



**NPP16N3**  
**NPP18N3**  
**NPP20N3**

**NPP20N3R**  
**NPP20N3E**

# PEDESTRIAN POWER

## SPECIFICATIONS

**PEDESTRIAN POWER PALLET TRUCKS 24V, 1.6 - 2.0 TONNES**



# IDEAL FOR EFFICIENT LOADING, UNLOADING AND SHUTTLE APPLICATIONS

TAKING MOST OF THE LEGWORK OUT OF PEDESTRIAN PALLET HANDLING, THE NPP RANGE IS IDEAL FOR BOTH HORIZONTAL MOVEMENTS AND VEHICLE LOADING/UNLOADING. ITS INDUSTRY-LEADING PERFORMANCE INSPIRES CONFIDENCE AND BOOSTS PRODUCTIVITY IN ANY APPLICATION.



The NPP16N3 is an ideal all-round machine for light to medium-duty handling applications and is small enough to be used on a mezzanine floor or transported in the back of a goods vehicle. The NPP18N3 and NPP20N3 add greater capacity for heavier loads and more intensive work.



The NPP20N3R is equipped with a foldable platform for occasional use when driving over longer distances. The spacious platform of the NPP20N3R, with suspension for a comfortable ride, is easy to get on and off, and also offers good ground clearance.



The NPP20N3E is equipped with lifting forks (735 mm height) that offer an ergonomic position for loading and unloading items with minimal physical strain.

## LOWER COST OF OWNERSHIP

- Sturdy chassis construction and endurance-tested forks provide enhanced robustness and durability even in the toughest conditions.
- Sealing of chassis and key electrical components resists moisture, dirt and corrosion - increasing uptime, cutting maintenance costs and prolonging truck life.
- Easy access to critical truck components allows faster fault diagnosis and speedier maintenance, reducing downtime still further.
- Integrated drive and lift system features fewer components than previous models, reducing scope for breakdown.
- Closed battery compartment with steel cover protects battery against impacts, postponing costly battery replacement.
- Standard battery sizes allow interchangeability with other brands.
- High levels of component sharing maximise parts availability – and reduce downtime, stock and carbon costs – across the Cat stacker and power pallet ranges.

## UNMATCHED PRODUCTIVITY

- Standard LCD display offers clear information on truck and battery condition.
- Class-leading, patented, ergonomic *emPower* tiller head helps keep operators fresh with comfortable controls.
- Increased maximum lift height suits even steep ramps and loading docks, making this an ideal truck for both horizontal pallet movements and vehicle loading/unloading.
- Advanced AC programmable controller lets users prioritise between faster performance and smoother handling, ensuring the most appropriate settings for the job.
- Rounded fork tips make for accurate and effortless pallet entry, speeding up handling cycles and preventing pallet or load damage.
- The NPP20N3R, with a maximum speed of 6 km/h, is equipped with a foldable platform for occasional use when driving over longer distances.

## SAFETY AND ERGONOMICS

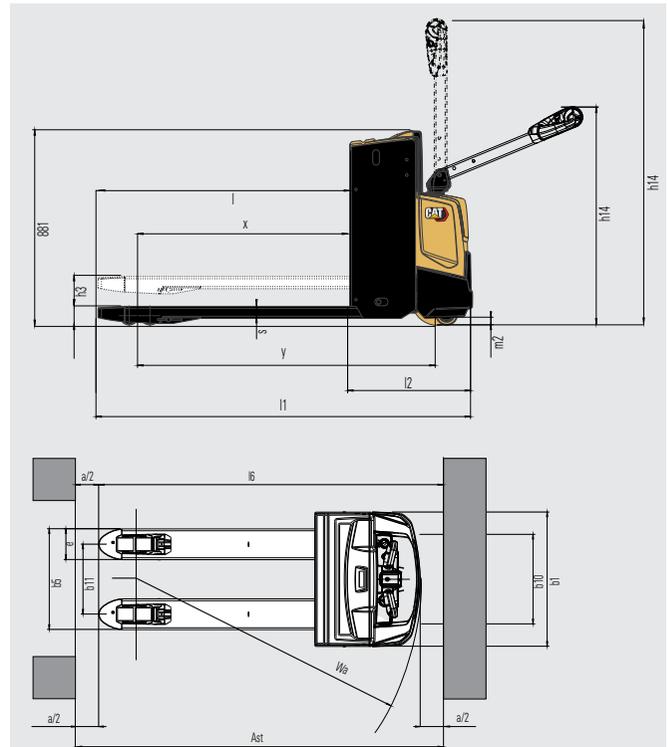
- Latest tiller arm design permits comfortable operating position with optimum hand protection.
- Super-quiet oil-filled transmission helps keep noise levels low.
- Optional large lift and lower levers are part of a unique, patented tiller head design with optimum distance between hand and controls, allowing easy one-handed operation even when wearing gloves.
- Linked suspension castor wheels ensure highest possible truck stability.
- The spacious platform of the NPP20N3R, with suspension for a comfortable ride, is easy to get on and off, and also offers good ground clearance.
- The NPP20N3E is equipped with lifting forks (735 mm height) that offer an ergonomic position for picking and placing items with minimal physical strain.



