



EXD-SF SlimForks® Technical data

High lift pallet truck with ultra-flat fork arms for double-decker operation



This specification sheet to VDI Guidelines 2198 or 3597 only gives the technical figures for the standard truck.
Different tyres, other masts, additional equipment etc. could give different figures.

Characteristics	1.1	Manufacturer			STILL
	1.2	Manufacturer's model designation			EXD-SF 20 SlimForks®
	1.3	Drive: electric, diesel, petrol, LPG, mains electric			Electric
	1.4	Controls (hand, pedestrian, stand on, rider seated, order picker.)			Stand-on/pedestrian
	1.5	Capacity/load	Q	kg	500 + 500
	1.6	Load centre	c	mm	600
	1.8	Load distance	x	mm	870
	1.9	Wheel base	y	mm	1663
	Weights	2.1	Truck weight (inc. battery)		kg
2.2		Axle load laden	drive end/load end	kg	1103/1188 ⁴
2.3		Axle load unladen	drive end/load end	kg	911/380 ⁴
Wheels, chassis	3.1	Tyres (rubber, Vulkollan, pneumatic, polyurethane)			Polyurethan
	3.2	Tyre size	drive end	mm	ø 230 x 75
	3.3	Tyre size	load end	mm	ø 43 x 80
	3.4	Support castors	drive end	mm	ø 140 x 54
	3.5	No. of wheels (x = driven)	drive end/load end		1 x -2/6
	3.6	Track width	drive end	b ₁₀ mm	495
	3.7	Track width	load end	b ₁₁ mm	355
Dimensions	4.2	Height, mast retracted	h ₁	mm	In the mast table
	4.3	Free lift	h ₂	mm	In the mast table
	4.4	Lift	h ₃	mm	In the mast table
	4.5	Height, mast extended	h ₄	mm	In the mast table
	4.6	Basic lift	h ₅	mm	95
	4.9	Height of tiller in driving position	min./max.	h ₁₄ mm	1109/1303
	4.15	Height lowered		h ₁₃ mm	42 ⁵
	4.19	Overall length without load	platform open/close	l ₁ mm	2177/2591 ¹
	4.20	Length including fork backs	platform open/close	l ₂ mm	1027/1443 ¹
	4.21	Overall width		b ₁ mm	720
	4.22	Fork dimensions		s/e/l mm	38/172/1150
	4.24	Fork carriage width		b ₃ mm	710
	4.25	Overall fork width		b ₅ mm	530
	4.32	Floor clearance, centre of wheel-base		m ₂ mm	4
4.34	Working aisle width with 800 x 1200 pallet lengthways (b ₁₂ x l ₆)	platform open/close	A _{st} mm	2429 ² /2841 ^{1,2}	
4.35	Turning radius	platform open/close	W _s mm	1899/2313 ¹	
Performance	5.1	Travel speed	laden/unladen	km/h	7.5/7.5
	5.2	Hoist speed	laden/unladen	s	2.6/2.2
	5.21	Hoist speed (Initial lift)	laden/unladen	m/s	0.16/0.31
	5.3	Lowering speed	laden/unladen	s	2.2/2.2
	5.31	Lowering speed (Initial lift)	laden/unladen	m/s	0.3/0.25
	5.7	Gradeability	laden/unladen	%	7 ³ /15 ³
	5.9	Acceleration time (over 10 m)	laden/unladen	s	7.2/5.85
5.10	Service brake			electromagnetic	
Electric motor	6.1	Drive motor, rating S2 = 60 min		kW	2.3
	6.2	Hoist motor, rating at S3		kW	2.2/10%
	6.3	Battery to DIN 43531/35/36; A, B, C, No			no
	6.4	Battery tvoltage, rated capacity C _s		V/Ah	24/345 (375)
	6.5	Battery weight ± 5% (depends on make)		kg	288
	6.6	Energy consumption to VDI cycle		kWh/h	1.07
Other	8.1	Type of drive control			AC controller
	8.4	Sound level at driver's ear		dB (A)	66

