



NPS20N2  
NPS30N2

# SIT-ON POWER

## SPECIFICATIONS

**SIT-ON POWER PALLET TRUCKS** 24V, 2.0 - 3.0 TONNES





# COMFORTABLY EQUIPPED FOR LONG AND HEAVY SHIFTS

CAT® SIT-ON POWER PALLETS MAXIMISE ERGONOMICS AND COMFORT FOR INTENSIVE INTERNAL TRANSPORT WORK. FAST AND POWERFUL, THEY CAN MOVE HEAVY AND LONG LOADS QUICKLY OVER LARGE DISTANCES. THEY'RE ALSO COMPACT AND HIGHLY MANOEUVRABLE IN NARROW AISLES AND HIGH-DENSITY STORAGE AREAS. MAIN APPLICATIONS INCLUDE PRODUCTION, WAREHOUSE, CROSS-DOCK AND MULTI-SHIFT OPERATIONS.



Stress, strain and fatigue on the driver are minimised by a quiet, low-vibration, ergonomically equipped operating compartment. Designed for day-long comfort, it offers easy entry and exit, plenty of space, and an adjustable suspension seat. Optional extra luxuries include electrically adjustable floor height for the perfect fit.



Progressive electric power steering, with automatic sensitivity adjustment, is delivered via an ergonomic, positionally adjustable, mini steering wheel. Other user-friendly controls are easily reached from an anatomically optimised armrest which can also be adjusted to the driver's ideal position. Advanced drive and electronic control systems make every action fast and smooth.



Faster and requiring less aisle width (AST) than platform trucks, sit-on power pallets can manoeuvre quickly in smaller spaces. What's more, there are no delays for folding and unfolding of platforms and sidebars. Aisles can be narrowed to make fuller use of your floor space for storage.



Contained and protected within the truck's robust chassis and optional overhead guard, operators can drive rapidly and confidently. Confidence is further enhanced by automated stability aids, which optimise speeds to match activities and enable fast but safe performance. For non-stop productivity and maximum efficiency, you can choose Li-ion battery power.

## LOWER COST OF OPERATION

- Robust construction and component sealing minimises damage and wear, even in demanding multi-shift operations.
- Multifunctional display option with onboard diagnostics encourages correct use of truck and speeds up maintenance.
- PIN code identification prevents unauthorised use, while choice of PRO, ECO and EASY modes matches truck performance to operator experience and application. (Only with multifunctional display option.)
- Easy, fail-safe battery lock avoids delays and accidents at exchanges.
- Fast maintenance access features, including a swing-out seat, combine with low servicing requirements and long service intervals to reduce downtime.
- Availability of fully integrated Li-ion battery increases battery efficiency, runtime and lifespan, while minimising maintenance needs, for even lower total cost of operation (TCO).

## UNMATCHED PRODUCTIVITY

- Advanced AC motor and control technology enables fast, smooth and precise driving and load handling.
- Progressive electric power steering automatically adjusts sensitivity according to speed, for high precision in tight manoeuvres and high stability when travelling fast and straight.
- Automatic cornering control reduces maximum travel speed according to steering angle, to ensure quick but safe, stable and confident turns.
- Angled fork tips permit faster pallet entry with less risk of damage.
- With Li-ion battery, performance is enhanced and fast opportunity charging is possible, via easily accessible connector, for continuous operation without battery changes.
- With lead-acid battery, an optional plug on the machine housing allows quick and easy charging without disconnecting the battery.
- Battery on steel rollers (option on Junior) with bearings enables rapid changes, when necessary, with minimal interruption of productivity.
- High ground clearance avoids sticking on ramps and uneven floors.
- 360-degree steering option enables fluid turning without stopping to change direction.
- Increased drive speed option gives maximum of 10 km/h with load leading and 12 km/h with load trailing.

## SAFETY AND ERGONOMICS

- Enclosed operator position ensures all-round protection by heavy-duty chassis, integrated bumper and – optionally – overhead guard pillars and roof.
- Comfortable operator compartment minimises strain and tiredness with low step-in height, unobstructed floor, comfortable, adjustable suspension seat, minimal vibration and plenty of space for drivers of all sizes.
- Electrically adjustable floor height (70 mm) option combines with adjustment of armrests and seat to give the perfect fit for each driver.
- Adjustable mini steering wheel on floating armrest allows a relaxed operator posture, proven to reduce neck/back strain and risk of RSI, and quickly folds up for easy entry/exit.
- Midi steering wheel option offers adjustable column length and angle, and folds up for easy entry/exit.
- Height-adjustable armrest comfortably supports wrist while positioning hand ideally to operate fingertip hydraulic levers and other controls simultaneously.
- Hand-operated direction switch option offers alternative to switching via pedal.
- Clear all-round and fork-tip view is achieved through careful design of fork carriage, overhead guard, pillars and chassis, and by low-reflection surfaces.
- Optional overhead guard can be specified with alternative designs such as panoramic, transparent, polycarbonate roof for high upward visibility and additional protection from falling objects.
- Low-noise specification includes quiet, temperature-controlled fans and speed-regulated lift pump motors, for a pleasant operator environment.
- Working aids include large tool storage compartment – on engine panel and accessible from outside truck – plus holders for smaller equipment, phone and drinks.
- Intuitive multifunctional display option keeps drivers fully informed and is optimally positioned and angled for clear viewing.



