

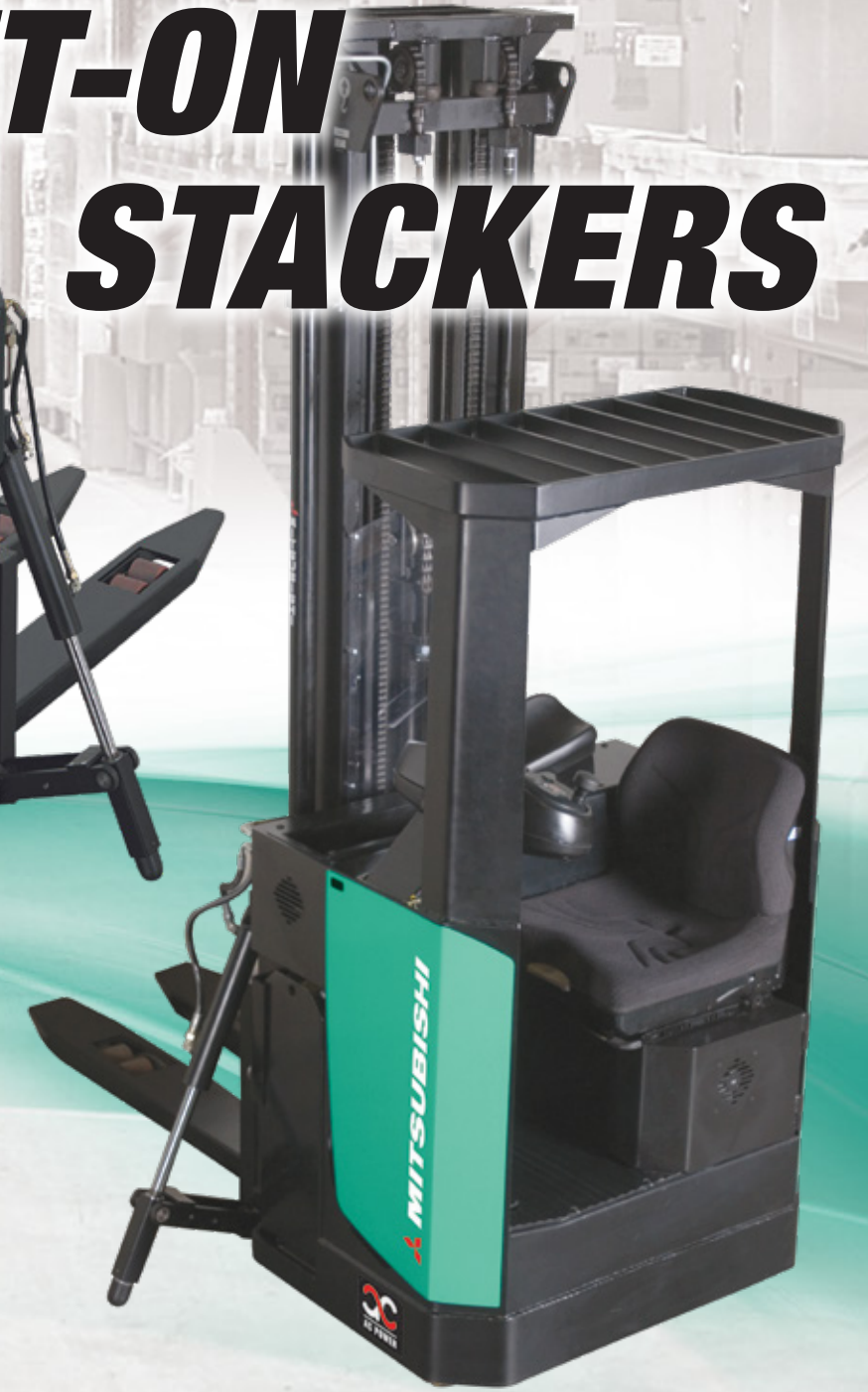
*Ready to Perform  
To Your Applications*



# **STAND-ON, SIT-ON STACKERS**

**SBR12-20N /  
SBS15-20N Series**

**1.2-2.0 TON**

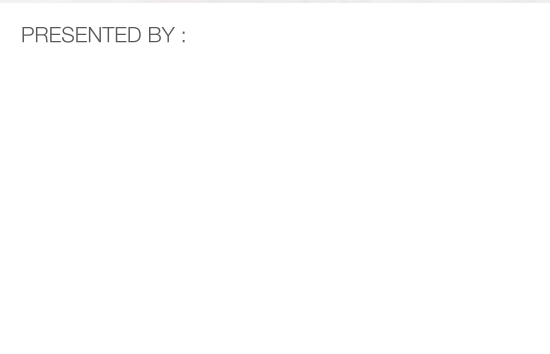


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Note: Performance specifications may vary depending on standard manufacturing tolerances, vehicle condition, types of tyres, floor or surface conditions, applications or operating environment. Trucks may be shown with non-standard options. Specific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