# STANDARD EQUIPMENT AND OPTIONS

	NPP16N3	NPP18N3	NPP20N3	NPP20N3R	NPP20N3E
<b>GENERAL</b>					
Multifunctional display, including hour meter and BDI	●	●	●	●	●
Key switch entry	●	●	●	●	●
PIN code login 5 codes	○	○	○	○	○
Centred long pipe tiller arm (short pipe arm in R model)	●	●	●	●	●
Electric on/off valve for lifting and lowering, controlled by rocker switch on tiller head	●	●	●	●	●
Ergo initial lift, to 735 mm for picking applications etc.	–	–	–	–	●
Sideways battery change on rollers, with 250 Ah and 375 Ah battery only (lead-acid)	–	○	○	○	–
Battery changing trolley, for 2 batteries (lead-acid)	–	○	○	○	–
Li-ion batteries	○	○	○	○	○
<b>ENVIRONMENT</b>					
Continuous use, +5°C to +25°C	●	●	●	●	●
Cold store design, 0°C to -35°C	○	○	○	○	○
Hot operating condition modification, up to +45°C	○	○	○	–	○
<b>DRIVE AND LIFT CONTROLS</b>					
Tiller up drive	●	●	●	●	●
Increased ground clearance +70 mm, incl. rubber strip foot protection	○	○	○	–	○
<b>WHEEL OPTIONS</b>					
Vulkollan® drive wheel	●	●	●	●	●
Power friction traction wheel	○	○	○	○	○
Single load wheels Vulkollan®	●	○	○	○	○
Tandem load wheels Vulkollan®	○	●	●	●	●
<b>OTHER OPTIONS</b>					
Load backrest, height 1300 mm (600 mm in E model)	○	○	○	○	○
Closed pallet entry and exit rollers	○	○	○	○	○
Special RAL colour	○	○	○	○	○
Built-in charger 30 A, for lead-acid batteries	○	○	○	–	○
Accessory rack	○	○	○	○	○
List bracket/writing desk, A4 size	○	○	○	○	○
Computer rack, 10-16" size	○	○	○	○	○
Working lights (LED)	○	○	○	○	○

