Technical sheet:

## ES 414





		ES 414 Created on August		eated on August 10, 2025 at 4:28 PM UT
1.2   Mode Name		Technical characteristics		Metric
1.4   Operator type	1.1	Manufacturer		Manitou
1.4	1.2	Model Name		ES 414
1.5	1.3	Power source		Electrical
1.0	1.4	Operator type		Pedestrian
1.0	1.5		Q	1400 kg
1.9   Wheelbase   Y   1245 mm   Y   1245 m		• •		-
New   New				
Neght   Service weight   Service weigh				
Service weight on front axie (laden) / rear axie (laden)				
	2 1			968 kg
2.3         Weight on front axis (Unladen) / rear axis (Unladen)         684 kg / 284 kg           Winests         Winests           3.3         Number of load wheels / Size of load wheels         2.7 82x88           3.4         Number of stabilizer wheels / Size of the stabilizer wheels         2.7 12x5x50           3.5         Number of front wheels / Size of the stabilizer wheels         2.7 12x5x50           3.5         Number of front wheels / Size of the stabilizer wheels         1.7390x70           3.6         Front wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b10         517 mm           4.15         Fook height in low position         h13         8 7 mm           4.19         Overall length         l1         1875 mm           4.20         Length to face of forks         l2         724 mm           4.21         Overall length         s / e / l         60 mm / 180 mm / 181 mm           4.22         Fook section / width / length         s / e / l         60 mm / 180 mm           4.24         Fook section / width / length         s / e / l         60 mm / 180 mm           4.23         Ground cleasance at centre of wheelbase         m2		•		-
Nice				
3.1         Tires type         Polyurethane           3.3         Number of load wheels / Size of load wheels         2 / 82568           3.4         Number of stabilizer wheels         1           3.5         Number of stabilizer wheels / Size of the stabilizer wheels         2 / 125x50           3.5         Number of forth wheels / Size of dire wheels         12 / 22           3.5.2         Number of forth wheels / Size of dire wheels         bit         17230x70           3.6         Front wheel gauge         bit         357 mm           4.15         Forth chejft in low position         bit         380 mm           4.19         Overall length         li         1875 mm           4.20         Length to face of forks         li         877 mm           4.21         Overall width         bit         822 mm           4.22         Fork carsection / width / length         s / e / 1         60 mm / 180 mm / 1150 mm           4.24         Fork carse extente of wheelbase         m2         30 mm           4.24         Fork carse accentre of wheelbase         m2         30 mm           4.24         Fork carse width for pallets 1000 x 1200 crossways         Ast         258 mm           4.25         Turning radius         ht         10	2.3			004 kg / 204 kg
3.3         Number of load wheels / Size of load wheels         2 / 82x68           3.4         Number of sabilize wheels / Size of the stabilizer wheels         2 / 125x50           3.5         Number of fathithizer wheels / Size of dive wheels         2 / 125x50           3.5         Number of front wheels / Size of dive wheels         1 / 230x70           3.5         Front wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b11         380 mm           4.15         Fork height in low position         h13         87 mm           4.19         Overall length         11         1875 mm           4.19         Overall width         b1         832 mm           4.20         Overall width / length         b1         832 mm           4.21         Fork section / width / length         5 / 6/1         60 mm / 180 mm / 1150 mm           4.22         Fork section / width / length         5 / 6/1         60 mm / 180 mm / 1150 mm           4.23         Ground clearance below mast         m1         35 mm           4.31         Ground clearance techne of whelbase         m2         30 mm           4.32         Ground clearance techne of whelbase         m2         30 mm           4.34         Asize width for 800 x 1	2.1			Dolyurothono
3.4         Number of castor wheels         1         2 / 12x x 50           3.4         Number of stabilizer wheels / Size of the stabilizer wheels         2 / 12x x 50         2 / 12x x 50           3.5.2         Number of drive wheels / Size of drive wheels         17230x 70         17230x 70           3.5.2         Font wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b11         380 mm           4.15         Fork height in low position         h13         87 mm           4.19         Overall length         11         1875 mm           4.20         Overall width         11         1875 mm           4.21         Forks section / width / length         5 / 2         60 mm / 180 mm / 1150 mm           4.22         Forks section / width / length         5 / 2         60 mm / 180 mm / 1150 mm           4.23         Forks section / width / length         5 / 2         60 mm / 180 mm / 1150 mm           4.24         Fork carriage width         8 / 2         60 mm / 180 mm / 1150 mm           4.25         Fork carriage width         8 / 2         30 mm           4.24         Fork carriage width         8 / 2         30 mm           4.25         Ground clearance tecentre of wheelbase         m2         3		**		•
