

TVL203

80V DUAL-DRIVE THREE-WHEEL COUNTERBALANCE FORKLIFT 2.0T

2000 kg | 6000 mm | Li-Ion



The TVL203 is an 80V lithium-ion 3-wheel forklift purpose-built for loading, unloading, and stocking goods in production plants, retail storage, and logistics hubs, including low-ceiling warehouse environments, thanks to the overhead guard height below 2 meters. Its compact chassis and tight turning radius enable agile operation in confined aisles, while the dual 80V PMS motors ensure stable power output for smooth lifting and acceleration. TVL offers energy-efficient operation, minimal noise, and outstanding operator comfort — even in continuous-use applications.

SPECIFICATION	REF	UNIT	VALUE
Manufacturer			EP
Model designation			TVL203
Battery voltage/nominal capacity		V/Ah	80/150
Rated capacity	Q	kg	2000
Load centre distance	c	mm	500
Service weight		kg	3649
Height, mast lowered	h_1	mm	1995
Lift	h_3	mm	3000
Height, mast extended	h_4	mm	4054
Overall length	l_1	mm	3039
Overall width	b_1/b_2	mm	1130
Length to face of forks	l_2	mm	1969
Fork dimensions	s/e/l	mm	40*122*1070
Turning radius	Wa	mm	1614
Drive			Electric
Operator type			Seated

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Features

Integral cast chassis for superior stability

The TVL163/183/203 is built on EP's self-developed integral cast chassis design, which means there's no longer a joint interface between chassis and counterweight. It delivers outstanding structural strength and a naturally lower center of gravity. This ensures excellent truck stability even under full load and at high lift heights, while minimizing vibration and mast shaking. The robust frame further enhances durability, extending the service life of the truck.





Compact size for low-clearance and tight spaces

With an overall height of less than 2,000 mm, the TVL163/183/203 is designed for seamless operation in confined spaces such as containers, underground garages, and low-ceiling warehouses. Combined with a tight turning radius of just 1,614 mm, this compact truck offers agility, enabling operators to retrieve and stack efficiently in areas where conventional forklifts simply cannot fit.

80V Dual drive motors and PMSM technology

Equipped with 80V dual drive motors with advanced Permanent Magnet Synchronous Motor (PMSM) technology, the TVL163/183/203 delivers sensitive steering and up to 10-15% energy savings compared with conventional forklifts.





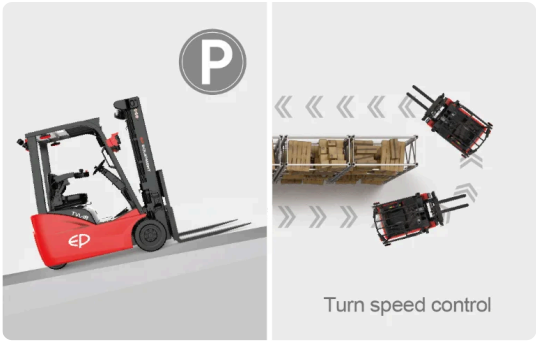
Dual charging flexibility

The lithium-powered TVL163/183/203 is equipped as standard with an 80V/35A internal single-phase charger and a plug for external charger connection. The selection of external single-phase or three-phase chargers with power up to 80V/100A gives operators flexible and efficient charging options for all working scenarios.

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Safety-guaranteed functions

Safety is further supported by automatic stop on ramp, electromagnetic parking brake, and turn speed control, making every turn and stop at ramp secure.





Effortless and precise control

Multiple functions are integrated into the armrest, within easy reach at the palm-sized control area, operated via fingertip or joystick, and include:
forward/reverse direction switch, lifting/lowering, tilting, sideshift and 4th way, horn, turning light switch, storage box with USB port, emergency switch.
The proportional hydraulic valve ensures precise control of all hydraulic functions without affecting steering beheaviur

Ergonomic and spacious operator workplace

The new chassis layout creates a larger operating space, giving drivers more legroom and comfort during long shifts. Combined with a wide-view mast and optimized overhead guard design, the TVL163/183/203 provides excellent visibility and minimizes blind spots, ensuring both a comfortable and safe driving experience.



