

# PS12/16/20N PS16DN

**The range of stacker includes the wide list of models with capacity from 1200kg to 2000kg and lifting height up to 5500mm.**

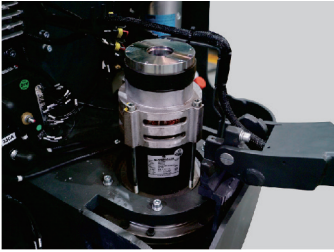
## **INTRODUCTION**

The truck designed to be used with high efficiency even during their multi-shift operation. The configuration of the truck allows you to get more powerful and productive units thanks to its increased speed and different options of batteries, including Lithium solutions.

## **ADVANTAGES:**

- The new model range of short-tiller trucks introduced by Noblelift has combined all the experience gained by the manufacturer over past years. By using of the most advanced solutions and top level components, the new range is ready to provide the top level of performance to its users.
- During the design stage, several priorities and various details were considered and verified such as improvement of the service life and performance of our trucks, easy maintenance as well as confirmation of interchangeability of components not only within model range, but also with other ranges of Noblelift products.
- The experience of Noblelift shows that the use of top brand components from well-known suppliers not only helps to improve reliability, but also gain trust from our customers and put the products to a new level. That is why nearly all key components used for the model range are coming from famous brands with rich experience in material handling industry.

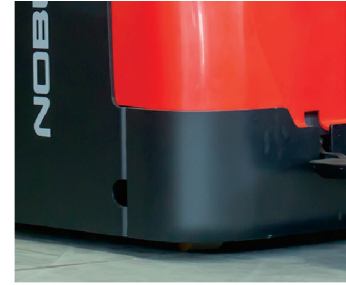




Powerful AC-drive unit from the global industry leaders: the AC driving motor designed and produced by Schabmuller comes together with the top quality ZF gearbox and it is equipped with Intorq electromagnetic brake. The drive unit can provide the drive speed up to 8 km/h. The use of top level quality drive wheels from German manufacturers Rader Vogel or Wicke helps to ensure the long life time of PU tires.



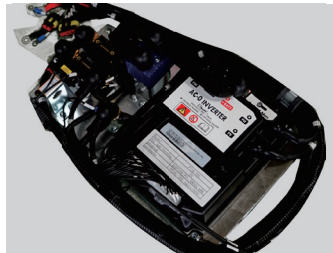
The integrated design of operator's platform and protective arms as well as totally new internal structure allows to ensure the smallest body length of the stackers and provide extremely low turning radius among competitors. Together with this, the suspension system for the platform helps to provide the high level of comfort to operators.



The use of apron with 8 mm thickness allows to ensure the robustness of chassis and its strength even in case of collision against objects. The strong battery cover made out of steel helps to provide a high level of strength for this part.



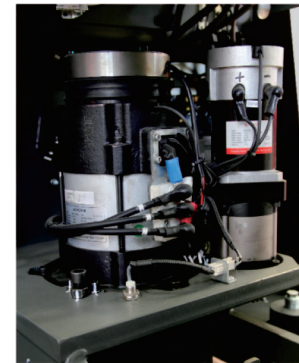
Rema tiller delivers high level of ergonomics as well as reliability of control system. In addition, the tiller ensures a long life-time thanks to the contactless rocker switches designed for lifting/lowering function.



The driving controllers and steering controllers are manufactured by Zapi (Italy) - the leading European brand with long history in the industry, which provides extremely reliable and flexible solutions with high performance level of the control system.



The option of PIN-code panel access, which works not only with PIN-code but also with access cards (RFID), can significantly simplify the procedure of access limitation for the fleet which may be used by more than one operator.



The model range can be equipped with the option of Electric Power Steering (EPS) which delivers precise and fast control for the position of steering wheel and has a high level of reliability as well as safety according to official standards.



