NR12N3L
NR14N3L
NR14N3C

COMPACT EFFICIENCY

SPECIFICATIONS

LIGHT REACH TRUCKS 48V, 1.2 - 1.4 TONNES

CAT®

SAVE TIME, MONEY AND SPACE

FOR THE NARROWEST OF AISLES, YOU NEED THE MOST COMPACT OF ALL CAT® REACH TRUCKS. THESE ECONOMICAL LIGHT AND MEDIUM DUTY MODELS, WITH LIFT HEIGHTS UP TO 7.25 METRES, OFFER GREAT MANOEUVRABILITY, EFFICIENT PERFORMANCE AND FULL CAT QUALITY.

NR14N3C shown with tapered overhead guard and rail guidance options

Drivers can operate quickly and precisely, with minimum effort, thanks to the *Palm Steering* unit and multifunctional joystick – each with adjustable floating armrests. Just 1.12 metres wide, and giving unbeatable all-round views, the trucks are ideally suited to working in tight spaces.

Drive and hydraulic functions are automatically speed-controlled, according to steering angle and lift height, for rapid but smooth and safe action. For further safety and stability, tilting masts are fitted as standard and the Mast Tilt Control (MTC) damping system can be optionally specified.

Time and money are saved by robust and wear-resistant construction, a user-friendly display with onboard diagnostics, and quick service access features. Good examples of cost-saving design include the heavy duty drive wheel, and accessibility for battery checks without leaving the truck.

All three models share the space-saving narrow chassis, but the NR14N3C also has a tapered overhead guard (optional), for drive-in racking, and can be equipped with optional rail guidance wheels. Perfect matching with application and driver needs is possible through programming and option selection.

LOWER COST OF OWNERSHIP

- Robust construction minimises damage and wear, even in demanding multi-shift operations.
- Heavy duty drive wheel is highly durable and easy to maintain, with a larger diameter, extra width and unique tread design which increase grip and stability as well as lifetime.
- User-friendly display encourages correct use of truck.
- PIN code identification and programmability prevent unauthorised use and allow matching of truck performance settings to driver experience and application.
- Easy battery access enables driver to make quick checks without leaving the truck.
- Fast service access to systems and components reduces downtime.

UNMATCHED PRODUCTIVITY

- Automatic drive speed reduction makes smooth adjustments according to steering angle and fork height to maintain stability, safety and confidence when cornering or carrying raised loads.
- Automatic hydraulic motion control optimises lift, lower, reach, tilt and side shift speeds according to lift height and keeps all movements smooth, quiet and precise. (Standard on NR14N3C, optional on others.)
- Mast Tilt Control (MTC) damping system reduces oscillations by up to 80%, allowing faster and more stable load handling.
- Tilting mast reduces aisle width necessary and enhances safety of handling.
- 360-degree steering option enables fluid turning without stopping to change direction.
- Fast travel and lift speeds come as standard.
- Small chassis (1.12 m wide) is ideal for working in tight spaces.
- Drive-in racking adaptations on NR14N3C include the options of tapered overhead guard and extra wheels for rail guidance.

SAFETY AND ERGONOMICS

- *Palm Steering* on adjustable floating armrest offers relaxed driving position and operation with minimal movement, effort or strain – ideal if driver is seated for long periods.
- Multifunctional joystick with adjustable armrest fits hand perfectly, positions all hydraulic controls optimally, minimises effort and enables precise individual and simultaneous actions.
- Optional fingertip hydraulic controls with adjustable armrest ensure ergonomically perfect hand positioning, anatomical support and free movement.
- Spacious driver's compartment with high roof safely and comfortably accommodates users of all sizes.
- Excellent all-round view is enabled by design of mast, fork carriage, overhead bars, pillars and chassis, and by use of dark, non-reflective paint.
- Intuitive display keeps drivers fully informed and is optimally positioned and angled for clear viewing.
- Direction control is switched using accelerator pedal, leaving right hand free to concentrate on hydraulic functions.
- Automotive pedal layout is intuitive to car drivers, while 'dead man' safety switch is effortlessly activated by the weight of the left foot.
- Smooth entry and exit are aided by ergonomic grab handles and low intermediate step with non-slip surface.
- Standard safety features include operator presence switch, mast lock system and automatic parking brake.

