  |           |       | 4 / 1x1                   | 4 / 1x1                   |
| 3.6                 | Track width (center of tyres), drive side   | b10       | mm    | 494                       | 494                       |
| 3.7                 | Track width (center of tyres), load side  | b11       | mm    | 365                       | 365                       |
| DIMENSIONS          |   |           |       |                           |                           |
| 4.2a                | Height with mast lowered  | h1        | mm    | 1173                      | 1173                      |
| 4.4                 | Lift height   | h3        | mm    | 135                       | 135                       |
| 4.5                 | Height with mast extended   | h4        | mm    | -                         | -                         |
| 4.8                 | Seat- or stand height   | h7        | mm    | 123                       | 123                       |
| 4.14                | Platform height, raised   | h12       | mm    | -                         | -                         |
| 4.15                | Fork height, fully lowered  | h13       | mm    | 85                        | 85                        |
| 4.19                | Overall length  | l1        | mm    | 2421 <sup>5)</sup>        | 2421 <sup>5)</sup>        |
| 4.20                | Length to fork face   | l2        | mm    | 1271 <sup>5)</sup>        | 1271 <sup>5)</sup>        |
| 4.21                | Overall width   | b1/b2     | mm    | 800                       | 800                       |
| 4.22                | Fork dimensions (thickness, width, length)  | s / e / l | mm    | 60 / 175 / 900-3600       | 60 / 175 / 900-3600       |
| 4.25                | Outside width over forks (minimum / maximum)  | b5        | mm    | 480 / 660                 | 480 / 660                 |
| 4.32                | Ground clearance at center of wheelbase, (forks lowered)  | m2        | mm    | 25                        | 25                        |
| 4.34a               | Working aisle width (Ast) with 800 × 1200 mm pallets, load lengthwise   | Ast       | mm    | 2898 <sup>5)</sup>        | 2898 <sup>5)</sup>        |
| 4.35                | Turning radius  | Wa        | mm    | 2231 <sup>5)</sup>        | 2231 <sup>5)</sup>        |
| PERFORMANCE         |   |           |       |                           |                           |
| 5.1                 | Travel speed, with / without load   |           | km/h  | 9.0 / 9.0 (opt 9 / 13)    | 9.0 / 13.0                |
| 5.2                 | Lifting speed, with / without load  |           | m/s   | 0.04 / 0.05               | 0.03 / 0.05               |
| 5.3                 | Lowering speed, with / without load   |           | m/s   | 0.05 / 0.03               | 0.05 / 0.03               |
| 5.7                 | Gradeability, with / without load   |           | %     | 7 / 15                    | 7 / 15                    |
| 5.10                | Service brake   |           |       | Electric                  | Electric                  |
| ELECTRIC MOTORS     |   |           |       |                           |                           |
| 6.1                 | Drive motor capacity (60 min. short duty)   |           | kW    | 2.6                       | 2.6                       |
| 6.2                 | Lift motor output at 15% duty factor  |           | kW    | 1.2                       | 1.2                       |
| 6.4                 | Battery voltage/capacity at 5-hour discharge  |           | V/Ah  | 24 / 465-620              | 24 / 465-620              |
| 6.5                 | Battery weight  |           | kg    | 355-493                   | 355-493                   |
| 6.6a                | Energy consumption according to EN 16796  |           | kWh/h | 0.37                      | 0.4                       |
| MISCELLANEOUS       |   |           |       |                           |                           |
| 8.1                 | Type of drive control   |           |       | Stepless                  | Stepless                  |
| 10.7                | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871 in work LpAZ          |           | dB(A) | 62 <sup>3)</sup>          | 62 <sup>3)</sup>          |
| 10.7.1              | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871, drive/lift/idle LpAZ |           | dB(A) | 73 / 62 / - <sup>3)</sup> | 73 / 62 / - <sup>3)</sup> |
| 10.7.2              | Whole-body vibration (EN 13 059:2002)   |           |       | 0.6                       | 0.6                       |
| 10.7.3              | Hand-arm vibration (EN 13 059:2002)   |           |       | <2.5                      | <2.5                      |

- 1) Forks 540 × 1150, battery 620 Ah
- 2) Forks 540 × 1150/ lift 1200mm, battery 620 Ah
- 3) Inaccuracy of 4 dB(A)
- 4) Fork carriage length 2375 mm
- 5) With 620Ah battery + 100mm