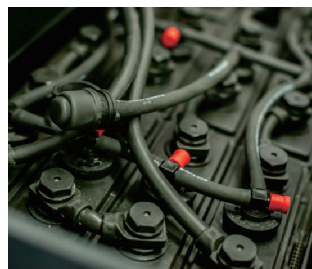
## PS16DN

## Mast table PS12N/16N/20N

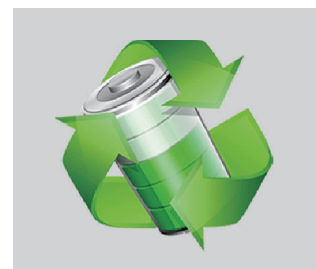
Designation	Lowered mast height h1(mm)	Free lift height h2(mm)	Lift height h3(mm)	Extended mast height h4(mm)
<b>PS12N</b>				
Two-stage mast	1958	/	2810	3380
	2108	/	3110	3680
	2308	/	3510	4080
Two-stage mast FFL (Full-Free-Lift)	1958	1410	2810	3380
	2108	1560	3110	3680
	2308	1760	3510	4080
Three stage mast FFL (Full-Free-Lift)	1998	1320	3910	4480
	2008	1420	4210	4780
	2108	1520	4510	5080
<b>PS16N</b>				
Two stage mast	1958	/	2810	3380
	2108	/	3110	3680
	2308	/	3510	4080
Two stage mast FFL (Full-Free-Lift)	1958	1410	2810	3380
	2108	1560	3110	3680
	2308	1760	3510	4080
Three stage mast	2008	/	4210	4780
	2108	/	4510	5080
Three stage mast FFL (Full-Free-Lift)	1908	1320	3910	4480
	2008	1420	4210	4780
	2108	1520	4510	5080
	2343	1756	5230	5780
<b>PS20N</b>				
Two stage mast	2078	/	2810	3500
	2228	/	3110	3800
	2428	/	3510	4200
Two stage mast FFL (Full-Free-Lift)	1978	1310	2610	3300
	2078	1410	2810	3500
	2228	1560	3110	3800
Three stage mast	2428	1760	3510	4200
	2128	/	4210	4900
Three stage mast FFL (Full-Free-Lift)	2228	/	4510	5200
	1978	1310	3910	4600
	2128	1420	4210	4900
	2228	1520	4510	5200



The option of side battery replacement allows customers to use the truck with multi-shift operation and not to waste time on complicated procedure of battery replacement through the top. With help of specially designed trolley, the batteries can be replaced fast and effortlessly.



The trucks can be equipped with the option of Aquamatic- the system of fast refilling of distilled water in lead-acid batteries. The 2-ton pallet truck can be optionally equipped with the battery under 3VBS standard, which helps to reduce the length of the original truck and make it more compact (the standard battery is 2PzS).



The model range can be equipped with Lithium batteries. The use of lithium solution from Noblelift will allow you to enjoy benefits of Lithium technology such as Fast charging, Opportunity charging, Maintenance free, Environmental-friendly, Smart Diagnosis of battery status, Lower cost of Total Ownership with long service life.

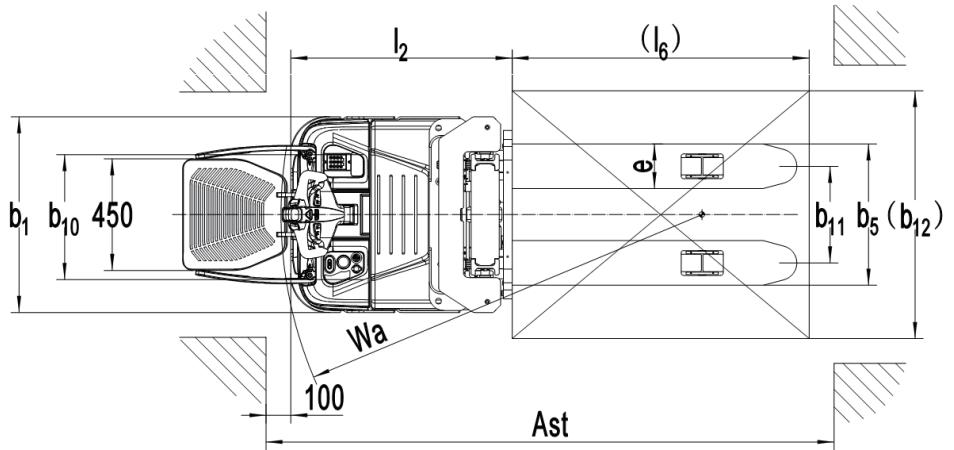
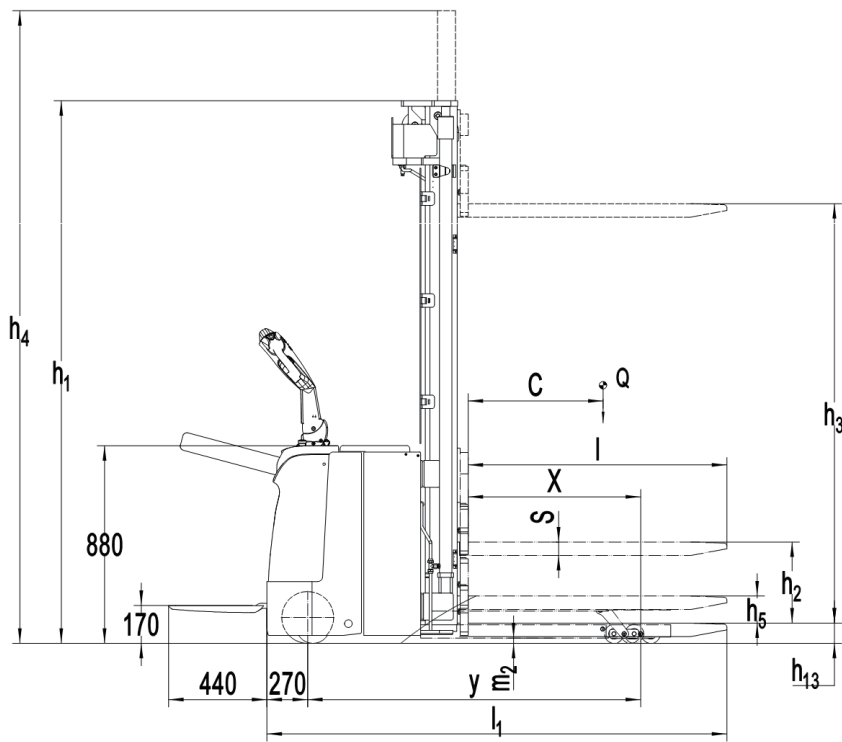
## Type sheet for industrial truck acc. to VDI 2198 1KG=2.2LB 1INCH=25.4MM

