



NSV12P
NSV12P(I)
NSV16P
NSV16P(I)
NSV16P(S)

**OUTSTANDING
VERSATILITY**

SPECIFICATIONS

PLATFORM STACKER TRUCKS 24V, 1.2 - 1.6 TONNES



ADAPTABLE POWER FOR DIVERSE ROLES

AS WELL AS STACKING UP TO 5.4 METRES, THESE VERSATILE PLATFORM STACKERS CAN BE USED IN PEDESTRIAN OR RIDE-ON MODE FOR INTERNAL TRANSPORT OVER ALL DISTANCES. THEY ARE ADAPTABLE TO A DIVERSITY OF APPLICATIONS IN NARROW SPACES, INCLUDING OCCASIONAL ORDER PICKING.



The NSV12P offers a 1.2 tonne capacity, for lighter duties, but is equipped to the same high standard as the other models. The NSV12P(I) is the 1.2 tonne truck fitted with the optional Initial lift feature.

The NSV16P handles loads up to 1.6 tonnes. In addition to the options applicable to all models, this stacker can be fitted with wide straddle legs if required (optional).



When specified with the optional Initial lift feature, the NSV16P(I) can raise its load legs to give extra ground clearance for travel on uneven floors and ramps. It can also handle two pallets at once, with one on the load legs and one on the forks.



The NSV16P(S), specified with the optional straddle feature, is ideal for handling extra-wide loads and bottom-boarded pallets. With load legs placed around the pallet, its forks are free to lift from ground level.

LOWER COST OF OWNERSHIP

- Weatherproofed sensors (IP65 or IP67), long service intervals and fast access features – including removable motor cover – reduce maintenance needs and improve uptime.
- PIN code login prevents unauthorised truck use.
- Onboard computer simplifies fault diagnostics, truck and battery condition monitoring, and setting of driver-specific parameters.
- BDI (battery discharge indicator) helps prevent damaging deep discharge and supports optimal timing of battery changes.

UNMATCHED PRODUCTIVITY

- Latest AC drive motor technology delivers higher torque, faster travel (8.5 km/h) and easier control, for top-class performance.
- Tapered fork profile enables faster pallet entry in racking or block stacking.
- Compact dimensions and easy, precise controllability allow rapid manoeuvring, even in the tightest spaces.
- Platform folds flat against chassis when not needed, to save space.
- Li-ion battery option makes continuous operation possible, without battery changes, using fast opportunity charging during short breaks.
- When fitted with the optional Straddle feature, NSV16P(S) can handle closed pallets and wider loads (and wide straddle option is available on NSV16P).
- With the initial lift option, NSV12P(I) and NSV16P(I) allow operation on uneven floors, on ramps and as double pallet handlers.

SAFETY AND ERGONOMICS

- Ergonomic tiller head, shaped to suit all hand sizes, features large, easily reached lift/lower, speed and other controls, for highly controllable operation even when wearing gloves.
- Keypad and display on tiller arm speed up truck activation, setting selection and availability of information such as battery status.
- Cast-iron platform safely resists deformation, provides excellent cushioned comfort and has a low step height for easy on-off access.
- Platform angle encourages drivers to bend their knees, creating a relaxed standing position which makes use of the body's natural suspension.
- The optional cushioned, comfortable side guards (optional) are quick and simple to fold out or in – one-handed and without leaving the platform – for protection and access.
- Fixed platform options offer extra safety and comfort with a choice of barrier designs and entry/exit points.
- Electronic power steering option avoids physical connection between the tiller arm and drive wheel, to prevent transmission of bumps, twists and turns to the driver's hand, wrist and arm.
- Progressive steering adjusts sensitivity according to speed and tiller angle, while resistance and feedback from the drive wheel help further in optimising the driving experience (if power steering option selected).
- Overhead guard option ensures safe working at heights above 1.8 m, without having to leave the platform or fold down the side bars.

