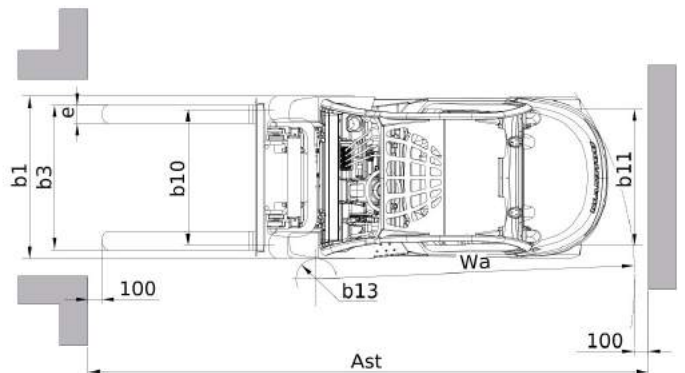
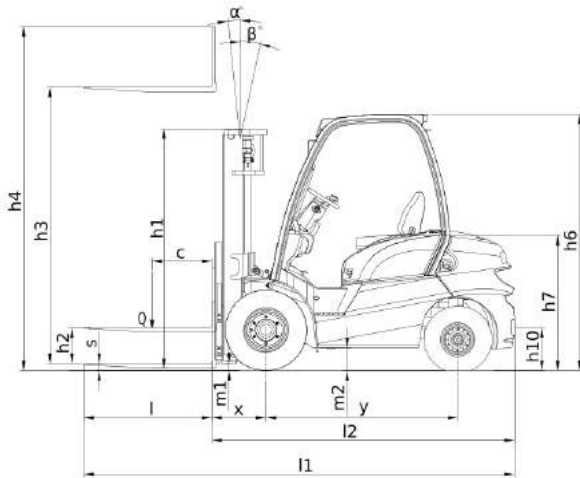


Technical sheet

MI 20 D

Masted Forklift Trucks

	Technical characteristics	Metric
1.1	Manufacturer	Manitou
1.2	Model	MI 20 D
1.3	Type of traction	Diesel
1.4	Type of operation	Seated
1.5	Q - Rated capacity	2000 kg
1.6	c - Center of gravity of load	500 mm
1.8	x - Distance from the load bearing surface to the centre of the front axle	470 mm
1.9	y - Wheelbase	1600 mm
Weight		
2.1	Weight of truck in working order	3620 kg
2.2	Laden weight on front/rear axle	5005 kg / 720 kg
2.3	Unladen weight on front/rear axle	1765 kg / 1960 kg
Wheels		
3.1	Tyre equipment: bandage (V), PPS (SE), inflatable tyre (L)	L
3.5	Number of front wheels (x)	2x / 2
3.6	b10 - Front track	0.97 mm
3.7	b11 - Rear track	0.97 mm
Dimensions		
4.1	α / β - Front/Rear mast angle	6 ° / 12 °
4.2	h1 - Height (mast lowered)	2190 mm
4.3	h2 - Free lift	140 mm
4.4	h3 - Lift height (Duplex mast)	3300 mm
4.5	h4 - Height of extended mast	4350 mm
4.7	h6 - Height of driver protection (cab)	2120 mm
4.8	h7 - Height of seat	1190 mm
4.12	h10 - Height of towing coupling	350 mm
4.19	l1 - Total length	3620 mm
4.20	l2 - Length to fork heel	2470 mm
4.21	b1 - Overall width - Single/twinned wheels	1160 mm / 1590 mm
4.22	e / s / l - Fork dimensions	1150 x 122 x 40
4.23	Fork carriage to DIN 15173 A/B	FEM2A
4.24	b3 - Width of fork clamp	1040 mm
4.31	m1 - Ground clearance under mast	115 mm
4.33	Ast - Aisle width for 1000 x 1200 pallet widthwise	3870 mm
4.34	Ast - Aisle width for 800 x 1200 pallet lengthwise	4070 mm
4.35	Wa - Turning radius	2200 mm
4.36	b13 - Inner turning radius	145 mm
Performances		
5.1	Speed of travel laden / unladen	18 km/h / 18.50 km/h
5.2	Lifting speed laden / unladen	0.47 m/s / 0.55 m/s
5.3	Lowering speed laden / unladen	0.48 m/s / 0.55 m/s
5.5	Nominal pulling force laden / unladen	1900 daN / -
5.7	Maximum ramp laden / unladen	20 % / 20 %
5.10	Service brake	Hydraulic
Engine		
7.1	Engine manufacturer / Type	Yanmar - 4TNV94L-BXPHZ / 3A
7.2	Useful power	35 kW
7.4	Number of pistons / Capacity	4 / 3054 cm ³
Miscellaneous		
8.2	Working hydraulic pressure for attachments	160 bar
8.3	Oil flow rate for attachments	69 l/min
8.4	Measured/guaranteed mean noise level at the ear of the operator	84 dB(A)