3.4         Number of stabilizer wheels / Size of the stabilizer wheels         2 / 125x550           3.5         Number of front wheels / Size of drive wheels         2 / 2           3.6         Front wheel gauge         b10         517 mm           3.7         Rear wheel pauge         b10         517 mm           3.7         Rear wheel pauge         b10         517 mm           4.15         Fork height in low position         h13         8 mm           4.19         Overall length         11         1875 mm           4.19         Length to face of forks         12         724 mm           4.20         Length to face of forks         12         724 mm           4.21         Overall width         5 / 2         60 mm / 180 mm / 1150 mm           4.22         Fork section / width / length         5 / 2         60 mm / 180 mm / 1150 mm           4.24         Fork camage width         5 / 2         60 mm / 180 mm / 1150 mm           4.31         Ground clearance at centre of wheelbase         m2         30 mm           4.32         Ground clearance at centre of wheelbase         m2         30 mm           4.33         Alsie width for sloth x 1200 pallet lengthways         Ast         2490 mm           4.35         Height t				
3.5         Number of front wheels / rear wheels         2 / 2           3.5.2         Number of drive wheels / Size of drive wheels         17/230x70           3.6         Forth wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b11         380 mm           4.15         Fork height in low position         h13         8 7 mm           4.19         Overall length         l1         1875 mm           4.20         Length to face of forks         l2         724 mm           4.21         Voerall width         b1         832 mm           4.22         Fork section / width / length         b1         832 mm           4.24         Fork carriage width         b3         660 mm           4.24         Fork carriage width         b3         660 mm           4.24         Fork carriage width / length         b3         660 mm           4.24         Fork carriage width         s / e / l         60 mm / 180 mm / 150 mm           4.24         Fork carriage width for pallet stotow x 1200 crossways         Ast         2 281 mm           4.33         Alsie Width for pallets 1000 x 1200 crossways         Ast         2 2490 mm           4.39         Height tiller max.         b14				
3.5.2       Number of drive wheels / Size of drive wheels       1/230x70         3.6       Front wheel gauge       b10       517 mm         Dimensions         4.15       Fork helph in low position       11       1875 mm         4.20       Length to face of forks       11       1875 mm         4.21       Overall width       11       383 mm         4.22       Fork section / width / length       5 / e / 1       60 mm / 180 mm / 1150 mm         4.24       Fork section / width / length       5 / e / 1       60 mm / 180 mm / 1150 mm         4.24       Fork cantage width       5 / e / 1       60 mm / 180 mm / 1150 mm         4.24       Fork cantage width       5 / e / 1       60 mm / 180 mm / 1150 mm         4.31       Ground clearance at centre of wheelbase       m2       30 mm         4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Alsie width for 800x 1200 pallet lengthways       Ast       2581 mm         4.34       Height tiller max.       b       4       1050 mm         4.9       Height tiller max.       b       6 km/h / 6 km/h         5.2       Turwing paddus       b       6 km/h / 6 km/h         5.2       Tavel s				
3.6         Front wheel gauge         b10         517 mm           3.7         Rear wheel gauge         b11         380 mm           4.15         Fork helght in low position         h13         87 mm           4.19         Overall length         11         1875 mm           4.20         Length to face of forks         12         724 mm           4.21         Overall width         b1         832 mm           4.22         Fork seeton / width / length         5 / e / I         60 mm / 180 mm / 180 mm           4.24         Fork carriage width         b3         680 mm / 180 mm           4.24         Fork carriage width         m2         30 mm           4.24         Ground clearance below mast         m1         35 mm           4.31         Ground clearance at center of wheelbase         m2         30 mm           4.32         A isle width for 800 x 1200 crossways         Ast         2581 mm           4.33         A isle width for 800 x 1200 crossways         Ast         2490 mm           4.9         Height tiller max.         h14         1050 mm           5.1         Travel speed (laden / unladen)         Wa         1,00 mm           5.2         Lift motor ating speed (laden / unladen) <td< td=""><td></td><td></td><td></td><td></td></td<>				