STANDARD EQUIPMENT AND OPTIONS

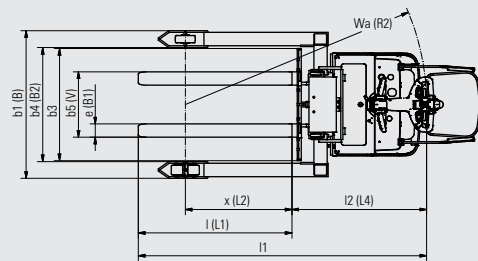
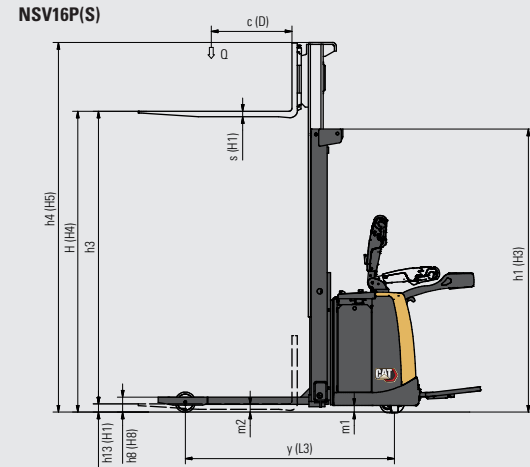
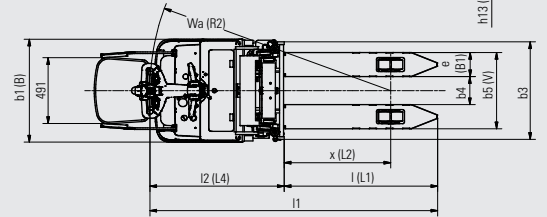
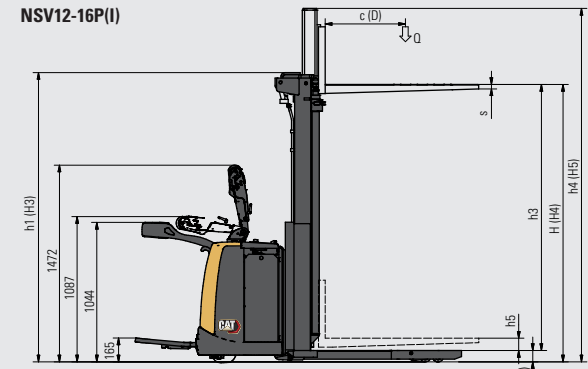
	NSV12P	NSV12P(I)	NSV16P	NSV16P(I)	NSV16P(S)
GENERAL					
Micro-computer incl. hour meter and battery indicator with cutout (ATC T4)	●	●	●	●	●
PIN code login 100 codes	●	●	●	●	●
Foldable platform	●	●	●	●	●
Foldable sidebars	○	○	○	○	○
Short tiller arm with display and keypad	●	●	●	●	●
Chill store design, down to 1°C, with rust-protected axles	●	●	●	●	●
Speed regulated lift motor	●	●	●	●	●
Proportional valve for lowering, controlled by rocker switch on tiller head	●	●	●	●	●
Polyurethane wheels	●	●	●	●	●
Single load wheel polyurethane	●	●	–	–	●
Tandem load wheels polyurethane	○	○	●	●	○
Battery rollers	●	●	●	●	●
Li-ion batteries	○	○	○	○	○
ENVIRONMENT					
Cold store design, 0C° to -35C°	○	○	○	○	○
DRIVE AND LIFT CONTROLS					
Heavy duty tiller head - with key switch entry	○	○	○	○	○
Tiller arm - adjustable in length	○	○	○	○	○
Tiller up drive	○	○	○	○	○
WHEEL OPTIONS					
Polyurethane traction and load wheels	●	●	●	●	●
Power friction traction wheel	○	○	○	○	○
Non-marking drive wheel	○	○	○	○	○
Anti-static drive wheel	○	○	○	○	○
OTHER OPTIONS					
Driver-protected platform rear entry	○	○	○	○	○
Driver-protected platform side entry	○	○	○	○	○
Power steering	○	○	○	○	○
Overhead guard	○	○	○	○	○
Load backrest low or high	○	○	○	○	○
Key switch entry	○	○	○	○	○
12V DC power socket	○	○	○	○	○
Equipment bar	○	○	○	○	○
Writing desk incl. RAM C holder	○	○	○	○	○
Equipment bar holder RAM system size C	○	○	○	○	○
Equipment bar holder RAM system size C, 2 pcs	○	○	○	○	○
Equipment bar holder RAM size D	○	○	○	○	○
Special RAL colour	○	○	○	○	○

