



# DOUBLE-LOAD PLATFORM POWER

NPV20N3D

NPF20N3DR

NPF20N3DS

## SPECIFICATIONS

**PLATFORM DOUBLE PALLET HANDLERS 24V, 2.0 TONNES**





# HOW TO WORK TWICE AS FAST

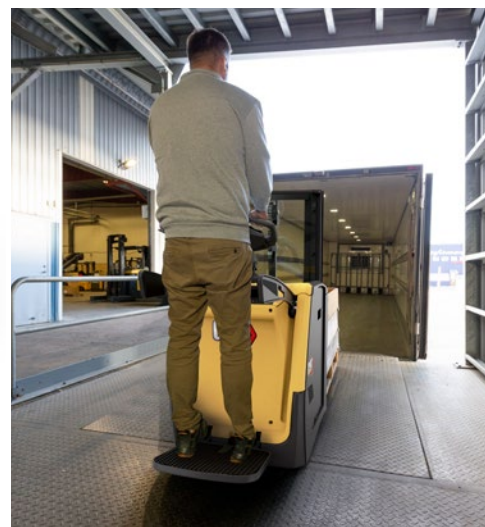
IT'S SIMPLE: CARRY TWO PALLET LOADS AT ONCE. OUR TIME-SAVING PLATFORM DOUBLE HANDLERS ARE IDEAL FOR INTENSIVE LORRY LOADING AND UNLOADING WITH DOUBLE-STACKED GOODS. THEY ALSO HALVE THE NUMBER OF MOVEMENTS IN CROSS-DOCKING AND INTERNAL TRANSPORT OVER ALL DISTANCES.



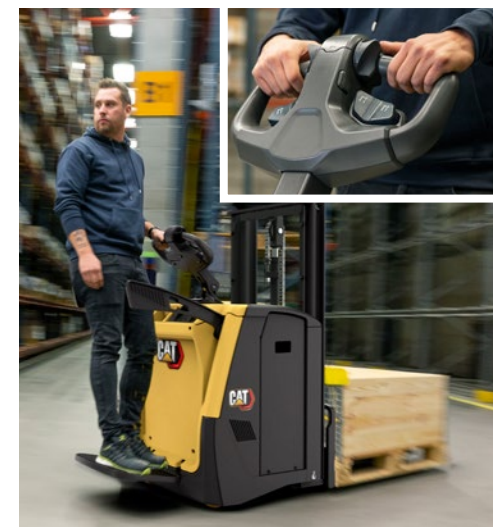
Double handling is achieved by placing one pallet load on the straddle legs and one on the forks. With this arrangement, the truck remains compact and is highly manoeuvrable even in tight spaces.



Application-matched choices include a foldable platform or, if you prefer, an enclosed, fixed platform with side or rear entry. You can choose between three steering types, two maximum lift heights, lead-acid or Li-ion battery power, and many extra options.



All platforms are comfortably damped, but fixed versions also offer optional electric adjustment according to the operator's weight and preference. If his/her foot is outside the platform, an automatic safety option on rear-entry models slows or stops the truck.



Ergonomic advances include the *ProRide+* system which simultaneously maximises traction, damping and stability, even on slippery, wet or irregular surfaces and when cornering. Meanwhile, the class-leading *emPower* tiller head's user-friendly operation, linked to your chosen steering technology, enables rapid, precisely controlled performance.

## LOWER COST OF OPERATION

- Fully weather-protected and impact-resistant tiller head is sealed to IP65 standard and reinforced for high durability.
- Sealing of connectors, sensors and other key components combines with robust construction, protected display location, shock and accident resilience, long service intervals and fast access features – including removable motor cover – to reduce maintenance needs and improve uptime.
- Standard display includes BDI (battery discharge indicator) to help prevent damaging deep discharge and support optimal timing of battery changes.
- Multifunctional display option offers clear information on truck and battery condition, faults and actions, and enables setting of operator IDs and PIN code access to avoid unauthorised truck use.
- Compatibility of parts reduces stock-related costs for servicing of these and other Cat® trucks.

