

AXIA EX

STAND-IN STACKERS

1.2 - 2.0 tonnes

**SMALL SPACES
BIG PERFORMANCE**

If you are looking to maximise the efficiency of your warehouse space, stand-up stackers may be the perfect choice for you. Combining minimal dimensions, a tight turning circle, and excellent operator protection, they offer an affordable and flexible alternative to a full VNA solution. By keeping the driver completely — and safely protected — within the truck, they can manoeuvre in much smaller aisle width.

SPECIFICATIONS

SBR12N2	SBR12N2I
SBR16N2	SBR16N2I
SBR20N2	SBR20N2I

SBR12-20N2(I) Series



**WHEN
RELIABILITY IS
EVERYTHING...**

AXiA EX

SBR12-20N2(I) Series

STAND-IN STACKERS

1.2 - 2.0 tonnes

Designing a warehouse around stand-in stackers is up to 35% more efficient from a space point of view compared to pedestrian stackers, typically lowering the cost per pallet position by a third. The compact profile also potentially allows for two-way traffic in aisles vs a reach truck, allowing for increased productivity.

And standing is the most efficient position for an operator from a working point of view, easily allowing them to frequently step on and off throughout a shift. There is ample space to work while still offering excellent all-round protection while working, and by being entirely within the truck they are better protected against collisions.

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.
- **10 km/h standard speed (option 12 km/h)**
Higher productivity is available if needed.

ELECTRICAL AND CONTROL SYSTEMS

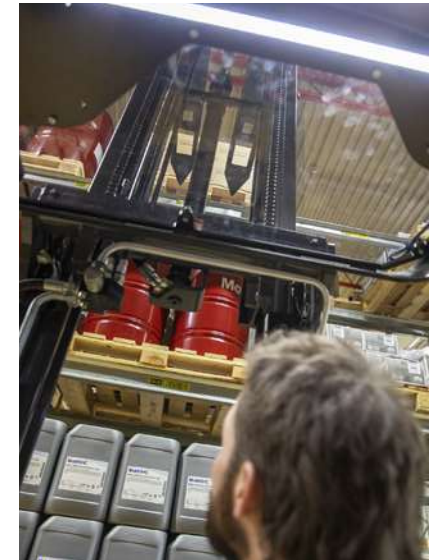
- **Built-in Li-ion battery**
Fast opportune charging removes the need for extra batteries and allows 24/7 operation. (Junior chassis only) (Option)
- **Combi controller lift system**
Fingertip control for speed regulated lifting and proportional valve for lowering.
- **Enhanced Stability System (ESS)**
4-point chassis for maximum stability, drive speed is reduced when forks are lifted over 1.7 m.

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 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)

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 please visit our website



mft2.eu/axiaex

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SBR12-20N2(I) Series

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

OPERATOR COMPARTMENT AND CONTROLS

- **Optical Presence Sensor**
This locks all movement of the truck and its mast if the operator is not present. Driver can lift foot slightly without brakes automatically engaging, reducing muscle stress.
- **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.
- **Ergo Forks Trailing Control**
When working with forks trailing, an additional speed control allows an operator to stand in a more comfortable and ergonomic forward-facing position while travelling. (Option)

STEERING SYSTEM

- **Fully adjustable steering wheel**
Height and distance are ergonomically adjustable to reduce strain and lower 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 please visit our website





AXIA EX AVAILABLE LI-ION SYSTEMS

MAKE YOUR FORKLIFT 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 30% more efficient than lead-acid counterparts. Plus, it's virtually error-proof, thanks to its ultra-low-maintenance design.

- **Gas-emission free and space efficient operation**
with no need for air ventilation and/or closed charging room.
- **Exceptional high battery & charger efficiency**
due to state-of-the-art technology, delivers up to 30% more power efficiency than lead-acid batteries.



- **Maintenance free design**
eliminates the need for daily checks and water re-fills by operator, and reduces the risk of operators damaging cells.
- **No spare batteries and charging room required**
saves space and costs in multi-shift application to maximise profitability.
- **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 from 1 hour 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.
- **Active protection componentry**
continuously monitors the system, highlighting potential issues, including misuse.
- **High safety features include**
circuit protection, 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.
- **Wide choice of battery and charger capacities**
so the most suitable power supply can be matched to the exact requirements of a specific application.