# Designed for Maximum productivity

## SBR12-20N Series (Stand-On)

*For duties which involve horizontal movement over large distances, as well as stacking, a Mitsubishi stand-on stacker is ideal. Importantly, these trucks are very compact and can work in narrower aisles than a reach truck.*

*A choice of three load capacities is available: 1.2, 1.6 and 2.0 tonne. The first two models will lift to a height of 6500 mm and the 2.0 tonne model to 6300 mm. Using the optional side stabilisers, residual capacity at higher lifts is increased.*

*Productivity is optimised by fast travel and lifting speeds, advanced electronic technology and ergonomic design. The operator enjoys a spacious compartment, quick on-off access, a comfortable standing position, good visibility and highly efficient fly-by-wire steering.*



DIAGONAL STANDING POSITION



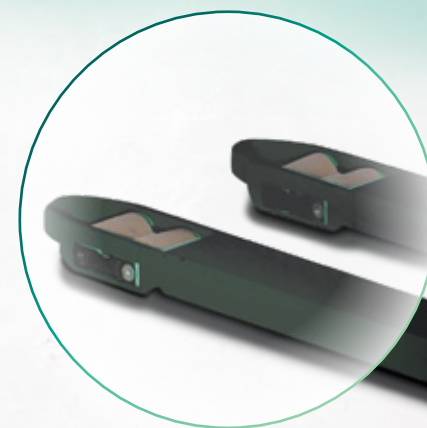
### Main Features

- **AC drive motor and controller technology** for powerful, flexible performance, fully programmable to match the needs of each operator and application perfectly.
- **Side stabilisers** increase residual capacities at higher lifts (standard on triplex mast).
- **Diagonal standing position** improves visibility and operator comfort.
- **Fly-by-wire steering** and compact dimensions allow efficient manoeuvring in very small spaces.
- **Tapered fork tips** ensure smooth, accurate pallet entry.
- **Regenerative braking** conserves energy, for extended shift life, and reduces brake wear.
- **Built-in diagnostics and easy service access** to all components minimises downtime and maximises productivity.

### Options

*In addition to the impressive list of standard features, a number of options are available including:*

- Initial lift
- Single, dual and triple masts
- Working lights
- Cold storage modification (class II, -25°C)



TAPERED FORK TIPS



# Performance, durability and comfort... for non-stop productivity

## SBS15-20N Series (Sit-On)

The 'do-it-all' SBS15-20N series not only stacks heavy loads at heights up to 6.5 meters but works in narrower aisles than a reach truck and transports goods efficiently over long distances. Powerful, fast and controllable, the SBSN combines excellent performance with effortless, precise steering, ergonomic controls and a comfortable operator compartment... for constant productivity throughout the longest of shifts.

### Drive

- **Powerful AC motor** means high drive speed and acceleration – even when loaded – plus smooth, quiet, controlled operation, extended shift length and lower maintenance requirements.

### Steering System

- **360° electronic 'fly-by-wire' steering** offers precise turning with minimal effort, even at high speeds.
- **Progressive steering** allows easy manoeuvring at low speeds and steady control when moving fast.

### Brakes

- **Regenerative braking** gives effective control, reduced brake wear and longer shift life.

### Hydraulics

- **Smooth hydraulics** ensure jolt-free fork movement for careful handling of loads.

### Electrical and Control Systems

- **Large battery compartment** accommodates high-capacity batteries (up to 500 Ah).
- **PIN code start-up** with driver-specific settings is included as standard to prevent unauthorised or inappropriate use.
- **Programmable controller** adjusts acceleration, travel speed, lift speed and braking to suit the application and operator – for greater versatility.
- **Battery roller system** is fitted as standard for rapid exchanges.
- **Battery discharge indicator** and lift cut-out are provided for battery protection.
- **Automatic, stepless speed reduction system** constantly monitors lift height and steering angle and adjusts speed to ensure safe, controlled performance.

### Frame and Body

- **Robust chassis** offers exceptional durability and driver protection.
- **High-visibility design** maximises view of fork tips and working area, especially on 2.0 tonne model.