VDI Chart

	SPECIFICATION	REF	UNIT	VALUE
1.1	Manufacturer			EP
1.2	Model designation			TVL203
1.3	Drive			Electric
1.4	Operator type			Seated
1.5	Rated capacity	Q	kg	2000
1.6	Load centre distance	c	mm	500
1.8	Load distance, centre of drive axle to fork	x	mm	382
1.9	Wheelbase	y	mm	1359
2.1	Service weight		kg	3649
2.2	Axle loading, laden front/rear		kg	4930/719
2.3	Axle loading, unladen front/rear		kg	1632/2017

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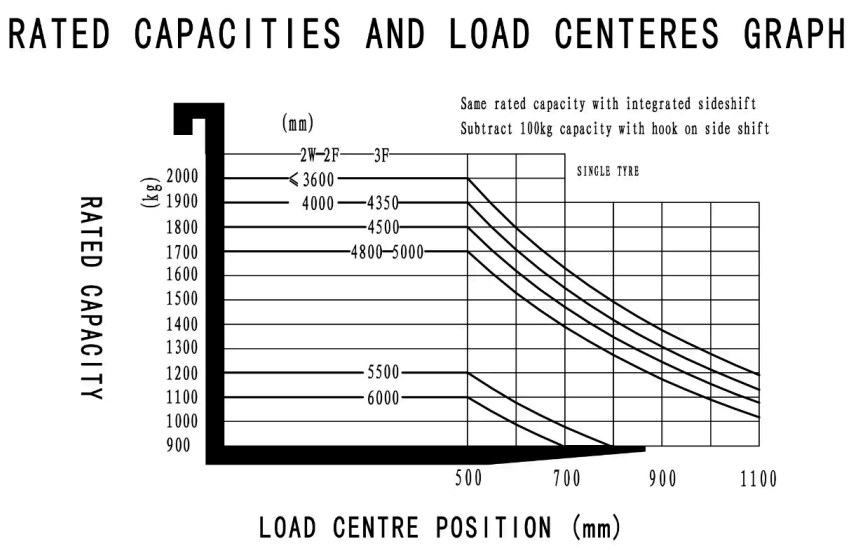
	SPECIFICATION	REF	UNIT	VALUE
3.1	Tyres			Solidrubber
3.2	Tyre size, front		mm	200/50-10
3.3	Tyre size, rear		mm	140/55-9
3.5	Wheels, number front/rear (x=drive wheels)			2x/2
3.6	Tread width, front	b_{10}	mm	930
3.7	Tread width, rear	b_{11}	mm	215
4.1	Tilt of mast/fork carriage forward/backward	α/β	°	5/5
4.2	Height, mast lowered	h_1	mm	1995
4.3	Free lift	h_2	mm	100
4.4	Lift	h_3	mm	3000
4.5	Height, mast extended	h_4	mm	4054
4.7	Height of overhead guard (cabin)	h6	mm	1984
4.8	Seat height relating to SIP/stand height	h7	mm	1017
4.12	Coupling height	h10	mm	492
4.19	Overall length	l_1	mm	3039
4.20	Length to face of forks	l_2	mm	1969
4.21	Overall width	b_1/b_2	mm	1130
4.22	Fork dimensions	s/e/l	mm	40*122*1070
4.23	Fork carriage ISO 2328, class/type A, B			2A
4.24	Fork carriage width	b_3	mm	1040
4.31	Ground clearance, laden, below mast	m_1	mm	90
4.32	Ground clearance, centre of wheelbase	m_2	mm	110
4.34.1	Aisle width for pallets 1000×1200 crossways	Ast	mm	3321
4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast	mm	3446
4.35	Turning radius	Wa	mm	1614
5.1	Travel speed, laden/unladen		km/h	13/14
5.2	Lift speed, laden/unladen		m/s	0.36/0.45
5.3	Lowering speed, laden/unladen		m/s	0.45/0.43
5.5	Drawbar pull, laden/unladen			1878/1224
5.6	Max. drawbar pull, laden/unladen		N	12923/9208
5.8	Max. gradeability, laden/unladen		%	15/17
5.10	Service brake			Electromagnetic
5.11	Parking brake			Electromagnetic
6.1	Drive motor rating S2 60 min		kW	5.0X2

