Technical sheet :

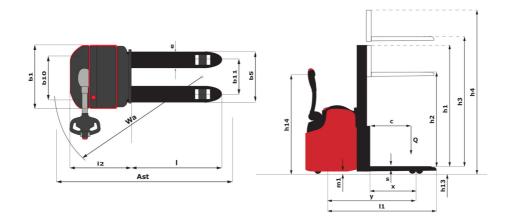




	Technical characteristics	
.1	Manufacturer	
2	Model Name	
3	Power source	
	Operator type	
	Max. capacity	
	Nominal capacity on wrapover forks	
	Load center of gravity	
	Distance from Load backrest to center of rear axle	
	Wheelbase	
	Weight	
	Service weight	
	Weight on front axle (laden) / rear axle (laden)	
	Weight on front axle (Unladen) / rear axle (Unladen)	
	Wheels	
	Tires type	
	Number of load wheels / Size of load wheels	
	Number of castor wheels	
	Number of stabilizer wheels / Size of the stabilizer wheels	
	Number of front wheels / rear wheels	
2	Number of drive wheels / Size of drive wheels	
	Front wheel gauge	
	Rear wheel gauge	
	Dimensions	
	Initial lift	
	Fork height in low position	
	Overall length	
	Length to face of forks	
	Overall width	
	Forks section / width / length	
	Fork carriage width	
	Ground clearance below mast	
	Ground clearance at centre of wheelbase	
	Aisle Width for pallets 1000 x 1200 crossways	
	Aisle width for 800 x 1200 pallet lengthways	
	Turning radius	
	Height tiller min. / max.	
	Performances	
	Travel speed (laden / unladen)	
	Lifting speed (laden / unladen)	
	Lowering speed (laden / unladen)	
	Max Gradeability (laden / unladen)	
	Service brake	
	Engine	
	Drive motor rating S2 60 min	
	Lift motor rating at S3 15%	
	Battery according to DIN 43531/35/36 A, B, C	
	Battery voltage / capacity	
	Battery weight (+/- 5%)	
	Miscellaneous	
	Type of drive control	
	Sound level at the driver's ear according to DIN 12 053	
	Sound rever at the driver's car according to Driver 2 055	

