

Maintenance Friendly

Convenient and fast access to any component of the truck, no elements are located in areas difficult to reach. No Special tools are required.



Capacity	Ready	Min Volt	Max Volt
17.6%	24.50V	0mV	0mV
	0.00A	Avg Volt	Communication
		0.0mV	Normal

Realtime				
Rated Capacity	60.0 Ah	Wh(Current)	0.0	Wh
Discharge Cycle ...		Discharge Cycle ...		Reset
Times		Times		

Other		
Name	Value	Units
Cell Temp1	25.3	C
Cell Temp1	25.1	C
SOC	45	1/255
Power Temp	27.1	C
Envir Temp	32.2	C
Cell Volt Alarm	none	
Total Volt Alarm	none	
Current Alarm	none	
Temp Alarm	none	
Balance Alarm	none	

Volt		
Name	Value	Units
Cell	3507	mV
Total	24.5	V
Current	0.0	A
Run(Wh)	0	Wh

The software diagnostic tool for lithium batteries can provide full information about battery's condition and its current status. (The above values are for reference only.)

Battery Management System

CAN-bus

The BMS of battery controls charging and discharging parameters, working temperature, short circuits, has sleeping mode and is able to turn off the power in case of emergency. Communication with BMS and software adjustment is possible via CAN



The electric system is using CAN communication protocol increasing reliability of the system.



PSE12B
2x12 85Ah (5Hr) AGM maintenance free batteries are used.
Optionally available 2x12 106Ah (5Hr).



For PSE12B the charger with current 12A is used. The standard charging time is 7 hours



PSE12N
24V 60Ah Lithium LiFePO4 battery with BMS. Lithium battery has connection terminals with screws and located inside the steel case



For PSE12N the charger with current 25A is used. The standard charging time is 2.5 hours. Opportunity charging is supported

The PSE 12N stacker is equipped with maintenance-free 24V/60Ah LiFePO4 type Li-ion battery with fast charging and ultra-high number of charging /discharging cycles during life time; opportunity charging feature basically does not limit your operation time. The integrated BMS provides the same features as the BMS for the batteries of pallet trucks(refer to pallet truck section) .

The on-board charger with 25A current can provide full charge for less than 2.5 hours with great efficiency.

The **PSE 12B** stacker is equipped with 2x12V 85Ah VRLA-AGM maintenance free batteries. Optionally available 2x12V 105Ah batteries for longer operation.

The stacker is equipped with 12A on-board charger. The charging time is 7-8 hours, opportunity charging is not available.



STANDARD CONFIGURATION & OPTIONS FOR EDGE FAMILY

STANDARD CONFIGURATION OR OPTIONS	PTE12N	PTE15N	PTE20N	PTE20B	PSE12B	PSE12N
Standard Battery	Li-ion 24V/15Ah	Li-ion 24V/20Ah	Li-ion 48V/20Ah	AGM 48V/20Ah	AGM 2x12V/85Ah	Li-ion 24V/60Ah
Li-ion Battery 24V/20Ah	O	S	—	—	—	—
Li-ion Battery 24V/30Ah	O	O	—	—	—	—
Li-ion Battery 24V/36Ah	O	O	—	—	—	—
AGM 2x12V/106Ah (5 Hr)	—	—	—	—	O	—
Standard Charger	24V / 5A	24V / 5A	48V / 9A	48V / 3A	24V / 12A	24V / 25A
Li-ion Charger 24V/5Ah	S	S	—	—	—	—
Li-ion Charger 24V/8Ah	with optional battery only	O	—	—	—	—
Li-ion Charger 24V/12Ah	with 36Ah battery only	with 36Ah battery only	—	—	—	—
Curtis controller	S	S	S	S	S	S
BMS	S	S	S	—	—	S
CAN-communication	S	S	S	S	S	S
Speed Reduction at Turning	O	O	S	S	S	S
Vertical drive/Pin wheel	S	S	S	S	S	S
Fast battery replacement	S	S	S	S	—	—
Entry Roller	S	S	S	S	—	—
Single Fork Roller	S	S	S	S	S	S
Tandem Fork Rollers	O	O	O	O	—	—
On-board charger	—	—	—	—	S	S
Stability Castors	O	O	S	S	S	S
High traction drive wheel tyre	O	O	—	—	—	—
Fork length 800/900/1000mm	O	O	O	O	—	—
Fork width 370/550/570mm	—	O	—	—	—	—
Load backrest(42/48/60")	—	O	O	—	—	—
Pin Code Access	O	S	S	O	S	S
RFID Access	O	O	S	O	—	O
LED Indicators on Tiller	S	—	—	S	—	—
LCD Display on Tiller	O	S	S	O	S	S

