# PRELIMINARY SPECIFICATIONS

# SBS16-20N2 Series

# AXÍA EX SIT-ON STACKERS

1.6 – 2.0 - tonnes

# GIANT PERFORMANCE COMPACT PACKAGE

The **AXiA EX** sit-on stacker is a flexible and cost-effective choice for stacking and internal transport in warehousing, manufacturing, and anywhere else safe, productive stacking is required. Platform stackers are more commonly used for these tasks but with an aisle width (AST) requirement of 2.8m (vs 2.5m on the AXiA EX) and lift heights of only 5.4m (vs 7m for the AXiA EX), it's easy to see where the sit-on stacker presents an opportunity to make much better use of space. Many companies use reach trucks for stacking tasks, but they may be over specified for the task. For these jobs the AXiA sit-on stacker makes an excellent low-cost alternative.

### SPECIFICATIONS

SBS16N2 SBS16N2I SBS20N2 SBS20N2I









# **AXÍA EX** SBS16-20N2 Series SIT-ON STACKERS

1.6 – 2.0 - tonnes



#### BRAKES

• High-efficiency regenerative braking This gives more effective control and reduces brake wear.

#### DRIVE

- Powerful AC drive motor High torque for greater efficiency. No carbon brushes mean lower servicing requirements.
- Intelligent Cornering System The truck senses the angle of a turn and reduces speed early for maximum stability and accurate, positive cornering.
- Automatic Speed Reduction
   Drive speed is automatically limited
   when forks are above 1.7m to allow
   higher capacities above that height.
- High travel speeds Boosted productivity with optional top speed of up to 12 km/h (Load trailing).

# ELECTRICAL AND CONTROL SYSTEMS

- Built-in Li-ion battery
   Fast opportune charging removes the need for extra batteries and allows 24/7 operation. (Junior chassis only)
- Convenient charging
- An extra battery plug on the outside of the truck allows for easy charging without needing to disconnect the internal battery plug. (Lead acid batteries).

- Combi controller lift system Fingertip control for speed regulated lifting and proportional valve for lowering.
- Enhanced Stability System (ESS) 4-point chassis for maximum stability, drive speed is reduced when forks are lifted over 1.7m, and acceleration is reduced when steering angle exceeds 45 degrees.

#### **FORKS AND MAST**

- Tapered and angled fork tips Access to pallets is easier, quicker and safer.
- Level Assistance System Automatically detects the operator's intention and automatically stops when the forks are at precisely at the right level. (Option)
- Laser positioning guide Aligning the red laser with rack markings allows the driver to quickly ensure the forks are central to the desired position. (Option)
- Initial Lift
   Can be used as a double pallet
   handler. (Option on (i) models only)

#### **FRAME AND BODY**

#### Robust chassis

Built for intensive operations, with great inherent strength and high residual capacities. Designed to enclose the operator within for extra safety.

Strong battery lock

Simple and safe. Battery lock can only be unlocked when battery plug is disconnected. Battery plug can only be reconnected if battery is locked.

- Excellent ground clearance Easy and safe handling on loading docks and ramps.
- RapidAccess features
   These allow quick and easy entry to
   all areas for checks and maintenance.
- Waterproof wiring and connectors Sealed compartment prevents system failure and corrosion from water and dust.
- **Overhead guard pillars** Protection for the operator while still offering excellent visibility.





For more information on AXiA EX sit-on please visit our website



mft2.eu//axiaexbs

## **AXÍA EX** SBS16-20N2 Series SIT-ON STACKERS

1.6 – 2.0 - tonnes





#### **HYDRAULICS**

- Smooth, quick lifting and lowering High levels of control and productivity. Low noise means less fatigue for the operator over long shifts.
- Mast damping

Soft landing and seamless transition in the mast stages provides low noise and vibrations when lifting or lowering.

# OPERATOR COMPARTMENT AND CONTROLS

- **Comfortable seat** Adjustable so drivers can find their ideal working position for less fatigue over long shifts.
- Plenty of storage space
   Storage for on-board essentials, putting clipboard, mobile phone, drinks bottle and pen all within easy reach.
- Ultra-low step height

Operators stay more productive throughout shifts thanks to easy on/ off access.