THE MOST COST-EFFECTIVE SOLUTION

When you factor in the extensive lifetime, no need for maintenance, higher power efficiency, and up to 30% savings, a Li-ion battery is most often the choice that saves money and offers peace of mind.

For more information on Li-ion please visit our website



VDI - PERFORMANCE & DIMENSIONS

CHARACTERISTICS				Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks
1.1	Manufacturer			SBR12N2	SBR16N2	SBR20N2
1.2	Manufacturer's model designation			Battery	Battery	Battery
1.3	Power source			Stand-in	Stand-in	Stand-in
1.4	Operator type					
1.5	Load capacity	Q	kg	1250	1600	2000
1.6	Load center distance	c	mm	600	600	600
1.8	Load wheel axle to fork face (forks lowered)	x	mm	800	800	800
1.9	Wheelbase	y	mm	1422 ¹⁾	1496 ¹⁾	1545 ¹⁾
WEIGHT						
2.1a	Truck weight with load, with maximum battery weight		kg	2682	3356	4018
2.1b	Truck weight without load, with maximum battery weight		kg	1432	1756	2018
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side		kg	1127 / 1555	1389 / 1967	1613 / 2405
2.3	Axle loadings without load & with maximum battery weight, drive / load side		kg	1002 / 430	1229 / 527	1413 / 605
WHEELS, DRIVE TRAIN						
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side			Vul / Vul	Vul / Vul	Vul / Vul
3.2	Tyre dimensions, drive side		mm	250 x 105	250 x 105	250 x 105
3.3	Tyre dimensions, load side	ø	mm	85 x 70	85 x 70	85 x 70
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)			1 x + 2 / 4	1 x + 2 / 4	1 x + 2 / 4
3.6	Track width (center of tyres), drive side	b10	mm	662	662	662
3.7	Track width (center of tyres), load side	b11	mm	402	402	392
DIMENSIONS						
4.2a	Height with mast lowered	h1	mm	see tables	see tables	see tables
4.2b	Height	h1	mm	see tables	see tables	see tables
4.3	Free lift	h2	mm	see tables	see tables	see tables
4.4	Lift height	h3	mm	see tables	see tables	see tables
4.5	Height with mast extended	h4	mm	see tables	see tables	see tables
4.6	Initial lift	h5	mm	-	-	-
4.7	Height to top of overhead guard	h6	mm	2310	2310	2310
4.8	Seat- or stand height	h7	mm	230	230	230
4.10	Height of support legs	h8	mm	82	80	83
4.15	Fork height, fully lowered	h13	mm	89	87	90
4.19	Overall length	l1	mm	1995 ¹⁾	2069 ¹⁾	2118 ¹⁾
4.20	Length to fork face	l2	mm	825 ¹⁾	899 ¹⁾	948 ¹⁾
4.21	Overall width	b1/b2	mm	940	940	940
4.22	Fork dimensions (thickness, width, length)	s/e/l	mm	70 / 180 / 1170	70 / 180 / 1170	70 / 195 / 1170
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	32	25	23
4.33a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast	mm	2475 ²⁾	2548 ²⁾	2593 ²⁾
4.33b	Working aisle width (Ast3) with 1000 x 1200 mm pallets, load crosswise	Ast3	mm	2043 ²⁾	2116 ²⁾	2161 ²⁾
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	mm	2409 ²⁾	2481 ²⁾	2527 ²⁾
4.34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3	mm	2243 ²⁾	2316 ²⁾	2361 ²⁾
4.35	Turning radius	Wa	mm	1643 ²⁾	1716 ²⁾	1761 ²⁾
PERFORMANCE						
5.1	Travel speed, with / without load		km/h	10.0 / 10.0	10.0 / 10.0	9.0 / 9.0
5.2	Lifting speed, with / without load		m/s	0.21 / 0.37	0.15 / 0.32	0.12 / 0.22
5.3	Lowering speed, with / without load		m/s	0.55 / 0.41	0.45 / 0.42	0.33 / 0.30
5.8	Maximum gradeability with / without load		%	9.0 / 9.0	6.7 / 6.7	5.9 / 5.9
5.9	Acceleration time (10 metres) with / without load		s	-	-	-
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)			Electric	Electric	Electric
ELECTRIC MOTORS						
6.1	Drive motor capacity (60 min. short duty)		kW	2.7	2.7	2.7
6.2	Lift motor output at 15% duty factor		kW	4.0	4.0	4.0
6.4	Battery voltage/capacity at 5-hour discharge		V/Ah	24 / 375-775	24 / 375-775	24 / 375-775
6.5	Battery weight		kg	330 - 610	330 - 610	330 - 610
6.6a	Energy consumption according to EN16796		kWh/h			
MISCELLANEOUS						
8.1	Type of drive control			AC	AC	AC
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)		67.3	
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)		71.5 / 68.9 / 53.3	