S=Standard O=Optional — =not available

Various Options(Pallet Truck)



Optional tandem fork rollers



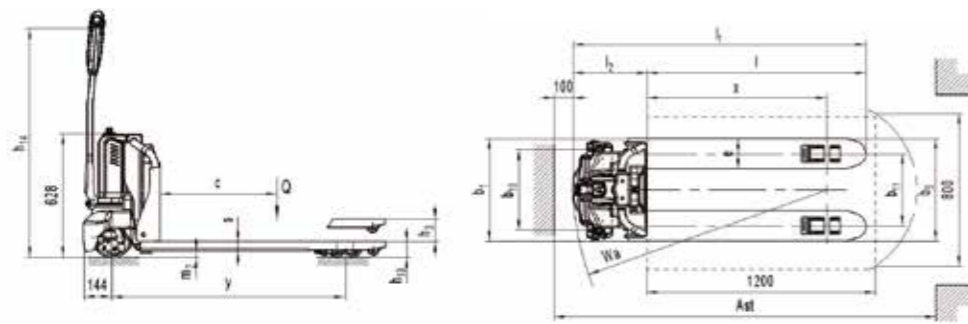
Optional high traction drive wheel



Optional Stability Casters

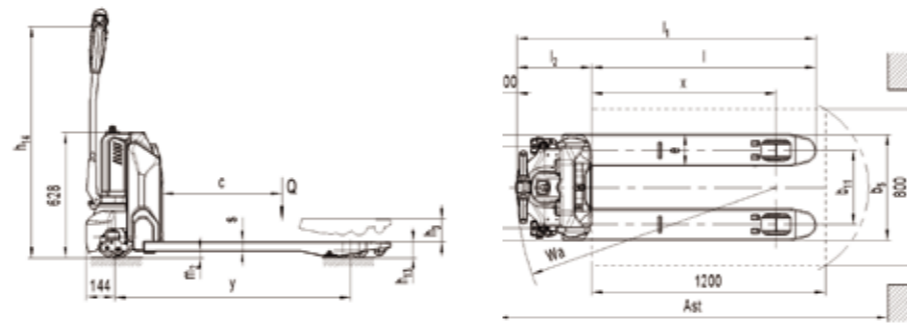


Optional backrest



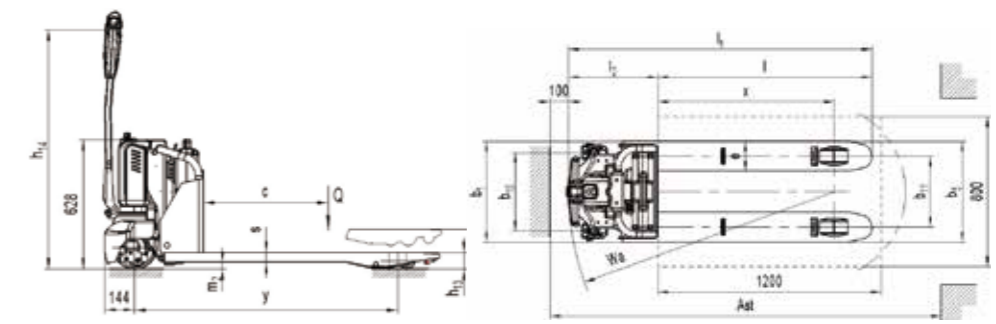
Type sheet for industrial truck acc. to VDI 2198