Direction switch on handle

Alternative for drivers who prefer hand control rather than direction control on a pedal. Standard with cold storage modification or 360-degree steering. (Option)

- Temperature controlled fans Low noise for a more comfortable working environment.
- Adjustable floor height More adaptable working position to suit a wide range of operator heights.

#### STEERING SYSTEM

 Mini steering wheel with floating armrest

Fully ergonomically adjustable, its unique design allows the operator to adopt a more relaxed and natural driving position This reduces arm and shoulder strain and lowers the risk of RSI.

360-degree steering

The operator can keep the truck in constant motion - saving seconds on every turn. (Option)

 Dynamic Power Steering Smooth, precise control with minimum effort offering maximum comfort and stability at top speed.





### For more information on AXiA EX sit-on please visit our website



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# 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.

#### 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, deepdischarge 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.





Li-ion battery option is available in selected regions.

Continuing improvement may lead to changes in these specifications



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



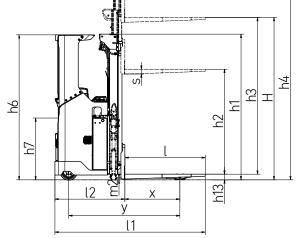
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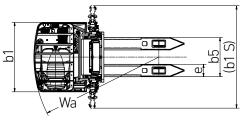
# **VDI - PERFORMANCE & DIMENSIONS**

	CHARACTERISTICS				
1.1	Manufacturer			Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks
1.2	Manufacturer's model designation			SBS16N2	SBS20N2
1.3	Power source			Battery	Battery
1.4	Operator type			Sit-on	Sit-on
1.5	Load capacity	Q	kg	1600	2000
1.6	Load center distance	c	mm	600	600
1.8	Load wheel axle to fork face (forks lowered)	x	mm	800	800
1.9	Wheelbase	y	mm	1616 1)	1665 1)
1.7	WEIGHT	<b>y</b>		1010	1000
2.1b	Truck weight without load, with maximum battery weight		kg	1866	2127
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side		kg	1466 / 2000	1690 / 2438
2.3	Axle loadings without load & with maximum battery weight, drive / load side		kg	1306 / 560	1490 / 638
2.0	WHEELS, DRIVE TRAIN		ng	1000 / 000	14707 000
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	250 × 105	250 × 105
3.3	Tyre dimensions, load side	ø	mm	85 × 70	85 × 70
3.4	Castor wheel dimensions (diameter x width)	Ø	mm	150 × 55	150 × 55
3.5	Number of wheels, load / drive side (x = driven)			1 × + 2 / 4	1 × + 2/ 4
3.6	Track width (center of tyres), drive side	b10	mm	706	706
3.8	Track width (center of tyres), load side	b10	mm	402	392
5.7	DIMENSIONS	DII		402	372
4.2a	Height with mast lowered	h1	mm	see tables	see tables
4.2a	Height	h1	mm	see tables	see tables
4.20	Free lift	h2	mm	see tables	see tables
4.5	Lift height	h3	mm	see tables	see tables
4.4	Height with mast extended	h4		see tables	see tables
4.5	Initial lift	h4 h5	mm mm	300 (00)(05	300 (00/05
4.0	Height to top of overhead guard	h6		2110	2110
4.7	Seat- or stand height	h7	mm	966	966
4.8	Height of support leas	h8	mm	80	83
4.10	Fork height, fully lowered	h13	mm mm	87	83 90
4.15	Overall length	11		2189 <sup>1)</sup>	2238 <sup>1)</sup>
4.19	Length to fork face	12	mm	1019 1)	1068 1)
	Overall width	12 b1/b2	mm mm	1019	
4.21 4.22	Fork dimensions (thickness, width, length)	s/e/l	mm	70 / 180 / 1170	1010 70 / 195 / 1170
4.22	Outside width over forks (minimum / maximum)	b5		570	570
4.25	Ground clearance at center of wheelbase, (forks lowered)	m2	mm	25	
4.32 4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	mm	2584 <sup>2)</sup>	23 2632 <sup>2)</sup>
4.34a 4.34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3	mm	2584-7	2466
	Turning radius	Wa	mm		
4.35	PERFORMANCE	wa	mm	1819 <sup>2)</sup>	1866 <sup>2)</sup>
F 1	Travel speed, with / without load		km/h	10 / 10	9/9
5.1	Lifting speed, with / without load		m/s		
5.2	Lowering speed, with / without load			0.16 / 0.32	0.12 / 0.22
5.3			m/s	0.44 / 0.41	0.33 / 0.30
5.8	Maximum gradeability with / without load Service brakes (mechanical / hydraulic / electric / pneumatic)		%	6.7 / 6.7	5.9 / 5.9
5.10	ELECTRIC MOTORS			Electric	Electric
(1	Drive motor capacity (60 min. short duty)		kW	2 7	27
6.1	Lift motor output at 15% duty factor			2.7	2.7
6.2			kW	4.0	4.0
6.4	Battery voltage/capacity at 5-hour discharge		V/Ah	24 / 375 - 775	24 / 375 - 775
6.5	Battery weight	_	kg	305 - 620	305 - 620
- 1	MISCELLANEOUS			10	10
8.1	Type of drive control			AC	AC