Metric           Manitou           ES 820 Li           Electrical           Pedestrian           Q           2000 kg           Q           2000 kg           Q           2000 kg           C           600 mm           x           716 mm           y           1509 mm           x           7150 mm           y           1500 kg           1800 kg           1250 kg / 550 kg           Polyurethane           4 / 82 x 68           1           2 / 120 x 50           3 / 4           2 / 120 x 50           3 / 4           1/254x100           b10           664 mm           11           2120 x50           110 mm           h13           86 mm           11           2123 mm           12           973 mm           b1           890 mm           st           2572 mm           Ast           2572 mm <th>ES 820</th> <th>L∎ Created on August 1, 2025 at 11:46 PM UTC</th>	ES 820	L∎ Created on August 1, 2025 at 11:46 PM UTC
ES 820 LI           Pedestrian           Q           Polyurethane           4 / 82 x 68           1           1           2 / 120 x 50           3 / 4           1/254x100           664 mm           b1           375 mm           Q           973 mm           b1           800 mm           s / e / 1           700 mm / 200 mm           m1           20 mm           s/ e / 1           700 mm / 200 mm		Metric
Electrical           Pedestrian           Q         2000 kg           Q         2000 kg           C         600 mm           X         716 mm           y         1509 mm           y         1509 mm           y         1509 kg           y         1509 kg           y         1500 kg           y         1360 kg / 2500 kg           1250 kg / 550 kg         1           H         2/ 120 x 50           X         3 / 4           1/254x 100         664 mm           b10         664 mm           b11         375 mm           I1         2123 nm           I2         973 mm           b1         800 mm           s/ e / 1         700 mm / 200 mm / 1150 mm           b3         700 mm           m1         20 mm           Ast         2572 mm           Ast         2572 mm           Ast         2572 mm           Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           G         6 km/h / 6 km/h           0.21 m/s / 0.2		
Pedestrian           Q         2000 kg           c         600 mm           x         716 mm           y         1509 mm           y         1509 mm           y         1360 kg / 2500 kg           1360 kg / 2500 kg         1250 kg / 550 kg           y         1250 kg / 550 kg           y         1/25 kg / 50 kg		ES 820 LI
Q         2000 kg           Q         2000 kg           C         600 mm           x         716 mm           y         1509 mm           J         1800 kg           J         1250 kg / 550 kg           Polyurethane         4 / 82 x 68           J         1           Z / 120 x 50         3 / 4           J         3 / 4           J/254x100         664 mm           b10         664 mm           b11         375 mm           J         973 mm           J         700 mm / 200 mm / 1150 mm           J         700 mm           J         700 mm           Mat         1719 mm           Mat         2572 mm           Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           Mat         0.21 m/s / 0.22 m/s           G         6 km/h / 6 km/h <th></th> <th>Electrical</th>		Electrical
Q         2000 kg           c         600 mm           x         716 mm           y         1509 mm           1800 kg         1360 kg / 2500 kg           1360 kg / 2500 kg         1250 kg / 550 kg           Polyurethane         4 / 82 x 68           1         2 / 120 x 50           3 / 4         1/254x100           b10         664 mm           b11         375 mm           b11         86 mm           11         2123 mm           12         973 mm           b1         890 mm           s / e / l         700 mm / 1150 mm           b1         390 mm           s / e / l         700 mm           m1         20 mm           m1         90 mm           s / e / l         700 mm           b1         900 mm / 1400 mm           f & km/h / 6 km/h         6 km/h           f & km/h / 6 km/h         11 m/s / 0.22 m/s		Pedestrian
c         600 mm           x         716 mm           y         1509 mm           1800 kg         1360 kg / 2500 kg           1250 kg / 550 kg         1250 kg / 550 kg           Polyurethane         4 / 82 x 68           1         2 / 120 x 50           3 / 4         1/254x 100           b10         664 mm           b11         375 mm           b21         973 mm           b12         973 mm           b13         700 mm / 200 mm           b14         900 mm           b33         700 mm           b14         900 mm           b3         700 mm           b14         900 mm           b15         6 km/h / 6 km/h           b16         6 km/h /	Q	2000 kg
x         716 mm           y         1509 mm           y         1500 kg           1800 kg         1360 kg / 2500 kg           1250 kg / 550 kg         1250 kg           Polyurethane         4 / 82 x 68           1         1           2 / 120 x 50         3 / 4           1/254x100         664 mm           b10         664 mm           b11         375 mm           h5         110 mm           h13         86 mm           11         2123 mm           b1         890 nm           s / e / 1         70 mm / 200 mm / 1150 mm           b3         700 mm / 200 mm / 1150 mm           b3         700 mm           m1         20 mm           m2         21 mm           Ast         2572 mm           Ast         2572 mm           Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           6 km/h / 6 km/h         0.11 m/s / 0.22 m/s           6 % / 10 %         Electro magnetic           2 kW         4 kW           2 kW         4 kW           171 m         24 V/	Q	2000 kg
y         1509 mm           1800 kg         1800 kg           1360 kg / 2500 kg         1250 kg / 550 kg           1250 kg / 550 kg         1           Polyurethane         4 / 82 x 68           1         2 / 120 x 50           3 / 4         3 / 4           1/254x100         664 nm           b10         664 nm           b11         375 nm           b11         370 nm           b11         86 nm           11         2123 nm           12         973 nm           b1         890 nm           s1         20 nm           n1         20 nm           n1         20 nm           n2         21 nm           Ast         2572 nm           Ast         2531 nm           Wa         1719 nm           h14 / h14         900 nm / 1400 nm           14 / h14         900 nm / 1400 nm           15 / h         0.21 m/s / 0.22 m/s           6 % / 10 %         Electro magnetic	С	600 mm