1) When SN/BC775 then add 104 mm

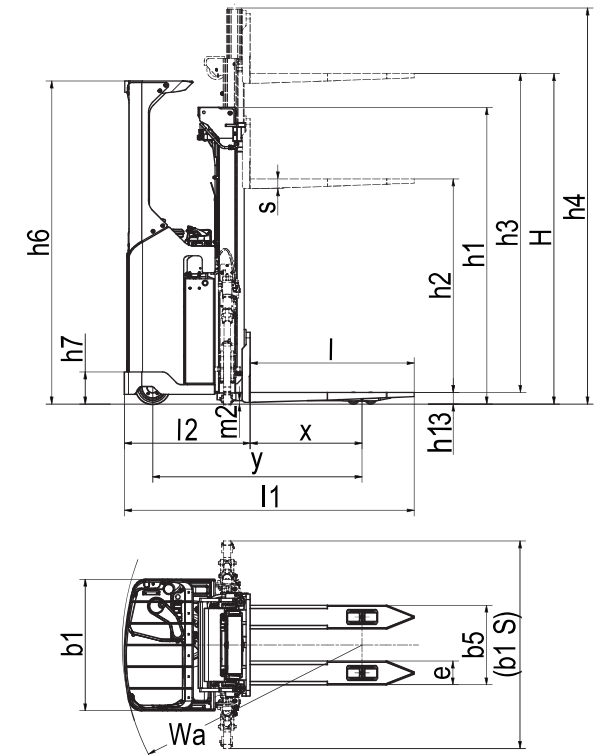
2) Dimensions vary depending on battery carriage and mast type. Ast dimensions available in table on page 7.