¹ with platform lowered

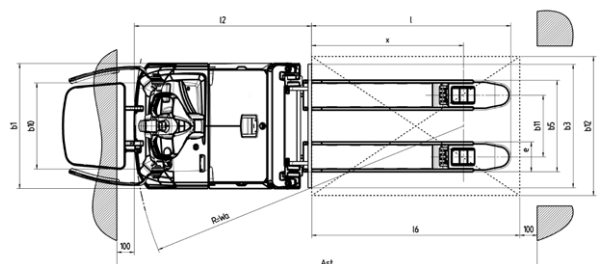
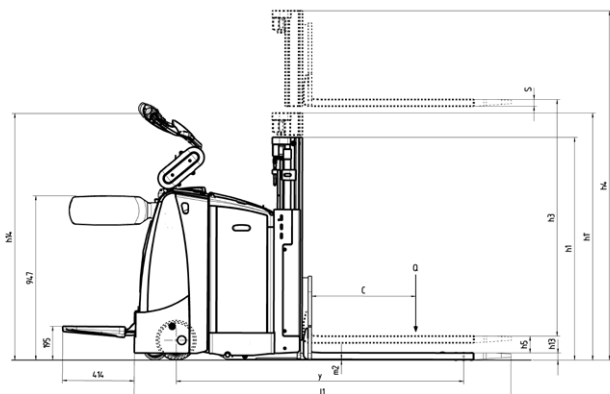
² diagonal according to VDI 2198-2011 add 190 mm

³ with base structure lifted

⁴ Without on-board operator

⁵ To add 6 mm in correspondence of the sliding roller pallets

	DX			HiLo
h ₃	1580	2024	2424	2924
h ₁	1285	1535	1735	1985
h ₁ '	1350	1600	1800	-
h ₂	130	130	130	1462
h ₄	2075	2547	2947	3447



Chassis.

- Very compact design and flowing contours increase the agility of the EXD-SF SlimForks® and allow manoeuvring the truck in very narrow spaces. The moving part of the chassis can be raised by the initial lift. Besides this, the contours of the forks and the rigid part of the chassis were modified in such a way that the truck now easily passes over transitions on slopes without getting stuck.
- The central, suspended drive unit keeps the wheel pressure constant in proportion to the load weight on the fork ensuring excellent traction for acceleration and braking at all times.
- Two resilient castor wheels guarantee perfect lateral stability.

Steering.

- By standard, the EXD-SF SlimForks® is fitted with a very smooth and well levelled electric steering.
- In the position for straight travel, all unintended steering movements are filtered away by an electronic filter so that the truck runs in a perfect straight line.
- The combination of the castor wheels and automatic curve speed reduction provides maximum lateral stability and reduces the effect of centrifugal forces on the driver and the load.

Tiller.

- To increase the safety of the truck when operated in pedestrian mode, it is now available with the new optional combi-tiller.
- The ergonomic layout of the controls is suitable for operation by left handed and right handed operators alike. The buttons for horn, lifting and lowering are always in reach without change of grip; intelligent details for fatigue free work.
- Thanks to the large buttons that have raised and depressed areas, every function can be felt, also when wearing gloves, without having to look at the tiller.
- The arrangement of the controls allows activating several functions at the same time, e. g. lifting and driving.
- The switches (micro switches) and the circuit board in the tiller are IP 65 protected. All plug connections and wire harnesses are IP 54 protected. This substantially reduces the effects of the environment such as humidity, rain or dust.
- Extremely enduring tiller head made of glass fibre reinforced Polyurethane.

Driver's compartment.

- By standard, the EXD-SF SlimForks® is fitted with a pneumatically suspended platform for the driver. This system which is unique to warehouse equipment absorbs shocks and vibrations resulting from bumpy floors and protects the operator.
- The suspension can be easily regulated by a valve and provides the driver with the possibility to select a personal comfort adjustment. A table provides a guideline to the values depending on the weight of the driver.
- The large barriers on both sides of the driver's stand are single-piece casts and offer maximum protection.
- STILL offers a unique, patented system to adjust the height of the side barriers. This makes it possible to adjust the barriers to suit each user's individual needs with respect to the body size providing safety and maximum productivity.
- If the side barriers and the platform are folded away, they are completely inside the contour of the truck. This makes the truck very compact so that it can be manoeuvred in very narrow spaces.

Drive.

