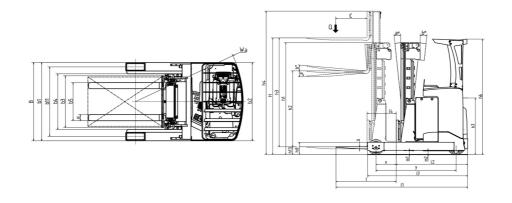
Technical sheet:

ER 20



Manufachure		Technical characteristics		Metric
1.4 Open to type	1.1	Manufacturer		MANITOU
1.5 Max. capacity Q 2000 kg	1.2	Model Name		ER 20
1.5 Load center of gravity 0 500 mm 1.8 Load distance, centre of drive atale to fork x 441 mm 1.9 Wine-Boase y 1530 mm 2.1 Service weight 3730 kg 3730 kg 2.1 Times Spee Wukledian 1 3730 kg 3.1 Times Spee Vukledian 1 355 kg 55 kg 55 kg 55 3.3 1 15 kg 55 kg 55 kg 55 kg 55 3.3 3.3 1, 25 kg 54 kg 55 kg 55 kg 55 3.3 1, 22 kg 52 kg 50 kg 55 kg 55 kg 55 3.3 1, 22 kg 52 kg 50 kg 55 kg 56 3.3 3.3 1, 22 kg 52 kg 50 kg 55 kg 55 kg 55 kg 55 kg 55 kg 56 kg 50 kg 64 kg 64 kg 50 kg 64 kg 64 kg 50 kg 64 k	1.3	Power source		Electrical
1.6	1.4	Operator type		Seated
1.8 Land distance, centre of drive axle to fork x 444 mm 1.9 Weight 3730 kg 2.1 Service weight	1.5	Max. capacity	Q	2000 kg
1.50	1.6	Load center of gravity	С	600 mm
	1.8	Load distance, centre of drive axle to fork	x	441 mm
Service weight Wheels Whitels Walkolfan	1.9	Wheelbase	у	1530 mm
Wheels		Weight		
1 1 1 1 1 1 1 1 1 1	2.1	Service weight		3740 kg
3.5.2 Number of drive wheels - Size of drive wheels 1 x 355 x 155 3.3 Number of float wheels - Size of load wheels 1 / 2 3.5 Number of float wheels - Weels 1 / 2 3.6 Float wheel gauge b10 0 mm 3.7 Rear wheel gauge b10 0 mm 4.8 Seat height/stand height h7 11.72 wm 4.9 Overall length 11 2460 mm 4.20 Length to face of forks 12 1310 mm 4.21 Overall width 5 / 4 40 mm x 100 mm / 1150 mm 4.22 Fork section / width / length 5 / 4 40 mm x 100 mm / 1150 mm 4.23 Fork section / width / length 5 / 4 40 mm x 100 mm / 1150 mm 4.24 Fork section / width / length 5 / 4 40 mm x 100 mm 4.25 Fork section / width / length 5 / 4 40 mm x 100 mm 110 mm 4.26 Distance between wheel ams/loading surfaces 5 / 4 903 mm 4.25 Width over forks x min / max 5 / 5 316 mm / 697 mm <td< td=""><td></td><td>Wheels</td><td></td><td></td></td<>		Wheels		
3.3 Number of load wheels - Size of load wheels 2 x 285 x 105 3.5 Number of front wheel gauge b10 0 mm 3.6 Front wheel gauge b10 0 mm 3.7 Rear wheel gauge b11 1128 mm 4.8 Seat height/stand height h7 1077 mm 4.19 Overall length l1 2460 mm 4.20 Length to face of forks l2 1310 mm 4.21 Overall width b1 1270 mm 4.22 Fork section / width / length s / e / l 40 mm x 100 mm / 1150 mm 4.23 Fork carriage (15228 (class/from) A/B s / e / l 40 mm x 100 mm / 1150 mm 4.24 Fork carriage (15228 (class/from) A/B s / e / l 40 mm x 100 mm / 1150 mm 4.25 Tork carriage (15228 (class/from) A/B s / e / l 40 mm x 100 mm / 1150 mm 4.25 Tork carriage (15028) m2 70 mm 4.25 Tork carriage (1500 mm / m m2 70 mm 4.33 Alsie width for 1000 x 1200 pallet lengthways Ast 2808 mm	3.1	Tires type		Vulkollan
3.5 Number of front wheels / rear wheels 1 / 2 2 3.6 Front wheel gauge b10 0 mm Sear wheel gauge b11 1128 mm Ullimanions	3.5.2	Number of drive wheels - Size of drive wheels		1 x 355 x 155
