

Technical book

MI-X high capacity range

5 to 10 tons

IC trucks



5000 - 6000 kg

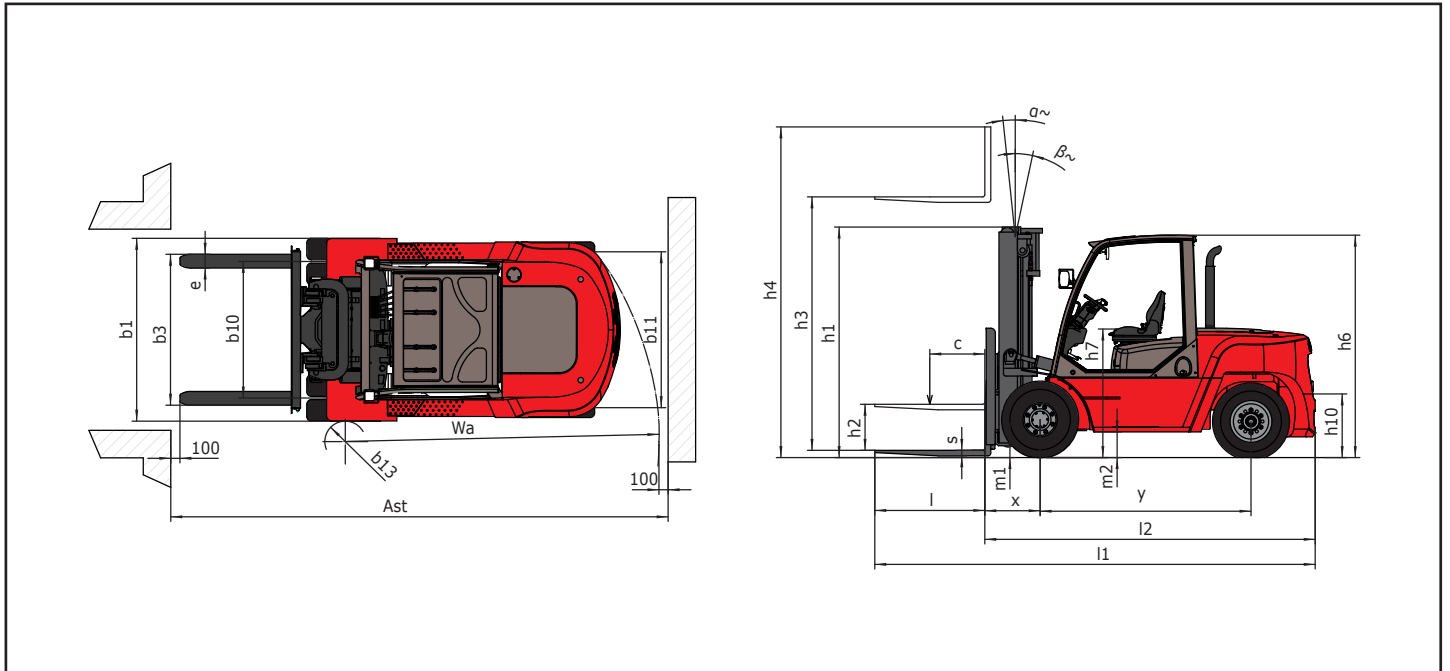
TECHNICAL SPECS

Specifications	1.1	Manufacturer			MANITOU	MANITOU	MANITOU	MANITOU
	1.2	Model			MI 50LG	MI-X 50LD	MI 60G	MI-X 60D
	1.3	Power source			LPG	Diesel	LPG	Diesel
	1.4	Driving position			Seated	Seated	Seated	Seated
	1.5	Nominal capacity	Q	t	5	5	6	6
	1.6	Load - Centre of gravity	c	mm	600	600	600	600
	1.8	Distance from the load-bearing surface to centre of front axle	x	mm	598	598	598	598
	1.9	Wheelbase	y	mm	2300	2300	2300	2300
	Weights	2.1	Operating weight		kg	8295	8295	8825
2.2		Axle load, with load, front / rear		kg	11500 / 1795	11500 / 1795	13000 / 1825	13000 / 1825
2.3		Axle load, without load, front / rear		kg	4080 / 4215	4080 / 4215	3960 / 4865	3960 / 4865
Tyres, frame	3.1	Tyre equipment : cushion (V), superelastic (SE), pneumatic (L)			SE	SE	SE	SE
	3.2	Size of front wheels			8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	8.25-15-14PR
	3.3	Size of rear wheels			8.25-15-14PR	8.25-15-14PR	8.25-15-14PR	8.25-15-14PR
	3.5	Number of front wheels (x=drive wheel) / rear wheels			4x / 2	4x / 2	4x / 2	4x / 2
	3.6	Front wheel gauge (middle of wheels)	b10	mm	1489	1489	1489	1489
	3.7	Rear wheel gauge (middle of wheels)	b11	mm	1700	1700	1700	1700
Dimensions	4.1	Tilt of mast forwards/backwards (1)	α / β	deg	6 / 12	6 / 12	6 / 12	6 / 12
	4.2	Height mast lowered	h1	mm	2500	2500	2500	2500
	4.3	Free lift	h2	mm	160	160	160	160
	4.4	Lift height	h3	mm	3000	3000	3000	3000
	4.5	Height mast extended	h4	mm	4420	4420	4420	4420
	4.7	Height of overhead guard	h6	mm	2430	2430	2430	2430
	4.8	Height of seat	h7	mm	1350	1350	1350	1350
	4.12	Height of towing bar	h10	mm	430	430	430	430
	4.19	Overall length	l1	mm	4699	4699	4729	4729
	4.20	Length at fork heels	l2	mm	3499	3499	3529	3529
	4.21	Total width (overall)	b1	mm	1990	1990	1990	1990
	4.22	Fork dimensions	e / s / l	mm	150 / 60 / 1200	150 / 60 / 1200	150 / 60 / 1200	150 / 60 / 1200
	4.23	Fork carriage to DIN 15173 A/B			FEM 4A	FEM 4A	FEM 4A	FEM 4A
	4.24	Width of fork carriage b3	b3	mm	1700	1700	1700	1700
	4.31	Ground clearance below mast	m1	mm	190	190	190	190
	4.32	Ground clearance at centre of wheel-base	m2	mm	270	270	270	270
	4.33	Width of aisle for pallet 1000x1200 crossways	Ast	mm	5030	5030	5080	5080
	4.34	Width of aisle for pallet 800x1200 lengthways	Ast	mm	5230	5230	5280	5280
	4.35	Turning radius	Wa	mm	3250	3250	3300	3300
	4.36	Inner turning radius	b13	mm	1222	1222	1222	1222
Performances	5.1	Speed of travel laden / unladen		km/h	30 / 31	27 / 29	28 / 31	27 / 29
	5.2	Speed of raise laden / unladen		m/s	0,47 / 0,49	0,47 / 0,49	0,46 / 0,49	0,46 / 0,49
	5.3	Speed of lowering laden / unladen m/s		m/s	0,48 / 0,42	0,48 / 0,42	0,48 / 0,42	0,48 / 0,42