The optional Initial lift (I) or Straddle (S) features are shown in brackets. These are not separate models.

● Standard ○ Option

Characteristics		
1.1	Manufacturer	
1.2	Manufacturer's model designation	
1.3	Power source	
1.4	Operator type	
1.5	Load capacity	Q (kg)
1.6	Load centre distance	c (mm)
1.8	Load wheel axle to fork face (forks lowered)	x (mm)
1.9	Wheelbase	y (mm)
2.0 Weight		
2.1	Truck weight without load, with maximum battery weight	kg
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg
3.0 Wheels, Drive Train		
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side	
3.2	Tyre dimensions, drive side	(mm)
3.3	Tyre dimensions, load side	(mm)
3.4	Castor wheel dimensions (diameter x width)	(mm)
3.5	Number of wheels, load / drive side (x = driven)	
3.6	Track width (centre of tyres), drive side	b10 (mm)
3.7	Track width (centre of tyres), load side	b11 (mm)
4.0 Dimensions		
4.2b	Height	h1 (mm)
4.3	Free lift	h2 (mm)
4.4	Lift height	h3 (mm)
4.5	Height with mast extended	h4 (mm)
4.6	Initial lift	h5 (mm)
4.7	Height to top of overhead guard	h6 (mm)
4.8	Seat or stand height	h7 (mm)
4.9	Height of tiller arm / steering console (min/max)	h14 (mm)
4.10	Height of support legs	h8 (mm)
4.15	Fork height, fully lowered	h13 (mm)
4.19	Overall length	l1 (mm)
4.20	Length to fork face	l2 (mm)
4.21	Overall width	b1/b2 (mm)
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)
4.24	Fork carriage width	b3 (mm)
4.25	Outside width over forks (minimum / maximum)	b5 (mm)
4.26	Inner width of support legs	b4 (mm)
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2 (mm)
4.33c	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise, platform up/down	Ast (mm)
4.33d	Working aisle width (Ast3) with 1000 x 1200 mm pallets, load crosswise, platform up/down	Ast3 (mm)
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)
4.34d	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast3 (mm)
4.35	Turning radius	Wa (mm)
5.0 Performance		
5.1	Travel speed, with / without load	km / h
5.2	Lifting speed, with / without load	m / s
5.3	Lowering speed, with / without load	m / s
5.7	Gradeability, with / without load	%
5.8	Maximum gradeability with / without load	%
5.9	Acceleration time (10 metres) with / without load	s
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)	
6.0 Electric motors		
6.1	Drive motor capacity (60 min. short duty)	kW
6.2	Lift motor output at 15% duty factor	kW
6.3	Battery to DIN	no
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah
6.5	Battery weight	kg
6.6b	Energy consumption according to VDI 60 cycle	kWh / h
8.0 Miscellaneous		
8.1	Type of drive control	
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)
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)