Characteristics			Cat Lift Trucks	Cat Lift Trucks	Cat Lift Trucks
1.1	Manufacturer				
1.2	Manufacturer's model designation				
1.3	Power source				
1.4	Operator type				
1.5	Load capacity	Q (kg)	1600	1800	2000
1.6	Load centre distance	c (mm)	600	600	600
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	960	960	960
1.9	Wheelbase	y (mm)	1360 <sup>1)</sup>	1425	1425 <sup>2)</sup>
<b>2.0 Weight</b>					
2.1b	Truck weight without load, with maximum battery weight	kg	430	500	500
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg	745 / 1290	805 / 1495	840 / 1660
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg	340 / 90	380 / 120	380 / 120
<b>3.0 Wheels, Drive Train</b>					
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)	230 x 70	230 x 70	230 x 70
3.3	Tyre dimensions, load side	(mm)	85 x 90	85 x 75	85 x 75
3.4	Castor wheel dimensions (diameter x width)	(mm)	100 x 40	100 x 40	100 x 40
3.5	Number of wheels, load / drive side (x = driven)		2 / 1x + 2	4 / 1x + 2	4 / 1x + 2
3.6	Track width (centre of tyres), drive side	b10 (mm)	480	480	480
3.7	Track width (centre of tyres), load side	b11 (mm)	375	375	375
<b>4.0 Dimensions</b>					
4.4	Lift height	h3 (mm)	135	135	135
4.9	Height of tiller arm / steering console (min/max)	h14 (mm)	865 / 1420	865 / 1420	865 / 1420
4.15	Fork height, fully lowered	h13 (mm)	85	85	85
4.19	Overall length	l1 (mm)	1650 <sup>3)</sup>	1710	1710 <sup>2)</sup>
4.20	Length to fork face	l2 (mm)	500 <sup>3)</sup>	560	560 <sup>2)</sup>
4.21	Overall width	b1/b2 (mm)	720	720	720
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	55 / 165 / 1150	55 / 165 / 1150	55 / 165 / 1150
4.25	Outside width over forks (minimum / maximum)	b5 (mm)	540	540	540
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2 (mm)	30	30	30
4.33c	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise, platform up/down	Ast (mm)	2311 <sup>5)</sup>	2352	2352 <sup>2)</sup>
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)	2176 <sup>5)</sup>	2217	2217 <sup>2)</sup>
4.35	Turning radius	Wa (mm)	1510 <sup>6)</sup>	1551	1551 <sup>2)</sup>
<b>5.0 Performance</b>					
5.1	Travel speed, with / without load	km / h	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0
5.2	Lifting speed, with / without load	m / s	0.035 / 0.045	0.030 / 0.035	0.040 / 0.050
5.3	Lowering speed, with / without load	m / s	0.050 / 0.050	0.060 / 0.042	0.050 / 0.060
5.7	Gradeability, with / without load	%	10.0 / 20.0	10.0 / 20.0	10.0 / 20.0
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		Electric	Electric	Electric
<b>6.0 Electric motors</b>					
6.1	Drive motor capacity (60 min. short duty)	kW	1.0	1.0	1.0
6.2	Lift motor output at 15% duty factor	kW	0.8	0.8	1.2
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah	24 / 150-250 <sup>6)</sup>	24 / 250	24 / 250-375 <sup>6)</sup>
6.5	Battery weight	kg	151-212	212	212-288
6.6a	Energy consumption according to EN16796	kWh / h	0.23 <sup>7)</sup>	0.26	0.26
<b>8.0 Miscellaneous</b>					
8.1	Type of drive control		Stepless	Stepless	Stepless
10.7	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)	64.5	64.5	64.5
10.7.3	Hand-arm vibration (EN 13 059:2002)		< 2.5	< 2.5	< 2.5