3.6 Front wheel gauge b10 0 mm 3.7 Rear wheel gauge b11 1128 mm 4.8 Seat height/stand height h7 1077 mm 4.19 Overall length I1 2460 mm 4.20 Length to face of forks I2 1310 mm 4.21 Overall width b1 1270 mm 4.22 Fork section / width / length s / e / I 40 mm v100 mm / 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B x / e / I 40 mm v100 mm / 1150 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.26.2 Ground clearance at center of wheelbase m2 70 mm 4.33 Alse width for 1000 x 1200 pallet lengthways Ast 2280 mm 4.34 Alse width for 1000 x 1200 pallet lengthways Ast 2200 mm 5.1 Travel speed (laden / unladen) Max 11750 mm	3.3	Number of load wheels - Size of load wheels		2 x 285 x 105
Rear wheel gauge	3.5	Number of front wheels / rear wheels		1/2
Rear wheel gauge	3.6	Front wheel gauge	b10	0 mm
4.8 Seat height/stand height h7 1077 mm 4.19 Overall length 11 2460 mm 4.20 Length to face of forks 12 1310 mm 4.21 Overall width b1 1270 mm 4.22 Fork section / width / length s re / I 40 mm x 100 mm / 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2A 2A 4.26 Distance between wheel sams/loading surfaces b4 903 mm 4.25.1 Width over forks min / max. b5 316 mm / 697 mm 4.26 Oistance between wheel sams/loading surfaces b5 316 mm / 697 mm 4.27 Width over forks min / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Akis le width for 1000 x 1200 pallet lengthways Ast 2280 mm 4.34 Alsie width for 900 x 1200 pallet lengthways Ast 2308 mm 4.35 Tuning radius M8 1750 mm 4.7 Height of overhead guard (cabin) M8 1750 mm	3.7		b11	1128 mm
4.19 Overall length 11 2460 mm 4.20 Length to face of forks 12 1310 mm 4.21 Overall width for 100 kith bit 1270 mm 4.22 Fork section / width / length \$ / e / l 40 mm x 100 mm / 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2A 2A 4.26 Distance between wheel ams/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Alsie width for 1000 x 1200 pallet lengthways ASI 22070 mm 4.34 Alsie width for 2000 x 1200 pallet lengthways ASI 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 5.1 Tavel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.33 m/s 5.3 Lowering speed (laden / unladen) 0.20 m/s / 0.20 m/s 5.1 Gradeability (laden / unladen) 0.20 m/s / 0.20 m/s <				
4.19 Overall length 11 2460 mm 4.20 Length to face of forks 12 1310 mm 4.21 Overall width b1 1270 mm 4.22 Fork section / width / length \$ / e / 1 40 mm x 100 mm / 1150 mm 4.23 Fork carriage ISO 2238 (class/rom) A/B 2A 2A 4.26 Distance between wheel amms/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Alsie width for 1000 x 1200 pallet lengthways Ast 2808 mm 4.34 Alsie width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 5.1 Tavel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.33 m/s 5.3 Lowering speed (laden / unladen) 0.20 m/s / 0.20 m/s 5.1 Gradeability (laden / unladen) 0.20 m/s / 0.20 m/s	4.8	Seat height/stand height	h7	1077 mm
4.20 Length to face of forks I2 1310 mm 4.21 Overall width b1 1270 mm 4.22 Fork carriage ISO 2328 (class/form) A/B s / e / l 40 mm x 100 mm / 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2A 4.26 Distance between wheel arms/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Aisle width for 1000 x 1200 pallet lengthways Ast 22770 mm 4.34 Aisle width for 1000 x 1200 pallet lengthways Ast 22770 mm 4.35 Turning radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 5.1 Travel speed (laden / unladen) 0.37 m/s / 0.63 m/s 0.37 m/s / 0.63 m/s 5.3 Lowering speed (laden / unladen) 0.55 m/s / 0.43 m/s 0.55 m/s / 0.43 m/s 5.4 Beach speed (with oad / wit	4.19			2460 mm