Fingertip control option.

Rail guidance option.

Optional Midi steering wheel.

STANDARD EQUIPMENT AND OPTIONS

	NR12N3L	NR14N3L	NR14N3C
GENERAL			
Automatic electric parking brake	●	●	●
Steering wheel angle indicator	●	●	●
Battery indicator with cut-out at 20% remaining battery level	●	●	●
Multifunctional colour display	●	●	●
Integrated side shift DTFV mast	●	●	●
Rail guidance for drive-in racking	–	–	○
Chill store design, down to +1° C	●	●	●
Paper storage and cup holder	●	●	●
Battery reach-out	●	●	●
Battery on rollers	○	○	○
Other RAL colour	○	○	○
POWER SOURCE			
Li-ion battery*	○	○	○
Lead-acid battery	○	○	○
Battery cover plate	○	○	○
MAST, FORKS AND CARRIAGE			
Tilting mast	●	●	●
Fork tilt	–	–	○
Integral fork positioner/side shift DTFV mast	○	○	○
Load backrest	○	○	○
Load backrest in combination with fork positioner/side shift	○	○	○
Mast Tilt Control (MTC) damping system on tilting masts	●	●	●
Lift stop with/without restart	○	○	○
Lift height indicator (std with load-weight-adjusted control option)	○	○	○
Level selector	–	–	○
Level assistance system, LAS	–	–	○
Load weight indicator (std with load-weight-adjusted control option)	○	○	○
Horizontal forks	–	–	○
Central position of side shift	–	–	○
Automatic hydraulic motion control	○	○	●

* Not in combination with cold store design, 0°C to -30°C
** Not in combination with Li-ion battery

● Standard ○ Option

STANDARD EQUIPMENT AND OPTIONS

DRIVE AND LIFT CONTROLS	NR12N3L	NR14N3L	NR14N3C
Electric-powered *Palm Steering* unit on floating armrest	●	●	●
180-degree steering	●	●	●
360-degree steering	○	○	○
Active Spin Reduction	○	○	○
Automatic drive speed reduction	●	●	●
Hands-free direction control, HFDC, via accelerator pedal	●	●	●
Hand-operated direction control	○	○	○
Multifunctional joystick	●	●	●
Fingertip hydraulic control	○	○	○
Midi steering wheel	○	○	○
Key switch entry	○	○	○
Creep speed at preset level 500 mm	–	–	○
Creep speed at other levels	–	–	○
Load-weight-adjusted functioning of automatic drive speed and hydraulic motion controls	○	○	○
ELECTRIC			
Blue/red point safety light, towards driving direction	○	○	○
Automatic logoff	○	○	○
Working lights LED	○	○	○
Working lights LED for cabin	○	○	○
Warning light on the roof	○	○	○
Warning light for heated cabin	○	○	○
12V connector	○	○	○
Converter 48 - 12 V	○	○	○
Radio with MP3	○	○	○
Service alarm	○	○	○

OHG AND CABIN	NR12N3L	NR14N3L	NR14N3C
Heated cabin**	○	○	○
Window opening in cabin door (CSM)	○	○	○
2-way intercom for cold store cabin (CSM)	○	○	○
Tapered overhead guard	–	–	○
Mesh metal on overhead guard	○	○	○
Heated seat – fabric	○	○	○
Heated seat – PVC	○	○	○
Rear view mirror	○	○	○
Writing desk	○	○	○
Equipment holder, RAM system size C	○	○	○
Equipment holder, RAM system size C, 2 pcs	○	○	○
Equipment holder, RAM system size D	○	○	○
WHEEL OPTIONS			
Vulkollan® traction wheel 93 Shore	●	●	●
Tractothan® traction wheel 93 Shore	○	○	○
Load wheel Ø 220 mm	●	●	●
ENVIRONMENT			
Cold store design, 0°C to -30°C	○	○	○