## UNMATCHED PRODUCTIVITY

- Double pallet handling capability halves the number of transport movements required.
- Initial lift (120 mm) allows clearance under load and makes work easier on steep ramps and loading locks.
- Compact dimensions combine with easy, accurate handling to allow quick manoeuvring, even in tight spaces.
- Fully integrated Li-ion technology makes continuous operation possible, without battery changes, using fast opportunity charging during short breaks. (Both Li-ion and lead-acid versions are available.)
- Exceptional levels of comfort, control, traction and stability keep operators alert, confident and productive, however intense their workload.
- Three performance modes are selectable to suit individual users and applications: Pro for advanced operators and intensive operations; Eco to blend low energy consumption with high productivity; Easy for learners and sensitive goods handling. (These are only available with multifunctional display option.)
- Latest AC drive motor technology delivers higher torque and easier controllability, for top-class performance.
- Proportional lift/lower control via rocker buttons enables quick, smooth and fine-tuned fork movements.

## SAFETY AND ERGONOMICS

- Unique *ProRide+* system is a milestone advance in power pallet truck development which solves the age-old problem of how to combine effective traction, damping and stability.
- Unique floating drive unit design works with additional friction force from the hydraulic system to maximise drive wheel pressure and traction, so wheelspin on slippery floors is prevented and braking performance optimised.
- Unique patented castor wheel design uses variable damping to minimise shocks and vibration, even on rough surfaces, and features a locking function which maintains stability during turns, with or without loads.
- Best-in-class *emPower* ergonomic tiller head gives easier access to controls with a unique design that achieves the optimum distance between hand and lift/lower buttons.
- Ergonomically designed tiller head operating features include optimised handle shape and cross-section, large hand space, enlarged horn and lift/lower buttons, and an optimally angled throttle wheel with seven convenient finger positions.
- Dual throttle wheel controls allow easy reach with either hand and can be used accurately even when operator is wearing gloves.
- Tiller-type power steering via a short tiller arm features a hydraulic damper and works without physical connection to the drive wheel – avoiding transmission of bumps, twists and turns, while enabling comfortable, controlled, precise manoeuvring. (Available on folding platform and rear-entry fixed platform models.)
- *Comfort Steering* via a tiller head without arm – as on an electric scooter – maximises power-steered control and precision, with the aid of a damper, while avoiding shock, vibration, strain and fatigue in the operator's hands, wrists and arms. (Available on fixed platform models.)
- Mechanical steering option provides a long tiller arm for a simple, low-effort manoeuvring solution in less intense work environments. (Only available on folding platform models.)
- Electronic steering technology automatically adjusts sensitivity according to steered angle and truck speed, and gives resistance and feedback, for controlled travel and full confidence. (On power-steered trucks.)
- Cornering control automatically slows truck down when turning, to maintain safe motion. (On power-steered trucks.)

- High-comfort damping on both folding and fixed platforms minimises impacts on the knees, especially, and acts progressively with increasing operator weight, while ergonomic controls and steering further reduce effort and fatigue.
- Unique electrically adjustable damping option on fixed platform models is optimised for each operator's weight and preference at the touch of a button, providing a cost-effective increase in comfort.
- Overhead guard protects operator from falling goods. (Standard on fixed platform models with higher-lifting mast. Optional on all others.)
- Protective side bars on folding platform models are high-positioned, cushioned, comfortable, and shock-resistant, and are deployed quickly and simply – with one hand – to help avoid falls and defend against impacts.
- Fixed platform models give extra protection and comfort, with low step height and a choice of rear and side entry barrier designs.
- Optional foot protection system automatically slows/stops the truck if foot is outside platform. (Rear entry fixed platform models.)
- Rugged build includes compact but heavy-duty chassis, integrated bumper and cast-iron platform to resist deformation and protect the operator.

