



Electric Four Way Reach Truck Capacity 2000 kg + 2500 kg R 20 F – R 25 F

Series 8923

Safety

Designed for optimum operator comfort and safety. Multi directional ability enables long or wide loads to be handled safely and efficiently. To operate the truck either key switch entry or PIN access are available as standard. Personal ID is available with pre-programmed performance parameters for ten individual operator. The electromagnetic drive wheel disc brake and regenerative braking together with seamless proportional electric braking on the steered load wheel provide assured, precise stopping power.

Performance

Rapid lift and traction speeds are controlled by energy efficient digital AC technology for maximum productivity. The truck can be driven in any direction with smooth precision. The drive wheel and steered load wheel are synchronized to ensure safe rapid direction changes and maneuvering for productive, cost-efficient load handling.

Comfort

The ergonomic tilting seat with high backrest and inflatable lumbar support and combined with height adjustable floor plate provide a superb, fatigue-free working environment. A tapered backrest profile enables strain free turning of the upper torso when travelling or maneuvering.

Reliability

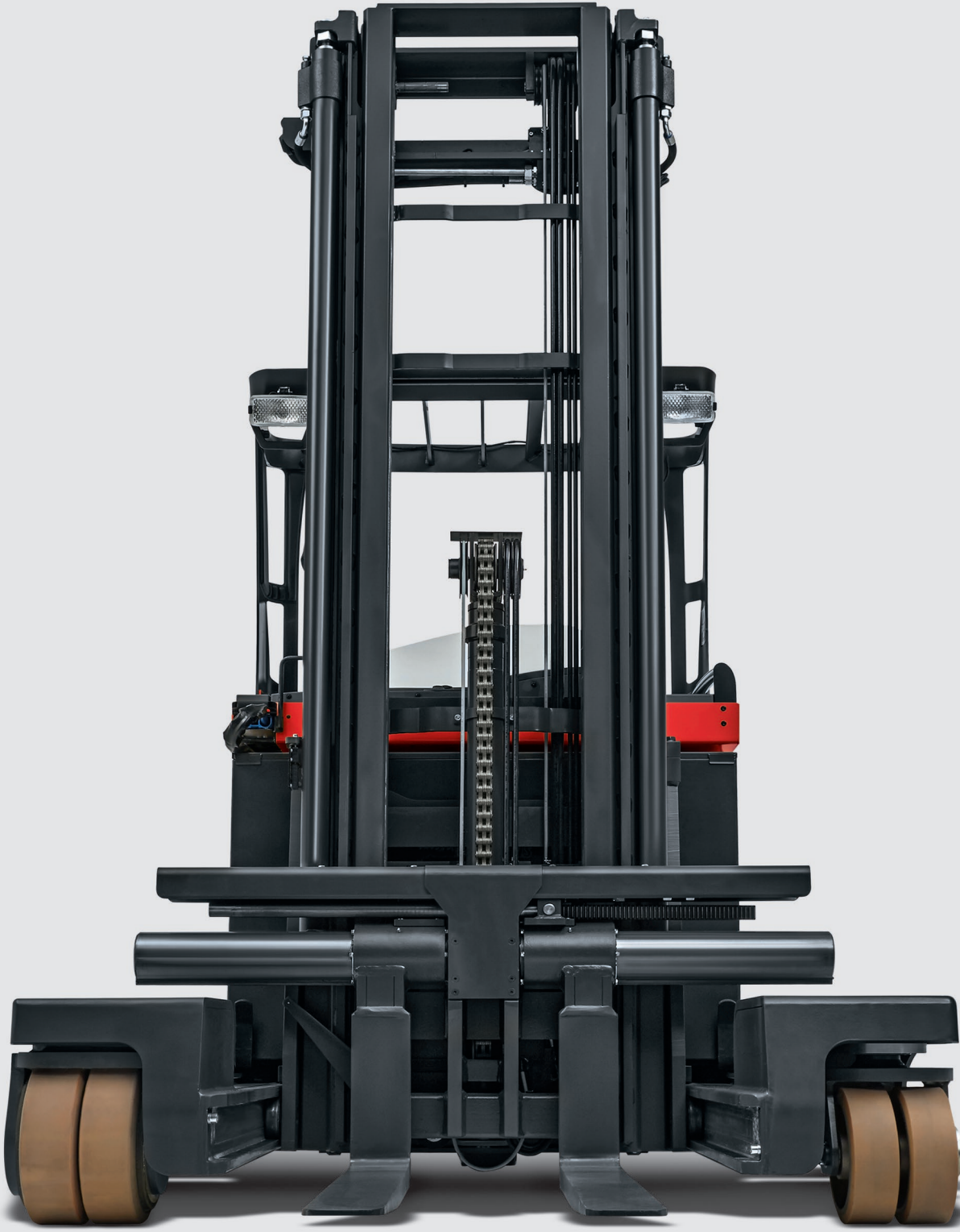
The rugged, compact chassis is designed for maximum strength and durability. A low centre of gravity provides assured stability and high residual capacities for reliable, productive, 24/7 performance and lower operating costs.