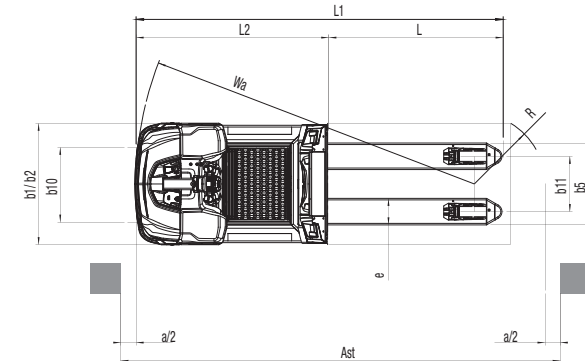
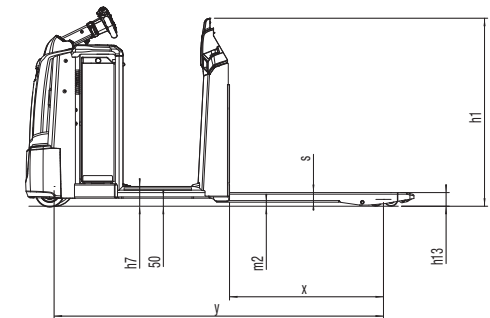
- Ast =  $Wa - x + l6 + 200$   
 Ast = Working aisle width  
 Wa = Turning radius  
 a = Safety clearance =  $2 \times 100$  mm  
 $R = \sqrt{(l6 + x)^2 + (b12 / 2)^2}$   
 l6 = Pallet length (800 or 1000 mm)  
 b12 = Pallet width (1200 mm)

## VELIA ES LOW LEVEL ORDER PICKERS

### OPB20N2 / 25N2

#### STANDARD MODEL

2.0 – 2.5 tonnes



# VDI - PERFORMANCE & DIMENSIONS

| CHARACTERISTICS     |   |           |       |                                      |                           |
|---------------------|---|-----------|-------|--------------------------------------|---------------------------|
| 1.1                 | Manufacturer  |           |       | Mitsubishi                           | Mitsubishi                |
| 1.2                 | Manufacturer's model designation  |           |       | OPB20N2P                             | OPB25N2P                  |
| 1.3                 | Power source  |           |       | Battery                              | Battery                   |
| 1.4                 | Operator type   |           |       | Stand-on                             | Stand-on                  |
| 1.5                 | Load capacity   | Q         | kg    | 2000                                 | 2500                      |
| 1.6                 | Load center distance  | c         | mm    | 600                                  | 600                       |
| 1.8                 | Load wheel axle to fork face (forks lowered)  | x         | mm    | 960                                  | 960                       |
| 1.9                 | Wheelbase   | y         | mm    | 2054 <sup>5)</sup>                   | 2054 <sup>5)</sup>        |
| WEIGHT              |   |           |       |                                      |                           |
| 2.1                 | Truck weight without load, with maximum battery weight  |           | kg    | 1215 <sup>1)</sup>                   | 1215 <sup>1)</sup>        |
| 2.2                 | Axle loadings with nominal load & maximum battery weight, drive/load side                                       |           | kg    | 1130 / 2085                          | 1223 / 2492               |
| 2.3                 | Axle loadings without load & with maximum battery weight, drive/load side                                       |           | kg    | 913 / 302                            | 913 / 302                 |
| WHEELS, DRIVE TRAIN |   |           |       |                                      |                           |
| 3.1                 | Tyres: PT=Power Thane, Vul=Vulkollan, P=Polyurethane, N=Nylon, R=Rubber drive/load side                         |           |       | Vul/ Vul                             | Vul/ Vul                  |
| 3.2                 | Tyre dimensions, drive side   |           | mm    | ø250                                 | ø250                      |
| 3.3                 | Tyre dimensions, load side  |           | mm    | ø85                                  | ø85                       |
| 3.4                 | Castor wheel dimensions (diameter × width)  |           | mm    | ø180 × 65                            | ø180 × 65                 |
| 3.5                 | Number of wheels, load/drive side (x=driven)  |           |       | 4 / 1x1                              | 4 / 1x1                   |
| 3.6                 | Track width (center of tyres), drive side   | b10       | mm    | 494                                  | 494                       |
| 3.7                 | Track width (center of tyres), load side  | b11       | mm    | 365                                  | 365                       |
| DIMENSIONS          |   |           |       |                                      |                           |
| 4.2a                | Height with mast lowered  | h1        | mm    | 1394 / 2244                          | 1394 / 2244               |
| 4.4                 | Lift height   | h3        | mm    | 135                                  | 135                       |
| 4.5                 | Height with mast extended   | h4        | mm    | -                                    | -                         |
| 4.8                 | Seat- or stand height   | h7        | mm    | 150                                  | 150                       |
| 4.14                | Platform height, raised   | h12       | mm    | 1000                                 | 1000                      |
| 4.15                | Fork height, fully lowered  | h13       | mm    | 85                                   | 85                        |
| 4.19                | Overall length  | l1        | mm    | 2421 <sup>5)</sup>                   | 2421 <sup>5)</sup>        |
| 4.20                | Length to fork face   | l2        | mm    | 1271 <sup>5)</sup>                   | 1271 <sup>5)</sup>        |
| 4.21                | Overall width   | b1/b2     | mm    | 800                                  | 800                       |
| 4.22                | Fork dimensions (thickness, width, length)  | s / e / l | mm    | 60 / 175 / 900-3600                  | 60 / 175 / 900-3600       |
| 4.25                | Outside width over forks (minimum / maximum)  | b5        | mm    | 480 / 660                            | 480 / 660                 |
| 4.32                | Ground clearance at center of wheelbase, (forks lowered)  | m2        | mm    | 25                                   | 25                        |
| 4.34a               | Working aisle width (Ast) with 800 × 1200 mm pallets, load lengthwise   | Ast       | mm    | 2898 <sup>5)</sup>                   | 2898 <sup>5)</sup>        |
| 4.35                | Turning radius  | Wa        | mm    | 2231 <sup>5)</sup>                   | 2231 <sup>5)</sup>        |
| PERFORMANCE         |   |           |       |                                      |                           |
| 5.1                 | Travel speed, with / without load   |           | km/h  | 9.0 / 9.0 (opt 9 / 13) <sup>4)</sup> | 9.0 / 13.0 <sup>6)</sup>  |
| 5.2                 | Lifting speed, with / without load  |           | m/s   | 0.04 / 0.05                          | 0.03 / 0.05               |
| 5.3                 | Lowering speed, with / without load   |           | m/s   | 0.05 / 0.03                          | 0.05 / 0.03               |
| 5.7                 | Gradeability, with / without load   |           | %     | 7 / 15                               | 7 / 15                    |
| 5.10                | Service brake   |           |       | Electric                             | Electric                  |
| ELECTRIC MOTORS     |   |           |       |                                      |                           |
| 6.1                 | Drive motor capacity (60 min. short duty)   |           | kW    | 2.6                                  | 2.6                       |
| 6.2                 | Lift motor output at 15% duty factor  |           | kW    | 2.2                                  | 2.2                       |
| 6.4                 | Battery voltage/capacity at 5-hour discharge  |           | V/Ah  | 24 / 465-620                         | 24 / 465-620              |
| 6.5                 | Battery weight  |           | kg    | 355-493                              | 355-493                   |
| 6.6a                | Energy consumption according to EN 16796  |           | kWh/h | 0.37                                 | 0.4                       |
| MISCELLANEOUS       |   |           |       |                                      |                           |
| 8.1                 | Type of drive control   |           |       | Stepless                             | Stepless                  |
| 10.7                | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871 in work LpAZ          |           | dB(A) | 62 <sup>3)</sup>                     | 62 <sup>3)</sup>          |
| 10.7.1              | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871, drive/lift/idle LpAZ |           | dB(A) | 73 / 62 / - <sup>3)</sup>            | 73 / 62 / - <sup>3)</sup> |
| 10.7.2              | Whole-body vibration (EN 13 059:2002)   |           |       | 0.6                                  | 0.6                       |
| 10.7.3              | Hand-arm vibration (EN 13 059:2002)   |           |       | <2.5                                 | <2.5                      |