- Powerful and economic rotary current technology with a performance capacity of 2.3 kW.
- Two alternative driving programmes allow to flexibly adjust the truck to the given application.
- In the "ECO" mode (tortoise button) the motor will accelerate less vigorously and achieve a longer service time per battery charge cycle at consistently high productivity.
- In the "BOOST" mode (hare button) the motor will operate at maximum speeds to achieve maximum performance. Especially in peak workload situations, e.g. towards the end of a shift, this mode provides substantial advantages.
- Close monitoring of the torque moment ensures that the EXD-SF SlimForks® will accelerate smoothly in all situations.
- When stopping on a slope or a ramp and when the operator releases the drive switch, the control unit will detect any rolling movement of the truck and automatically close the motor brake in order to prevent the truck from accidentally rolling off.

Hydraulics.

- A compact 2.2 kW motor with an integrated oil tank, solenoid valves and pressure release valves ensure frictionless movement of the lift cylinder which is equipped with a lift switch off function.
- This powerful hydraulic system lifts loads in very short times and provides maximum turnover, also when handling heavy loads.

Mast and initial lift.

- A wide mast and the improved shape of the mast allow a perfect view of the load.
- With the pulse control system for the hydraulics the fork can be placed exactly at the desired height.
- The fully proportional hydraulics are provided by electronically controlling the speed of the pump motor.
- The capacity of the initial lift is max. 1 000 kg, when carrying two load carriers 500 kg per load carrier.

Brakes.

- The EXD-SF SlimForks® offers double safety by two independent brake circuits.
- The progressive electric service brake is activated when the drive switch is released or if the butterfly switch to invert the drive direction is depressed.
- The electro-magnetic disc brake is used for emergency stops if the emergency stop button is pressed or if the tiller is moved to an upright position.

Battery.

- The battery is easy to reach and can be charged, maintained or topped-up effortlessly. In two or three-shift operation the battery can be exchanged with a crane or by roller track.
- The stable metal battery cover is completely inside the contour of the EXD-SF SlimForks® so that it is perfectly protected against impacts by collisions.

Options.

- Modular accessory system exclusively provided by STILL.
- Adjustable A4 writing pad with paper clip.
- Combi-tiller.
- Drive wheel made of Polyurethane, solid rubber or natural coloured. Other materials on request.
- Preparation for data terminal.
- Cold store version (-30°).
- Access authorisation and fleet management by STILL FleetManager™.
- Accident recorder (optional with STILL FleetManager).
- Battery cover with shrink film roll holder.
- Fire extinguisher.

Safety.

- Curve speed reduction if load is lifted thanks to OPTISPEED.
- STILL forklift trucks comply with the EC guideline 98/37 and are marked by the CE label.
- STILL is certified in accordance with ISO 9001.

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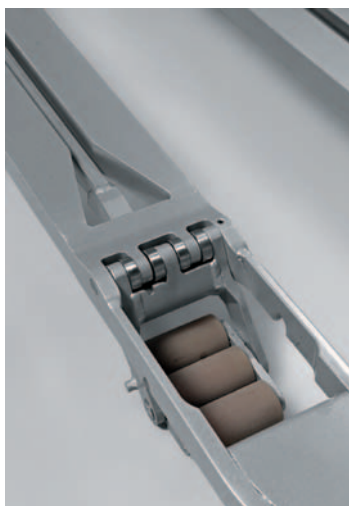
Double-decker high lift pallet truck with ultra-flat fork arms.

The EXD-SF SlimForks® is a double-decker high lift pallet truck with a maximum load capacity of 1000 kg for the initial lift or two times 500 kg if the initial lift and the main lift are used at the same time. The EXD-SF SlimForks® allows moving two pallets at once. The ultra-flat forks provide frictionless handling of load carriers with an entry height of only 45 mm.

The pneumatic suspension of the platform can be individually adjusted to any driver's weight and the height-adjusting side barriers ensure maximum comfort and safety. Two available driving programmes either for maximum productivity or maximum service time per battery cycle allow adjusting the truck to any kind of application.



- The very compact design and the platform that folds completely into the inside the contour of the truck allows manoeuvring in very narrow spaces and using the truck in rooms with public access.
- STILL has developed a new combi-tiller. This tiller is optionally available and increases the safety for pedestrian operation of the truck, because it enlarges the distance between the truck and the operator.



- The newly developed straddle arms are only 42 mm high.
- The 6 rollers are fitted with a surface of optimised Polyurethane and run on multiple bearings.
- 8 additional metal skid-rollers allow picking up pallets even when deformed or damaged.
- A release valve ensures that the load is always evenly distributed between main lift and initial lift.



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