Ast = Working aisle width Ast3 = Working aisle width (b12 <1000 mm) Ast = Wa +  $\sqrt{(16 - x)^2 + (b127 - 2)^2} + a$ Ast3 = Wa + 16 -x +a

l6 = Pallet length

- x = Load wheel axle to fork face
- b12 = Pallet width a = Safety clearance = 2 x 100 mm

1) When SN/BC775 then add 104 mm

2) Dimensions vary depending on battery carriage and mast type. Ast dimensions available in table on page 7.

Wa = Turning radius

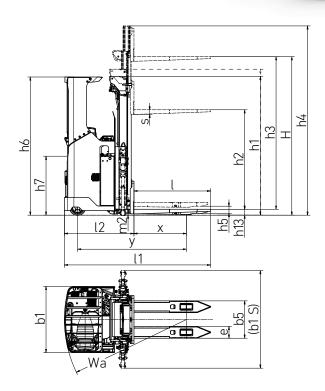
# **VDI - PERFORMANCE & DIMENSIONS**

	CHARACTERISTICS				
1.1	Manufacturer			Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks
1.2	Manufacturer's model designation			SBS16N2I	SBS20N2I
1.3	Power source			Battery	Battery
1.4	Operator type			Sit-on	Sit-on
1.5	Load capacity	Q	kg	1600	2000
1.6	Load center distance	С	mm	600	600
1.8	Load wheel axle to fork face (forks lowered)	х	mm	800	800
1.9	Wheelbase	у	mm	1661 <sup>1)</sup>	1720 <sup>1)</sup>
	WEIGHT	,			
2.1b	Truck weight without load, with maximum battery weight		kg	2015	2294
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side		kg	1571 / 2045	1806 / 2488
2.3	Axle loadings without load & with maximum battery weight, drive / load side		kg	1411 / 605	1606 / 688
	WHEELS, DRIVE TRAIN		<u> </u>		
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	250 × 105	250 × 105
3.3	Tyre dimensions, load side	ø	mm	85 × 70	85 × 70
3.4	Castor wheel dimensions (diameter x width)		mm	150 × 55	150 × 55
3.5	Number of wheels, load / drive side (x = driven)			$1 \times + 2 / 4$	$1 \times + 2/4$
3.6	Track width (center of tyres), drive side	b10	mm	706	706
3.7	Track width (center of tyres), load side	b11	mm	402	392
017	DIMENSIONS	5			072
4.2a	Height with mast lowered	h1	mm	see tables	see tables
4.2b	Height	h1	mm	see tables	see tables
4.3	Free lift	h2	mm	see tables	see tables
4.4	Lift height	h3	mm	see tables	see tables
4.5	Height with mast extended	h4	mm	see tables	see tables
4.6	Initial lift	h5	mm	110	110
4.7	Height to top of overhead guard	h6	mm	2110	2110
4.8	Seat- or stand height	h7	mm	966	966
4.10	Height of support legs	h8	mm	87	87
4.15	Fork height, fully lowered	h13	mm	93	93
4.19	Overall length	11	mm	2233 1)	2293 <sup>1)</sup>
4.20	Length to fork face	12	mm	1063 1)	1123 1)
4.21	Overall width	b1/b2	mm	1010	1010
4.22	Fork dimensions (thickness, width, length)	s/e/l	mm	70 / 180 / 1170	70 / 195 / 1170
4.25	Outside width over forks (minimum / maximum)	b5	mm	570	570
4.32	Ground clearance at center of wheelbase, (forks lowered)	m2	mm	20	20
4.32 4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	mm	2627 <sup>2)</sup>	2685 <sup>2)</sup>
4.34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3	mm	2461	2520
4.35	Turning radius	Wa	mm	1861 2)	1920 <sup>2)</sup>
4.33	PERFORMANCE	Wa		1001	1720
5.1	Travel speed, with / without load		km/h	9/9	9/9
5.2	Lifting speed, with / without load		m/s	0.16 / 0.32	0.12 / 0.22
5.2 5.3	Lowering speed, with / without load		m/s	0.44 / 0.41	0.33 / 0.30
5.8	Maximum gradeability with / without load		%	26.6 / 26.6	25.6 / 25.6
5.8 5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		/0	Electric	
5.10	ELECTRIC MOTORS			Electric	Electric
6.1	Drive motor capacity (60 min. short duty)		kW	2.7	2.7
6.1 6.2	Lift motor output at 15% duty factor		kW		
6.2 6.4	Battery voltage/capacity at 5-hour discharge		кw V/Ah	4.0 24 / 375 - 775	4.0 24 / 375 - 775
	Battery weight				
6.5	MISCELLANEOUS		kg	305 - 620	305 - 620
	Type of drive control			AC	AC