# STANDARD EQUIPMENT AND OPTIONS

	NPV20N3D	NPF20N3DR	NPF20N3DS
<b>GENERAL</b>			
Micro-computer with standard display incl. hour meter and battery indicator	●	●	●
Initial straddle lift	●	●	●
Foldable platform with foldable side protection bars	●	—	—
Fixed platform, rear entry	—	●	—
Fixed platform, side entry	—	—	●
Mechanical steering tiller arm	●	—	—
Power steering tiller arm	○	●	—
Comfort Steering tiller	—	○	●
Crossway pallet indication on forks, for EU pallet long side handling	●	●	●
Vulkollan® drive wheel	●	●	●
Tandem load wheels dia 85 mm, Vulkollan®	●	●	●
Single load wheel dia 85 mm (max. load weight = 1600 kg)	○	○	○
Closed pallet entry/exit, climbing wheels	○	○	○
Quick release of battery lock	○	○	○
Battery steel rollers	○	○	○
<b>POWER SOURCE</b>			
Li-ion batteries*	○	○	○
Lead-acid batteries	○	○	○
<b>ENVIRONMENT</b>			
Grease nipples in lifting profiles and rust protected axles	●	●	●
Chill store design, down to -10°C	●	●	●
Cold store design, down to -30C° **	○	○	○
<b>DRIVE AND LIFT CONTROLS</b>			
Speed regulated lift motor and proportional valve for lowering, controlled by large rocker switch on tiller head	●	●	●
Tiller-up drive	○	—	—
<b>WHEEL OPTIONS</b>			
Vulkollan®	●	●	●
Tractothan	○	○	○
Super grip	○	○	○
<b>OTHER OPTIONS</b>			
Power steering	○	●	●
Multi-function display incl. BDI and hourmeter, PIN code log in (99 codes) and graphic icons	○	○	○
Load guard backrest	○	○	○
Key switch entry	●	●	●
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	○	○	○
Increased drive speed with/without load 10.0/12.5 km/h (only available with power steering)	○	○	○
Active Spin Reduction, ASR	○	○	○
Special RAL colour	○	○	○
Battery creep	○	○	○
Battery level audible warning	○	○	○
Service alarm	○	○	○
Automatic log off	○	○	○
Revert to low speed at log off	○	○	○
Revert to low speed at operator absent	○	○	○

● Standard ○ Option

\*Li-ion battery option is available in selected regions.  
\*\* Not in combination with Li-Ion battery