AXIA EX

SBR12 - 20N2

STAND-IN STACKERS

1.2 - 2.0 ton



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

VDI - PERFORMANCE & DIMENSIONS

CHARACTERISTICS				Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks	Mitsubishi Forklift Trucks
1.1	Manufacturer			SBR12N2I	SBR16N2I	SBR20N2I
1.2	Manufacturer's model designation			Battery	Battery	Battery
1.3	Power source			Stand-in	Stand-in	Stand-in
1.4	Operator type					
1.5	Load capacity	Q	kg	1250	1600	2000
1.6	Load center distance	c	mm	600	600	600
1.8	Load wheel axle to fork face (forks lowered)	x	mm	800	800	800
1.9	Wheelbase	y	mm	1501 ¹⁾	1541 ¹⁾	1600 ¹⁾
WEIGHT						
2.1a	Truck weight with load, with maximum battery weight		kg	2876	3506	4184
2.1b	Truck weight without load, with maximum battery weight		kg	1626	1906	2184
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side		kg	1263 / 1613	1494 / 2012	1729 / 2455
2.3	Axle loadings without load & with maximum battery weight, drive / load side		kg	1138 / 488	1334 / 572	1529 / 655
WHEELS, DRIVE TRAIN						
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side			Vul / Vul	Vul / Vul	Vul / Vul
3.2	Tyre dimensions, drive side		mm	250 x 105	250 x 105	250 x 105
3.3	Tyre dimensions, load side	ø	mm	85 x 70	85 x 70	85 x 70
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)			1 x + 2 / 4	1 x + 2 / 4	1 x + 2 / 4
3.6	Track width (center of tyres), drive side	b10	mm	662	662	662
3.7	Track width (center of tyres), load side	b11	mm	390	390	375
DIMENSIONS						
4.2a	Height with mast lowered	h1	mm	see tables	see tables	see tables
4.2b	Height	h1	mm	see tables	see tables	see tables
4.3	Free lift	h2	mm	see tables	see tables	see tables
4.4	Lift height	h3	mm	see tables	see tables	see tables
4.5	Height with mast extended	h4	mm	see tables	see tables	see tables
4.6	Initial lift	h5	mm	110	110	110
4.7	Height to top of overhead guard	h6	mm	2310	2310	2310
4.8	Seat- or stand height	h7	mm	230	230	230
4.10	Height of support legs	h8	mm	87	87	87
4.15	Fork height, fully lowered	h13	mm	93	93	93
4.19	Overall length	l1	mm	2073 ¹⁾	2113 ¹⁾	2173 ¹⁾
4.20	Length to fork face	l2	mm	903 ¹⁾	943 ¹⁾	1003 ¹⁾
4.21	Overall width	b1/b2	mm	940	940	940
4.22	Fork dimensions (thickness, width, length)	s/e/l	mm	70 / 180 / 1170	70 / 180 / 1170	70 / 195 / 1170
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	20	20
4.33a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast	mm	2552 ²⁾	2591 ²⁾	2622 ²⁾
4.33b	Working aisle width (Ast3) with 1000 x 1200 mm pallets, load crosswise	Ast3	mm	2120 ²⁾	2159 ²⁾	2190 ²⁾
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	mm	2486 ²⁾	2525 ²⁾	2556 ²⁾
4.34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3	mm	2320 ²⁾	2359 ²⁾	2390 ²⁾
4.35	Turning radius	Wa	mm	1720 ²⁾	1759 ²⁾	1790 ²⁾
PERFORMANCE						
5.1	Travel speed, with / without load		km/h	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0
5.2	Lifting speed, with / without load		m/s	0.21 / 0.37	0.15 / 0.32	0.12 / 0.22
5.3	Lowering speed, with / without load		m/s	0.55 / 0.41	0.45 / 0.42	0.33 / 0.30
5.8	Maximum gradeability with / without load		%	10.0 / 16.0	10.0 / 16.0	10.0 / 16.0
5.9	Acceleration time (10 metres) with / without load		s			7.0 / 6.0
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)			Electric	Electric	Electric
ELECTRIC MOTORS						
6.1	Drive motor capacity (60 min. short duty)		kW	2.7	2.7	2.7
6.2	Lift motor output at 15% duty factor		kW	4.0	4.0	4.0
6.4	Battery voltage/capacity at 5-hour discharge		V/Ah	24 / 375 -775	24 / 375-775	24 / 375-775
6.5	Battery weight		kg	330 - 610	330 - 610	330 - 610
6.6a	Energy consumption according to EN16796		kWh/h		0.878	
MISCELLANEOUS						
8.1	Type of drive control			AC	AC	AC
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)		67.3	
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)		71.5 / 68.9 / 53.3	

1) When SN/BC775 then add 104 mm

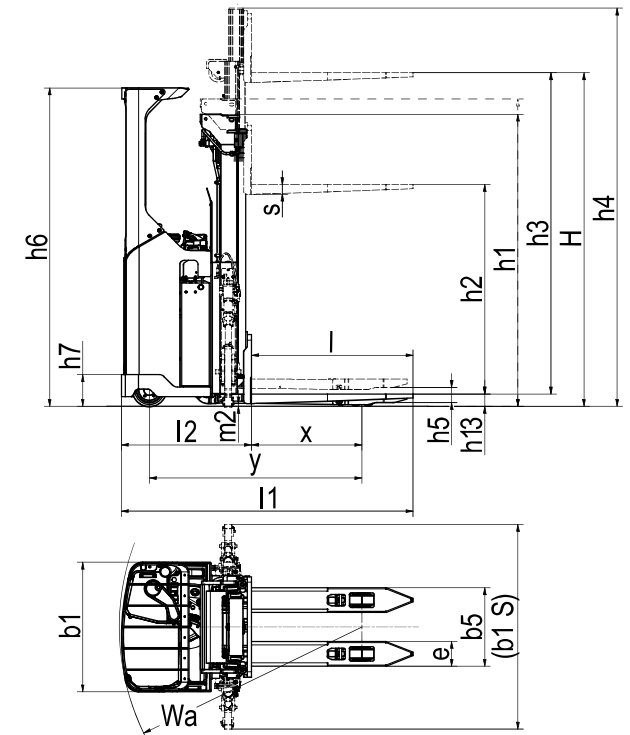
2) Dimensions vary depending on battery carriage and mast type. Ast dimensions available in table on page 7.