3.7         Rear wheel gauge         bill         380 mm           Long Dimensions         Long Mich Reight I low position         h13         87 mm           4.19         Overall length         I1         1875 mm           4.20         Length to face of forks         I2         724 mm           4.21         Overall width         Is 832 mm         1832 mm           4.22         Forks section / width / length         5 / e / I         60 mm / 150 mm         150 mm           4.21         Fork carriage width         B3         680 mm         680 mm           4.22         Fork carriage width         B3         680 mm           4.31         Ground clearance below mast         m1         35 mm           4.32         Ground clearance at center of wheelbase         m2         30 mm           4.33         Aisle width for 800 x 1200 crossways         Ast         2581 mm           4.34         Aisle width for 800 x 1200 crossways         Ast         2490 mm           4.35         Tuning radius         Wa         1400 mm           4.35         Tuning radius         Ma         1400 mm           5.1         Travel speed (laden / unladen)         5         6. Km/h / 6 km/h           5.2         Li			140	
		* *		
4.15         Fork height in low position         h13         87 mm           4.19         Overall length         11         1875 mm           4.20         Length to face of forks         12         724 mm           4.21         Overall width         b1         832 mm           4.22         Fork section / width / length         \$ / e/1         60 mm / 180 mm / 1150 mm           4.24         Fork carriage width         b3         660 mm           4.31         Ground clearance at centre of wheelbase         m2         30 mm           4.32         Ground clearance at centre of wheelbase         m2         30 mm           4.33         Alsie width for solox 1200 pallet lengthways         Ast         2581 mm           4.34         Alsie width for solox 1200 pallet lengthways         Ast         29 mm           4.35         Tuming radius         Ma         1400 mm           4.94         Height tiller max.         Ma         1400 mm           5.1         Tavel speed (laden / unladen)         For well speed (laden / unladen)         6 km/h / 6 km/h           5.2         Lifting speed (laden / unladen)         For well speed         8 % / 10 %           5.2         Lighting         See (laden / unladen)         8 % / 10 %	3.7		b11	380 mm
4.19       Overall length       11       1875 mm         4.20       Length to face of foks       12       724 mm         4.21       Forks section / width / length       51       832 mm         4.22       Fork saming width       5 / r/l       60 mm/ 180 mm / 1150 mm         4.24       Fork carriage width       53       680 mm         4.31       Ground clearance below mast       m1       35 mm         4.32       Asile Width for pallets 1000 x 1200 crossways       Ast       2 30 mm         4.33       Asile width for 800 x 1200 pallet lengthways       Ast       2 490 mm         4.34       Asile width for 800 x 1200 pallet lengthways       Ast       2 490 mm         4.35       Turning radius       Ma       14       10 500 mm         4.9       Performaces       8       1 4       10 500 mm         5.1       Travel speed (laden / unladen)       9       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       9       6 km/h / 6 km/h         5.3       Mac Gradeability (laden / unladen)       9       8 ½ / 10 ½         5.1       Service brake       9       8 ½ / 10 ½         6.1       Drive motor rating 25 60 min       9       1.20 kW				
4.20   Length to face of forks   12   724 mm     4.21   Overall width   Saze mm     4.22   Forks section / width / length   S / e / f   60 mm / 180 mm / 1150 mm     4.24   Fork carriage width   Saze mm     4.24   Fork carriage width   Saze mm     4.25   Ground clearance at centre of wheelbase   Max     4.31   Ground clearance at centre of wheelbase   Max     4.32   Ground clearance at centre of wheelbase   Max     4.33   Aisle Width for allow x 1200 crossways   Ast   2581 mm     4.34   Aisle width for 800 x 1200 pallet lengthways   Ast   2490 mm     4.35   Tuming radius   Max   1400 mm     4.36   Height tiller max.   Hi 14   1050 mm     4.37   Tawel speed (laden / unladen)   G km/h / 6 km/h     5.1   Tawel speed (laden / unladen)   G km/h / 6 km/h     5.2   Lifting speed (laden / unladen)   G km/h / 6 km/h     5.3   Lowering speed (laden / unladen)   G km/h / 6 km/h     5.1   Service brake   G km/h / 6 km/h     6.1   Dive motor rating at S3 15%   G km/h / 6 km/h     6.1   Dive motor rating at S3 15%   G km/h / 6 km/h     6.2   Lift motor rating at S3 15%   G km/h / 6 km/h     6.3   Battery according to DIN 43531/35/36 A, B, C   DIN 43535-B     6.4   Battery woltage / capacity   G km/h / 5 km/h     6.5   Miscellaneous   G km/h / 5 km/h     6.6   Miscellaneous   G km/h / 5 km/h     6.7   Miscellaneous   G km/h / 5 km/h     6.8   Miscellaneous   G km/h / 5 km/h     6.9   Miscellaneous   G km/h / 5 km/h     6.0   Miscellaneous   G km/h / 6 km/h     6.0   Miscellaneous   G km/h				
4.21       Overall width       b1       832 mm         4.22       Fork section / width / length       \$ / e / l       60 mm / 180 mm / 1150 mm         4.24       Fork carriage width       b3       680 mm         4.31       Ground clearance below mast       m1       35 mm         4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Ma       1400 mm         4.9       Height tiller max.       b1       1500 mm         5.1       Travel speed (laden / unladen)       5.0       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       5.0       0.0 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       5.0       8 % / 10 %         5.1       Service brake       5.0       8 % / 10 %         5.1       Service brake       5.0       8 % / 10 %         6.1       Divie motor rating \$2.60 min       \$ \$ 1.20 kW         6.2       Lift motor rating \$2.60 min       \$ 3 kW         6.3       Battery voltage / capacity<		,		