## FULL LI-ION\* BATTERY INTEGRATION

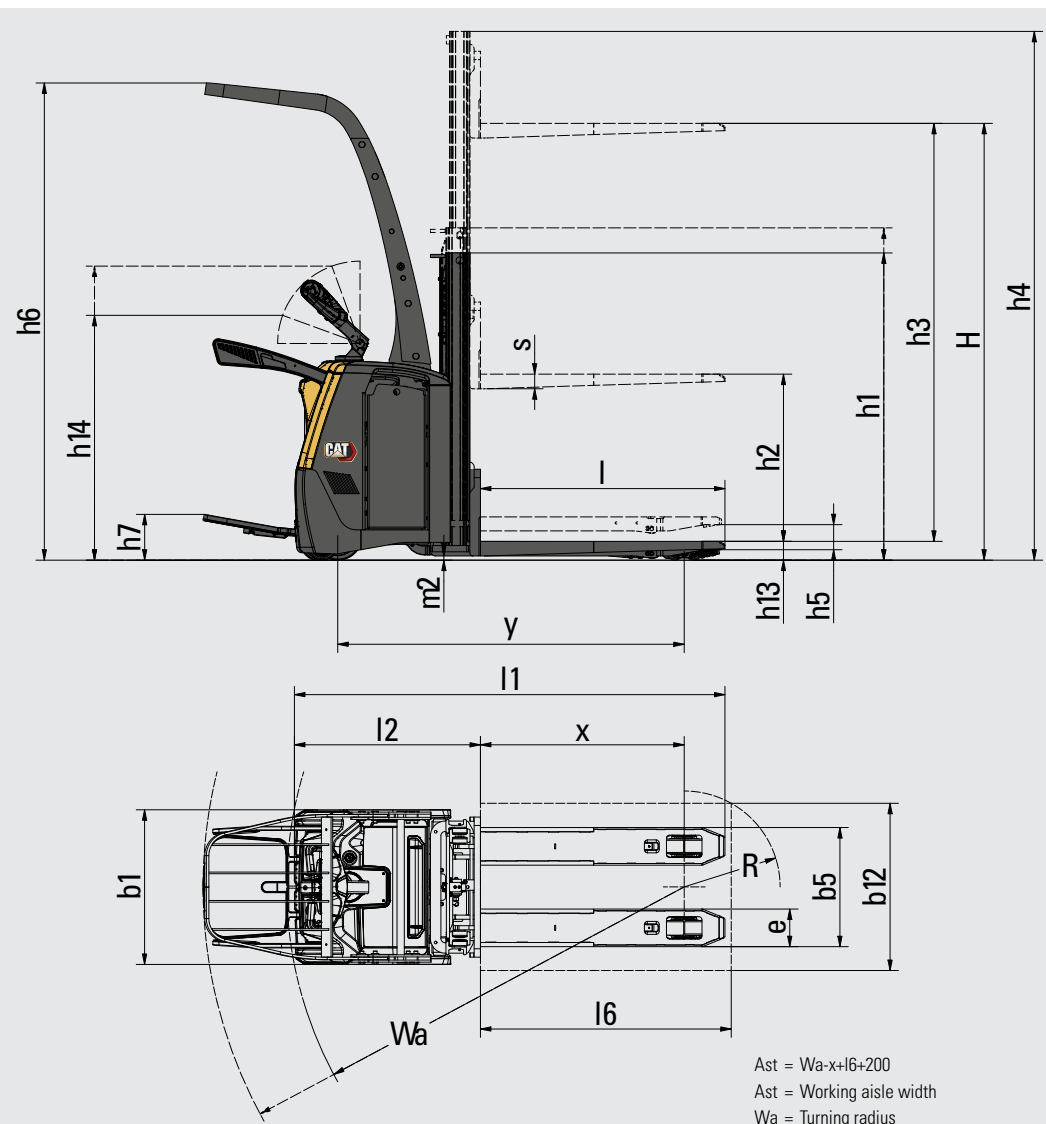
Full integration of Li-ion battery communication on Cat platform double pallet handlers enables all battery-related information to be presented clearly via the truck's inbuilt full-colour display.



