Technical sheet:

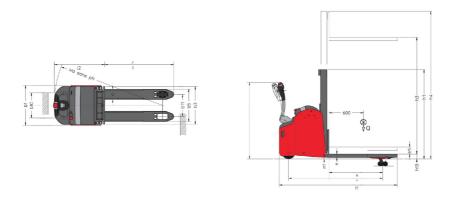
ES 410





Weight on front axle (Unladen) / rear axle (Unladen) 609 kg / 261 kg				20 011 0010BC1 30, 2023 dt 10.27 1 W
Est 10				
Power source				
1.4 Operator type				
Max. capacity				
1.6 Load center of gravity C 660 mm 18		· · · · · ·		
1.5 Distance from Load backrest to center of rear axie		• •	Q	¥
Wheelbase Y 1286 mm Weight Weight Weight Weight Weight Weight Weight on front sale (laden) / rear axie (Unladen) 609 kg / 261 kg 609 kg / 261 kg Wheels Cushion Fort sale (Unladen) / war axie (Unladen) Wheels Cushion Cush		- ,	С	
			х	
Service weight	1.9		у	1286 mm
Weight on front axie (luden) / rear axie (laden)				
Weight on front axle (Unladen) / rear axle (Unladen) 609 kg / 261 kg				•
Number Size of load wheels Size of the stabilizer wheels Size of three wheels Size	2.2	Weight on front axle (laden) / rear axle (laden)		709 kg / 1161 kg
Times type	2.3	Weight on front axle (Unladen) / rear axle (Unladen)		609 kg / 261 kg
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 front wheels / rear wheels 3.5 Number of front wheels / rear wheels 3.6 Front wheel gauge 3.6 Front wheel gauge 3.7 Rear wheel gauge 3.8 Dille and wheels / Rear wheels 3.7 Rear wheel gauge 3.8 Dille and wheels / Rear wheels 3.8 Dille and wheels / Rear wheels 3.9 Dille and wheels / Rear wheels 3.0 Dille and wheels / Rear wheels gauge 3.0 Rear wheels / Rear wheels gauge 3.0 Re		Wheels		
Number of stabilizer wheels / Size of the stabilizer wheels 2 / 2 2 2 2 2 2 2 2 2	3.1	Tires type		Cushion
2	3.3	Number of load wheels / Size of load wheels		2 / 125x50
Number of drive wheels / Size of drive wheels 1/230x70 1/230	3.4	Number of stabilizer wheels / Size of the stabilizer wheels		1 / 125x50
Sear wheel gauge	3.5	Number of front wheels / rear wheels		2/2
Rear wheel gauge Bill 380 mm Dimensions	3.5.2	Number of drive wheels / Size of drive wheels		1/230x70
Dimensions	3.6	Front wheel gauge	b10	517 mm
Fork height in low position	3.7	Rear wheel gauge	b11	380 mm
1		Dimensions		
Length to ace of forks 12 725 mm A21	4.15	Fork height in low position	h13	85 mm
A21 Overall width b1 832 mm 422 Forks section / width / length s / e / I 60 mm / 180 mm / 1150 mm 424 Fork carriage width b3 680 mm 425 Fork carriage width b3 680 mm 426 Fork carriage width b3 680 mm 431 Ground clearance below mast m1 35 mm 432 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	4.19	Overall length	I1	1875 mm
4.22 Forks section / width / length s / 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 Asile 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 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 6.1 Drive motor rating \$2.60 min 1.20 kW 6.2 Lift motor rating at \$3.15% 3 kW 6.3 Battery voltage / capacity 24 V / 160 Ah	4.20	Length to face of forks	12	725 mm
Fork carriage width B3 680 mm A31 Ground clearance below mast m1 35 mm A35 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 A35 Tuming radius Wa 1516 mm A35 Tuming radius Wa A35 Tuming radius Wa A35	4.21	Overall width	b1	832 mm
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 Ferfomances	4.22	Forks section / width / length	s / e / l	60 mm / 180 mm / 1150 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 4.9 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 Dive 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 velage / capacity 24 V / 160 Ah 6.5 Battery velight (+/- 5%) 155 kg Miscellaneous 8.1 Type of drive control AC	4.24	Fork carriage width	b3	680 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 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 Engline 6.1 Drive motor rating S2 60 min 1.20 kW 6.2 Lift motor rating s2 60 min 3 kW 6.2 Lift motor rating s1 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 <td>4.31</td> <td>Ground clearance below mast</td> <td>m1</td> <td>35 mm</td>	4.31	Ground clearance below mast	m1	35 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 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	4.32	Ground clearance at centre of wheelbase	m2	30 mm
Tuming radius Wa 1516 mm Height tiller min. / max.	4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2605 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	4.34	Aisle Width for pallets 800 x 1200 crossways	Ast	2518 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	4.35	Turning radius	Wa	1516 mm
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	4.9	Height tiller min. / max.	h14 / h14	920 mm / 1425 mm
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		Performances		
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
5.3 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	5.2			0.14 m/s / 0.24 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	5.3	Lowering speed (laden / unladen)		0.30 m/s / 0.20 m/s
Electro magnetic Engine 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 / 160 Ah 6.5 Battery weight (+/- 5%) 165 kg Miscellaneous 8.1 Type of drive control AC				
Engine Common Service 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	5.10			
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				
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	0.0			100 kg
**	8.1			Δ.C.
		7.		

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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