4.22       Forks section / width / length       s / e / l       60 mm / 180 mm / 1150 mm         4.24       Fork carriage width       b3       6800 mm         4.31       Ground clearance below mast       m1       35 mm         4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Ma       1400 mm         4.9       Height tiller max.       Ma       1505 mm         5.1       Tavel speed (laden / unladen)       5       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       5       6 km/h / 6 km/h         5.3       Lowering speed (laden / unladen)       5       8 % / 10 %         5.0       Exprice brake       8 % / 10 %       8 % / 10 %         5.1       Engine       5       1 2.0 kW         6.1       Dive motor rating \$2.60 min       \$       1 2.0 kW         6.2       Lift motor rating \$2.50 min       \$       3 kW         6.3       Battery voltage / capacity       \$       3 kW         6.4       Ba		•		
4.24       Fork carriage width       b3       680 mm         4.31       Ground clearance below mast       m1       35 mm         4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle Width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Wa       1400 mm         4.9       Height tiller max.       b14       1050 mm         5.1       Travel speed (laden / unladen)       6 km/h 6 km/h       1010 m/s / 0.24 m/s         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s       10.00 m/s / 0.20 m/s         5.3       Lowering speed (laden / unladen)       8 ½ / 10 %       8 ½ / 10 %         5.1       Service brake       Electromagnetic       8 ½ / 10 %         5.2       Lift motor rating \$2.60 min       1.20 kW         6.1       Dive motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating at \$3.15%       3 kW         6.3       Battery voltage / capacity       3 kW         6.4       Battery voltage / capacity       2 V / 180 Ah         6.5       Battery voltage / capacity       <		Overall width	b1	832 mm
4.31       Ground clearance below mast       m1       35 mm         4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Wa       11400 mm         4.9       Height tiller max.       h14       1050 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       8 % / 10 %         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         6.1       Drive motor rating \$2.60 min       1.20 kW         6.1       Drive motor rating \$2.60 min       3 kW         6.2       Lift motor rating at \$3.15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       3 kW         6.4       Battery woltage / capacity       24 V/ 180 Ah         6.5       Battery woltage / capacity       3 kW         6.		Forks section / width / length		
4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Wa       1400 mm         4.9       Height tiller max.       h14       1050 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       0.30 m/s / 0.20 m/s         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.8       Service brake       Electro magnetic         Engine         6.1       Drive motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating \$2.50 min       3 kW         6.3       Battery voltage / capacity       24 V/ 180 Ah         6.4       Battery voltage / capacity       24 V/ 180 Ah         6.5       Battery voltage / capacity       183 kg         6.5       Battery weight (+/- 5%)       183 kg         6.5       Battery weight (expected)       180 kg	4.24	Fork carriage width	p3	680 mm
4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2581 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Wa       1400 mm         4.9       Height tiller max.       h14       1050 mm         Performances         Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       0.30 m/s / 0.20 m/s         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         6.1       Drive motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating at \$3.15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous       AC	4.31	Ground clearance below mast	m1	35 mm
4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2490 mm         4.35       Tuming radius       Wa       1400 mm         4.9       Height tiller max.       h14       1050 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       3 % / 10 %         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         Engine         6.1       Drive motor rating \$2 60 min       1.20 kW         6.2       Lift motor rating at \$3 15%       3 kW         6.2       Lift motor rating at \$3 15%       3 kW         6.3       Battery worltage / capacity       3 kW         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	4.32	Ground clearance at centre of wheelbase	m2	30 mm
4.35       Tuming radius       Wa       1400 mm         4.9       Height tiller max.       h14       1050 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       8 % / 10 %         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         Engine         6.1       Drive motor rating \$2.50 min       1.20 kW         6.2       Lift motor rating at \$3.15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/-5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2581 mm