- 1) Forks 540 × 1150, battery 620 Ah
- 2) Forks 540 × 1150/ lift 1200mm, battery 620 Ah
- 3) Inaccuracy of 4 dB(A)
- 4) Fork carriage length 2375 mm
- 5) With 620Ah battery + 100mm
- 6) Travel speed when drivers platform >300mm 5.5km/h

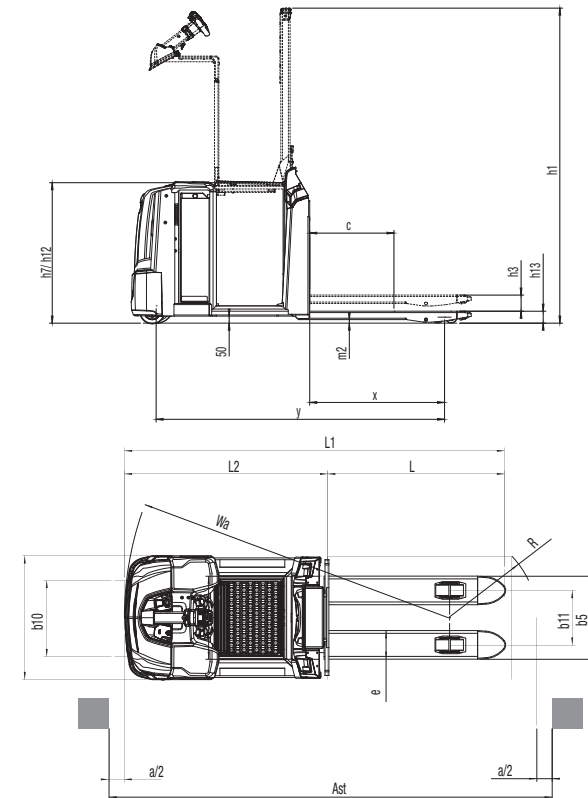
- Ast =  $Wa - x + l6 + 200$   
 Ast = Working aisle width  
 Wa = Turning radius  
 a = Safety clearance =  $2 \times 100$  mm  
 $R = \sqrt{(l6 + x)^2 + (b12 / 2)^2}$   
 l6 = Pallet length (800 or 1000 mm)  
 b12 = Pallet width (1200 mm)

