

# KANVAN Technical Data

## Multifunction Tractor with Lift Function

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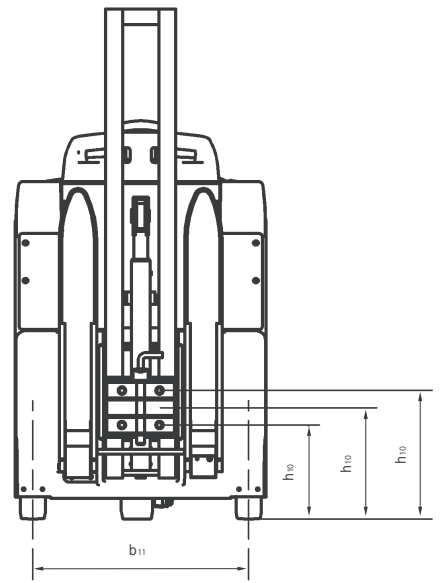
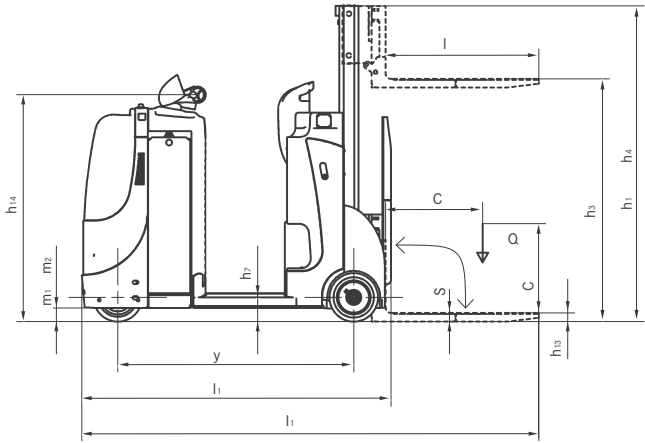
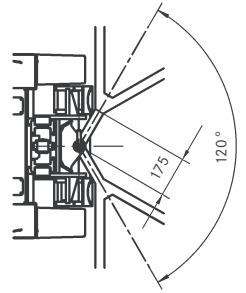
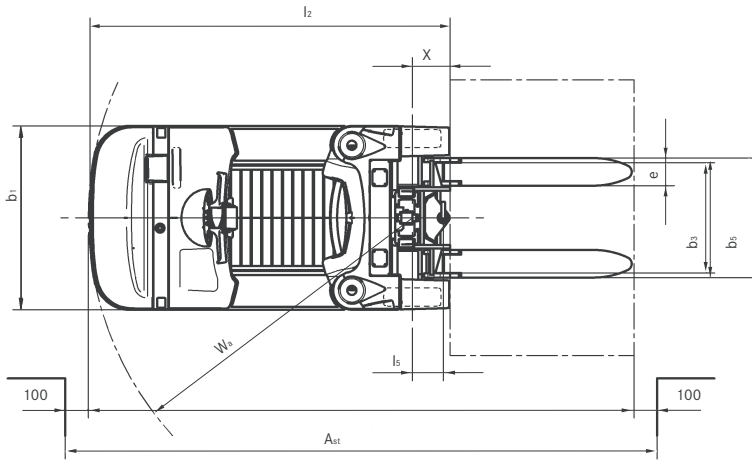
KANVAN 05