**NPP16/18/20N3**

Ast = Wa-x+l6+200

Ast = Working aisle width

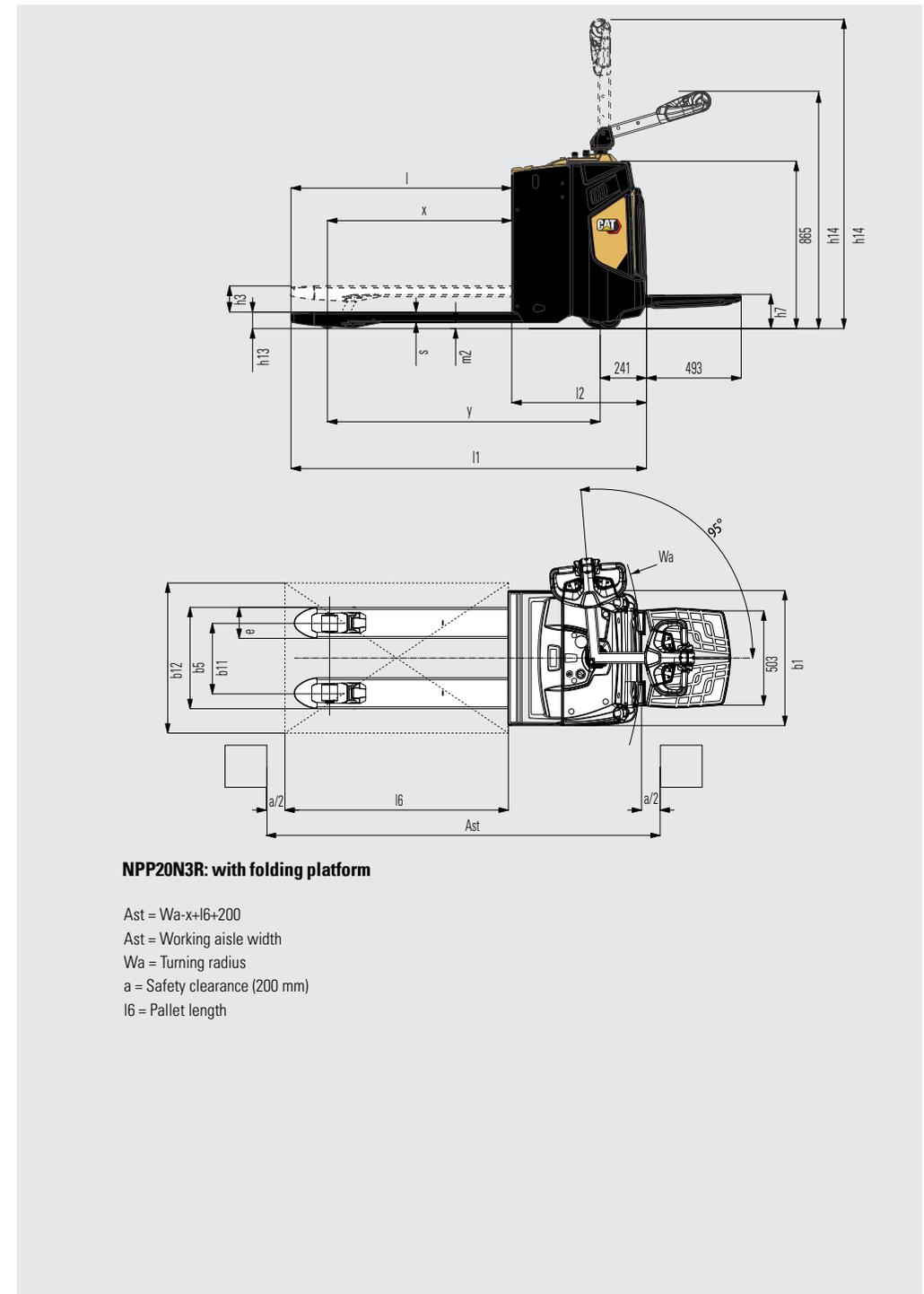
Wa = Turning radius

a = Safety clearance (200 mm)