Characteristics of masts and residual capacities

Duplex Total Visibility		FVD 33	FVD 37	FVD 40
Lift height	mm	3300	3700	4000
Height (mast lowered)	mm	2185	2435	2635
Free lift	mm	140	140	140
Height of extended mast	mm	3960	4360	4660
Residual Capacity without attachment (Industrial load chart)	kg	2000	2000	2000
Residual Capacity with integrated side shift (Industrial load chart)	kg	2000	2000	2000
Forward/backward mast tilt angle	°	6 / 12	6 / 12	6 / 12

Duplex Free Lift		FLD 33	FLD 37	FLD 40
Lift height	mm	3300	3700	4000
Height (mast lowered)	mm	2160	2360	2560
Free lift	mm	1480	1680	1880
Height of extended mast	mm	3980	4330	4680
Residual Capacity without attachment (Industrial load chart)	kg	2000	2000	2000
Residual Capacity with integrated side shift (Industrial load chart)	kg	2000	2000	2000
Forward/backward mast tilt angle	°	6 / 12	6 / 12	6 / 12

Triplex Free Lift		FLT 43	FLT 45	FLT 47	FLT 48	FLT 50	FLT 55	FLT 60	FLT 65
Lift height	mm	4300	4500	4700	4800	5000	5500	6000	6500
Height (mast lowered)	mm	2100	2150	2200	2250	2300	2500	2750	2900
Free lift	mm	1400	1470	1520	1570	1620	1820	2070	2200
Height of extended mast	mm	5000	5230	5380	5480	5680	6180	6730	7200
Residual Capacity without attachment (Industrial load chart)	kg	1850	1800	1750	1750	1700	1300	900	800
Residual Capacity with integrated side shift (Industrial load chart)	kg	1750	1700	1650	1650	1600	1200	800	700
Forward/backward mast tilt angle	°	6 / 6	6 / 6	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6	3 / 6



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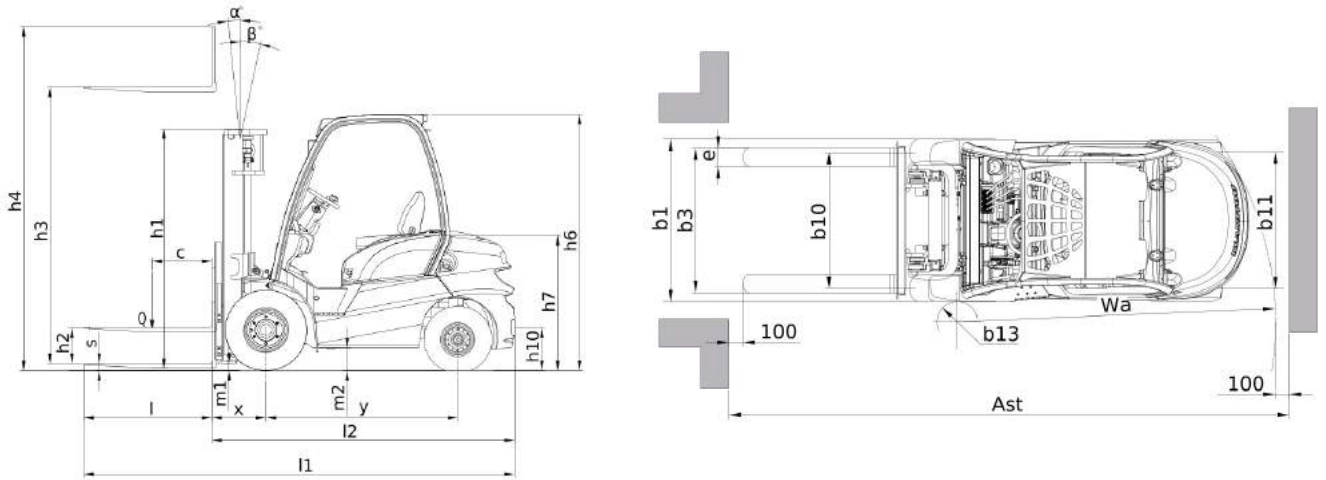
Technical sheet