KANVAN 10



This specification sheet to VDI Guidelines 2198 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	STILL	
	1.2	Manufacturer's model designation			KANVAN 05	KANVAN 10	
	1.3	Power supply			Electric	Electric	
	1.4	Type of control			Stand-on	Stand-on	
	1.5	Capacity/load	Q	kg	500	1000	
	1.5.1	Trailer load	Q	kg	4000	4000	
	1.6	Nominal load centre	c	mm	500	500	
	1.7	Towing capacity	F	N	1600	1600	
	1.8	Load distance	x	mm	165	165	
1.9	Wheel base	y	mm	1216	1302		
Weight	2.1	Weight (incl. battery)		kg	1510	1645	
	2.2	Axle loadings laden	drive end/load end	kg	530/1480	380/2265	
	2.3	Axle loadings unladen	drive end/load end	kg	780/730	890/755	
Wheels, Tyres	3.1	Tyres			Polyurethane	Polyurethane	
	3.2	Tyre size	drive end	mm	250 x 100	250 x 100	
	3.3	Tyre size	load end	mm	250 x 80	250 x 80	
	3.5	Wheels, number (x = driven wheel)	drive end/load end		1x / 2	1x / 2	
	3.6	Track width	drive end	b <sub>10</sub>	mm	0	0
	3.7	Track width	load end	b <sub>11</sub>	mm	689	689
	Dimensions	4.1	Tilt angle, mast/fork carriage	forwards/backwards	°	0/0	0/0
4.2		Closed height		h <sub>1</sub>	mm	1650	1650
4.3		Free lift		h <sub>2</sub>	mm	150	150
4.4		Lift height		h <sub>3</sub>	mm	1250	1250
4.5		Overall height, mast raised		h <sub>4</sub>	mm	1650	1650
4.8		Seat/platform height		h <sub>7</sub>	mm	146	146
4.9		Height of tiller in drive position	min./max.	h <sub>14</sub>	mm	1165	1165
4.12		Tow coupling height		h <sub>10</sub>	mm	300/355/410	300/355/410
4.15		Fork height lowered		h <sub>13</sub>	mm	45	45
4.17		Rear overhang (Tow)		l <sub>5</sub>	mm	135	135
4.19		Overall length		l <sub>1</sub>	mm	1595/2756	1693/2854
4.20		Length to front face of forks		l <sub>2</sub>	mm	1566	1664
4.21		Overall width		b <sub>1</sub>	mm	800	831
4.22		Fork dimensions		s/e/l	mm	45/120/990	45/120/990
4.24		Fork carriage width		b <sub>3</sub>	mm	480	480
4.25	Distance between fork arms		b <sub>5</sub>	mm	520	520	
4.31	Ground clearance beneath mast, laden		m <sub>1</sub>	mm	70	70	
4.32	Floor clearance, centre of wheel base		m <sub>2</sub>	mm	70	70	
4.33	Working aisle width for pallets 1000 x 1200 crossways		A <sub>st</sub>	mm	2940	3040	
4.34	Working aisle width for pallets 800 x 1200 lengthways (b <sub>12</sub> x l <sub>6</sub> )		A <sub>st</sub>	mm	3040	3140	
4.35	Outer turning radius		W <sub>a</sub>	mm	1410	1500	
Performances	5.1	Travel speed	laden/unladen	km/h	7.5/13	7.5/13	
	5.2	Lift speed	laden/unladen	m/s	0.16/0.20	/	
	5.3	Lowering speed	laden/unladen	m/s	0.28/0.23	/	
	5.5	Rated drawbar pull laden		N	400	400	
	5.6	Max. drawbar pull laden		N	4000	4000	
	5.7	Gradeability	laden/unladen	%	See diagram	See diagram	
	5.8	Max. gradeability	laden/unladen	%	See diagram	See diagram	
	5.9	Acceleration time (over 10 m)	laden/unladen	s	-	-	
	5.10	Service brake			Electromagnetic	Electromagnetic	
	Electric motors	6.1	Drive motor, rating S2 = 60 min		kW	3	3
6.2		Lift motor, rating/S3		kW	2.2/10%	2.2/10%	
6.3		Battery according to IEC 254-2; A, B, C, no			IEC 254 - 2; B	IEC 254 - 2; B	
6.4		Battery voltage, capacity K <sub>5</sub>		V/Ah	24/450	24/560	
6.5		Battery weight ±5% (dependant on manufacturer)		kg	410	515	
6.6		Energy consumption according to VDI cycle		kWh/h	-	-	
Other	8.1	Drive control			AC control	AC control	
	8.4	Noise peak at operator's ears		dB(A)	-	-	