Identification					
1.2	Manufacturer's type designation		PS12N(3600)	PS16N(5500)	PS20N(4600)
1.3	Drive		Battery		
1.4	Operator type		Pedestrian		
1.5	Load Capacity / rated load	Q (t)	1.2	1.6	2.0
1.6	Load centre distance	c (mm)	600		
1.8	Load distance ,centre of drive axle to fork	x (mm)	647		
1.9	Wheelbase	y (mm)	1167	1215	1327
Weights					
2.1	Service weight	kg	1080	1380	1620
2.2	Axle load at full load, drive side/load side	kg	860/1420	1040/1940	1210/2410
2.3	Axle load at no load, drive side/load side	kg	780/300	940/440	1090/540
Wheels, Chassis					
3.1	Tires		Polyurethane(PU)		
3.2	Tire size,front	Øx w (mm)	Ø230×70		
3.3	Tire size,rear	Øx w (mm)	Ø84×70		
3.4	Additional wheels(dimensions)	Øx w (mm)	Ø150×54		
3.5	Wheels,number front/rear(x=driven wheels)		1x + 1 / 4		
3.6	Tread, front	b10 (mm)	510		
3.7	Tread, rear	b11 (mm)	390/505		
Basic Dimensions					
4.2	Lowered mast height	h1(mm)	2308	2408	2228
4.3	Free Lift height	h2(mm)	1760	1820	1520
4.4	Lift	h3(mm)	3510	5410	4510
4.5	Extended maximal height	h4(mm)	4080	6110	5200
4.9	Height of tiller in drive position min./ max.	h14 (mm)	950/1350		
4.15	Height, lowered	h13 (mm)	90		
4.19	Overall length	l1 (mm)	1855 <sup>1)</sup>	1896 <sup>1)</sup>	2025 <sup>1)</sup>
4.20	Length to face of forks	l2 (mm)	705 <sup>1)</sup>	746 <sup>1)</sup>	875 <sup>1)</sup>
4.21	Overall width	b1 (mm)	790		
4.22	Fork dimensions	s/e/l (mm)	60 / 180 / 1150		
4.25	Width across forks	b5 (mm)	570 /685		
4.32	Ground clearance, centre of wheelbase	m2 (mm)	28	28	23
4.33	Aisle width for pallets1000X1200 crossways	Ast (mm)	2285 <sup>1)</sup>	2325 <sup>1)</sup>	2455 <sup>1)</sup>
4.34	Aisle width for pallets800X1200 lengthways	Ast (mm)	2250 <sup>1)</sup>	2290 <sup>1)</sup>	2420 <sup>1)</sup>
4.35	Turning radius	Wa (mm)	1380 <sup>1)</sup>	1420 <sup>1)</sup>	1550 <sup>1)</sup>
Performance Data					
5.1	Travel speed, laden/ unladen	km/h	7.0/8.0	6.0/7.0	6.0/7.0
5.2	Lift speed, laden/ unladen	m/s	0.09/0.14	0.13/0.20	0.13/0.20
5.3	Lowering speed, laden/ unladen	m/s	0.25/0.20	0.28/0.23	0.28/0.23
5.8	Max. gradeability, laden/ unladen	%	6/12	6/12	6/10
5.10	Service brake		Electromagnetic		
E-Motor					
6.1	Drive motor rating S2 60min	kW	1.4		
6.2	Lift motor rating at S3 10%	kW	1.5	3.2	3.2
6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		2VBS	3VBS	3PZS
6.4	Battery voltage, nominal capacity K5	V / Ah	24/160-180	240/210-270	24/270-350
6.5	Battery weight	kg	155	185	235
6.6	Energy consumption acc. to VDI cycle	kWh/h	0.95	1.34	1.70
Other Details					
8.1	Type of drive control		AC- speed control		
8.4	Sound level at driver's ear acc. to EN 12053	dB(A)	<69		