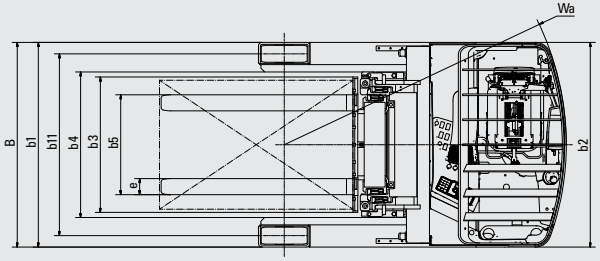
* Not in combination with cold store design, 0°C to -30°C
** Not in combination with Li-ion battery

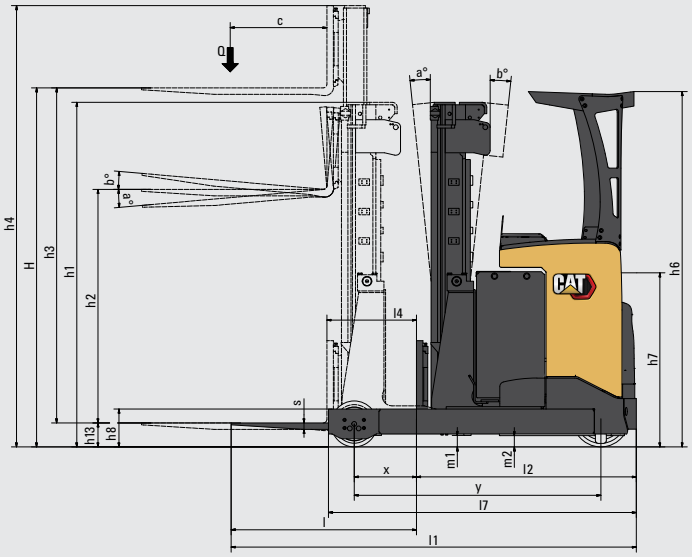
● Standard ○ Option

Heated cabin with tapered overhead guard option.