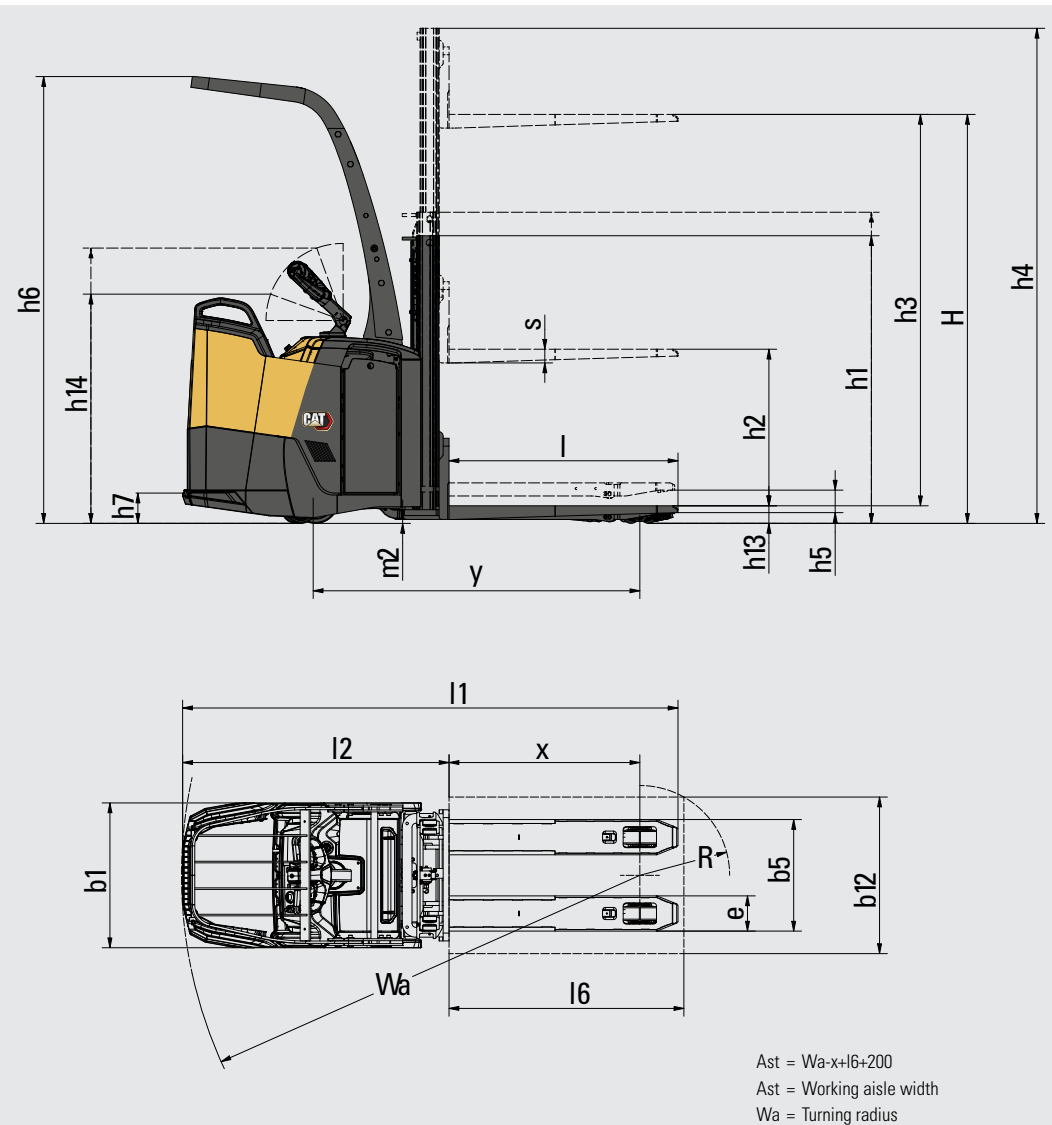
The class-leading, user-friendly *emPower* tiller head gives easy access to controls and enables rapid, precise operation.