Productivity

An integrated computer-controlled diagnostic system ensures optimum uptime and reduces costs. Operating parameters can be configured to precisely fit the requirement of the customer's application. The drive wheel and the twin mounted steered load wheels on the right hand side are synchronized to turn through 90° via a fingertip control lever. Individual fingertip lever controls with wrist support. 360° electric power steering

Linde Material Handling

Linde



Standard Equipment/Optional Equipment

Standard Equipment

General:

Individual fingertip control levers for precision load handling
Midi steering wheel, adjustable in length, height and angle
360° steering with steering angle indicator
Single pedal with hand operated direction selection
Maintenance-free AC 7.2 kW traction and 15 kW lift motor
Polyurethane drive and load wheel tyres
Battery residual capacity display
48 V batteries with capacities from 465 Ah to 930 Ah
Battery reaches forward for changing or daily checks
Key switch or PIN code entry
Foot step to floor, 400 mm, including instep handle
Integral control console with 60 mm horizontal adjustment
Armrest adjustable in height
Rear view mirror
Fork spreader V= 560-1550 mm to select
a) manually, b) hydraulically

New Standard Features:

Comfort fabric suspension seat with tilting high backrest and inflatable lumbar support
Electrically adjustable floor plate height 550-620 mm
Ground clearance 80 mm
Automatically adjusts the max. travel speed according to the actual load weight
Max. travel speed 13 km/h
Chill store design, down to +1° Celsius

Mast:

Tilting clear-view triplex mast with excellent visibility

Safety:

Automatic electric parking brake
Electromagnetic disc brake on the drive wheel and electric load wheel brake
Polycarbonate screen between operator and mast
Automatic slowdown at end of reach travel and max. lift
Lift height related travel speed reduction
Battery lock with creep speed interlock
Linde Curve Assist
Load weight indicator +/- 100 kg
Lift height indicator above free lift

Optional Equipment

Manual or hydraulic fork spreader up to 2,220 mm overall width across forks
Alternative fork lengths
Auto levelling of forks
Lift height preselector, operates only above free lift stage
Height assistance system
Lift stop with or without override switch
Lower and reach back interlock 600 mm with override
Creep speed from predetermined lift height
2 x rear facing working lights
Flashing beacon on overhead guard (increased h6 to 2270 mm)
Flashing beacon on cabin (increased h6 to 2325 mm)
Mesh on overhead guard
Audible battery discharge indication, present at 25% (adjustable)
Automatic truck shut-off
Maintenance interval display
Traction control system

Comfort PVC suspension seat with tilting high backrest, inflatable lumbar support and headrest
Headrest
Heated seat
12 V DC Power Socket
Clipboard
Mounting for data terminal (RAM C/ RAM D holder)
Radio / CD and MP3
Battery mounted on rollers in truck
Equipment bar
Lateral driving camera and monitor (not in combination with rear view mirror)
Alternative colour schemes
Ambient cabin, with electrical heating
Opening window in cabin door
Intercom System
Internal panorama mirror
Wide selection of battery chargers for single and multiple shift applications