1800 kg         1360 kg / 2500 kg         1250 kg / 550 kg         1250 kg / 550 kg         Polyurethane         4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         1         11         375 mm         12         973 mm         b1         890 mm         s/ e / 1         700 mm / 100 mm         m1         20 mm         6 km/h / 6 km/h	x	716 mm
1360 kg / 2500 kg         1250 kg / 550 kg         Polyurethane         4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         1         11         375 mm         b10         664 mm         b11         375 mm         11         375 mm         11         973 mm         b1         86 mm         11         2123 mm         12         973 mm         b1         890 mm         s/ e / 1         700 mm / 200 mm / 1150 mm         b3         700 mm / 200 mm         m1         20 mm         4st         2572 mm         Ast         2572 mm         Ast <th>у</th> <th>1509 mm</th>	у	1509 mm
1360 kg / 2500 kg         1250 kg / 550 kg         Polyurethane         4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         1         11         375 mm         b10         664 mm         b11         375 mm         11         375 mm         11         973 mm         b1         86 mm         11         2123 mm         12         973 mm         b1         890 mm         s/ e / 1         700 mm / 200 mm / 1150 mm         b3         700 mm / 200 mm         m1         20 mm         4st         2572 mm         Ast         2572 mm         Ast <th></th> <th></th>		
1250 kg / 550 kg         Polyurethane         4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         1         11         375 mm         b10         664 mm         b11         375 mm         11         375 mm         b1         86 mm         11         2123 mm         b1         800 mm         s2         700 mm / 200 mm / 1150 mm         b3         700 mm / 200 mm         m1         20 mm         m1         20 mm         m1         20 mm         m1         20 mm         m2         21 mm         Ast         2572 mm         Ast         2572 mm         Ast         2571 mm         h14 / h14         900 mm / 1400 mm         6 km/h / 6 km/h         0.21 m/s		1800 kg
Polyurethane           4 / 82 x 68           1           2 / 120 x 50           3 / 4           1/254x100           b10           664 mm           b11           375 mm           11           375 mm           b11           375 mm           b11           375 mm           b11           375 mm           b11           375 mm           b1           800 mm           s11           200 mm           3700 mm           b1           890 mm           s2           970 mm / 200 mm           m1           20 mm           m2           3700 mm           m2           6 km/h / 6 km/h           0.11 m/s / 0.20 m/s           0.21 m/s / 0.22 m/s           6 % / 10 %		1360 kg / 2500 kg
4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         II         4/ 82 x 68         1/254x100         b10         664 mm         b11         375 mm         II         11         212 mm         973 mm         b1         86 mm         11         212 mm         973 mm         b1         800 mm         s / e / 1         700 mm / 200 mm / 1150 mm         b3         700 mm         m1         20 mm         m2         21 mm         Ast         2572 mm         Ast         251 m         6 km/h / 6 km/h      <		1250 kg / 550 kg
4 / 82 x 68         1         2 / 120 x 50         3 / 4         1/254x100         b10         664 mm         b11         375 mm         II         4         910         664 mm         b11         375 mm         II         911         375 mm         II         911         912         913         914         915         916         917         918         919         919         913         914         915         916         917         918         919         914         915         916         917         918         919         914         914         915         916         917         918         919         914         914         914         914 <th></th> <th></th>		
1           2 / 120 x 50           3 / 4           1/254x100           b10         664 mm           b11         375 mm           m         1000000000000000000000000000000000000		Polyurethane
2 / 120 x 50         3 / 4         1/254x100         b10       664 mm         b11       375 mm         m       10         h5       110 mm         h13       86 mm         11       2123 mm         12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2572 mm         Mat       1719 mm         h14 / h14       900 mm / 1400 mm         Mat       0.21 m/s / 0.20 m/s         G       6 km/h / 6 km/h         0.11 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         G % / 10 %       Electro magnetic         2 kW       4 kW         4 kW       273 kg         Mat       273 kg		4 / 82 x 68
3 / 4         1/254x100         b10       664 mm         b11       375 mm         m       11         h5       110 mm         h13       86 mm         11       2123 mm         12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         0.21 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         6 % / 10 %       Electro magnetic         2       2 kW       4 kW         4 kW       273 kg         DC       DC		1
1/254x100         b10       664 mm         b11       375 mm         11       375 mm         h5       110 mm         h13       86 mm         11       2123 mm         12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 100 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2572 mm         Mast       0.01 mm / 1400 mm         m1       900 mm / 1400 mm         Mast       0.21 m/s / 0.22 m/s         6 km/h / 6 km/h       0.11 m/s / 0.20 m/s         Mast       2 kW         4 kW       4 kW         Mast       2 kW		2 / 120 x 50
b10         664 mm           b11         375 mm           h5         110 mm           h13         86 mm           l1         2123 mm           l2         973 mm           b1         890 mm           s / e / 1         70 mm / 200 mm / 1150 mm           b3         700 mm           m1         20 mm           m2         21 mm           Ast         2572 mm           Ast         2572 mm           Ast         2572 mm           Mast         0.11 ms / 0.20 m/s           0.11 ms / 0.20 m/s         0.21 ms / 0.22 m/s           6 km/h / 6 km/h         0.11 m/s / 0.20 m/s           0.21 m/s / 0.22 m/s         6 % / 10 %           Electro magnetic         2 kW           4 kW         4 kW           2 kW         4 kW           2 kW         4 kW           2 xW         315 Ah           2 x73 kg         273 kg		3 / 4
