## 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 efficienty 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 Plittings.



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 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 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 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.



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.

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



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).

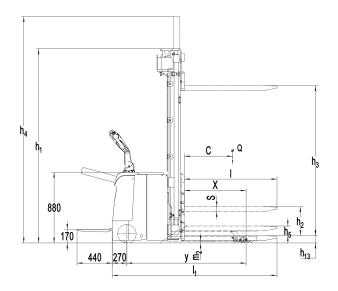


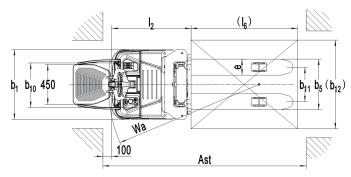
The model range can be equipped with Lithium batteries. The use of lithium solution from Noblelift will allow you to enjoy benefits of Lithium technology such as Fast charging, Opportunity charging, Maintenance free, Environmental-friendly, Smart Diagnosis of battery status, Lower cost of Total Ownership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

.2	ification  Manufacturer's type designation				
1.2	Manufacturer's type designation				
			PS12N(3600)	PS16N(5500)	PS20N(4600)
.4	Drive			Battery	
	Operator type			Pedestrian	
.5	Load Capacity / rated load	Q(t)	1.2	1.6	2.0
.6	Load centre distance	c (mm)		600	
.8	Load distance ,centre of drive axle to fork	x (mm)		647	
.9	Wheelbase	y (mm)	1167	1215	1327
Veig					
.1	Service weight	kg	1080	1380	1620
.2	Axle load at full load, drive side/load side	kg	860/1420	1040/1940	1210/2410
.3	Axle load at no load, drive side/load side	kg	780/300	940/440	1090/540
/hee	els Chassis Tires			Polyurethane(PU)	
.2	Tire size, front  Tire size, rear	Øx w (mm)		Ø230×70  Ø84×70	
.3	Tire size,rear  Additional wheels(dimensions)	Øx w (mm)		Ø84×70 Ø150×54	
.5	Additional wheels(dimensions)  Wheels,number front/rear(x=driven wheels)	ex w (mm)		1x + 1 / 4	
	Wheels,number front/rear(x=driven wheels)  Tread, front	b10 (mm)		1x + 1 / 4 	
.6	Tread, front			390/505	
./ asic		b11 (mm)		390/303	
.2	Lowered mast height	hl(mm)	2308	2408	2228
.3	Free Lift height	h2(mm)	1760	1820	1520
.4	Lift	h3(mm)	3510	5410	4510
.5	Extended maximal height	h4(mm)	4080	6110	5200
9	Height of tiller in drive position min./ max.	h14 (mm)		950/1350	
15	Height, lowered	h13 (mm)		90	
19	Overall length	11 (mm)	1855 <sup>1)</sup>	18961)	20251)
20	Length to face of forks	12 (mm)	7051)	7461)	8751)
21	Overall width	bl (mm)		790	
22	Fork dimensions	s/e/l (mm)		60 / 180 / 1150	
25	Width across forks	b5 (mm)		570 /685	
32	Ground clearance, centre of wheelbase	m2 (mm)	28	28	23
33	Aisle width for pallets1000X1200 crossways	Ast (mm)	22851)	23251)	24551)
34	Aisle width for pallets800X1200 lengthways	Ast (mm)	22501)	22901)	24201)
35	Turning radius	Wa (mm)	13801)	14201)	15501)
erf	ormance Data				
1	Travel speed, laden/ unladen	km/h	7.0/8.0	6.0/7.0	6.0/7.0
2	Lift speed, laden/ unladen	m/s	0.09/0.14	0.13/0.20	0.13/0.20
3	Lowering speed, laden/ unladen	m/s	0.25/0.20	0.28/0.23	0.28/0.23
.8	Max. gradeability, laden/ unladen	%	6/12	6/12	6/10
10	Service brake			Electromagnetic	
-Mc					
1	Drive motor rating S2 60min	kW		1.4	
2	Lift motor rating at S3 10%	kW	1.5	3.2	3.2
3	Battery acc. to DIN 43531/35/36 A, B, C, no		2VBS	3VBS	3PZS
4	Battery voltage, nominal capacity K5	V / Ah	24/160-180	240/210-270	24/270-350
.5	Battery weight	kg	155	185	235
6	Energy consumption acc. to VDI cycle	kWh/h	0.95	1.34	1.70
_	r Details				
1	Type of drive control			AC- speed control	
4	Sound level at driver's ear acc. to EN 12053	dB(A)		<69	

<sup>1)</sup> with compact platform:+440mm

Mast table PS16	DN				
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)
PS16DN					
	1955	/	2830	3380	2900
Two stage mast	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
	1905	1320	3930	4480	4000
Three stage mast FFL (Full-Free-Lift)	2005	1420	4230	4780	4300
()	2105	1520	4530	5080	4600