AXIA EX

SBR12 - 20N2I

STAND-IN STACKERS

1.2 - 2.0 tonnes



Ast = Working aisle width

Ast3 = Working aisle width (b12 < 1000 mm)

Ast = $Wa + \sqrt{(l6 - x)^2 + (b12 / 2)^2} + a$

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

MAST PERFORMANCE AND CAPACITY

AXIA EM

STAND-IN STACKERS

SBR12 - 20N2

MAST TYPE	h3+h13 mm	h1 mm	h4 mm	h2+h13 mm
SBR12N2				
DS	3290	2157	3720	159 (h2=70)
	3590	2307	4020	159 (h2=70)
	4190	2607	4620	159 (h2=70)
DEV	3290	2157	3720	1726
	3590	2307	4020	1876
	4190	2607	4620	2176
SBR16N2 - SBR20N2				
DEV	3600	2350	4105	1847
	4200	2650	4705	2147
	4500	2800	5005	2297
TREV	4800	2150	5332	1667
	5400	2350	5932	1867
	5700	2450	6232	1967
	6300	2650	6832	2167
	7000	2883	7532	2400

SBR12 - 20N2I

MAST TYPE	h3+h13 mm	h1 mm	h4 mm	h2+h13 mm
SBR12N2I				
DS	3290	2162	3725	163 (h2=70)
	3590	2312	4025	163 (h2=70)
	4190	2612	4625	163 (h2=70)
DEV	3290	2162	3725	1730
	3590	2312	4025	1880
	4190	2612	4625	2180
SBR16N2I - SBR20N2I				
DEV	3600	2355	4112	1853
	4200	2655	4712	2153
	4500	2805	5012	2303
TREV	4800	2155	5339	1673
	5400	2355	5939	1873
	5700	2455	6239	1973
	6300	2655	6839	2173
	7000	2888	7539	2406

- DS = Duplex with clear-view mast
- 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)						
BASIC CAPACITY, kg		1250	1600		2000	
CHASSIS / BATTERY CARRIAGE		Junior / BC 465	Junior / BC 465	Senior / BC 775	Junior / BC 465	Senior / BC 775
MAST TYPE	INITIAL LIFT					
DS	No	2409	N/A	N/A	N/A	N/A
DEV	No	2409	2481	2583	2527	2631
TREV	No	N/A	2481	2583	2527	2631
DS	Yes	2486	N/A	N/A	N/A	N/A
DEV	Yes	2486	2525	2626	2556	2684
TREV	Yes	N/A	2525	2626	2556	2684

AST dimensions, Ast3 (4.34b)						
BASIC CAPACITY, kg		1250	1600		2000	
CHASSIS / BATTERY CARRIAGE		Junior / BC 465	Junior / BC 465	Senior / BC 775	Junior / BC 465	Senior / BC 775
MAST TYPE	INITIAL LIFT					
DS	No	2243	N/A	N/A	N/A	N/A
DEV	No	2243	2316	2417	2361	2465
TREV	No	N/A	2316	2417	2361	2465
DS	Yes	2320	N/A	N/A	N/A	N/A
DEV	Yes	2320	2359	2460	2390	2518
TREV	Yes	N/A	2359	2460	2390	2518

WHEN RELIABILITY IS EVERYTHING...



AXIA
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 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

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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