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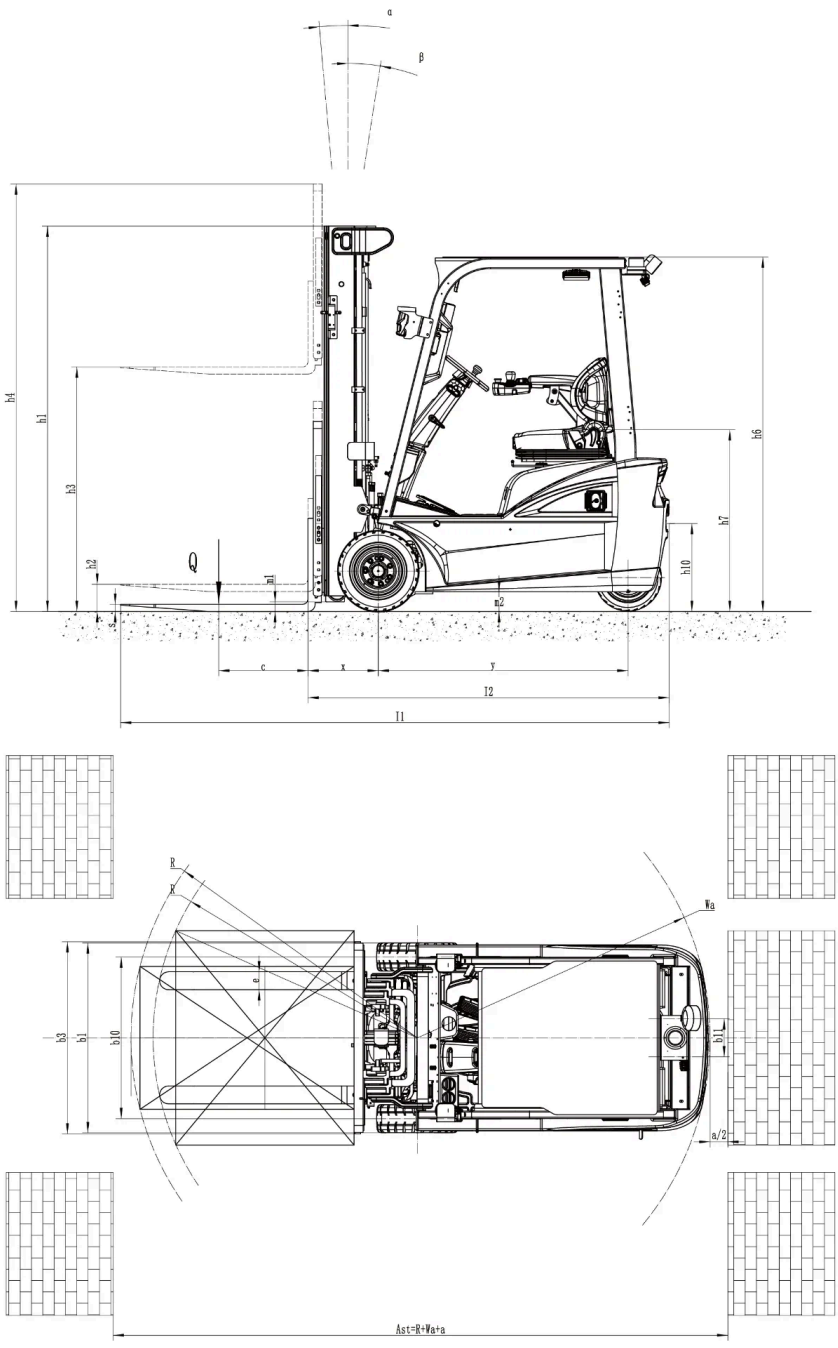
	SPECIFICATION	REF	UNIT	VALUE
6.2	Lift motor rating at S3 15%		kW	16
6.4	Battery voltage/nominal capacity		V/Ah	80/150
6.4.3	Battery type			Li-Ion
6.5	Battery weight		kg	165
6.6	Energy consumption according to DIN EN 16796		kWh/h	5.68 [1)]
6.7	Turnover output according to VDI 2198		t/h	108
6.8	Turnover efficiency according to VDI 2198		t/kWh	22.22
8.1	Type of drive unit			PMSM
10.1	Operating pressure for attachments		bar	180
10.2	Oil volume for attachments		ℓ/min	35
10.5	Steering design			Hydraulic
10.7	Sound pressure level at the driver's seat		dB(A)	65
15.1	Charger output current		A	35