4.9 Height tiller max.       h14       1050 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       8 % / 10 %         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         6.1       Drive motor rating S2 60 min       1.20 kW         6.2       Lift motor rating at S3 15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2490 mm
Performances         Commander         Commander           5.1         Travel speed (laden / unladen)         6 km/h / 6 km/h           5.2         Lifting speed (laden / unladen)         0.10 m/s / 0.24 m/s           5.3         Lowering speed (laden / unladen)         8 % / 10 %           5.8         Max Gradeability (laden / unladen)         8 % / 10 %           5.10         Service brake         Electro magnetic           6.1         Drive motor rating S2 60 min         1.20 kW           6.2         Lift motor rating at S3 15%         3 kW           6.3         Battery according to DIN 43531/35/36 A, B, C         DIN 43535-B           6.4         Battery voltage / capacity         24 V / 180 Ah           6.5         Battery weight (+/- 5%)         183 kg           Miscellaneous         AC	4.35	Turning radius	Wa	1400 mm
5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       0.30 m/s / 0.20 m/s         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         6.1       Drive motor rating S2 60 min       1.20 kW         6.2       Lift motor rating at S3 15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	4.9	Height tiller max.	h14	1050 mm
5.2       Lifting speed (laden / unladen)       0.10 m/s / 0.24 m/s         5.3       Lowering speed (laden / unladen)       0.30 m/s / 0.20 m/s         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         Engine         6.1       Drive motor rating S2 60 min       1.20 kW         6.2       Lift motor rating at S3 15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC		Performances		
5.3       Lowering speed (laden / unladen)       0.30 m/s / 0.20 m/s         5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         Engine         6.1       Drive motor rating S2 60 min       1.20 kW         6.2       Lift motor rating at S3 15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h
5.8       Max Gradeability (laden / unladen)       8 % / 10 %         5.10       Service brake       Electro magnetic         Engine         6.1       Drive motor rating S2 60 min       1.20 kW         6.2       Lift motor rating at S3 15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	5.2	Lifting speed (laden / unladen)		0.10 m/s / 0.24 m/s
Engine       Electro magnetic         6.1       Drive motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating at \$3.15%       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC	5.3	Lowering speed (laden / unladen)		0.30 m/s / 0.20 m/s
Engine         Common of Pating State (Common of Pating At State (Comm	5.8	Max Gradeability (laden / unladen)		8 % / 10 %
6.1 Drive motor rating \$2.60 min 1.20 kW 6.2 Lift motor rating at \$3.15% 3 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43535-B 6.4 Battery voltage / capacity 24 V / 180 Ah 6.5 Battery weight (+/- 5%) 183 kg  Miscellaneous AC  8.1 Type of drive control AC	5.10	Service brake		Electro magnetic
6.2 Lift motor rating at S3 15% 3 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43535-B 6.4 Battery voltage / capacity 24 V / 180 Ah 6.5 Battery weight (+/- 5%) 183 kg  Miscellaneous  8.1 Type of drive control AC		Engine		
6.2 Lift motor rating at S3 15% 3 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43535-B 6.4 Battery voltage / capacity 24 V / 180 Ah 6.5 Battery weight (+/- 5%) 183 kg  Miscellaneous  8.1 Type of drive control AC	6.1	-		1.20 kW
6.3 Battery according to DIN 43531/35/36 A, B, C  6.4 Battery voltage / capacity  6.5 Battery weight (+/- 5%)  Miscellaneous  8.1 Type of drive control  DIN 43535-B  24 V / 180 Ah  183 kg  AC				3 kW
6.4       Battery voltage / capacity       24 V / 180 Ah         6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC				
6.5       Battery weight (+/- 5%)       183 kg         Miscellaneous         8.1       Type of drive control       AC		•		
Miscellaneous  8.1 Type of drive control  AC				
8.1 Type of drive control AC				
	8.1			AC:
		•		

## ES 414 - Dimensional drawing



## Characteristics of masts and residual capacities

Full Visibility Duplex (FVD)		FVD 29	FVD 34	FVD 38
h1 - Mast lowered height	mm	1940	2190	2390
h3 - Mast lifting height	mm	2940	3440	3840
h4 - Mast extended height	mm	3365	3865	4265
Residual capacity at max height	kg	1250	1050	850
Height at max capacity	mm	2700	2700	2700

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	mm	1940	2190
h2 - Mast free lift	mm	1420	1670
h3 - Mast lifting height	mm	2935	3435
h4 - Mast extended height	mm	3365	3865
Residual capacity at max height	kg	1250	1000
Height at max capacity	mm	2700	2700

Free Lift Triplex (FLT)		FLT 42
h1 - Mast lowered height	mm	1890
h2 - Mast free lift	mm	1380
h3 - Mast lifting height	mm	4240
h4 - Mast extended height	mm	4678
Residual capacity at max height	kg	700
Height at max capacity	mm	2700





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