Technical sheet:

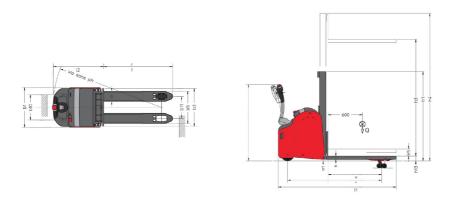
## ES 410





1.2       Model Name       ES 410         1.3       Power source       Electrical         1.4       Operator type       Pedestrian         1.5       Max. capacity       Q       1000 kg         1.6       Load center of gravity       c       600 mm         1.8       Distance from Load backrest to center of rear axle       x       723 mm         1.9       Wheelbase       y       1286 mm         2.1       Service weight       870 kg         2.2       Weight on front axle (laden) / rear axle (laden)       709 kg / 1161 kg		Technical characteristics		Metric
Power source	1.1	Manufacturer		Manitou
1.4   Operator type	1.2	Model Name		ES 410
1.5   Max. capacity	1.3	Power source		Electrical
1.6   Load center of gravity	1.4	Operator type		Pedestrian
1.6   Load center of gravity	1.5	Max. capacity	Q	1000 kg
1.5	1.6		С	600 mm
Weight   Service weig	1.8	Distance from Load backrest to center of rear axle	X	723 mm
Service weight   Serv	1.9	Wheelbase	У	1286 mm
Service weight   Serv		Weight		
Weight on front axle (Unladen) / rear axle (Unladen)   609 kg / 261 kg	2.1	-		870 kg
Weight on front axie (Unladen) / rear axie (Unladen)   609 kg / 261 kg	2.2	·		*
Wincels	2.3	. , , , , ,		
1				<b>3 3</b>
3.3 Number of load wheels / Size of load wheels 3.4 Number of stabilizer wheels / Size of the stabilizer wheels 3.5 Number of fort wheels / rear wheels 3.5 Number of fort wheels / Faze wheels 3.6 First wheel gauge 3.6 First wheel gauge 3.7 Rear wheel gauge 3.8 Dille of Miner wheels / Size of drive wheels 3.7 Rear wheel gauge 3.8 Dille of Miner wheels / Size of drive wheels 3.8 First wheel gauge 3.0 Dimensions 4.19 Overall ength 4.19 Overall ength 4.10 Overall ength 4.20 Length to face of forks 4.21 Doverall width 4.21 Overall width 4.22 Forks section / width / length 4.22 Forks section / width / length 4.23 Ground clearance below mast 4.24 Fork carriage width 4.3 Ground clearance at centre of wheelbase 4.3 Aisle Width for pallets 1000 x 1200 crossways 4.3 Aisle Width for pallets 800 x 1200 crossways 4.3 Aisle Width for pallets 800 x 1200 crossways 4.3 Aisle Width for pallets 800 x 1200 crossways 4.3 Tuming radius 4.9 Height tiller min. / max. 4.9 Lowering speed (laden / unladen) 5.1 Travel speed (laden / unladen) 5.2 Lifting speed (laden / unladen) 5.3 Lowering speed (laden / unladen) 6.4 Battery volage / capacity 6.5 Battery weight (x²-5 %) 6.6 Battery volage / capacity 6.7 Din A353758 Battery weight (x²-5 %) 6.8 Battery volage / capacity 6.9 Din A353758 Battery weight (x²-5 %) 6.1 Type of drive control 6.1 Type of drive control 6.2 Din A353758 Battery weight (x²-5 %) 6.3 Battery volage / capacity 6.4 Din A353758 Battery weight (x²-5 %) 6.5 Battery volage / capacity 6.6 Type of drive control 6.7 Type of drive control 6.8 Type of drive control 6.9 Type of drive control 6.1 Type of drive control 6.1 Type of drive control 6.2 Lift of drive and a stabilization of the stabilization	3.1			Polyurethane
Number of stabilizer wheels / Size of the stabilizer wheels   2 / 2   2   2   2   2   2   2   2   2		•		·
2				
1,230x70   Number of drive wheels / Size of drive wheels   1,230x70   1,230				
Sear wheel gauge				
Rear wheel gauge   bil   380 mm			h10	
Dimensions				
Fork height in low position	0.7		511	000
1	<i>4</i> 15		h13	85 mm
Length to face of forks   12   725 mm     A21				
A21   Overall width   B1   B32 mm     A22   Forks section / width / length   S / e / I   60 mm / 180 mm / 1150 mm     A24   Fork carriage width   B3   680 mm     A31   Ground clearance below mast   m1   35 mm     A32   Ground clearance at centre of wheelbase   m2   30 mm     A33   Aisle Width for pallets 1000 x 1200 crossways   Ast   2605 mm     A34   Aisle Width for pallets 800 x 1200 crossways   Ast   2518 mm     A35   Tuming radius   Wa   1516 mm     Height tiller min. / max.   h14 / h14   920 mm / 1425 mm     Performances		·		
Forks section / width / length		•		
A.24   Fork carriage width				
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   2605 mm     4.34   Aisle Width for pallets 800 x 1200 crossways   Ast   2518 mm     4.35   Tuming radius   Wa   1516 mm     4.36   Height tiller min. / max.   h14 / h14   920 mm / 1425 mm     4.37   Perfomances				
4.32       Ground clearance at centre of wheelbase       m2       30 mm         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2605 mm         4.34       Aisle Width for pallets 800 x 1200 crossways       Ast       2518 mm         4.35       Tuming radius       Wa       1516 mm         4.9       Height tiller min. / max.       h14 / h14       920 mm / 1425 mm         Perfomances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.14 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       Divice motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating \$2.60 min       1.20 kW         6.2       Lift motor rating \$2.60 min       2.4 V/ 160 Ah         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery veight (+/- 5%)       2.4 V/ 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneo		J.		