	Characteristics					
1.1	Manufacturer			Cat Lift Trucks	Cat Lift Trucks	Cat Lift Trucks
1.2	Manufacturer's model designation			**NR12N3L**	**NR14N3L**	**NR14N3C**
1.3	Power source			Battery	Battery	Battery
1.4	Operator type			Sit-on	Sit-on	Sit-on
1.5	Load capacity	Q	(kg)	1200	1400	1400
1.6	Load centre distance	c	(mm)	600	600	600
1.8	Load wheel axle to fork face (forks lowered)	x	(mm)	See table	See table	See table
1.9	Wheelbase	y	(mm)	1378	1378	1378
	Weight					
2.1b	Truck weight without load, with maximum battery weight		kg	2780	3010	3410
2.3	Axle loadings without load & with maximum battery weight, drive / load side		kg	1630 / 950	1690 / 1120	1780 / 1230
2.4	Axle loading, mast forward, with nominal load, drive / load side		kg	490 / 3290	540 / 3670	570 / 3840
2.5	Axle loading, mast retracted, with nominal load, drive / load side		kg	1450 / 2330	1400 / 2810	1450 / 2960
	Wheels, Drive Train					
3.1	Tyres: PT = Power Thane, Vul = Vulkollan, P = Polyurethane, N = Nylon, R = Rubber drive / load side			Vul	Vul	Vul
3.2	Tyre dimensions, drive side	Ø	(mm)	355 x 155	355 x 155	355 x 155
3.3	Tyre dimensions, load side	Ø	(mm)	220 x 85	220 x 85	220 x 85
3.5	Number of wheels, load / drive side (x = driven)			2 / 1 x	2 / 1 x	2 / 1 x
3.7	Track width (centre of tyres), load side	b11	(mm)	995	995	995
	Dimensions					
4.1	Fork tilt, forwards / backwards	∂/ß	°	1 / 4[9)]	1 / 4[9)]	1 / 4
4.2a	Height with mast lowered	h1	(mm)	See table	See table	See table
4.3	Free lift	h2	(mm)	See table	See table	See table
4.4	Lift height	h3	(mm)	See table	See table	See table
4.5	Height with mast extended	h4	(mm)	See table	See table	See table
4.7	Height to top of overhead guard	h6	(mm)	2205	2205	2205
4.8	Seat or stand height	h7	(mm)	1146[1)]	1146[1)]	1146[1)]
4.10	Height of support legs	h8	(mm)	235	235	235
4.15	Fork height, fully lowered	h13	(mm)	65	65	65
4.19	Overall length	l1	(mm)	See table	See table	See table
4.20	Length to fork face	l2	(mm)	See table	See table	See table
4.21	Overall width	b1/b2	(mm)	1120	1120	1120
4.22	Fork dimensions (thickness, width, length)	s / e / l	(mm)	40 / 100 / 1150	40 / 100 / 1150	40 / 100 / 1150
4.23	Fork carriage to DIN			FEM 2A	FEM 2A	FEM 2A
4.24	Fork carriage width	b3	(mm)	910	910	830
4.25	Outside width over forks (minimum /maximum)	b5	(mm)	316 / 697	316 / 697	316 / 697
4.26	Inner width of support legs	b4	(mm)	900	900	900
4.28	Mast reach	l4	(mm)	See table	See table	See table
4.32	Ground clearance at centre of wheelbase, (forks lowered)	m2	(mm)	70	70	70
4.33a	Working aisle width (Ast) with 1000 x 1200 mm pallets, load crosswise	Ast	(mm)	See table	See table	See table
4.34a	Working aisle width (Ast) with 800 x 1200 mm pallets, load lengthwise	Ast	(mm)	See table	See table	See table
4.35	Turning radius	Wa	(mm)	See table	See table	See table
4.37	Truck length including support legs	l7	(mm)	1725	1725	1725
	Performance					
5.1	Travel speed, with /without load		km / h	12.3 / 12.5	12.3 / 12.5	12.3 / 12.5
5.2	Lifting speed, with /without load		m / s	0.50 / 0.65	0.49 / 0.65	0.32 / 0.49
5.3	Lowering speed, with /without load		m / s	0.58 / 0.55	0.59 / 0.55	0.57 / 0.48
5.5	Rated drawbar pull, with /without load		N	0.2 / 0.2	0.2 / 0.2	0.2 / 0.2
5.8	Maximum gradeability with /without load		%	13.1 / 19.6	13.1 / 19.6	13.1 / 19.6
5.9	Acceleration time (10 metres) with /without load		s	4.9 / 4.4	4.9 / 4.4	4.9 / 4.4
5.10	Service brakes (mechanical /hydraulic /electric /pneumatic)			Electric	Electric	Electric
	Electric motors					
6.1	Drive motor capacity (60 min. short duty)		kW	5.9	5.9	5.9
6.2	Lift motor output at 15% duty factor		kW	11	11	11
6.4	Battery voltage/capacity at 5-hour discharge		V / Ah	48 - 300[1)] / 465	48 - 465 / 620	48 - 465 / 620 / 775
6.5	Battery weight		kg	533 / 708	708 / 890	708 / 890 / 1063
6.6b	Energy consumption according to VDI 60 cycle		kW / h	5.1	5.1	5.1
	Miscellaneous					
8.1	Type of drive control			Stepless	Stepless	Stepless
10.1	Maximum operating pressure for attachments		bar	150	150	150
10.2	Oil flow for attachments		l / min	25	25	25
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)	57.4	57.4	57.4

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





1) Measured with standard seat to SIP point
9) Mast tilt
11) DTFV mast

NR12N3L - NR14N3L				
Mast Type	h3 + h13 mm	h1 mm	h2 + h13 mm	h4 mm
DTFV	4800	2153	1645	5345
	5400	2353	1854	5945
	5700	2453	1945	6245
	6300	2653	2145	6845
	6750	2803	2295	7295
	7250*	2970	2462	7795