### Mast and Fork Assembly

- **High stability, lifting power and mast strength** mean excellent residual capacities.
- **Extendable side stabilisers** offer extra residual capacity (standard on triplex masts, optional on duplex).
- **Rounded fork tips** ensure smooth pallet entry/exit and make it easier to enter the pallet at an angle.

### Operator Environment and Controls

- **Ergonomic operator compartment** with adjustable armrest and carefully positioned controls reduces driver fatigue and increases precision.
- **Full-suspension, fully adjustable seat** with optional hip restraints and belt keeps driver safe and comfortable through the longest of shifts.
- **Load weight indicator** is specified as standard to avoid exceeding safe capacity.
- **Clear LCD display** keeps operator and service engineer fully informed – helping to avoid damage and encourage maintenance.
- **User-friendly operator menu** gives easy-to-follow instructions and allows operator to tune truck to own preference.

### Other Features

- **Swing-open seat** allows quick and easy entry to all areas for checks and maintenance.
- **Long service interval** reduces cost of ownership and increases uptime.

### Options

- Wide variety of fork dimensions
- Customer name/logo/artwork on side panels
- Pallet entry and exit rollers
- Side stabilisers (standard on triplex masts, optional on duplex)
- Compulsory activation of side stabilisers at 2.5 m lift of higher.
- Choice of wheel materials
- List bracket or PC support
- Key switch instead of start/stop button

HIGH VISIBILITY DESIGN

FULL  
SUSPENSION  
SEAT

ROUNDED FORK TIPS

HIGH STABILITY,  
LIFTING POWER  
& MAST STRENGTH

ERGONOMIC  
OPERATOR COMPARTMENT

FULL  
SUSPENSION  
SEAT

SIDE STABILISERS



# SPECIFICATIONS

## SBR12-20N

Characteristics			Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
1	Manufacturer (abbreviation)		Mitsubishi	Mitsubishi	Mitsubishi	Mitsubishi
2	Manufacturer's model designation		SBR12N	SBR16N	SBR16NI	SBR20N
3	Power source: (battery, diesel, LP gas, petrol)		Battery	Battery	Battery	Battery
4	Operator type: pedestrian, (operator)-standing, -seated		Stand-on	Stand-on	Stand-on	Stand-on
5	Load capacity	Q (kg)	1200	1600	1600	2000
6	At load centre	c (mm)	600	600	600	600
7	Load wheel axle to fork face (forks lowered)	x (mm)	775	775	760	790
8	Wheelbase	y (mm)	1440	1440	1460	1595
Weight						
9	Truck weight with nominal load & battery	kg	2775*	3175*	3255*	4415*
10	Axle loadings with nominal load & battery, drive/load side	kg	1255/1520*	1295/1880*	1395/1920*	1750/2485*
11	Axle loadings without load & with battery, drive/load side	kg	1130/445*	1130/445*	1170/485*	1540/695*
Wheels, Drive Train						
12	Tyres: P=Polyurethane, PT=Power Thane, Vul=Vulkollan, drive/load side		Vul/Vul	Vul/Vul	Vul/Vul	Vul/Vul
13	Tyre dimensions, front		250 x 100	250 x 100	250 x 100	250 x 100
14	Tyre dimensions, rear		85 x 75	85 x 75	85 x 75	85 x 90
15	Castor wheel dimensions (diameter x width)		150 x 50	150 x 50	150 x 50	150 x 50
16	Number of wheels, front/rear (x=driven)		1x + 2/4	1x + 2/4	1x + 2/4	1x + 2/4
17	Track width (centre of tyres), load side	b10 (mm)	385	385	385	375
18	Track width (centre of tyres), drive side	b11 (mm)	595	595	595	595
Dimensions						
19	Height with mast lowered (see tables)	h1 (mm)	2385*	2385*	2500*	2710*
20	Free lift (see tables)	h2 (mm)	1815*	1815*	1815*	2060*
21	Lift height (see tables)	h3 (mm)	5400*	5315*	5400*	6300*
22	Overall height with mast raised	h4 (mm)	5940*	5940*	6055*	7130*
23	Initial lift	h5 (mm)	-	-	115	-
24	Height to top of overhead guard	h6 (mm)	2300	2300	2300	2300
25	Seat height or platform height	h7 (mm)	235	235	235	235
26	Fork height, fully lowered	h13 (mm)	90	90	92	90
27	Overall length	l1 (mm)	2000	2000	2050	2160
28	Length to fork face (includes fork thickness)	l2 (mm)	850	850	900	1010
29	Overall width	b1/b2 (mm)	890/1440**	890/1440**	880/1440**	890/1510**
30	Fork dimensions (thickness, width, length)	s/e/l (mm)	65/165/1150	65/165/1150	65/185/1150	65/195/1150
31	Outside width over forks (minimum/maximum)	b5 (mm)	550 - 685	550 - 685	570 - 685	570 - 685
32	Ground clearance at centre of wheelbase, with load (forks lowered)	m2 (mm)	20	20	20	20
33a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast (mm)	2506	2506	2546	2651
33b	Working aisle width (Ast3) with 1000 x 1200 mm pallets, load crosswise	Ast3 (mm)	2090	2090	2140	2215
34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast (mm)	2090	2090	2140	2215
34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3 (mm)	2449	2449	2495	2582
35	Turning circle radius	Wa (mm)	1665	1665	1700	1820
Performance						
36	Travel speed, with/without load	km/h	7.0 / 8.0	7.0 / 8.0	7.0 / 8.0	6.5 / 7.5
37	Lifting speed, with/without load	m/s	0.17/ 0.31	0.13/0.31	0.13/0.31	0.11/0.31
38	Lowering speed, with/without load	m/s	0.5/0.35	0.5/0.35	0.5/0.35	0.5/0.4
39	Gradeability, with/without load	%	7/10	7/10	7/10	6/10
40	Service brakes (mechanical/hydraulic/electric/pneumatic)		Electric	Electric	Electric	Electric
Electric Motors						
41	Drive motor capacity (60 min. short duty)	kW	2.2	2.2	2.2	2.2
42	Lift motor output at 15% duty factor	kW	5.5	5.5	5.5	5.5
43	Battery voltage/capacity at 5-hour discharge	V/Ah	24/375	24/375	24/375	24/575 - 625
44	Battery weight	kg	305	305	305	435 - 465
Miscellaneous						
45	Type of drive control		Stepless	Stepless	Stepless	Stepless
46	Noise level, mean value at operator's ear	dB(A)	68	68	68	62