## VELIA ES LOW LEVEL ORDER PICKERS

### OPB20N2P / 25N2P

#### RISING PLATFORM MODEL

2.0 – 2.5 tonnes



# VDI - PERFORMANCE & DIMENSIONS

| CHARACTERISTICS     |   |           |       |                           |                           |
|---------------------|---|-----------|-------|---------------------------|---------------------------|
| 1.1                 | Manufacturer  |           |       | Mitsubishi                | Mitsubishi                |
| 1.2                 | Manufacturer's model designation  |           |       | OPB20N2X                  | OPB20N2XP                 |
| 1.3                 | Power source  |           |       | Battery                   | Battery                   |
| 1.4                 | Operator type   |           |       | Stand-on                  | Stand-on                  |
| 1.5                 | Load capacity   | Q         | kg    | 2000                      | 2000                      |
| 1.6                 | Load center distance  | c         | mm    | 1200                      | 1200                      |
| 1.8                 | Load wheel axle to fork face (forks lowered)  | x         | mm    | 1480                      | 1480                      |
| 1.9                 | Wheelbase   | y         | mm    | 2640 <sup>5)</sup>        | 2640 <sup>5)</sup>        |
| WEIGHT              |   |           |       |                           |                           |
| 2.1                 | Truck weight without load, with maximum battery weight  |           | kg    | 1333 <sup>1)</sup>        | 1469 <sup>1)</sup>        |
| 2.2                 | Axle loadings with nominal load & maximum battery weight, drive/load side                                       |           | kg    | 1135 / 2220               | 1230 / 2261               |
| 2.3                 | Axle loadings without load & with maximum battery weight, drive/load side                                       |           | kg    | 929 / 404                 | 1024 / 445                |
| WHEELS, DRIVE TRAIN |   |           |       |                           |                           |
| 3.1                 | Tyres: PT=Power Thane, Vul=Vulkollan, P=Polyurethane, N=Nylon, R=Rubber drive/load side                         |           |       | Vul / Vul                 | Vul / Vul                 |
| 3.2                 | Tyre dimensions, drive side   |           | mm    | ø250                      | ø250                      |
| 3.3                 | Tyre dimensions, load side  |           | mm    | ø85                       | ø85                       |
| 3.4                 | Castor wheel dimensions (diameter × width)  |           | mm    | ø180 × 65                 | ø180 × 65                 |
| 3.5                 | Number of wheels, load/drive side (x=driven)  |           |       | 4 / 1x1                   | 4 / 1x1                   |
| 3.6                 | Track width (center of tyres), drive side   | b10       | mm    | 494                       | 494                       |
| 3.7                 | Track width (center of tyres), load side  | b11       | mm    | 326 / 356                 | 326 / 356                 |
| DIMENSIONS          |   |           |       |                           |                           |
| 4.2a                | Height with mast lowered  | h1        | mm    | 1173                      | 1394 / 2244               |
| 4.4                 | Lift height   | h3        | mm    | 765                       | 765                       |
| 4.5                 | Height with mast extended   | h4        | mm    | 1305                      | 1305                      |
| 4.8                 | Seat- or stand height   | h7        | mm    | 123                       | 150                       |
| 4.14                | Platform height, raised   | h12       | mm    | -                         | 1000                      |
| 4.15                | Fork height, fully lowered  | h13       | mm    | 90                        | 90                        |
| 4.19                | Overall length  | l1        | mm    | 3728 <sup>4) 5)</sup>     | 3728 <sup>4) 5)</sup>     |
| 4.20                | Length to fork face   | l2        | mm    | 1353 <sup>4) 5)</sup>     | 1353 <sup>4) 5)</sup>     |
| 4.21                | Overall width   | b1/b2     | mm    | 800                       | 800                       |
| 4.22                | Fork dimensions (thickness, width, length)  | s / e / l | mm    | 70 / 194 / 2375, 2850     | 70 / 194 / 2375, 2850     |
| 4.25                | Outside width over forks (minimum / maximum)  | b5        | mm    | 520 / 550                 | 520 / 550                 |
| 4.32                | Ground clearance at center of wheelbase, (forks lowered)  | m2        | mm    | 20                        | 20                        |
| 4.34a               | Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise   | Ast       | mm    | 4074 <sup>4) 5)</sup>     | 4074 <sup>4) 5)</sup>     |
| 4.35                | Turning radius  | Wa        | mm    | 2833 <sup>5)</sup>        | 2833 <sup>5)</sup>        |
| PERFORMANCE         |   |           |       |                           |                           |
| 5.1                 | Travel speed, with / without load   |           | km/h  | 9.0 / 13.0                | 9.0 / 13.0 <sup>6)</sup>  |
| 5.2                 | Lifting speed, with / without load  |           | m/s   | 0.10 / 0.23               | 0.10 / 0.23               |
| 5.3                 | Lowering speed, with / without load   |           | m/s   | 0.17 / 0.23               | 0.17 / 0.23               |
| 5.7                 | Gradeability, with / without load   |           | %     | 7 / 15                    | 7 / 15                    |
| 5.10                | Service brake   |           |       | Electric                  | Electric                  |
| ELECTRIC MOTORS     |   |           |       |                           |                           |
| 6.1                 | Drive motor capacity (60 min. short duty)   |           | kW    | 2.6                       | 2.6                       |
| 6.2                 | Lift motor output at 15% duty factor  |           | kW    | 2.2                       | 2.2                       |
| 6.4                 | Battery voltage/capacity at 5-hour discharge  |           | V/Ah  | 24 / 465-620              | 24 / 465-620              |
| 6.5                 | Battery weight  |           | kg    | 355-493                   | 355-493                   |
| 6.6a                | Energy consumption according to EN 16796  |           | kWh/h | 0.44                      | 0.44                      |
| MISCELLANEOUS       |   |           |       |                           |                           |
| 8.1                 | Type of drive control   |           |       | Stepless                  | Stepless                  |
| 10.7                | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871 in work LpAZ          |           | dB(A) | 62 <sup>3)</sup>          | 62 <sup>3)</sup>          |
| 10.7.1              | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871, drive/lift/idle LpAZ |           | dB(A) | 73 / 62 / - <sup>3)</sup> | 73 / 62 / - <sup>3)</sup> |
| 10.7.2              | Whole-body vibration (EN 13 059:2002)   |           |       | 0.7                       | 0.7                       |
| 10.7.3              | Hand-arm vibration (EN 13 059:2002)   |           |       |                           |                           |