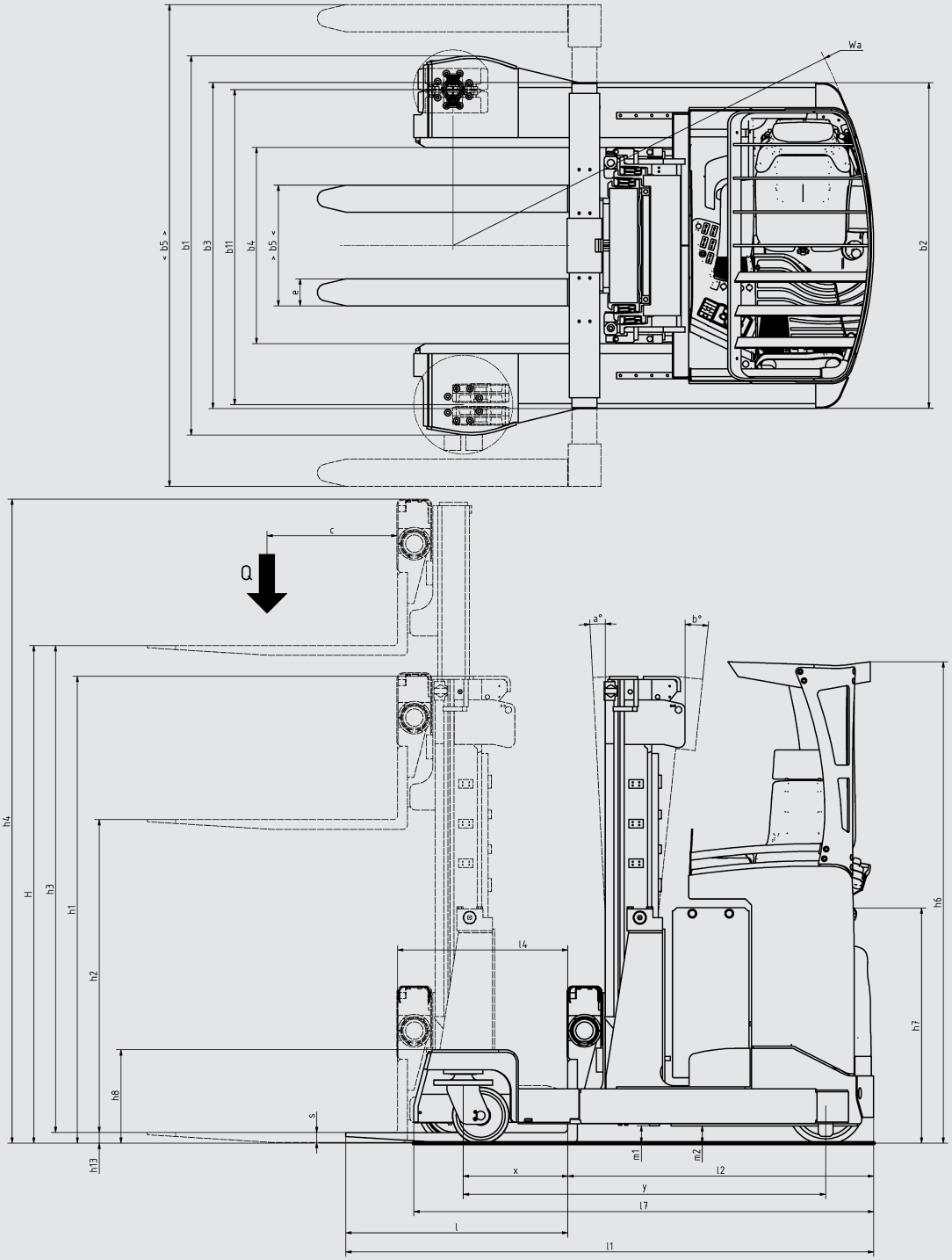
Other options available on request.