\* with TREV 5400 mm mast on 1200 and 1600 kg models, 6300 mm mast on 2000 kg model.

\*\* without / with stabilisers extended.

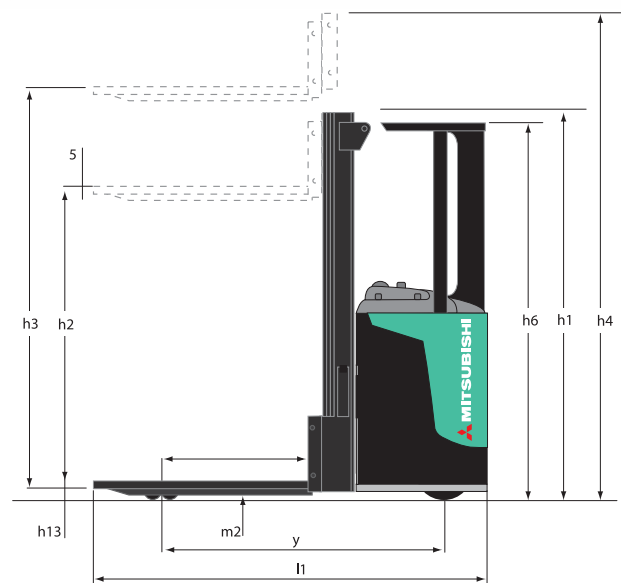
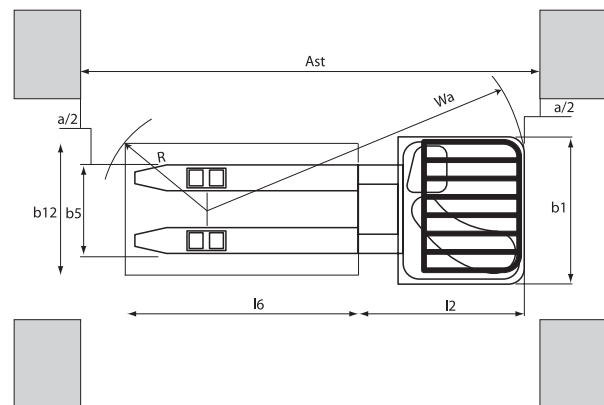
Ast = Wa + R + a