- 1) Forks 540 × 1150, battery 620 Ah
- 2) Forks 540 × 1150/ lift 1200mm, battery 620 Ah
- 3) Inaccuracy of 4 dB(A)
- 4) Fork carriage length 2375 mm
- 5) With 620Ah battery + 100mm
- 6) Travel speed when drivers platform >300mm 5,5km/h

- Ast =  $Wa - x + l6 + 200$   
 Ast = Working aisle width  
 Wa = Turning radius  
 a = Safety clearance =  $2 \times 100$  mm  
 $R = \sqrt{(l6 + x)^2 + (b1^2 / 2)^2}$   
 l6 = Pallet length (800 or 1000 mm)  
 b12 = Pallet width (1200 mm)

## VELIA ES LOW LEVEL ORDER PICKERS

### OPB20N2X

#### SCISSOR LIFT FORKS MODEL

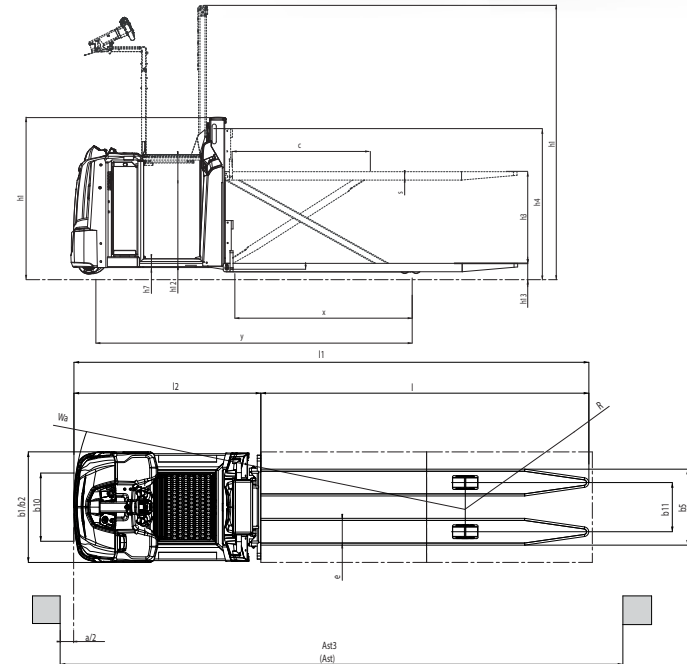
2.0 tonnes



### OPB20N2XP

#### SCISSOR LIFT FORKS AND RISING PLATFORM MODEL

2.0 tonnes



# VDI - PERFORMANCE & DIMENSIONS

| CHARACTERISTICS     |   |           |       |                                      |                                      |
|---------------------|---|-----------|-------|--------------------------------------|--------------------------------------|
| 1.1                 | Manufacturer  |           |       | Mitsubishi                           | Mitsubishi                           |
| 1.2                 | Manufacturer's model designation  |           |       | OPB12N2F                             | OPB12N2FP                            |
| 1.3                 | Power source  |           |       | Battery                              | Battery                              |
| 1.4                 | Operator type   |           |       | Stand-on                             | Stand-on                             |
| 1.5                 | Load capacity   | Q         | kg    | 1200                                 | 1200                                 |
| 1.6                 | Load center distance  | c         | mm    | 600                                  | 600                                  |
| 1.8                 | Load wheel axle to fork face (forks lowered)  | x         | mm    | 785                                  | 785                                  |
| 1.9                 | Wheelbase   | y         | mm    | 1929 <sup>5)</sup>                   | 1929 <sup>5)</sup>                   |
| WEIGHT              |   |           |       |                                      |                                      |
| 2.1                 | Truck weight without load, with maximum battery weight  |           | kg    | 1220 <sup>2)</sup>                   | 1356 <sup>2)</sup>                   |
| 2.2                 | Axle loadings with nominal load & maximum battery weight, drive/load side                                       |           | kg    | 972 / 1448                           | 1059 / 1497                          |
| 2.3                 | Axle loadings without load & with maximum battery weight, drive/load side                                       |           | kg    | 853 / 367                            | 940 / 416                            |
| WHEELS, DRIVE TRAIN |   |           |       |                                      |                                      |
| 3.1                 | Tyres: PT=Power Thane, Vul=Vulkollan, P=Polyurethane, N=Nylon, R=Rubber drive/load side                         |           |       | Vul / Vul                            | Vul / Vul                            |
| 3.2                 | Tyre dimensions, drive side   |           | mm    | ø250                                 | ø250                                 |
| 3.3                 | Tyre dimensions, load side  |           | mm    | ø85                                  | ø85                                  |
| 3.4                 | Castor wheel dimensions (diameter x width)  |           | mm    | ø180 x 65                            | ø180 x 65                            |
| 3.5                 | Number of wheels, load/drive side (x=driven)  |           |       | 4 / 1x1                              | 4 / 1x1                              |
| 3.6                 | Track width (center of tyres), drive side   | b10       | mm    | 494                                  | 494                                  |
| 3.7                 | Track width (center of tyres), load side  | b11       | mm    | 355                                  | 355                                  |
| DIMENSIONS          |   |           |       |                                      |                                      |
| 4.2a                | Height with mast lowered  | h1        | mm    | 1173                                 | 1394 / 2244                          |
| 4.4                 | Lift height   | h3        | mm    | 765 / 1115                           | 765 / 1115                           |