l6 = Pallet length

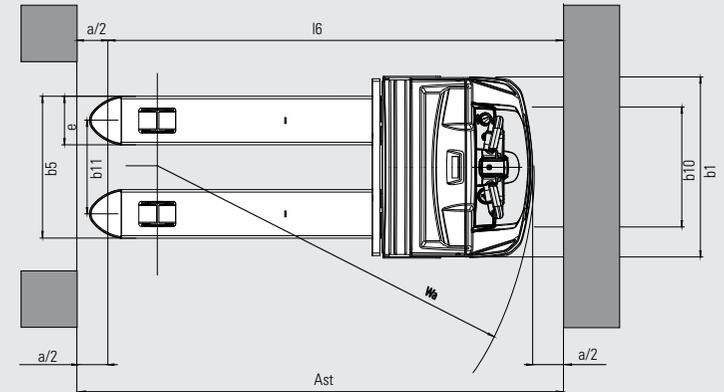
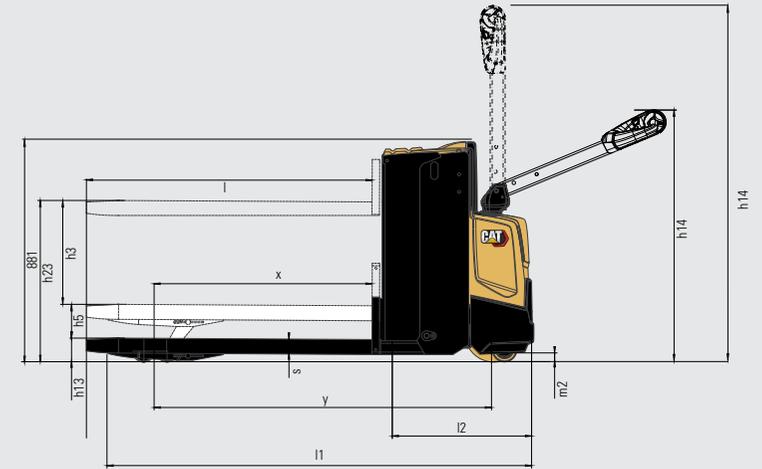
1) With the 250 Ah battery this dimension increase by 65 mm  
 2) With the 375 Ah battery this dimension increase by 72 mm  
 3) With the 250 Ah battery this dimension increase by 60 mm  
 5) With the 250 Ah battery this dimension increase by 41 mm  
 6) With the larger batteries several dimensions increase (see notes #1-5)  
 7) Measured with the 250 Ah battery

Characteristics			
1.1	Manufacturer		Cat Lift Trucks
1.2	Manufacturer's model designation		<b>NPP20N3R</b>
1.3	Power source		Battery
1.4	Operator type		Pedestrian / Stand-on
1.5	Load capacity	Q (kg)	2000
1.6	Load centre distance	c (mm)	600
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	960
1.9	Wheelbase	y (mm)	1420 <sup>2)</sup>
<b>2.0 Weight</b>			
2.1b	Truck weight without load, with maximum battery weight	kg	640
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg	950 / 1710
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg	505 / 135
<b>3.0 Wheels, Drive Train</b>			
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side		Vul / Vul
3.2	Tyre dimensions, drive side	(mm)	230 x 70
3.3	Tyre dimensions, load side	(mm)	85 x 75
3.4	Castor wheel dimensions (diameter x width)	(mm)	125 x 55
3.5	Number of wheels, load / drive side (x = driven)		4 / 1x + 2
3.6	Track width (centre of tyres), drive side	b10 (mm)	480
3.7	Track width (centre of tyres), load side	b11 (mm)	375
<b>4.0 Dimensions</b>			
4.4	Lift height	h3 (mm)	135
4.8	Seat or stand height	h7 (mm)	170
4.9	Height of tiller arm / steering console (min/max)	h14 (mm)	1155 / 1550
4.15	Fork height, fully lowered	h13 (mm)	85
4.19	Overall length	l1 (mm)	1850 / 2345 <sup>2)</sup>
4.20	Length to fork face	l2 (mm)	700 / 1195 <sup>2)</sup>
4.21	Overall width	b1/b2 (mm)	720
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	55 / 165 / 1150
4.25	Outside width over forks (minimum / maximum)	b5 (mm)	540
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2 (mm)	30
4.33c	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise, platform up/down	Ast (mm)	2481 / 2961 <sup>2)</sup>
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)	2346 / 2826 <sup>2)</sup>
4.35	Turning radius	Wa (mm)	1680 / 2160 <sup>2)</sup>
<b>5.0 Performance</b>			
5.1	Travel speed, with / without load	km / h	6.0 / 6.0
5.2	Lifting speed, with / without load	m / s	0.040 / 0.040
5.3	Lowering speed, with / without load	m / s	0.050 / 0.060
5.7	Gradeability, with / without load	%	9.0 / 20.0
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		Electric
<b>6.0 Electric motors</b>			
6.1	Drive motor capacity (60 min. short duty)	kW	1.0
6.2	Lift motor output at 15% duty factor	kW	1.2
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah	24 / 250-375 <sup>6)</sup>
6.5	Battery weight	kg	212-288
6.6a	Energy consumption according to EN16796	kWh / h	0.26
<b>8.0 Miscellaneous</b>			
8.1	Type of drive control		Stepless
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)	60.2
10.7.2	Whole-body vibration (EN 13 059:2002)		1.1
10.7.3	Hand-arm vibration (EN 13 059:2002)		< 2.5