b11       375 mm         h5       110 mm         h13       86 mm         11       2123 mm         12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 100 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         0.21 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         6 % / 10 %       Electro magnetic         2       2 kW       4 kW         4 kW       715 Ah       273 kg         DC       DC       DC		1/254x100
h5         110 mm           h13         86 mm           l1         2123 mm           l2         973 mm           b1         890 mm           s / e / 1         70 mm / 200 mm / 1150 mm           b3         700 mm           m1         20 mm           m2         21 mm           Ast         2572 mm           Ast         2572 mm           h14 / h14         900 mm / 1400 mm           b1         6 km/h / 6 km/h           0.11 m/s / 0.20 m/s         0.21 m/s           0.21 m/s / 0.22 m/s         6 % / 10 %           Electro magnetic         2 kW           4 kW         4 kW           1715 Ah         273 kg	b10	664 mm
h13       86 mm         l1       2123 mm         l2       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 1150 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         0.21 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         6 km/h / 6 km/h       6 km/h         0.21 m/s / 0.22 m/s       6 % / 10 %         Electro magnetic       2 kW         4 kW       4 kW         13 chi s / 135 ah       273 kg         14 chi s / 0.273 kg       DC	b11	375 mm
h13       86 mm         l1       2123 mm         l2       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 1150 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         0.21 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         6 km/h / 6 km/h       6 km/h         0.21 m/s / 0.22 m/s       6 % / 10 %         Electro magnetic       2 kW         4 kW       4 kW         13 chi s / 135 ah       273 kg         14 chi s / 0.273 kg       DC		
11       2123 mm         12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 1150 mm         b3       700 mm / 1150 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         Ma       0.11 m/s / 0.20 m/s         0.21 m/s / 0.20 m/s       0.21 m/s / 0.22 m/s         6 % / 10 %       Electro magnetic         2       2 kW         4 kW       4 kW         1715 Ah       273 kg         Main Main Main Main Main Main Main Main	h5	110 mm
12       973 mm         b1       890 mm         s / e / 1       70 mm / 200 mm / 1150 mm         b3       700 mm / 1150 mm         b3       700 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         Image: Point of the string of the str		
b1       890 mm         s / e / l       70 mm / 200 mm / 1150 mm         b3       700 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         Image: state stat	1	2123 mm
s / e / l       70 mm / 200 mm / 1150 mm         b3       700 mm         m1       20 mm         m2       21 mm         Ast       2572 mm         Ast       2531 mm         Wa       1719 mm         h14 / h14       900 mm / 1400 mm         6 km/h / 6 km/h       0.11 m/s / 0.20 m/s         0.21 m/s / 0.22 m/s       6 % / 10 %         Electro magnetic       2 kW         4 kW       4 kW         2 kW       4 kW         DC       DC	12	973 mm
b3         700 mm           m1         20 mm           m2         21 mm           Ast         2572 mm           Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           Ma         0.11 m/s / 0.20 m/s           O         0.21 m/s / 0.22 m/s           G % / 10 %         Electro magnetic           Ma         2 kW           4 kW         4 kW           Ma         773 kg           DC         DC	b1	890 mm
m1     20 mm       m2     21 mm       Ast     2572 mm       Ast     2531 mm       Wa     1719 mm       h14 / h14     900 mm / 1400 mm       Wa     0.11 m/s / 0.20 m/s       O.21 m/s / 0.22 m/s     6 % / 10 %       Electro magnetic       2 kW       4 kW       Traction       24 V / 315 Ah       273 kg       DC		
m2     21 mm       Ast     2572 mm       Ast     2531 mm       Wa     1719 mm       h14 / h14     900 mm / 1400 mm       Ma     0.11 m/s / 0.20 m/s       0.11 m/s / 0.20 m/s     0.21 m/s / 0.22 m/s       6 % / 10 %     Electro magnetic       2 kW     4 kW       1 Ast     2 kW       2 kW     4 kW       2 kW     2 kW       3 Ast     273 kg       3 DC     DC	b3	700 mm
Ast         2572 mm           Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           h14 / h14         900 mm / 1400 mm           6 km/h / 6 km/h         0.11 m/s / 0.20 m/s           0.11 m/s / 0.20 m/s         0.21 m/s / 0.22 m/s           6 % / 10 %         Electro magnetic           2 kW         4 kW           1 Traction         24 V / 315 Ah           273 kg         DC	m1	20 mm
Ast         2531 mm           Wa         1719 mm           h14 / h14         900 mm / 1400 mm           h14 / h14         900 mm / 1400 mm           Image: Image		
Wa         1719 mm           h14 / h14         900 mm / 1400 mm           H14 / h14         900 mm / 1400 mm           Image:		
h14 / h14 900 mm / 1400 mm 6 km/h 6 km/h / 6 km/h 0.11 m/s / 0.20 m/s 0.21 m/s / 0.22 m/s 6 % / 10 % 6 % / 10 % Electro magnetic 2 kW 4 kW 7 Traction 24 V / 315 Ah 273 kg DC		
6 km/h / 6 km/h 0.11 m/s / 0.20 m/s 0.21 m/s / 0.22 m/s 6 % / 10 % Electro magnetic 2 kW 4 kW Traction 24 V / 315 Ah 273 kg DC		
0.11 m/s / 0.20 m/s 0.21 m/s / 0.22 m/s 6 % / 10 % Electro magnetic 2 kW 4 kW Traction 24 V / 315 Ah 273 kg DC	h14 / h14	900 mm / 1400 mm
0.11 m/s / 0.20 m/s 0.21 m/s / 0.22 m/s 6 % / 10 % Electro magnetic 2 kW 4 kW Traction 24 V / 315 Ah 273 kg DC		
0.21 m/s / 0.22 m/s 6 % / 10 % Electro magnetic 2 kW 4 kW Traction 24 V/ 315 Ah 273 kg DC		
6 % / 10 % Electro magnetic 2 kW 4 kW Traction 24 V/ 315 Ah 273 kg DC		
Electro magnetic 2 kW 4 kW Traction 24 V/ 315 Ah 273 kg DC		
2 kW 4 kW Traction 24 V/ 315 Ah 273 kg DC		
4 kW Traction 24 V/ 315 Ah 273 kg DC		Electro magnetic
4 kW Traction 24 V / 315 Ah 273 kg DC		2 kW
Traction 24 V / 315 Ah 273 kg DC		
24 V / 315 Ah 273 kg DC		
273 kg DC		
DC		
		2/0 Ky
		DC
		65 dB