# **AXÍA EX**

### SBS16-20N2I Series SIT-ON STACKERS MODELS WITH INITIAL LIFT

1.6 – 2.0 - tonnes



Ast = Working aisle width Ast = Working also width Ast3 = Working also width (b12 <1000 mm) Ast = Wa +  $\sqrt{(16 - x)^2 + (b12 / 2)^2} + a$ Ast3 = Wa + l6 -x +a

Wa = Turning radius l6 = Pallet length

x = Load wheel axle to fork face

b12 = Pallet width

a = Safety clearance = 2 x 100 mm

1) When SN/BC775 then add 104 mm

2) Dimensions vary depending on battery carriage and mast type. Ast dimensions available in table on page 7.

### MAST PERFORMANCE AND CAPACITY

### AXÍA EX SIT-ON STACKERS

### SBS16-20N2

MAST TYPE	h3+h13 mm	h1 h4 mm mm		h2+h13 mm				
SBS16N2 / SBS20N2								
	3600	2350	4105	1847				
DEV	4200	2650	4705	2147				
	4500	2800	5005	2297				
	4800	2150	5332	1667				
	5400	2350	5932	1867				
TREV	5700	2450	6232	1967				
	6300	2650	6832	2167				
	7000	2883	7532	2400				

### SBS16-20N2I

MAST TYPE	h3+h13 mm	h1 mm	h4 mm	h2+h13 mm
	SBS	16N2I / SBS	20N2I	
	3600	2355	4112	1853
DEV	4200	2655	4712	2153
	4500	2805	5012	2303
	4800	2155	5339	1673
	5400	2355	5939	1873
TREV	5700	2455	6239	1973
	6300	2655	6839	2173
	7000	2888	7539	2406

DEV	=	Duplex with full free lift
TREV	=	Triplex with full free lift
h3+h13	=	Lifting height
h1	=	Lowered mast height
h4	=	Raised mast height
h2+h13	=	Free lift

AST dimensions, VDI2198 (4.34a)					AST dimensions, Ast3 (4.34b)						
BASIC CAPACITY, kg	16	00	2	000		BASIC CAPACITY, kg	16	500	2	000	
CHASSIS / BATTERY CARRIAGE	Junior / BC 465	Senior / BC 775	Junior / BC 465	Senior / BC 775		CHASSIS / BATTERY CARRIAGE	Junior / BC 465	Senior / BC 775	Junior / BC 465	Senior / BC 775	
STANDARD MODEL	2584	2688	2632	2736		STANDARD MODEL	2419	2523	2466	2570	
INITIAL LIFT MODEL	2627	2731	2685	2789		INITIAL LIFT MODEL	2461	2565	2520	2624	