Ast = Working aisle width

Wa = Turning radius

a = Safety clearance = 2 x 100 mm

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



## SBS15-20N

Characteristics			Mitsubishi	Mitsubishi	Mitsubishi
1	Manufacturer (abbreviation)		Mitsubishi	Mitsubishi	Mitsubishi
2	Manufacturer's model designation		SBS15N	SBS15NI	SBS20N
3	Power source: (battery, diesel, LP gas, petrol)		Battery	Battery	Battery
4	Operator type: pedestrian, (operator)-standing, -seated		Sit-on	Sit-on	Sit-on
5	Load capacity	Q (kg)	1500	1500	2000
6	At load centre	c (mm)	600	600	600
7	Load wheel axle to fork face (forks lowered)	x (mm)	775	755	805
8	Wheelbase	y (mm)	1500	1520	1585
Weight					
9	Truck weight with nominal load & battery	kg	3260*	3340*	4100*
Wheels, Drive Train					
10	Tyres: P=Polyurethane, PT=Power Thane, Vul=Vulkollan, drive/load side		Vul/Vul	Vul/Vul	Vul/Vul
11	Tyre dimensions, front		250 x 100	250 x 100	250 x 100
12	Tyre dimensions, rear		85 x 75	85 x 75	85 x 90
13	Castor wheel dimensions (diameter x width)		150 x 48	150 x 48	150 x 48
14	Number of wheels, front/rear (x=driven)		1x + 2 / 4	1x + 2 / 4	1x + 2 / 4
15	Track width (centre of tyres), load side	b10 (mm)	385	385	375
16	Track width (centre of tyres), drive side	b11 (mm)	690	690	690
Dimensions					
17	Height with mast lowered (see tables)	h1 (mm)	2385	2500	2710
18	Free lift (see tables)	h2 (mm)	1810	1810	2060
19	Lift height (see tables)	h3 (mm)	5400	5400	6300
20	Overall height with mast raised	h4 (mm)	5940	6055	7130
21	Initial lift	h5 (mm)	-	115	-
22	Height to top of overhead guard	h6 (mm)	1930	1930	1930
23	Seat height or platform height	h7 (mm)	400	400	400
24	Fork height, fully lowered	h13 (mm)	90	92	90
25	Overall length	l1 (mm)	2110	2145	2160
26	Length to fork face (includes fork thickness)	l2 (mm)	960	960	1010
27	Overall width	b1/b2 (mm)	1050 / 1550**	1050 / 1550**	1050 / 1715**
28	Fork dimensions (thickness, width, length)	s / e / l (mm)	65 / 165 / 1150	65 / 185 / 1150	65 / 195 / 1150
29	Outside width over forks (minimum/maximum)	b5 (mm)	550-685	570-685	570-685
30	Ground clearance at centre of wheelbase, with load (forks lowered)	m2 (mm)	30	30	25
31a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast (mm)	2626	2633	2696
31b	Working aisle width (Ast3) with 1000 x 1200 mm pallets, load crosswise	Ast3 (mm)	2210	2230	2260
32a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast (mm)	2569	2583	2627
32b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3 (mm)	2410	2430	2460
33	Turning circle radius	Wa (mm)	1785	1785	1865
Performance					
34	Travel speed, with/without load	(km/h)	7.0 / 8.0	7.0 / 8.0	7.0 / 8.0
35	Lifting speed, with/without load	(m/s)	0.13 - 0.30	0.13 - 0.30	0.11 - 0.30
36	Lowering speed, with/wihtout load	(m/s)	0.50 - 0.35	0.50 - 0.35	0.50 - 0.40
37	Gradeability, with/wihtout load	%	7 / 10	7 / 10	6 / 10
38	Service brakes (mechanical/hydraulic/electric/pneumatic)		Electric	Electric	Electric
Electric Motors					
39	Drive motor capacity (60 min. short duty)	(kW)	2.2	2.2	2.2
40	Lift motor output at 15% duty factor	(kW)	5.5	5.5	5.5
41	Battery voltage/capacity at 5-hour discharge	(V/Ah)	24 / 375 - 500	24 / 375 - 500	24 / 375 - 500
42	Battery weight	(kg)	305 - 400	305 - 400	305 - 400
Miscellaneous					
43	Type of drive control		Stepless	Stepless	Stepless
44	Noise level, mean valud at operator's ear	dB(A)	66	66	66

Continuing improvement may lead to changes in these specifications.

\* 1500 kg models with TREV5400 mm mast, 2000 kg model with 6300 mm mast

\*\* without/with stabilisers extended

Ast = Working aisle width

Ast3 = Working aisle width (b12 ≤ 1000 mm)

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

Ast3 = Wa + l6 + a

Wa = Turning radius

l6 = Pallet length

x = Load wheel axle to fork face

b12 = Pallet width

a = Safety clearance = 2 x 100 mm

h1 Height with mast lowered

h2 Standard free lift

h3 Lift height

h4 Height with mast raised

h5 Full free lift

Q Lifting capacity, rated load

c Load centre (distance)