# STANDARD EQUIPMENT AND OPTIONS

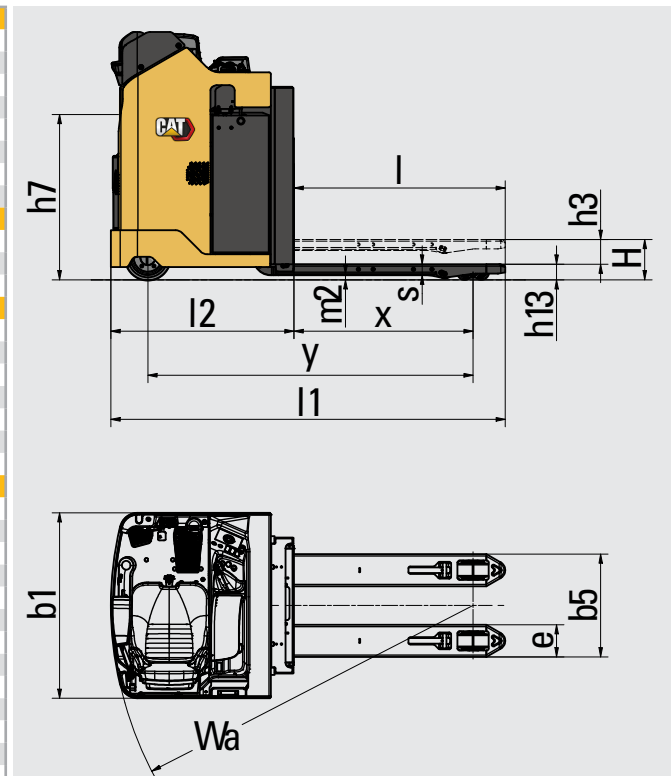
	NPS20N2	NPS30N2
<b>GENERAL</b>		
Standard display incl. hour meter and battery indicator	●	●
Key switch entry	●	●
Electric power steering	●	●
Speed-regulated lift motor and proportional valve for lowering	●	●
Tandem load wheels Vulkollan	●	●
Adjustable armrest, right side	●	●
Adjustable steering wheel, 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)	●	●
Chill store design, down to -10°C	●	●
<b>POWER SOURCE</b>		
Li-ion batteries*	○	○
Lead-acid batteries	○	○
<b>ENVIRONMENT</b>		
Cold store design, 0°C to -30°C	○	○
<b>DRIVE AND LIFT CONTROLS</b>		
Mini steering wheel with floating armrest	●	●
Midi steering wheel	○	○
Fingertip controls for lifting/lowering	●	●
Hands-free direction control (HFDC)	●	●
Hand-operated direction control (HODC)	○	○
<b>WHEEL OPTIONS</b>		
Vulkollan	●	●
Tractothan	○	○
Super Grip	○	○
<b>OTHER OPTIONS</b>		
Overhead guard	○	○
Panoramic high-vision polycarbonate roof (with overhead guard)	○	○
Electrically adjustable floor height, 70 mm	○	○
360-degree steering	○	○
Multifunctional display incl. BDI and hour meter, PIN code login (100 codes) and graphic icons	○	○
Load backrest	○	○
Key switch entry (in combination with multifunctional display)	○	○
12V DC power socket	○	○
5V 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.

● 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)
Weight		
2.1b	Truck weight without load, with maximum battery weight	kg
2.2	Axle loadings with nominal load and maximum battery weight, drive/load side	kg
2.3	Axle loadings without load and with maximum battery weight, drive/load side	kg
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)
Dimensions		
4.4	Lift height	h3 (mm)
4.7	Height to top of overhead guard	h6 (mm)
4.8	Seat or stand height	h7 (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)
4.25	Outside width over forks (minimum/maximum)	b5 (mm)
4.32	Ground clearance at centre of wheelbase (forks lowered)	m2 (mm)
4.33a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast (mm)
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast (mm)
4.34b	Working aisle width (Ast3) with 800 x 1200 mm pallets, load lengthwise	Ast3 (mm)
4.35	Turning radius	Wa (mm)
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
5.9	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
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah
6.5	Battery weight	kg
Miscellaneous		
10.7.1	Type of drive control	

Cat Lift Trucks	Cat Lift Trucks
NPS20N2	NPS30N2
Battery	Battery
Sit-on	Sit-on
2000	3000
600	600
975	975
1771	1771
1360	1360
1488 / 1872	1688 / 2672
1088 / 272	1088 / 272
Vul / Vul	Vul / Vul
250 x 105	250 x 105
85 x 70	85 x 70
150 x 55	150 x 55
4 / 1x + 1	4 / 1x + 1
706	706
385	385
135	135
2110 opt	2110 opt
966	966
88	88
2147	2147
997	997
1010	1010
60 / 175 / 1150	60 / 175 / 1150
560	560
25	25
2585	2585
2601	2601
2396	2396
1909	1909
10/10	9/9
0.07 / 0.09	0.06 / 0.10
0.12 / 0.09	0.10 / 0.07
7.0 / 6.0	7.5 / 6.0
Electric	Electric
2.7	2.7
2.2 (5%)	2.2 (5%)
24 / 575 - 775	24 / 575 - 775
460-620	460-620
AC	AC



$$Ast = Wa + R + a$$

$$Ast3 = Wa + l6 - x + a$$

$$Ast = \text{Working aisle width}$$

$$Wa = \text{Turning radius}$$

$$a = \text{Safety clearance} = 2 \times 100 \text{ mm}$$

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

# 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.



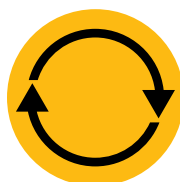
**LONGER  
LIFE**



**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.

[info@catlifttruck.com](mailto:info@catlifttruck.com) | [www.catlifttruck.com](http://www.catlifttruck.com)

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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.



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