Technical Data according to VDI 2198

Characteristics	1.1	Manufacturer		LINDE	LINDE
	1.2	Manufacturer's type designation		R20F	R25F
	1.2a	Series		8923	8923
	1.3	Power unit		Battery	Battery
	1.4	Operation		Seat	Seat
	1.5	Load capacity/Load	Q (t)	2.0	2.5
	1.6	Load centre distance	c (mm)	600	600
	1.8	Axle centre to fork face	x (mm)	449°	527°
	1.9	Wheelbase	y (mm)	1505	1665
Weights	2.1	Service weight	(kg)	4360	4960
	2.3	Axle load without load, front/rear	(kg)	2550 / 1810	2880 / 2080
	2.4	Axle load, fork outreached, with load, front/rear	(kg)	800 / 5560	660 / 6800
	2.5	Axle load, fork retracted, with load, front/rear	(kg)	2349 / 4011	2770 / 4690
Wheels/Tyres	3.1	Tyres rubber, SE, pneumatic, polyurethane		Polyurethane	Polyurethane
	3.2	Tyre size, front		Ø 355 x 155	Ø 355 x 155
	3.3	Tyre size, rear		Ø 320 x 100 / Ø 260 x 85	Ø 320 x 100 / Ø 260 x 85
	3.5	Wheels, number front/rear (x = driven)		1x / 4	1x / 4
	3.6	Track width, front	b10 (mm)	0	0
	3.7	Track width, rear	b11 (mm)	1444	1444
	Dimensions	4.1	Mast/fork carriage tilt, forward/backward	a/b (°)	1.5/3.5 1.0/3.0 1.0/1.0°
4.2		Height of mast, lowered	h1 (mm)	2800	3367
4.3		Free lift	h2 (mm)	2070	2637
4.4		Lift	h3 (mm)	6250	7500
4.5		Height of mast, extended	h4 (mm)	7000	8250
4.7		Height of overhead guard (cabin)	h6 (mm)	2215	2215
4.8		Height of seat/stand on platform	h7 (mm)	1087	1087
4.10		Height of reach legs	h8 (mm)	430	430
4.15		Height, lowered	h13 (mm)	50	50
4.19		Overall length	l1 (mm)	2473°	2555°
4.20		Length to fork face	l2 (mm)	1323°	1405°
4.21		Overall width	b1/b2 (mm)	1744 / 1498	1744 / 1498
4.22		Fork dimensions DIN ISO 2331	s/e/l (mm)	45 x 125 x 1150	45 x 125 x 1150
4.23		Fork carriage to ISO 2328, class/type A, B		-	-
4.24		Width of fork carriage	b3 (mm)	1500 / 2170	1500 / 2170
4.25		Fork spread	b5 (mm)	556-1555 / 556-2220	556-1555 / 556-2220
4.26		Distance between wheel arms/loading surfaces	b4 (mm)	903	903
4.28		Reach travel	l4 (mm)	704°	782°
4.32		Ground clearance, centre of wheelbase	m2 (mm)	80	80
4.34.1		Aisle width for pallets 1000 × 1200 crossways	Ast (mm)	2787 ¹⁾	2896 ¹⁾
4.34.2	Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2823 ¹⁾	2915 ¹⁾	
4.35	Turning radius	Wa (mm)	1772	1932	
4.37	Length of chassis	l7 (mm)	1942	2102	
Performance	5.1	Travel speed, with/without load	(km/h)	13 / 13	13 / 13
	5.2	Lifting speed, with/without load	(m/s)	0.33 / 0.55	0.32 / 0.53
	5.3	Lowering speed, with/without load	(m/s)	0.54 / 0.47	0.53 / 0.53
	5.4	Reach speed, with/without load	(m/s)	0.2 / 0.2	0.2 / 0.2
	5.8	Maximum climbing ability, with/without load	(%)	10.0 / 15.0	9.0 / 14.0
	5.9	Acceleration time, with/without load	(s)	5.7 / 5.0	6.2 / 5.2
	5.10	Service brake		electric/mechanic	electric/mechanic
Drive	6.1	Drive motor rating S2 60 min	(kW)	7.2	7.2
	6.2	Lift motor rating at S3 15%	(kW)	15	15
	6.3	Battery according to DIN 43531/35/36 A,B,C,no		43 531 / C	43 531 / C
	6.4	Battery voltage/rated capacity (5h)	(V)/(Ah)	48 / 465	48 / 620
	6.5	Battery weight (± 5%)	(kg)	712	892
8.1	Type of drive unit		Electronic/stepless	Electronic/stepless	
Others	10.1	Operating pressure for attachments	(bar)	150	150
	10.2	Oil flow for attachments	(l/min)	25	25
	10.7	Sound pressure level LpAZ (at the driver's seat)	(dB(A))	59,7	59,7

1) Alternative batteries may alter given dimensions.
2) 1/1 above lift height 6750 mm

3) Including a 200 mm (min.) operating aisle clearance.