4.21 Overall width b1 1270 mm 4.22 Forks section / width / length s / e / I 40 mm x 100 mm / 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2A 4.26 Distance between wheel ams /loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at center of wheelbase m2 70 mm 4.33 A sile width for 800 x 1200 pallet lengthways Ast 2808 mm 4.34 A isle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Turning radius Wa 1750 mm 4.7 Height of overhead guard (cabin) Wa 1750 mm 4.7 Tavel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.1 Tavel speed (laden / unladen) 0.37 m/s / 0.63 m/s 5.2 Liffing speed (laden / unladen) 0.55 m/s / 0.43 m/s 5.3 Lowering speed (with load / without load) 0.55 m/s / 0.20 m/s 5.7 Gradeability (laden / unladen) 0.20 m/s / 0.20 m/s 5.1	4.20		12	1310 mm
4.22 Forks section / width / length s / e / I 40 mm x 100 mm / 1150 mm 4.23 Fork carniage ISO 2328 (class/fom) A/B 2A 4.26 Distance between wheel arms/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Aisle width for 1000 x 1200 pallet lengthways Ast 2808 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 5.1 Travel speed (laden / unladen) 14.30 km/h / 14.50 km/h 20.37 m/s / 0.63 m/s 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.63 m/s 3.30 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 6.90 % / 10.20 % 5.7 Service brake Electric Electric 6.1 Drive motor rating \$2.60 min 7.20 kW 15 kW 6.2 </td <td></td> <td></td> <td></td> <td></td>				
4.23 Fork carriage ISO 2328 (class/form) A/B 2A 4.26 Distance between wheel arms/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Aisle width for 1000 x 1200 pallet lengthways Ast 22770 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 28080 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 5.1 Travel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.63 m/s 5.3 Lowering speed (laden / unladen) 0.55 m/s / 0.43 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 5.7.0 Service brake Electric 6.10 Drive motor rating 25.60 min 0.90 % / 10.20 % 6.2 Lift motor rating at S3 15% 15 kW 6.3 Battery voltage / capacity		Forks section / width / length	s / e / l	40 mm x 100 mm / 1150 mm
4.26 Distance between wheel ams/loading surfaces b4 903 mm 4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Aisle width for 1000 x 1200 pallet lengthways Ast 2770 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Helpht of overhead guard (cabin) h6 2205 mm 4.7 Performances **** **** 5.1 Travel speed (laden / unladen) 0.37 m/s / 0.63 m/s *** 5.2 Lifting speed (laden / unladen) 0.55 m/s / 0.43 m/s *** 5.3 Lowering speed (laden / unladen) 0.55 m/s / 0.43 m/s *** 5.4.1 Reach speed (with load / without load) *** 6.90 % / 10.20 % 5.7 Gradeability (laden / unladen) *** 6.90 % / 10.20 % 5.10 Service brake *** *** 6.1 Dive motor rating \$2.60 min ***		-		2A
4.25.1 Width over forks min. / max. b5 316 mm / 697 mm 4.32 Ground clearance at centre of wheelbase m2 70 mm 4.33 Aisle width for 1000 x 1200 pallet lengthways Ast 2770 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm 4.7 Height of overhead guard (cabin) 6 2205 mm 5.1 Tavel speed (laden / unladen) 0.37 m/s / 0.63 m/s 0.37 m/s / 0.63 m/s 5.2 Lifting speed (laden / unladen) 0.55 m/s / 0.43 m/s 0.55 m/s / 0.43 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 0.55 m/s / 0.43 m/s 5.7 Gradeability (laden / unladen) 6.90 % / 10.20 % 0.55 m/s / 0.43 m/s 5.10 Service brake Electric 6.1 Drive motor rating \$2.60 min 7.20 kW 6.2 Lift motor rating \$2.60 min 15 kW 6.3 Battery valcage / capacity 48 V / 520 Ah 6.5 Battery weight (+/· 5%) 920 kg	4.26		b4	903 mm