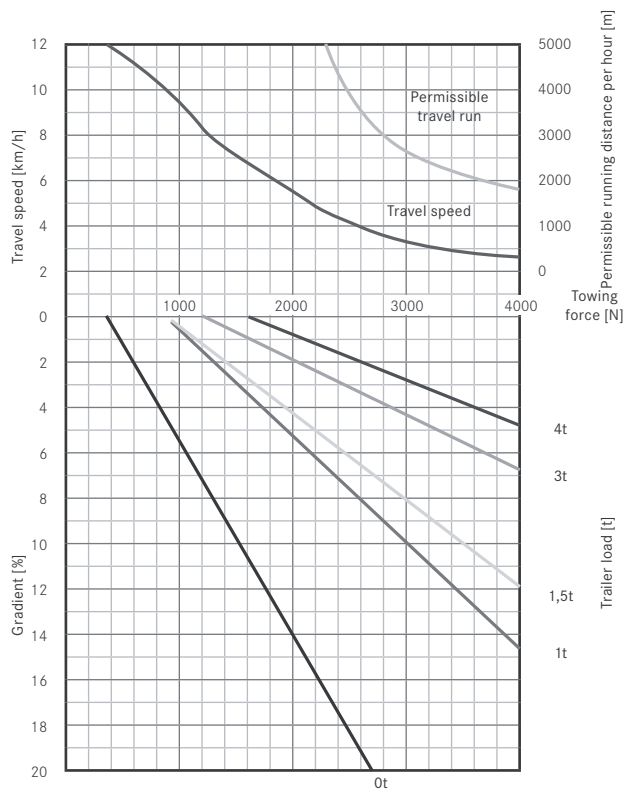
## Mast table

h <sub>1</sub>	1650	2200
h <sub>2</sub>	150	150
h <sub>3</sub>	1250	1800
h <sub>4</sub>	1650	2200

## Maximum load

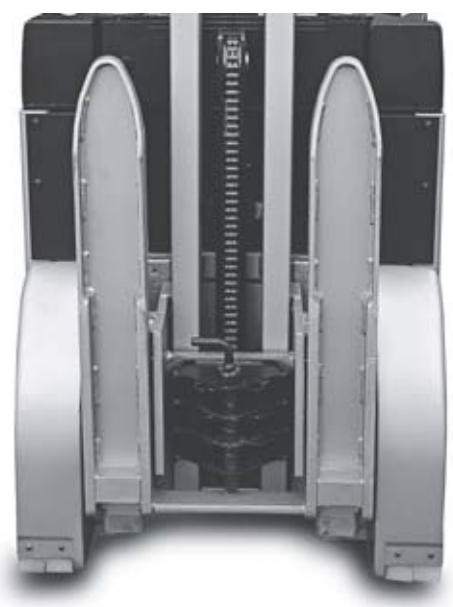
	Load centre in mm	400	500	600
KANVAN 05	h <sub>3</sub> 1250 mm	500 kg	500 kg	450 kg
	h <sub>3</sub> 1800 mm	500 kg	500 kg	450 kg
KANVAN 10	h <sub>3</sub> 1250 mm	1000 kg	1000 kg	830 kg
	h <sub>3</sub> 1800 mm	1000 kg	1000 kg	830 kg

## Performance chart



Performance example: on a 2 per cent gradient with a towed load of 4 t the KANVAN can pull the load for 3500 m largely uninterrupted at the speed of 4.0 and still brake it. With the load and gradient combinations displayed a restart can be made on the gradient after a stop.

The permissible travel distance per hour is the total run including return runs. It is recommended that a braked trailer be used if the trailer weight is more than 2.5 t and for all trailer loads when up or down gradients are being negotiated.



## A genuine innovation for the intralogistics of tomorrow

The KANVAN, the first standard truck of its type, integrates two functions essential in modern production provision: powerful towing of trailers and stacking or moving goods.

Thus the KANVAN enables the user, on his own initiative and independent of other trucks, to carry out all necessary tasks on his way through the operation with only one truck. The KANVAN thus integrates in an innovative manner all functions which are needed in practice to implement modern production concepts (e. g. lean production, Kanban, etc.).

## Combined functionality

The KANVAN combines the manoeuvrability of a compact standard tractor with the possibility of lifting goods weighing up to 1000 kg to a height of 1250 or 1800 mm.

The dynamic 3 kW AC drive has a towing power of 4000 kg and allows a maximum speed of 13 km/h.

The compact build with a length of 1595 mm allows flexible manoeuvring even in narrow aisles.

## Steering

- Electrical steering with automatic return to the neutral position.
- In the middle steering range unwanted steering movements are electronically damped in order to guarantee straight ahead travel without fluctuations.
- The central position of the drive wheel guarantees good traction and also stable straight ahead running when accelerating and braking.
- The automatic speed reduction when travelling round bends provides a high lateral stability and reduces the effects of centrifugal force.

## Truck frame

- Reinforced in the frontal area for collision protection. Located behind the removable front cowl the whole technology of the truck is easily accessible.

## Combi operating controls

The modern combi controls of the STILL cockpit contain all functions for guiding, operating and controlling the KANVAN. Thanks to the ergonomic arrangement of the buttons, all functions can be reached without changing grip. The following functions are integrated in the cockpit:

- Driving
- Steering
- Lifting and lowering
- Work hour meter
- Discharge indicator
- Adjustable drive programmes
- Standard access authorisation by pin code
- Diagnosis by Service Code

In addition to this, the cockpit offers secure support whilst driving.