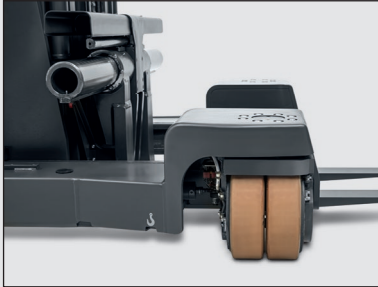
Features

Superb working environment

- Ergonomic comfort seat has a high, tilting backrest and inflatable lumbar support.
- A tapered backrest profile enables strain-free turning of the upper torso when travelling or maneuvering.
- Additionally the dynamic tilting backrest provides a clear upward view to the load and forks, without straining the neck.
- The steering and control consoles are adjustable.
- Cushioned, adjustable armrest
- Electrically adjustable floor plate height 550-620 mm

Maneuverability

- Four-way traction ability provides outstanding multi-directional versatility and maneuverability for handling long or wide loads across the forks as well as standard pallets.
- Synchronised steering system for rapid, seamless transfer between normal and lateral driving.
- 360° steering with direction selection



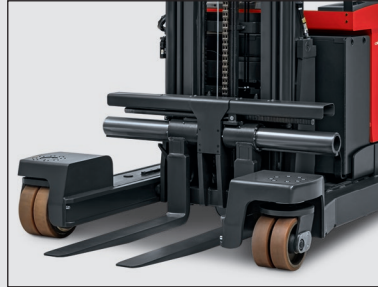
Servicing

- Easy service access
- Maintenance-free AC traction, lift and steer motors
- Digital control system enables performance parameters to be individually adjusted
- Modern CAN bus technology
- Up to 1000 operating hours between services



Mast and load handling

- Tilting clear-view triplex mast with full free lift
- Lifting, lowering, mast reach and mast tilt are electronically adjustable.
- Fork spreader designed to enhance load-handling efficiency, manually or hydraulically; standard V=560-1550 mm (optional V=560-2220 mm)



Digital truck controller

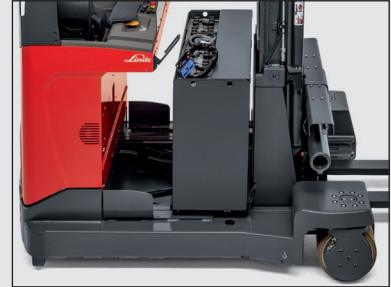
- Task-specific parameter configuring
- Excellent reliability and safety
- Very energy efficient
- Electronic system automatically self-checks at power-on

Stability

- Chassis designed for maximum structural integrity and durability
- A low centre of gravity provides optimum stability and high residual capacities
- Robust integrated manual or hydraulic fork spreader to handle long or wide loads with ease.
- All tyres are Polyurethane for long life
- Rugged, clear view overhead guard

Batteries

- Battery capacities to suit every application: 465 Ah to 930 Ah
- Rapid and easy lift-out battery changing system. Optional battery carrier on steel rollers
- Optional audible warning when battery level is low



Operator compartment

- Optimum visibility with new overhead guard design
- Ambient cabin, with electrical heating
- Document compartment with cup holder
- 12 V electrical socket to charge devices
- Storage holders for drinks and pen/pencils
- Lateral driving camera and monitor
- Ambient cabin with electrical heating

ncnielsen

7860 Balling · tlf: 99 83 83 83 · fax: 97 56 46 24
e-mail: linde@nc-nielsen.dk · www.nc-nielsen.dk



Subject to modification in the interest of progress. Illustrations and technical details could include options and not binding for actual constructions. All dimensions subject to usual tolerances.