Characteristics			
1.1	Manufacturer		Cat Lift Trucks
1.2	Manufacturer's model designation		<b>NPV20N3D</b>
1.3	Power source		Battery
1.4	Operator type		Pedestrian/stand-on
1.5	Load capacity	Q (kg)	2000 / 1000+1000
1.6	Load center distance	c (mm)	600
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	930
1.9	Wheelbase	y (mm)	1613
Weight			
2.1b	Truck weight without load, with maximum battery weight	kg	1050
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg	1230/1820
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg	780/270
Wheels, Drive Train			
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side		Vulkollan
3.2	Tyre dimensions, drive side	(mm)	235 x 75
3.3	Tyre dimensions, load side	(mm)	85x75
3.4	Castor wheel dimensions (diameter x width)	(mm)	150 x 55
3.5	Number of wheels, load / drive side (x = driven)		4 / 1x + 2
3.6	Track width (center of tyres), drive side	b10 (mm)	520
3.7	Track width (center of tyres), load side	b11 (mm)	390
Dimensions			
4.2a	Height with mast lowered	h1 (mm)	1320 / 1470
4.3	Free lift	h2 (mm)	0
4.4	Lift height	h3 (mm)	1700 / 2000
4.5	Height with mast extended	h4 (mm)	2170 / 2470
4.6	Initial lift	h5 (mm)	120
4.7	Height to top of overhead guard	h6 (mm)	2283
4.8	Seat- or stand height	h7 (mm)	171
4.9	Height of tiller arm / steering console (min./max.)	h14 (mm)	
4.10	Height of support legs	h8 (mm)	87
4.15	Fork height, fully lowered	h13 (mm)	90
4.19	Overall length	l1 (mm)	2142/2500
4.20	Length to fork face	l2 (mm)	972/1330
4.21	Overall width	b1/b2 (mm)	740
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	70/180/1170
4.24	Fork carriage width	b3 (mm)	670
4.25	Outside width over forks (minimum / maximum)	b5 (mm)	570
4.32	Ground clearance at center of wheelbase, (forks lowered)	m2 (mm)	20-140
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast (mm)	
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)	2585/2943
4.35	Turning radius	Wa (mm)	1902/2260
Performance			
5.1	Travel speed, with / without load	km / h	10.0/10.0
5.2	Lifting speed, with / without load	m / s	0.22/0.43
5.3	Lowering speed, with / without load	m / s	0.50/0.53
5.7	Gradeability, with / without load	%	11.6/19.4
5.9	Acceleration time (10 metres) with / without load	s	6.1/4.9
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		Electric
Electric motors			
6.1	Drive motor capacity (60 min. short duty)	kW	2.4
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah	24/222-400
6.5	Battery weight	kg	285-350
6.6a	Energy consumption according to EN16796	kWh / h	
6.6b	Energy consumption according to VDI 60 cycle	kWh / h	
Miscellaneous			
8.1	Type of drive control		AC
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 LpA <sub>Z</sub>	dB (A)	