1) with compact platform:+440mm

## Mast table PS16DN

Designation	Lowered mast height h1(mm)	Free lift height h2(mm)	Lift height h3(mm)	Extended mast height h4(mm)	Lift+fork height h3+h13(mm)
<b>PS16DN</b>					
Two stage mast	1955	/	2830	3380	2900
	2105	/	3130	3680	3200
	2305	/	3530	4080	3600
Two stage mast FFL (Full-Free-Lift)	1955	1410	2830	3380	2900
	2105	1560	3130	3680	3200
	2305	1760	3530	4080	3600
Three stage mast	2005	/	4230	4780	4300
	2105	/	4530	5080	4600
Three stage mast FFL (Full-Free-Lift)	1905	1320	3930	4480	4000
	2005	1420	4230	4780	4300
	2105	1520	4530	5080	4600





# Type sheet for industrial truck acc. to VDI 2198

1KG=2.2LB 1INCH=25.4MM

Identification			
1.2	Manufacturer's type designation		PS16DN(4600)
1.3	Drive		Battery
1.4	Operator type		Pedestrian
	Load Capacity / rated load		1.6
1.5	Load capacity at mast lift	Q (t)	1.6
	Load capacity at support arm lift		1.6
1.6	Load centre distance	c (mm)	600
1.8	Load distance ,centre of drive axle to fork	x (mm)	767 <sup>1)</sup>
1.9	Wheelbase	y (mm)	1480 <sup>2)</sup>
Weights			
2.1	Service weight	kg	1450
2.2	Axle load at full load, drive side/load side	kg	1180/1870
2.3	Axle load at no load, drive side/load side	kg	1040/410
Wheels, Chassis			
3.1	Tires		Polyurethane (PU)
3.2	Tire size,front	Øx w (mm)	Φ230×70
3.3	Tire size,rear	Øx w (mm)	Φ84×70
3.4	Additional wheels(dimensions)	Øx w (mm)	Φ150×54
3.5	Wheels,number front/rear(x=driven wheels)		1x+1/4
3.6	Tread, front	b10 (mm)	519
3.7	Tread, rear	b11 (mm)	390/505
Basic Dimensions			
4.2	Lowered mast height	h1(mm)	2105
4.3	Free Lift height	h2(mm)	1520
4.4	Lift	h3(mm)	4530
4.5	Extended maximal height	h4(mm)	5080
4.6	Initial lift	h5(mm)	120
4.9	Height of tiller in drive position min./ max.	h14 (mm)	950/1350
4.15	Height, lowered	h13 (mm)	90
4.19	Overall length	l1 (mm)	2044 <sup>1)</sup>
4.20	Length to face of forks	l2 (mm)	894 <sup>1)</sup>
4.21	Overall width	b1 (mm)	790
4.22	Fork dimensions	s/e/l (mm)	60/180/1150
4.25	Width across forks	b5 (mm)	570/685
4.32	Ground clearance, centre of wheelbase	m2 (mm)	20
4.33	Aisle width for pallets1000X1200 crossways	Ast (mm)	2586 <sup>2)</sup>
4.34	Aisle width for pallets800X1200 lengthways	Ast (mm)	2566 <sup>2)</sup>
4.35	Turning radius	Wa (mm)	1700 <sup>2)</sup>
Performance Data			
5.1	Travel speed, laden/ unladen	km/h	6.0/7.0
5.2	Lift speed, laden/ unladen	m/s	0.09/0.14
5.3	Lowering speed, laden/ unladen	m/s	0.25/0.20
5.8	Max. gradeability, laden/ unladen	%	6/12
5.10	Service brake		Electromagnetic
E-Motor			
6.1	Drive motor rating S2 60min	kW	1.4
6.2	Lift motor rating at S3 10%	kW	3.2
6.3	Battery acc. to DIN 43531/ 35/ 36 A, B, C, no		3VBS
6.4	Battery voltage, nominal capacity K5	V / Ah	24/270
6.5	Battery weight	kg	230
6.6	Energy consumption acc. to VDI cycle	kWh/h	0.73
Other Details			
8.1	Type of drive control		AC- speed control
8.4	Sound level at driver's ear acc. to EN 12053	dB(A)	<70

1) when operate the fork and pallet at the same time: Load Capacity / rated load (mast lift) < Load Capacity / rated load (support arm lift)

2) Load section lowered: -74mmmm