### **STANDARD EQUIPMENT & OPTIONS**

= Standard				
) = Option	SBS16N2	SBS16N2I	SBS20N2	SBS20N2
GENERAL				
Standard display incl. hour meter and battery indicator	•	•	•	•
Key switch entry	•	•	•	•
Electric power steering	•	•	•	•
Speed regulated lift motor and proportional valve for lowering	•	•	•	•
Tandem load wheels Vulkollan	•			ě
Overhead guard	•	•	ě	
Adjustable armrest, right side				
Adjustable steering wheel, all directions				
Storage compartment under armrest and by left side of seat				
Ergonomic fully adjustable seat				
Battery rollers, plastic (steel rollers with bearings in Senior models)				
Initial lift	•			
Chill store design, down to -10°C	-		-	
POWER SOURCE	•	•	•	
Li-ion batteries*	•	•	•	•
Lead acid batteries	•	•	•	
ENVIRONMENT Cold store design, 0C° to -30C°		-		
DRIVE AND LIFT CONTROLS	•	•	•	•
	•	-	•	-
Mini steering wheel with floating armrest	•	•	•	•
Midi steering wheel	•	•	•	
Finger tip controls for lifting/lowering	•	•	•	•
Hands-free direction control (HFDC)	•	•	•	•
Hand operated direction control (HODC)	•	•	•	•
WHEEL OPTIONS				
Vulkollan	•	•	•	•
Tractothan	•	•	•	•
Super grip	•	•	•	
OTHER OPTIONS				
Side stabilizers	•		•	
Electric adjustable floor height, 70 mm	•	•	•	
360 degree steering	•	•	•	•
Multifunction display incl. BDI and Hourmeter, PIN code login (100 codes) and graphic icons	•	•	•	
High performance 8.0 kW AC hydraulic pump system	•			
Load backrest	•			
Key switch entry (in combination with Multi function display)	•	•	•	•
Laser positioning guide	•		•	
Load weight indicator	•	•	•	•
Lift height indicator				
Level assistance system (LAS)		•	•	•
Panoramic ProVision roof				
12V DC Power Socket				
5 V 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	•	•	•	•
Floor spot, red or blue	•	•	•	•
Increased drive speed, 12 km/h in driver compartment direction	•	-	•	-
Special RAL colour	•	•	•	

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

## SBS16-20N2(I) Series SIT-ON STACKERS

1.6 – 2.0 - tonnes



Standard display

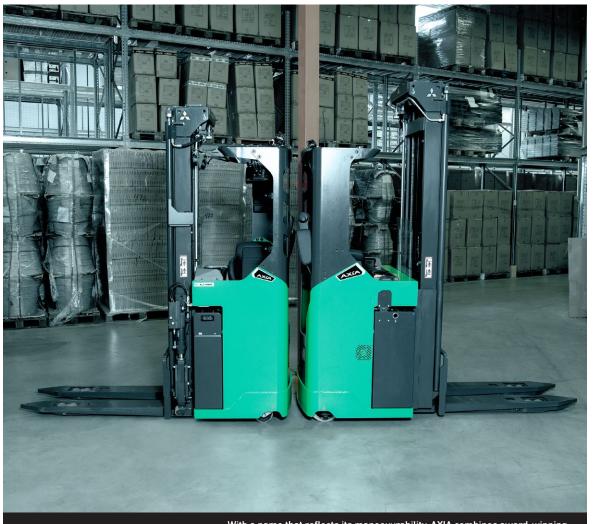


Storage compartment under armrest



Initial lift

# WHEN RELIABILITY IS EVERYTHING...



AXÍA THE ALL ROUNDER With a name that reflects its manoeuvrability, AXIA combines award-winning ergonomics with high performance and low maintenance features to deliver a complete warehouse support package.

Efficient, versatile and durable, AXIA is the perfect choice for every workplace.

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 awardwinning 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

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 nonstandard 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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Mitsubishi Logisnext Europe B.V. Hefbrugweg 77, 1332 AM Almere The Netherlands Tel: +31 (0)36 5494 411







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