| 4.5                 | Height with mast extended   | h4        | mm    | 1275 / 1625                          | 1275 / 1625                          |
| 4.8                 | Seat- or stand height   | h7        | mm    | 123                                  | 150                                  |
| 4.14                | Platform height, raised   | h12       | mm    | -                                    | 1000                                 |
| 4.15                | Fork height, fully lowered  | h13       | mm    | 85                                   | 85                                   |
| 4.19                | Overall length  | l1        | mm    | 2471 <sup>5)</sup>                   | 2471 <sup>5)</sup>                   |
| 4.20                | Length to fork face   | l2        | mm    | 1321 <sup>5)</sup>                   | 1321 <sup>5)</sup>                   |
| 4.21                | Overall width   | b1/b2     | mm    | 800                                  | 800                                  |
| 4.22                | Fork dimensions (thickness, width, length)  | s / e / l | mm    | 56 / 186 / 950-1450                  | 56 / 186 / 950-1450                  |
| 4.25                | Outside width over forks (minimum / maximum)  | b5        | mm    | 540 / 570                            | 540 / 570                            |
| 4.32                | Ground clearance at center of wheelbase, (forks lowered)  | m2        | mm    | 25                                   | 25                                   |
| 4.34a               | Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise   | Ast       | mm    | 2881 <sup>5)</sup>                   | 2881 <sup>5)</sup>                   |
| 4.35                | Turning radius  | Wa        | mm    | 2106 <sup>5)</sup>                   | 2106 <sup>5)</sup>                   |
| PERFORMANCE         |   |           |       |                                      |                                      |
| 5.1                 | Travel speed, with / without load   |           | km/h  | 9.0 / 9.0 (opt 9 / 13) <sup>7)</sup> | 9.0 / 9.0 (opt 9 / 13) <sup>7)</sup> |
| 5.2                 | Lifting speed, with / without load  |           | m/s   | 0.20 / 0.41                          | 0.20 / 0.41                          |
| 5.3                 | Lowering speed, with / without load   |           | m/s   | 0.30 / 0.36                          | 0.30 / 0.36                          |
| 5.7                 | Gradeability, with / without load   |           | %     | 7 / 15                               | 7 / 15                               |
| 5.10                | Service brake   |           |       | Electric                             | Electric                             |
| ELECTRIC MOTORS     |   |           |       |                                      |                                      |
| 6.1                 | Drive motor capacity (60 min. short duty)   |           | kW    | 2.6                                  | 2.6                                  |
| 6.2                 | Lift motor output at 15% duty factor  |           | kW    | 2.2                                  | 2.2                                  |
| 6.4                 | Battery voltage/capacity at 5-hour discharge  |           | V/Ah  | 24 / 465-620                         | 24 / 465-620                         |
| 6.5                 | Battery weight  |           | kg    | 355-493                              | 355-493                              |
| 6.6a                | Energy consumption according to EN 16796  |           | kWh/h | 0.37                                 | 0.37                                 |
| MISCELLANEOUS       |   |           |       |                                      |                                      |
| 8.1                 | Type of drive control   |           |       | Stepless                             | Stepless                             |
| 10.7                | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871 in work LpAZ          |           | dB(A) | 62 <sup>3)</sup>                     | 62 <sup>3)</sup>                     |
| 10.7.1              | Level of noise at the ear level of the driver according to EN 12 053:2001 and EN ISO 4871, drive/lift/idle LpAZ |           | dB(A) | 73 / 62 / - <sup>3)</sup>            | 73 / 62 / - <sup>3)</sup>            |
| 10.7.2              | Whole-body vibration (EN 13 059:2002)   |           |       | 0.6                                  | 0.6                                  |
| 10.7.3              | Hand-arm vibration (EN 13 059:2002)   |           |       | <2.5                                 | <2.5                                 |