*Only NR14N3L

NR14N3C				
Mast Type	h3 + h13 mm	h1 mm	h2 + h13 mm	h4 mm
DTFV	4800	2155	1630	5345
	4900	2190	1665	5445
	5000	2225	1690	5545
	5100	2255	1730	5645
	5200	2290	1760	5745
	5300	2325	1790	5845
	5400	2355	1830	5945
	5500	2390	1860	6045
	5600	2425	1890	6145
	5700	2455	1930	6245
	5800	2490	1960	6345
	5900	2525	1990	6445
	6000	2555	2030	6545
	6100	2590	2060	6645
	6200	2625	2090	6745
	6300	2655	2130	6845
	6400	2690	2160	6945
	6500	2725	2190	7045
	6600	2755	2230	7145
	6750	2805	2280	7295
	6900	2855	2330	7445
	7000	2890	2360	7545
	7100	2925	2390	7645
	7250	2975	2440	7795
	7950	3205	2680	8495
	8450	3375	2840	8995
	8950	3540	3010	9495

Mast Performance and Capacity

DTFV	Triplex
h1	Lowered mast height
h2 + h13	Free lift
h3 + h13	Lift height
h4	Raised mast height
Q	Lifting capacity, rated load
c	Load centre (distance)

Model	Battery Capacity	Battery Weight	4.33a Ast	4.34a Ast	4.28 L4	4.20 L2	4.19 L1	1.8 x	4.35 Wa
	Ah	kg	mm	mm	mm	mm	mm	mm	mm
NR12N3L	310	533	2643	2688	557	1193	2343	405	1598
	465	708	2694	2751	487	1263	2413	335	1598
NR14N3L	465	708	2694	2751	487	1263	2413	335	1598
	620	890	2762	2833	397	1353	2503	245	1598
NR14N3C	465	708	2716	2778	457	1293	2443	305	1598
	620	890	2786	2861	367	1383	2533	215	1598
	775	1063	2859	2945	227	1473	2623	125	1598

NR14N3C shown with tapered overhead guard and rail guidance options.

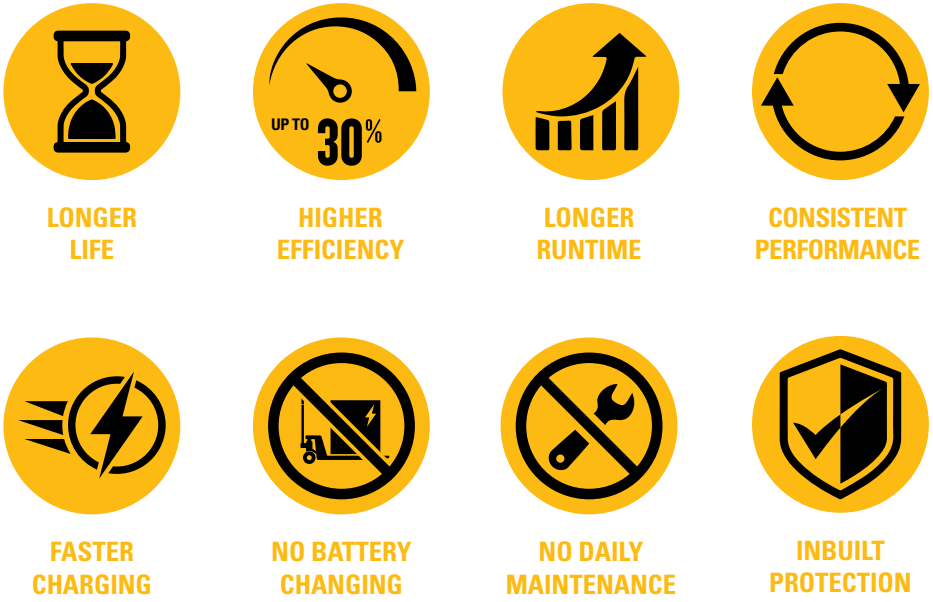
LI-ION BATTERIES

TIME TO SWITCH?

LiION BATTERY TECHNOLOGY

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.



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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