Distinguishing mark			
1.2	Manufacturer's type designation		PT E12N
1.3	Drive		Battery
1.4	Operator type		Pedestrian
1.5	Load Capacity / rated load	Q (t)	1.2
1.6	Load centre distance	c (mm)	600
1.8	Load distance ,centre of drive axle to fork	x (mm)	942
1.9	Wheelbase	y (mm)	1185
Weight			
2.1	Service weight	kg	124 129
2.2	Axle loading, laden front/rear	kg	355 / 972 425 / 908
2.3	Axle loading, unladen front/rear	kg	101 / 27 106 / 27
Tyres, chassis			
3.1	Tires		Polyurethane (PU)
3.2	Tire size,front	x w (mm)	210×70
3.3	Tire size,rear	x w (mm)	80×93(80×70)
3.4	Additional wheels(dimensions)	x w (mm)	- / 80×30
3.5	Wheels,number front/rear(x=driven wheels)		1x/ 2(1x/ 4) or 1x +2/ 2(1x +2/ 4)
3.6	Tread, front	b ₁₀ (mm)	430
3.7	Tread, rear	b ₁₁ (mm)	380 525
Dimensions			
4.4	Lift	h ₃ (mm)	115
4.9	Height of tiller in drive position min./ max.	h ₁₄ (mm)	700 / 1160
4.15	Height, lowered	h ₁₃ (mm)	80
4.19	Overall length	l ₁ (mm)	1537
4.20	Length to face of forks	l ₂ (mm)	387
4.21	Overall width	b ₁ (mm)	540 685
4.22	Fork dimensions	s/e/l (mm)	48 / 160 / 1150
4.25	Width across forks	b ₅ (mm)	540 685
4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	32
4.34	Aisle width for pallets800X1200 lengthways (200mm safe distance)	Ast (mm)	2007
4.35	Turning radius	Wa (mm)	1337
Performance Data			
5.1	Travel speed, laden/ unladen	km/h	4.6/ 4.8
5.2	Lift speed, laden/ unladen	m/s	0.031 / 0.037
5.3	Lowering speed, laden/ unladen	m/s	0.069 / 0.051
5.8	Max. gradeability, laden/ unladen	%	4 / 16
5.10	Service brake		Electromagnetic
Electric- engine			
6.1	Drive motor rating S2 60min	kW	0.65
6.2	Lift motor rating at S3 10%	kW	0.50
6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		No
6.4	Battery voltage, nominal capacity K5	V / Ah	24/15
6.5	Battery weight	kg	4.4
6.6	Energy consumption acc. to VDI cycle	kWh/h	0.14
Addition Data			
8.1	Type of drive control		DC speed Control
8.4	Sound level at driver's ear acc. to EN 12053	dB(A)	<70



Type sheet for industrial truck acc. to VDI 2198

Distinguishing mark					
1.2	Manufacturer's type designation		PT E15N	PT E20N	
1.3	Power(battery,diesel,petrolgas,manual)		Battery		
1.4	Operator type		Pedestrian		
1.5	Load Capacity / rated load	Q (t)	1.5	2.0	
1.6	Load centre distance	c (mm)	600		
1.8	Load distance ,centre of drive axle to fork	x (mm)	947	951	
1.9	Wheelbase	y (mm)	1185	1189	
Weight					
2.1	Service weight	kg	123 126 149 153		
2.2	Axle loading, laden front/rear	kg	623/1000 626/1000 621/1528 625/1528		
2.3	Axle loading, unladen front/rear	kg	96/27 99/27 115/34 119/34		
Tyres, chassis					
3.1	Tires		Polyurethane (PU)		
3.2	Tire size,front	x w (mm)	210×70		
3.3	Tire size,rear	x w (mm)	80×93(80×70)		
3.4	Additional wheels(dimensions)	x w (mm)	80×30		
3.5	Wheels,number front/rear(x=driven wheels)		1x/ 2(1x/ 4) or 1x +2/ 2(1x +2/ 4)		
3.6	Tread, front	b ₁₀ (mm)	430		
3.7	Tread, rear	b ₁₁ (mm)	380 525	380 525	
Dimensions					
4.4	Lift height	h ₃ (mm)	115		
4.9	Height of tiller in drive position min. / max.	h ₁₄ (mm)	700 / 1160		
4.15	Height, lowered	h ₁₃ (mm)	80		
4.19	Overall length	l ₁ (mm)	1530	1536	
4.20	Length to face of forks	l ₂ (mm)	380	386	
4.21	Overall width	b ₁ (mm)	540 685	540 685	
4.22	Fork dimension	s/e/l (mm)	47 / 160 / 1150		
4.25	Width across forks	b ₅ (mm)	540 685	540 685	
4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	33		
4.34	Aisle width for pallets800X1200 lengthways	Ast (mm)	2000	2006	
4.35	Turning radius	Wa (mm)	1330	1336	
Performance					
5.1	Travel speed, laden/ unladen	km/h	4.6/ 4.8	4.8/ 5.2	
5.2	Lift speed, laden/ unladen	m/s	0.020 / 0.025	0.017 / 0.022	
5.3	Lowering speed, laden/ unladen	m/s	0.05 / 0.04	0.05 / 0.03	
5.8	Gradeability, laden/ unladen	%	6 / 16	7 / 16	
5.10	Service brake		Electromagnetic		
Motors					
6.1	Drive motor rating S2 60min	kW	0.65	0.75	
6.2	Lift motor rating at S3 10%	kW	0.50	0.8	
6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		/		
6.4	Battery voltage, nominal capacity K5	V / Ah	24/20(24/30;24/36)	48/20	
6.5	Battery weight (minimum)	kg	4.6	7.5	
6.6	Energy consumption acc. to VDI cycle	kWh/h	0.22	0.18	
Addition Data					
8.1	Type of drive control		DC speed Control		
8.4	Sound level at driver's ear acc. to EN 12053	dB(A)	<70		