1) With the 250 Ah battery this dimension increase by 65 mm  
2) With the 375 Ah battery this dimension increase by 72 mm  
3) With the 250 Ah battery this dimension increase by 60 mm  
5) With the 250 Ah battery this dimension increase by 41 mm  
6) With the larger batteries several dimensions increase (see notes #1-5)  
7) Measured with the 250 Ah battery

Characteristics			
1.1	Manufacturer		Cat Lift Trucks
1.2	Manufacturer's model designation		<b>NPP20N3E</b>
1.3	Power source		Battery
1.4	Operator type		Pedestrian
1.5	Load capacity	Q (kg)	2000 / 700
1.6	Load centre distance	c (mm)	600
1.8	Load wheel axle to fork face (forks lowered)	x (mm)	890
1.9	Wheelbase	y (mm)	1425
<b>2.0 Weight</b>			
2.1b	Truck weight without load, with maximum battery weight	kg	585
2.2	Axle loadings with nominal load & maximum battery weight, drive / load side	kg	815 / 1785
2.3	Axle loadings without load & with maximum battery weight, drive / load side	kg	435 / 150
<b>3.0 Wheels, Drive Train</b>			
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side		Vul / Vul
3.2	Tyre dimensions, drive side	(mm)	230 x 70
3.3	Tyre dimensions, load side	(mm)	85 x 75
3.4	Castor wheel dimensions (diameter x width)	(mm)	100 x 40
3.5	Number of wheels, load / drive side (x = driven)		4 / 1x + 2
3.6	Track width (centre of tyres), drive side	b10 (mm)	480
3.7	Track width (centre of tyres), load side	b11 (mm)	375
<b>4.0 Dimensions</b>			
4.4	Lift height	h3 (mm)	135 / 645
4.9	Height of tiller arm / steering console (min/max)	h14 (mm)	865 / 1420
4.15	Fork height, fully lowered	h13 (mm)	90
4.19	Overall length	l1 (mm)	1780
4.20	Length to fork face	l2 (mm)	630
4.21	Overall width	b1/b2 (mm)	720
4.22	Fork dimensions (thickness, width, length)	s / e / l (mm)	59 / 184 / 1150
4.25	Outside width over forks (minimum / maximum)	b5 (mm)	570
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2 (mm)	30
4.33c	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise, platform up/down	Ast (mm)	2370
4.34c	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise, platform up/down	Ast (mm)	2266
4.35	Turning radius	Wa (mm)	1560
<b>5.0 Performance</b>			
5.1	Travel speed, with / without load	km / h	6.0 / 6.0
5.2	Lifting speed, with / without load	m / s	0.110 / 0.140
5.3	Lowering speed, with / without load	m / s	0.130 / 0.120
5.7	Gradeability, with / without load	%	9.0 / 20.0
5.10	Service brakes (mechanical / hydraulic / electric / pneumatic)		Electric
<b>6.0 Electric motors</b>			
6.1	Drive motor capacity (60 min. short duty)	kW	1.0
6.2	Lift motor output at 15% duty factor	kW	1.2
6.4	Battery voltage/capacity at 5-hour discharge	V / Ah	24 / 150
6.5	Battery weight	kg	151
6.6a	Energy consumption according to EN16796	kWh / h	0.26
<b>8.0 Miscellaneous</b>			
8.1	Type of drive control		Stepless
10.7	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)	64.5
10.7.3	Hand-arm vibration (EN 13 059:2002)		< 2.5



#### NPP20N3E: with lifting forks

Ast =  $Wa - x + l6 + 200$

Ast = Working aisle width

Wa = Turning radius

a = Safety clearance (200 mm)

l6 = Pallet length

# 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.



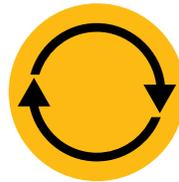
**LONGER  
LIFE**



**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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