MI 20 G

Masted Forklift Trucks



Technical characteristics		Metric
1.1	Manufacturer	Manitou
1.2	Model	MI 20 G
1.3	Type of traction	LPG gas
1.4	Type of operation	Seated
1.5	Q - Rated capacity	2000 kg
1.6	c - Center of gravity of load	500 mm
1.8	x - Distance from the load bearing surface to the centre of the front axle	465 mm
1.9	y - Wheelbase	1600 mm
Weight		
2.1	Weight of truck in working order	3620 kg
2.2	Laden weight on front/rear axle	4930 kg / 690 kg
2.3	Unladen weight on front/rear axle	1720 kg / 1900 kg
Wheels		
3.1	Tyre equipment: bandage (V), PPS (SE), inflatable tyre (L)	Solid cushion
3.5	Number of front wheels (x)	2x / 2
3.6	b10 - Front track	0.97 mm
3.7	b11 - Rear track	0.97 mm
Dimensions		
4.1	α / β - Front/Rear mast angle	6 ° / 12 °
4.2	h1 - Height (mast lowered)	2190 mm
4.3	h2 - Free lift	140 mm
4.4	h3 - Lift height (Duplex mast)	3300 mm
4.5	h4 - Height of extended mast	4350 mm
4.7	h6 - Height of driver protection (cab)	2115 mm
4.8	h7 - Height of seat	1190 mm
4.12	h10 - Height of towing coupling	355 mm
4.19	l1 - Total length	3620 mm
4.20	l2 - Length to fork heel	2470 mm
4.21	b1 - Overall width - Single/twinned wheels	1160 mm / 1595 mm
4.22	e / s / l - Fork dimensions	1150 X 122 X 40
4.23	Fork carriage to DIN 15173 A/B	FEM 2A
4.24	b3 - Width of fork clamp	1040 mm
4.31	m1 - Ground clearance under mast	115 mm
4.33	Ast - Aisle width for 1000 x 1200 pallet widthwise	3870 mm
4.34	Ast - Aisle width for 800 x 1200 pallet lengthwise	4070 mm
4.35	Wa - Turning radius	2200 mm
4.36	b13 - Inner turning radius	145 mm
Performances		
5.1	Speed of travel laden / unladen	18.80 km/h / 19.40 km/h
5.2	Lifting speed laden / unladen	0.47 m/s / 0.55 m/s
5.3	Lowering speed laden / unladen	0.48 m/s / 0.50 m/s
5.5	Nominal pulling force laden / unladen	1680 daN / -
5.7	Maximum ramp laden / unladen	20 % / 20 %
5.10	Service brake	Hydraulic
Engine		
7.1	Engine manufacturer / Type	Nissan / 3B
7.2	Useful power	38 kW
7.4	Number of pistons / Capacity	2400 / 2488 cm ³
7.5	Fuel consumption according to VDI cycle	6.30 l/h
Miscellaneous		
8.2	Working hydraulic pressure for attachments	160 bar
8.3	Oil flow rate for attachments	72 l/min
8.4	Measured/guaranteed mean noise level at the ear of the operator	80 dB(A)



Characteristics of masts and residual capacities

Duplex Total Visibility		FVD 33	FVD 37	FVD 40
Lift height	mm	3300	3700	4000
Height (mast lowered)	mm	2185	2435	2635
Free lift	mm	140	140	140
Height of extended mast	mm	3960	4360	4660
Residual Capacity without attachment (Industrial load chart)	kg	2000	2000	2000
Residual Capacity with integrated side shift (Industrial load chart)	kg	2000	2000	2000
Forward/backward mast tilt angle	°	6 / 12	6 / 12	6 / 12

Duplex Free Lift		FLD 33	FLD 37	FLD 40
Lift height	mm	3300	3700	4000
Height (mast lowered)	mm	2160	2360	2560
Free lift	mm	1480	1680	1880
Height of extended mast	mm	3980	4330	4680
Residual Capacity without attachment (Industrial load chart)	kg	2000	2000	2000
Residual Capacity with integrated side shift (Industrial load chart)	kg	2000	2000	2000
Forward/backward mast tilt angle	°	6 / 12	6 / 12	6 / 12

Triplex Free Lift		FLT 43	FLT 45	FLT 47	FLT 48	FLT 50	FLT 55	FLT 60	FLT 65
Lift height	mm	4300	4500	4700	4800	5000	5500	6000	6500
Height (mast lowered)	mm	2100	2150	2200	2250	2300	2500	2750	2900
Free lift	mm	1400	1470	1520	1570	1620	1820	2070	2200
Height of extended mast	mm	5000	5230	5380	5480	5680	6180	6730	7200
Residual Capacity without attachment (Industrial load chart)	kg	1850	1800	1750	1750	1700	1300	900	800
Residual Capacity with integrated side shift (Industrial load chart)	kg	1750	1700	1650	1650	1600	1200	800	700
Forward/backward mast tilt angle	°	6 / 6	6 / 6	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6	3 / 6



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