4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2605 mm         4.34       Aisle Width for pallets 800 x 1200 crossways       Ast       2518 mm         4.35       Tuming radius       Wa       1516 mm         4.9       Height tiller min. / max.       h14 / h14       920 mm / 1425 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.14 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 \$2.60 min       1.20 kW         6.2       Lift motor rating \$2.60 min       3 kW         6.2       Lift motor rating \$2.60 min       3 kW         6.3       Battery according to DIN 43531/35/36 A, B, C       DIN 43535-B         6.4       Battery voltage / capacity       24 V / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
4.34       Aisle Width for pallets 800 x 1200 crossways       Ast       2518 mm         4.35       Turning radius       Wa       1516 mm         4.9       Height tiller min. / max.       h14 / h14       920 mm / 1425 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.14 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 \$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 weight (+/-5%)       24 V / 160 Ah         6.5       Battery weight (+/-5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
Tuming radius   Wa   1516 mm				
4.9       Height tiller min. / max.       h14 / h14       920 mm / 1425 mm         Performances         5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.14 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 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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC		·		
Performances           5.1         Travel speed (laden / unladen)         6 km/h / 6 km/h           5.2         Lifting speed (laden / unladen)         0.14 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 / 160 Ah           6.5         Battery weight (+/- 5%)         165 kg           Miscellaneous           8.1         Type of drive control         AC				
5.1       Travel speed (laden / unladen)       6 km/h / 6 km/h         5.2       Lifting speed (laden / unladen)       0.14 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 \$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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC	4.5	•	11147 1114	920 11111 / 1423 11111
5.2       Lifting speed (laden / unladen)       0.14 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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC	5.1			6 km/h / 6 km/h
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 \$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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
Electro magnetic         Engine       Electro magnetic         6.1       Drive motor rating S2 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 / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
Engine         Company           6.1         Drive motor rating S2 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 / 160 Ah           6.5         Battery weight (+/- 5%)         165 kg           Miscellaneous           8.1         Type of drive control         AC				
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 / 160 Ah 6.5 Battery weight (+/- 5%) 165 kg  Miscellaneous 8.1 Type of drive control AC	3.10			Liectio magnetic
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 / 160 Ah 6.5 Battery weight (+/- 5%) 165 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 / 160 Ah  165 kg  AC				
6.4       Battery voltage / capacity       24 V / 160 Ah         6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
6.5       Battery weight (+/- 5%)       165 kg         Miscellaneous         8.1       Type of drive control       AC				
Miscellaneous  8.1 Type of drive control AC				
8.1 Type of drive control AC	0.5			тоо кд
21	0.1			•
		21		

## ES 410 - 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	1000	900	750

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	mm	1940	2190
h2 - Mast free lift	mm	1510	1760
h3 - Mast lifting height	mm	2935	3435
h4 - Mast extended height	mm	3365	3865
Residual capacity at max height	kg	1000	900

Free Lift Triplex (FLT)	FLT 42	
h1 - Mast lowered height	mm	1965
h2 - Mast free lift	mm	1470
h3 - Mast lifting height	mm	4240
h4 - Mast extended height	mm	4735
Residual capacity at max height	kg	550





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