## ES 820 LI - Dimensional drawing



## Characteristics of masts and residual capacities

Central Cylinder Simplex (CCS)		CCS 15	CCS 17
h1 - Mast lowered height	mm	1955	2205
h2 - Mast free lift	mm	1510	1760
h3 - Mast lifting height	mm	1510	1760
h4 - Mast extended height	mm	1965	2215
Residual capacity at max height	kg	2000	2000

Full Visibility Duplex (FVD)		FVD 29	FVD 34
h1 - Mast lowered height	mm	1955	2205
h3 - Mast lifting height	mm	2940	3440
h4 - Mast extended height	mm	3400	3900
Residual capacity at max height	kg	1600	1300

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	mm	2205	2205
h2 - Mast free lift	mm	1510	1760
h3 - Mast lifting height	mm	2935	3435
h4 - Mast extended height	mm	3895	3895
Residual capacity at max height	kg	1600	1300

Free Lift Triplex (FLT)		FLT 42	FLT 47	FLT 54
h1 - Mast lowered height	mm	1915	2075	2315
h2 - Mast free lift	mm	1470	1630	1880
h3 - Mast lifting height	mm	4250	4730	5460
h4 - Mast extended height	mm	4725	5205	5895
Residual capacity at max height	kg	750	550	450



Head Office B.P. 249 - 430 rue de l'Aubinière 44150 Ancenis Cedex - France Tel: +33 (0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97 www.manitou.com



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