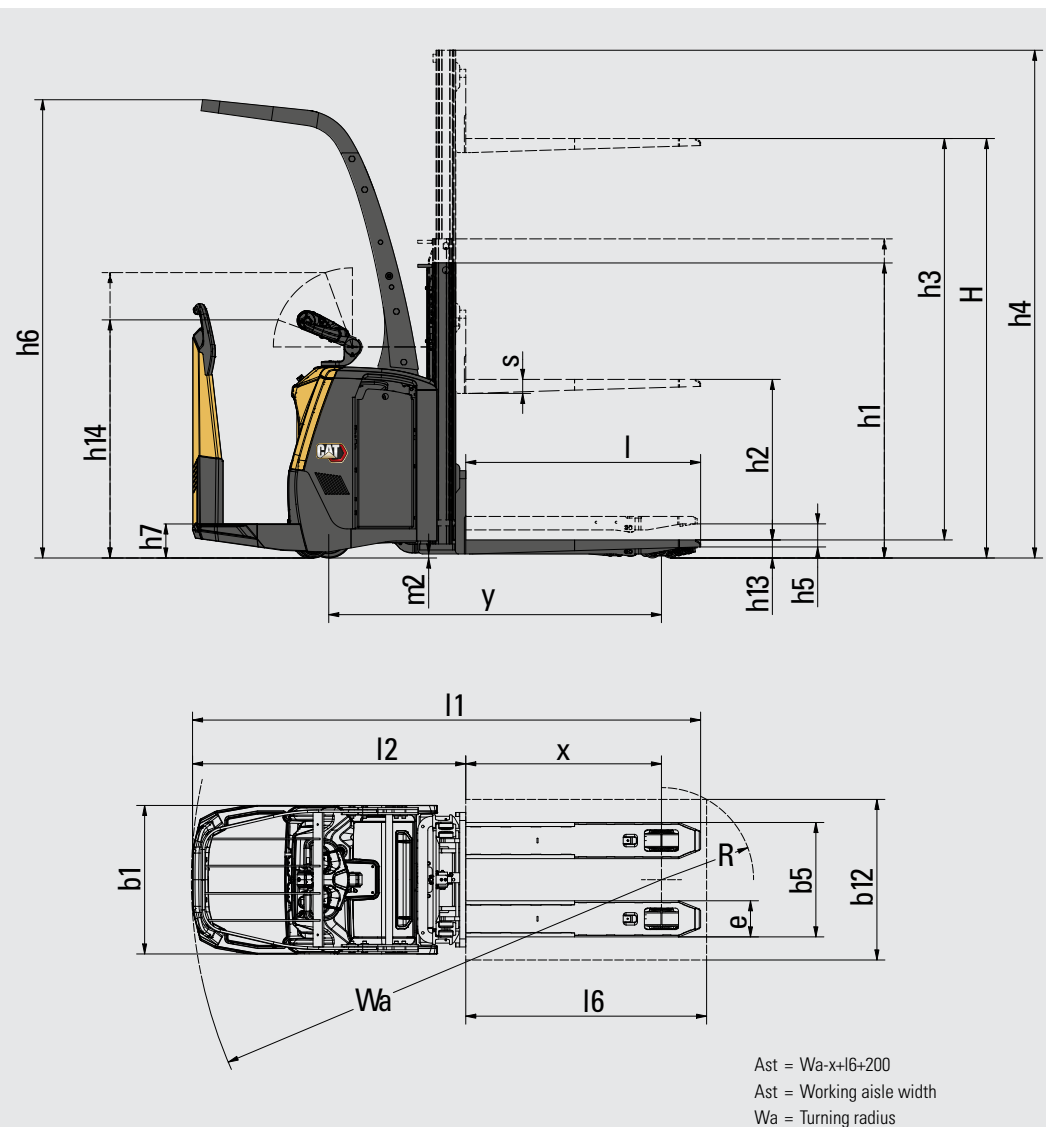


Characteristics					
1.1	Manufacturer		Cat Lift Trucks		
1.2	Manufacturer's model designation		<b>NPF20N3DR</b>		
1.3	Power source		Battery		
1.4	Operator type		Stand-on		
1.5	Load capacity	Q (kg)	2000 / 1000+1000		
1.6	Load center distance	c (mm)	600		
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	930		
1.9	Wheelbase	y (mm)	1613		
Weight					
2.1b	Truck weight without load, with maximum battery weight	kg	1220		
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg	1400/1820		
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg	960/260		
Wheels, Drive Train					
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side		Vulkollan		
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4.6	Initial lift	h5 (mm)	120		
4.7	Height to top of overhead guard	h6 (mm)	2283		
4.8	Seat- or stand height	h7 (mm)	170		
4.9	Height of tiller arm / steering console (min./max.)	h14 (mm)			
4.10	Height of support legs	h8 (mm)	87		
4.15	Fork height, fully lowered	h13 (mm)	90		
4.19	Overall length	l1 (mm)	2532		
4.20	Length to fork face	l2 (mm)	1362		
4.21	Overall width	b1/b2 (mm)	740		
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	70/180/1170		
4.24	Fork carriage width	b3 (mm)	670		
4.25	Outside width over forks (minimum / maximum)	b5 (mm)	570		
4.32	Ground clearance at center of wheelbase, (forks lowered)	m2 (mm)	20-140		
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast (mm)	2980		
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)			
4.35	Turning radius	Wa (mm)	2292		
Performance					
5.1	Travel speed, with / without load	km / h	10.0/10.0		
5.2	Lifting speed, with / without load	m / s	0.22/0.43		
5.3	Lowering speed, with / without load	m / s	0.50/0.53		
5.7	Gradeability, with / without load	%	11.6/17.5		
5.9	Acceleration time (10 metres) with / without load	s	6.2/5.0		
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		Electric		
Electric motors					
6.1	Drive motor capacity (60 min. short duty)	kW	2.4		
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah	24/222-400		
6.5	Battery weight	kg	285-350		
6.6a	Energy consumption according to EN16796	kWh / h			
6.6b	Energy consumption according to VDI 60 cycle	kWh / h			
Miscellaneous					
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Miscellaneous					
8.1	Type of drive control		AC		
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 LpA2	dB (A)			



# 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.



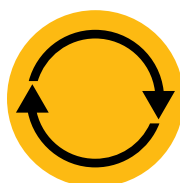
**LONGER  
LIFE**



**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.

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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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