Cat Lift Trucks	Cat Lift Trucks	Cat Lift Trucks	Cat Lift Trucks	Cat Lift Trucks
NSV12P	NSV12P(I)	NSV16P	NSV16P(I)	NSV16P(S)
Battery	Battery	Battery	Battery	Battery
Pedestrian/stand-on	Pedestrian/stand-on	Pedestrian/stand-on	Pedestrian/stand-on	Pedestrian/stand-on
1250	1250	1600	1600	1600
600	600	600	600	600
750	750	800	800	800
1412	1646	1529	1501	1565
1317 h13+h3=4200	1317 h13+h3=4200	1230 h13+h3=3600	1230 h13+h3=3600	1230 h13+h3=3600
1130/1457	1130/1457	738/1085	738/1085	930/2030
924/403	924/403	930/350	930/350	940/420
PT	PT	Vul / Vul	Vul / Vul	Vul / Vul
230x70	230x70	230x90	230x90	230x90
85x99	85x99	85x70	85x70	85x70
140x60	140x60	140x60	140x60	140x60
1x+1/2	1x+1/2	1x+1/4	1x+1/4	2+1x/4
501	501	501	501	550
380	380	390	980/1180	980/1180
see tables	see tables	see tables	see tables	see tables
see tables	see tables	see tables	see tables	see tables
see tables	see tables	see tables	see tables	see tables
see tables	see tables	see tables	see tables	see tables
-	110	-	110	-
2288	2288	-	-	-
165	165	165	165	145
1090/1470	1090/1470	1090/1470	1090/1470	1141/1341
82	82	80	80	-
90	90	85	85	75
2107	2216 / 2622	2140/2524 (l=1150)	2185/2569 (l=1150)	2175 / 2559 (l=1150)
907	1016 / 1422	990/1374	1035/1419	887 / 1343
770	770	770	770	1105/1305
65/180/1200,1000	65/180/1200,1000	65/180/1150,1000	65/180/1200,1000	40/100/1150,1000,800
590	590	730	730	840
570	570	570	570	216/773
210	210	265	235	855/1055
28	28	25	25	38
2526 / 2909	2515 / 2935	2535/2920 (l=1000)	2604/2979 (l=1000)	2547 / 2931(l=1000)
2479 / 2862	2537 / 2957	2557/2942 (l=1150)	2538/2913 (l=1150)	2593 / 2977 (l=1150)
2325 / 2708	2515 / 2935	2390/2775	2372/2747	2579 / 2963
1675 / 2058	1865 / 2285	1790/2175	1172/2147	1826 / 2210
6/6	6/6	8.5/8.5	8.5/8.5	8.5/8.5
0.13 / 0.26	0.13 / 0.26	0.16/0.33	0.16/0.33	0.13/0.23
0.33 / 0.21	0.33 / 0.21	0.39/0.31	0.39/0.31	0.20/0.12
7 / 9	7 / 9	-	-	-
7 / 9	9.9 / 21.4	7	14.6/26.5	10/10
7.9 / 7.5	7.9 / 7.5	6.6/5.6	6.6/5.6	6.6/5.6
Electric	Electric	Electric	Electric	Electric
1.3	1.3	2.2	2.2	2
1	1	3.6	3.6	3
no	no	NA	NA	NA
24V / 220Ah-400Ah	24V / 220Ah-400Ah	24V/220Ah-400Ah	24V/220Ah-400Ah	24V/375Ah
250-370	250-370	250-370	250-370	285
-	-	1.138	1.138	1.138
Stepless	Stepless	Stepless	Stepless	Stepless
62.8	-	67.5	67.5	67.5



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

Some options affect VDI measurements, these options are shown between brackets ('I'), and are not separate models.