4.33 Aisle width for 1000 x 1200 pallet lengthways 2770 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm Perfomances 5.1 Travel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.63 m/s 5.3 Lowering speed (laden / unladen) 0.55 m/s / 0.43 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 5.7 Gradeability (laden / unladen) 6.90 % / 10.20 % 5.10 Service brake Electric Engine 6.1 Drive motor rating S2 60 min 7.20 kW 6.2 Lift motor rating s2 50 min 7.20 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43531 C 6.4 Battery weight (+/- 5%) 920 kg Miscellaneous 1 8.1 Type of drive control Electronic 8.3 Oil flow rate for attachments 25 l/min <td></td> <td>-</td> <td>b5</td> <td>316 mm / 697 mm</td>		-	b5	316 mm / 697 mm
4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm Performances 1 14.30 km/h /14.50 km/h 5.1 Travel speed (laden / unladen) 0.37 m/s / 0.63 m/s 5.2 Lifting speed (laden / unladen) 0.55 m/s / 0.43 m/s 5.3 Lowering speed (laden / unladen) 0.20 m/s / 0.20 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 5.7 Gradeability (laden / unladen) 0.20 m/s / 0.20 m/s 5.10 Service brake Electric Engine 6.1 Drive motor rating \$2.60 min 7.20 kW 6.2 Lift motor rating at \$3.15% 15 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43531 C 6.4 Battery weight (+/- 5%) 920 kg Miscellaneous Miscellaneous 8.1 Type of drive control Electronic	4.32	Ground clearance at centre of wheelbase	m2	70 mm
4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2808 mm 4.35 Tuming radius Wa 1750 mm 4.7 Height of overhead guard (cabin) h6 2205 mm Performances Travel speed (laden / unladen) 14.30 km/h / 14.50 km/h 5.2 Lifting speed (laden / unladen) 0.37 m/s / 0.63 m/s 5.3 Lowering speed (laden / unladen) 0.55 m/s / 0.43 m/s 5.4.1 Reach speed (with load / without load) 0.20 m/s / 0.20 m/s 5.7 Gradeability (laden / unladen) 0.20 m/s / 0.20 m/s 5.10 Service brake Electric Engine 6.1 Drive motor rating \$2.60 min 7.20 kW 6.2 Lift motor rating \$2.50 min 7.20 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43531 C 6.4 Battery weight (+/- 5%) 920 kg Miscellaneous Miscellaneous 8.1 Type of drive control Electronic 8.3 Oil flow rate for attachments				

ER 20 - Dimensional drawing



Characteristics of masts and residual capacities

Free Lift Triplex (FLT)		FLT 48	FLT 54	FLT 57	FLT 63	FLT 68	FLT 73	FLT 80	FLT 85	FLT 90
α - Mast/fork carriage tilt, forward	۰	3	3	3	3	3	3	3	3	3
β - Mast/fork carriage tilt, backward	٠	1	1	1	1	1	1	1	1	1
h1 - Mast lowered height	mm	2140	2340	2640	2790	2957	3040	3190	3357	3523
h2 - Mast free lift	mm	16001	1800	1900	2100	2250	2400	2650	2800	2980
h3 - Mast lifting height	mm	4800	5400	5700	6300	6750	7250	7950	8450	8950
h4 - Mast extended height	mm	5380	5980	6880	7330	7830	8080	8530	9030	9530
Residual capacity with integrated side shift at max heigth	kg	2000	2000	2000	1850	1600				





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