## Operating the mast

- The mast can be simply operated from the driver's station through the STILL cockpit. An additional button on the rear of the truck is available as standard, for the best view on the forks and load when operating the mast.
- With the aid of the patented system the forks can be comfortably folded up or down at the push of a button. The driver can thus safely control all functions from his station without having to stand outside the truck.

## Driver's station

- The damped driver's stand on platform provides optimal conditions for entry and exit thanks to a low step height and an anti-slip covering.
- The stand on platform on the KANVAN also acts as a safety switch through a contact in order to ensure that the driver is standing in the truck when hoisting and lowering.
- The rear wall of the driver's station consists of a plastic (RIM) also used in car building and is ergonomically matched to the driver's needs.
- The padded backrest with shaped side supports provides the greatest comfort and security when driving.
- Various storage compartments and holders for rolls of foil or paperwork are integrated in the driver's station.
- A writing desk is available as an option for the KANVAN.

## Drive

- Powerful, economical and thus cost-saving thanks to a 3.0 kW three-phase motor.
- Together with the STILL cockpit the latest generation of AC controllers provides the opportunity to adjust the truck performance at the push of a button. For this the driver simply switches from one mode to another.
- The central position of the drive wheel guarantees good traction in order to apply force to the roadway even in difficult situations.
- A high floor clearance of 70 mm and cushioning polyurethane tyres also allow use outdoors and on uneven floors.
- When standing on the ramp or when the drive switch is released the controller monitors the truck and prevents uncontrolled rolling back by closing the motor brake.
- In "ECO" mode (Tortoise button) the motor follows the standard characteristic curve which is programmed for efficient consumption and allows nominal acceleration. This gives a long operating period per battery charge.
- In "BOOST" mode (Hare button) the motor follows a very dynamic characteristic curve which allows a high torque, increased acceleration and also higher speeds under load. Productivity is once again noticeably increased by this.
- In both modes the driving programme can be tuned to the particular requirements of the application and to the driver's (speed, acceleration, braking).
- A speed sensor connected to the control unit provides soft uniform acceleration of the KANVAN up to maximum speed, regardless of the load on the forks.
- The truck will brake when the drive switch on the STILL cockpit is released or when the driver brakes. Here, the AC motor acts as a generator and the energy gained during braking is stored in the battery.

## Mast

- The single lift mast of the KANVAN offers a lift height of 1250 mm as standard or 1800 mm as an option. With these the KANVAN can raise a load of 1000 kg to full lift height.
- Depending on the goods to be lifted, hinged forks of different lengths can be selected (790 mm, 990 mm, 1190 mm).
- The proportional hydraulic valve enables sensitive lifting and lowering and also allows the forks to be folded in and out smoothly.

## Brake system

- Soft and secured braking with energy recovery is activated by releasing the butterfly switch, or by plugging.

## Battery

- The battery is easily accessible and can be changed using a hoist or at the side through integral roller tracks, for two or three shift operation.
- Two different battery trays accommodate batteries with a capacity of up to 450 and 600 Ah respectively.

## Coupling

- Trailer load 4000 kg.
- The trailer load and travel speed are dependent on the gradient in question (see performance diagram page 5).
- The standard pin coupling offers five different coupling heights (300/355/410).
- Coupling variants on request (e.g. Rockinger).

## Options

- A unique modular accessory system due to multi-functional holder (front and rear end).
- Adjustable A4 writing desk.
- Warning light.
- Spotlights.
- Reversing light and brake light.
- Rear-view mirror.
- Several types of trailer coupling.
- Preparation for data terminal.
- Additional holders for accessories (on request).
- Pedestrian operation through butterfly switch on the cockpit and/or by buttons on the backrest.
- Various speed settings.
- Battery compartment for 600 Ah battery.
- If required the second order-picking level can be reached with the hinged step.
- Accident recorder (optional as part of STILL FleetManager).
- An extra coupling on the truck front is possible (only KANVAN 10).

## Safety

- Trucks comply with the EC guideline 2006/42 and bear the CE symbol.
- STILL is certified to ISO 9001.

# STILL



STILL Materials Handling Ltd  
Aston Way  
Leyland Preston  
PR26 7UX  
Tel.: +44 (0)845 603 6827  
Fax: +44 (0)1772 454668

STILL Materials Handling Ltd  
19 Hennock Road  
Marsh Barton Trading Estate  
Exeter  
EX2 8RU  
Tel.: +44 (0)1392 435151  
Fax: +44 (0)1392 824328  
info@still.co.uk

For further information please visit:  
[www.still.co.uk](http://www.still.co.uk)



STILL is certified in the following areas: Quality management, occupational safety, environmental protection and energy management.



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