1.3   Drive	PS16DN(4600)  Battery Pedestrian 1.6 1.6 1.6
1.3   Drive	Battery Pedestrian 1.6 1.6
Load Capacity / rated load	Pedestrian 1.6 1.6
Load Capacity / rated load	1.6
Load capacity at mast lift	1.6
Load capacity at support arm lift  .6 Load centre distance  .8 Load distance centre of drive axle to fork  .8 Voights  .9 Wheelbase  Vymm)  Veights  .1 Service weight  .2 Axle load at full load, drive side/load side  .3 Axle load at no load, drive side/load side  Vheelss Chassis  .1 Tires  Po  .2 Tires ize,front  .3 Tire size,front  .4 Additional wheels(dimensions)  .5 Wheels,number front/rear(x=driven wheels)  .6 Tread, front  .7 Tread, rear  assic Dimensions  2 Uncerd mast height  h1(mm)  .3 Free Lift height  h2(mm)  .4 Lift  h3(mm)  .4 Lift  h3(mm)	
Load capacity at support arm lift	
Load centre distance   C (mm)	
1.	600
1.9   Wheelbase   y (mm)	7671)
Veights         kg           2.1 Service weight         kg           2.2 Axle load at full load, drive side/load side         kg           3.3 Axle load at no load, drive side/load side         kg           Viveclss Chassis           8.1 Tres         Po           4.2 Tire size, front         Ox w (mm)           5.3 Tire size, rear         Ox w (mm)           6.4 Additional wheels(dimensions)         Ox w (mm)           6.5 Tread, front         bl0 (mm)           6.7 Tread, rear         bl1 (mm)           3.3sic Dimensions           8.2 Lowerd mast height         h1(mm)           6.3 Free Lift height         h2(mm)           6.4 Lift         h3(mm)           6.5 Extended maximal height         h4(mm)	14802)
2.1   Service weight	
2	1450
Axle load at no load, drive side/load side   kg	1180/1870
Vheels         Chassis           .1         Tires         Po           .2         Tire size,front         9x w (mm)           .3         Tire size,rear         9x w (mm)           .4         Additional wheels(dimensions)         9x w (mm)           .5         Wheels,number front/rear(x-driven wheels)         b10 (mm)           .6         Tread, front         b10 (mm)           .7         Tread, rear         b11 (mm)           .asic Dimensions           .2         Lowered mast height         h1(mm)           .3         Free Lift height         h2(mm)           .4         Lift         h3(mm)           .5         Extended maximal height         h4(mm)	1040/410
1	
.3   Tire size,rear   Ox w (mm)   .4   Additional wheels(dimensions)   Ox w (mm)   .5   Wheels,number front/rear(x=driven wheels)   .6   Tread, front   bl0 (mm)   .7   Tread, rear   bl1 (mm)   .8   Saise Dimemsions   .2   Lowerd mast height   hl2(mm)   .3   Free Lift height   h2(mm)   .4   Lift   h3(mm)   .5   Extended maximal height   h4(mm)	olyurethane (PU)
.3   Tire size,rear   Ox w (mm)   .4   Additional wheels(dimensions)   Ox w (mm)   .5   Wheels,number front/rear(x=driven wheels)   .6   Tread, front   bl0 (mm)   .7   Tread, rear   bl1 (mm)   .8   Saise Dimemsions   .2   Lowerd mast height   hl2(mm)   .3   Free Lift height   h2(mm)   .4   Lift   h3(mm)   .5   Extended maximal height   h4(mm)	Ф230×70
.4 Additional wheels(dimensions) Ox w (mm) .5 Wheels,number front/rear(x=driven wheels) .6 Tread, front bl10 (mm) .7 Tread, rear bl11 (mm) .8 Size Dimensions .2 Lowerd mast height hl(mm) .3 Free Lift height h2(mm) .4 Lift h3(mm) .5 Extended maximal height h4(mm)	Ф84×70
1.5   Wheels,number front/rear(x=driven wheels)     1.6   Tread, front   b10 (mm)     1.7   Tread, rear   b11 (mm)     1.8   Basic Dimemsions     1.2   Lowered mast height   h1(mm)     1.3   Free Lift height   h2(mm)     1.4   Lift   h3(mm)     1.5   Extended maximal height   h4(mm)	Ф150×54
1.6   Tread, front	1x+1/4
1.7   Tread, rear   b11 (mm)	519
Saste Dimemsions           .2         Lowered mast height         h1(mm)           .3         Free Lift height         h2(mm)           .4         Lift         h3(mm)           .5         Extended maximal height         h4(mm)	390/505
.2         Lowered mast height         h1(mm)           .3         Free Lift height         h2(mm)           .4         Lift         h3(mm)           .5         Extended maximal height         h4(mm)	390/303
.3         Free Lift height         h2(mm)           .4         Lift         h3(mm)           .5         Extended maximal height         h4(mm)	2105
.4         Lift         h3(mm)           .5         Extended maximal height         h4(mm)	1520
.5 Extended maximal height h4(mm)	4530
	5080
no minuai mu h5(mm)	
	120
.9 Height of tiller in drive position min./ max. h14 (mm)	950/1350
15 Height, lowered h13 (mm)	90
19 Overall length II (mm)	20441)
20 Length to face of forks 12 (mm)	8941)
21 Overall width b1 (mm)	790
22 Fork dimensions s/e/l (mm)	60/180/1150
25 Width across forks b5 (mm)	570/685
32 Ground clearance, centre of wheelbase m2 (mm)	20
33 Aisle width for pallets 1000X1200 crossways Ast (mm)	2586 <sup>2)</sup>
34 Aisle width for pallets800X1200 lengthways Ast (mm)	2566 <sup>2)</sup>
35 Turning radius Wa (mm)	17002)
Performance Data	
.1 Travel speed, laden/ unladen km/h	6.0/7.0
.2 Lift speed, laden/ unladen m/s	0.09/0.14
.3 Lowering speed, laden/ unladen m/s	0.25/0.20
.8 Max. gradeability, laden/ unladen %	6/12
	Electromagnetic
-Motor	
.1 Drive motor rating S2 60min kW	1.4
.2 Lift motor rating at S3 10% kW	3.2
.3 Battery acc. to DIN 43531/35/36 A, B, C, no	
.4 Battery voltage, nominal capacity K5 V/Ah	3VBS
.5 Battery weight kg	3VBS 
6.6 Energy consumption acc. to VDI cycle kWh/h	24/270
Other Details	24/270
	24/270
4 Sound level at driver's ear acc. to EN 12053 dB(A)	24/270 230 0.73
dD(A)	24/270

<sup>1)</sup> 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