- 1) Forks 540 x 1150, battery 620 Ah
- 2) Forks 540 x 1150/ lift 1200mm, battery 620 Ah
- 3) Inaccuracy of 4 dB(A)
- 4) Fork carriage length 2375 mm
- 5) With 620Ah battery + 100mm
- 7) Travel speed when drivers platform >300mm 5,5km/h,  
850mm lift: Travel speed >300mm lift 5,5km/h,  
1200mm lift: Travel speed >300 - 900mm lift 5,5km/h, >900mm lift 3km/h

- Ast =  $Wa - x + l6 + 200$   
 Ast = Working aisle width  
 Wa = Turning radius  
 $a = \text{Safety clearance} = 2 \times 100 \text{ mm}$   
 $R = \sqrt{(l6 + x)^2 + (b12 / 2)^2}$   
 l6 = Pallet length (800 or 1000 mm)  
 b12 = Pallet width (1200 mm)

## VELIA ES LOW LEVEL ORDER PICKERS

### OPB12N2F

#### RISING FORKS MODEL

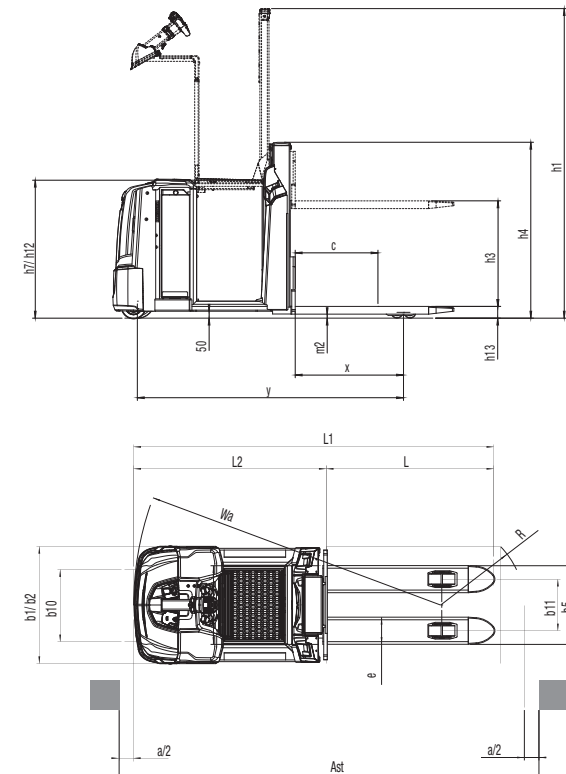
1.2 tonnes



### OPB12N2FP

#### RISING FORKS AND RISING PLATFORM MODEL

1.2 tonnes



# STANDARD EQUIPMENT & OPTIONS

● = Standard  
● = Option

|  | OPB20N2 | OPB25N2 | OPB20N2P | OPB25N2P | OPB20N2X | OPB20N2XP | OPB12N2F | OPB12N2FP |
|--|---------|---------|----------|----------|----------|-----------|----------|-----------|
| <b>GENERAL</b>   |         |         |          |          |          |           |          |           |
| Multifunctional steering wheel (electric 200°)                       | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Power ON/OFF by Key switch   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Hourmeter & BDI  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| ECO/PRO mode   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Drive speed reduction in curves                                      | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Maximum drive speed adjusted according to load weight                | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Floor mat acting as dead man's pedal                                 | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Crane battery change   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Polyurethane wheels  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Tandem load wheels polyurethane                                      | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Suspended operator's platform  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Simultaneously driving and lifting the forks                         | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Hill hold  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Automatic parking brake  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Lifting driver's platform, h=1000 mm (OPB20N2/25N2P, 20N2XP, 12N2FP) | -       | -       | ●        | ●        | -        | ●         | -        | ●         |
| Lift height (h3 + h13) 220 mm (OPB20N2/25N2, OPB12N2FP)              | ●       | ●       | ●        | ●        | -        | -         | -        | -         |
| Lift height (h3 + h13) 850 mm (OPB12N2F, OPB12N2FP)                  | -       | -       | -        | -        | -        | -         | ●        | ●         |
| Lift height (h3 + h13) 855 mm (OPB20N2X/25N2XP)                      | -       | -       | -        | -        | ●        | ●         | -        | ●         |
| Simultaneous driving and lifting the driver's platform               | -       | -       | ●        | ●        | -        | ●         | -        | ●         |
| Drive speed reduction when platform raised (4 km/h)                  | -       | -       | ●        | ●        | -        | ●         | -        | ●         |
| Drive speed reduction when forks raised (lift height > 300 mm)       | -       | -       | -        | -        | ●        | ●         | ●        | ●         |
| <b>ENVIRONMENT</b>   |         |         |          |          |          |           |          |           |
| Cold store design, 0C° to -35C°                                      | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| <b>DRIVE, LIFT CONTROLS</b>  |         |         |          |          |          |           |          |           |
| Walk beside drive button in backrest, FWD/BWD                        | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Buttons for lift / lower on sides of backrest                        | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| <b>SAFETY</b>  |         |         |          |          |          |           |          |           |