Type sheet for industrial truck acc. to VDI 2198

Distinguishing mark			
1.2	Manufacturer's type designation		PT E20B
1.3	Power(battery,diesel,petrolgas,manual)		Battery
1.4	Operator type		Pedestrian
1.5	Load Capacity / rated load	Q (t)	2.0
1.6	Load centre distance	c (mm)	600
1.8	Load distance ,centre of drive axle to fork	x (mm)	946
1.9	Wheelbase	y (mm)	1281
Weight			
2.1	Service weight	kg	185 192
2.2	Axle loading, laden front/rear	kg	670 / 1515 673 / 1519
2.3	Axle loading, unladen front/rear	kg	145 / 40 152 / 40
Tyres, chassis			
3.1	Tires		Polyurethane (PU)
3.2	Tire size,front	x w (mm)	210×70
3.3	Tire size,rear	x w (mm)	80×93(80×70)
3.4	Additional wheels(dimensions)	x w (mm)	80×30
3.5	Wheels,number front/rear(x=driven wheels)		1x/ 2(1x/ 4) or 1x +2/ 2(1x +2/ 4)
3.6	Tread, front	b ₁₀ (mm)	430
3.7	Tread, rear	b ₁₁ (mm)	380 525
Dimensions			
4.4	Lift height	h ₃ (mm)	115
4.9	Height of tiller in drive position min./ max.	h ₁₄ (mm)	700 / 1160
4.15	Height, lowered	h ₁₃ (mm)	80
4.19	Overall length	l ₁ (mm)	1628
4.20	Length to face of forks	l ₂ (mm)	478
4.21	Overall width	b ₁ (mm)	540 685
4.22	Fork dimensions	s/e/l (mm)	47 / 160 / 1150
4.25	Width across forks	b ₅ (mm)	540 685
4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	33
4.34	Aisle width for pallets800X1200 lengthways	Ast (mm)	2098
4.35	Turning radius	Wa (mm)	1428
Performance			
5.1	Travel speed, laden/ unladen	km/h	4.2/ 4.6
5.2	Lift speed, laden/ unladen	m/s	0.025 / 0.030
5.3	Lowering speed, laden/ unladen	m/s	0.075 / 0.063
5.8	Max. gradeability, laden/ unladen	%	5 / 16
5.10	Service brake		Electromagnetic
Motors			
6.1	Drive motor rating S2 60min	kW	0.75
6.2	Lift motor rating at S3 10%	kW	0.8
6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		No
6.4	Battery voltage, nominal capacity K5	V / Ah	48/20
6.5	Battery weight (minimum)	kg	30
6.6	Energy consumption acc. to VDI cycle	kWh/h	0.19
Addition Data			
8.1	Type of drive control		DC speed Control
8.4	Sound level at driver's ear acc. to EN 12053	dB(A)	<70