Subject to modification of specifications and designs without prior notice as part of continuous product improvement. Images and technical data shown may include optional features and are provided for reference only. All dimensions are subject to standard manufacturing tolerances.

VDI Drawing



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Mast Options

MAST TYPE	LIFT HEIGHT (H3, MM)	MAST LOWERED HEIGHT (H1, MM)	MAST EXTENDED HEIGHT, NO BACKREST (H4, MM)	MAST EXTENDED HEIGHT, WITH BACKREST (H4, MM)	FREE LIFT HEIGHT, NO BACKREST (H2, MM)	FREE LIFT HEIGHT, WITH BACKREST (H2, MM)
2-Standard Mast	3000	1995	3665	4054	100	100
2-Standard Mast	3600	2295	4265	4654	100	100

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MAST TYPE	LIFT HEIGHT (H3, MM)	MAST LOWERED HEIGHT (H1, MM)	MAST EXTENDED HEIGHT, NO BACKREST (H4, MM)	MAST EXTENDED HEIGHT, WITH BACKREST (H4, MM)	FREE LIFT HEIGHT, NO BACKREST (H2, MM)	FREE LIFT HEIGHT, WITH BACKREST (H2, MM)
2-Standard Mast	4000	2545	4665	5054	100	100
2-Free Mast	3000	1995	3665	4054	1360	970
2-Free Mast	3600	2295	4265	4655	1660	1270
2-Free Mast	4000	2545	4665	5055	1910	1520
3-Free Mast	4350	2010	5015	5404	1375	835
3-Free Mast	4500	2060	5165	5554	1425	1035
3-Free Mast	4800	2160	5465	5854	1525	1135
3-Free Mast	5000	2225	5665	6054	1590	1200
3-Free Mast	5500	2395	6165	6554	1760	1370
3-Free Mast	6000	2610	6665	7054	1975	1585

Options

ITEM	OPTIONS (optional items marked in yellow)
Fork dimension	122*40*1070 | Can be customized | 122*40*1150 | 122*40*1220 | 122*40*1370 | 122*40*1500
Front wheel material	Normal solid | Non-marking solid
Rear wheel material	Normal solid | Non-marking solid
Battery capacity	80V150AH | 80V230AH | 80V314AH
Charger	80V-35A integrated charger | 80V-60A external charger | 80V-65A external charger | 80V-100A external charger | 80V-150A external charger
Battery indicator	With hourmeter (Bluetooth) with ESP
Seat type	Comfortable + safety belt switch | GRAMMER-MSG65 | Suspension + safety belt switch
Attachments	No | Built-in sideshifter | External shifter | Fork positioner with sideshift
Traction pin	Yes and not customized
Electrostatic chain	Yes and not customized
Front lamp	LED
Rear lamp	No | LED
Warning lamp	LED

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ITEM	OPTIONS (optional items marked in yellow)
Steering lamp	LED
Blue lamp	No | Rear | Front and rear
Area warning lamp	No | Both side | Both side and rear
Rearview mirror	One in front | Two on sides and one in front
Buzzer	Yes and not customized
OPS system	Yes and not customized
USB interface	USB TYPE A/C
Telematics	Yes and not customized | No
Cabin	No | Basic half-cabin | Upgrade half cabin | Full cabin
Overhead guard	Standard | With tempered glass
AS/NZS function package	No | Yes and not customized
Turn speed control	Yes and not customized
Heating system during lithium battery charging	No | Yes and not customized
Operator identification device	No
Lifting electronic limit	No | Yes and not customized
Hydraulic system operating mode	Joystick | Fingertip
Rear armrest horn	Yes and not customized
Automatic Parking Brake	Yes and not customized

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