| Blue point safety light towards driving direction (forks trailing)   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Red point safety light towards driving direction (forks trailing)    | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Driving light towards driving direction (forks trailing)             | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Warning strobe, yellow   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Drive alarm (programmable)   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Fire extinguisher  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| <b>WHEEL OPTIONS</b>   |         |         |          |          |          |           |          |           |
| Polyurethane traction and load wheels                                | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Power friction traction wheel  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| <b>OUTLOOK</b>   |         |         |          |          |          |           |          |           |
| Special RAL color on front machinery steel cover                     | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |

## VELIA ES OPB12-25N2(X)(F)(P) Series LOW LEVEL ORDER PICKERS 1.2 – 2.5 tonnes



Multifunctional steering wheel with optional color display.



Optional walk beside drive button and buttons for lift / lower in backrest.



Fire extinguisher



Optional blue point safety light.



# STANDARD EQUIPMENT & OPTIONS

● = Standard  
● = Option

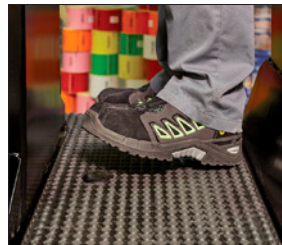
| OTHER OPTIONS   | OPB20N2 | OPB25N2 | OPB20N2P | OPB25N2P | OPB20N2X | OPB20N2XP | OPB12N2F | OPB12N2FP |
|---|---------|---------|----------|----------|----------|-----------|----------|-----------|
| High drive speed 13 km/h (without load)   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| PIN code access with BDI display  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| PIN code access with color display  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Color display without PIN code access   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Walk beside drive button in backrest, FWD / BWD                                     | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Buttons for lift/lower on sides of backrest   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Accessory rail in front   | ●       | ●       | -        | -        | ●        | -         | ●        | -         |
| Picking tray, for OPB20/25N2P, OPBN2XP and OPB12N2FP models only. Max. 50 kg        | -       | -       | ●        | ●        | -        | ●         | -        | ●         |
| Scanner holder  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Equipment holder (RAM mountings)  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Wrapping holder   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Load backrest   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Rear grab handle on backrest  | ●       | ●       | -        | -        | ●        | -         | -        | -         |
| Foot switch for lowering the driver's platform                                      | -       | -       | ●        | ●        | -        | ●         | -        | ●         |
| Sideways battery change   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Clipboard, A4   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Front storage boxes   | ●       | ●       | -        | -        | ●        | -         | ●        | -         |
| Storage folder on bottom of the platform  | ●       | ●       | -        | -        | ●        | -         | ●        | -         |
| Entry and exit rollers for crosswise pallet handling                                | ●       | ●       | ●        | ●        | -        | -         | -        | -         |
| Back cushion, tiltable to seat position for back & feet rest. Adjustable in height. | ●       | ●       | -        | -        | ●        | -         | ●        | -         |
| Power supply, 12 V  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Power supply, USB 5 V   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Heavy duty front nylon strip covered bumper   | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Raised front guard plate  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |
| Load Weight Indicator +/- 50kg  | ●       | ●       | ●        | ●        | ●        | ●         | ●        | ●         |

## VELIA ES OPB12-25N2(X)(F)(P) Series LOW LEVEL ORDER PICKERS

1.2 – 2.5 tonnes



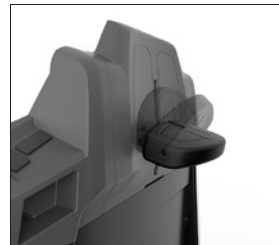
Equipment holder (RAM mountings)



Foot switch for lowering the driver's platform



Rear grab handle on backrest



Back cushion, tiltable to seat position. Adjustable in height.

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[mitforklift@mcf.nl](mailto:mitforklift@mcf.nl)

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