NSV12P(I)				NSV12P(I)			
Mast Type	h3+h13	h1*	h2+h13	Mast Type	h3+h13	h1*	h2+h13
	mm	mm	mm		mm	mm	mm
Duplex Without Free Lift (DS)	2690	1845	80	Duplex With Free Lift (DEV)	2690	1845	1433
	2990	1995	80		2990	1995	1583
	3290	2150	80		3290	2150	1738
	3590	2300	80		3590	2300	1888
	4190	2600	80		4190	2600	2188

* With Initial Lift (I): h1 + 110mm when support legs in upper position

NSV16P(I,S)				NSV16P(I,S)			
Mast Type	h3+h13	h1*	h2+h13	Mast Type	h3+h13	h1*	h2+h13
	mm	mm	mm		mm	mm	mm
Duplex Without Free Lift (DS)	1670	1390	130	Duplex With Free Lift (DEV)	1670	1385	835
	2400	1755	130		2400	1750	1200
	2900	2005	130		2900	2000	1450
	3200	2155	130		3200	2150	1600
	3600	2355	130		3600	2350	1800
	3800	2455	130		3800	2450	1900
	4200	2655	130	4200	2650	2100	
	4350	-		Triplex With Free Lift (TREV)	3600	1750	1270
	4800	-			4350	2000	1520
5400	-		4800		2150	1670	
				5400	2350	1870	

* With Initial Lift (I): h1 + 110mm when support legs in upper position; with Straddle (S): h1 - 30mm

Mass Performance and Capacity

- 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)




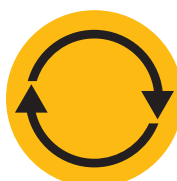



LI-ION BATTERIES

TIME TO SWITCH?



Lithium-ion (Li-ion) battery technology is available in the Cat® electric counterbalance and warehouse truck ranges. While lead-acid batteries remain a popular choice for our customers, and still have much to offer, they present various challenges which Li-ion can overcome.

Perhaps the most noticeable change when switching to Li-ion is the use of opportunity charging. Instead of exchanging batteries between shifts, you can simply plug into a fast charger during short breaks and keep the same battery going 24/7. This, together with other efficiency, environmental and safety benefits, makes Li-ion a very appealing alternative.

			
LONGER LIFE	HIGHER EFFICIENCY	LONGER RUNTIME	CONSISTENT PERFORMANCE
			
FASTER CHARGING	NO BATTERY CHANGING	NO DAILY MAINTENANCE	INBUILT PROTECTION

Cat Li-ion advantages over lead-acid

Li-ion is an investment which should be viewed against ongoing savings on energy, equipment, labour and downtime.

- **Longer life** – 3 to 4 times lead-acid lifespan – reduces overall battery investment
- **Higher efficiency** – energy losses during charging and discharging are up to 30% lower, so electricity consumption is reduced
- **Longer runtime** – thanks to more efficient battery performance and use of opportunity charges, which can be given at any time without damaging the battery or shortening its lifespan
- **Consistently high performance** – with a more constant voltage curve – maintains greater truck productivity, even toward the end of a shift
- **Faster charging** – enables full charge in as little as 1 hour with the fastest chargers
- **No battery changing** – fast opportunity charges – 15 minutes for several hours of extra runtime – enable continuous operation with just one battery and minimise the need to buy, store and maintain spares
- **No daily maintenance** – the battery stays on board the truck for charging and there is no need for water top-ups or electrolyte checks
- **No gas** – or acid spills – avoids the space, equipment and running costs of a battery room and ventilation system
- **Inbuilt protection** – intelligent battery management system (BMS) automatically prevents excessive discharge, charge, voltage and temperature, as well as virtually eliminating misuse

Batteries and chargers with different capacities are available. Your dealer will identify the best combination for your needs. You should also ask your dealer about optional 5-year warranties, subject to annual check-ups, which give extra peace of mind.

NSV12/16P LI-ION BATTERY AND CHARGER	
Battery capacity, Ah	208 / 260
Charger capacity, A, 1 – 2,5 hour*	100 / 200

* Both values possible for 208Ah Li ion battery, depending on charger.

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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 Cat lift trucks Dealer. Cat Lift Trucks follows a policy of continual product improvement. For this reason, some materials, options and specifications could change without notice.