	5.5	Nominal towing power laden / unladen		N	59000 / 25440	65000 / 25440	59000 / 26720	65000 / 26720
	5.7	Gradeability with / without load		%	38	48	33	43
	5.10	Service brake			Hydraulic	Hydraulic	Hydraulic	Hydraulic
Engines	7.1	Engine Manufacturer / Type			PSI 4.3L	Cummins - QSB3,3 Stage 3A	PSI 4.3L	Cummins - QSB3,3 Stage 3A
	7.2	Power delivery		kW	74	74	74	74
	7.3	Rated speed		tr/min	2300	2200	2300	2200
	7.4	Number of pistons / Cubic capacity		cm ³	6 / 4300	4 / 3300	6 / 4300	4 / 3300
Misc.	8.2	Operating pressure for attachments		bar	195	195	195	195
	8.3	Oil flow for attachments		l/min	120	120	120	120
	-	Average weighted acceleration on driver's body (acc to std NF EN 13059)		m/s ²	0,9	0,9	0,9	0,9

1 Values with duplex mast

Data is based on standard configurations (forks, battery).
Performance data and dimensions are nominal and subject to tolerances.
Specifications are subject to change without notice.

DIMENSIONAL DRAWINGS



MAST AND RATED CAPACITIES

MI-X 5,0 T			Duplex Total Visibility						Duplex Free Lift				Triplex Free Lift				
			DVT30	DVT33	DVT36	DVT40	DVT45	DVT50	DLL30	DLL33	DLL36	DLL40	TLL45	TLL48	TLL50	TLL55	TLL60
h3*	Lift height	mm	3000	3300	3600	4000	4500	5000	3000	3300	3600	4000	4500	4800	5000	5500	6000
h1	Height mast lowered	mm	2500	2650	2800	3000	3300	3550	2450	2600	2750	2950	2725	2825	2875	3075	3225
h2	Free lift	mm	160	160	160	160	160	160	1495	1695	1795	1995	1500	1600	1672	1800	2000
h4	Height mast extended*	mm	3995	4295	4595	4995	5500	6000	3955	4255	4555	4955	5735	6035	6213	6785	72356
	Residual capacity without attachment	kg	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	4500	4500	4500	4200	4000
	Residual capacity with Integrated sideshift	kg	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4000	4000	4000	3700	3500
α / β	Tilt of mast forwards / backwards	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6

* Without backrest

MI-X 6,0 T			Duplex Total Visibility						Duplex Free Lift				Triplex Free Lift				
			DVT30	DVT33	DVT36	DVT40	DVT45	DVT50	DLL30	DLL33	DLL36	DLL40	TLL45	TLL48	TLL50	TLL55	TLL60
h3*	Lift height	mm	3000	3300	3600	4000	4500	5000	3000	3300	3600	4000	4500	4800	5000	5500	6000
h1	Height mast lowered	mm	2500	2650	2800	3000	3300	3550	2450	2600	2750	2950	2725	2825	2875	3075	3225
h2	Free lift	mm	160	160	160	160	160	160	1495	1695	1795	1995	1500	1600	1672	1800	2000
h4	Height mast extended*	mm	3995	4295	4595	4995	5500	6000	3955	4255	4555	4955	5735	6035	6213	6785	72356
	Residual capacity without attachment	kg	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	5500	5500	5500	5200	5000
	Residual capacity with Integrated sideshift	kg	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500	5000	5000	5000	4700	4500
α / β	Tilt of mast forwards / backwards	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6

* Without backrest

7000 kg

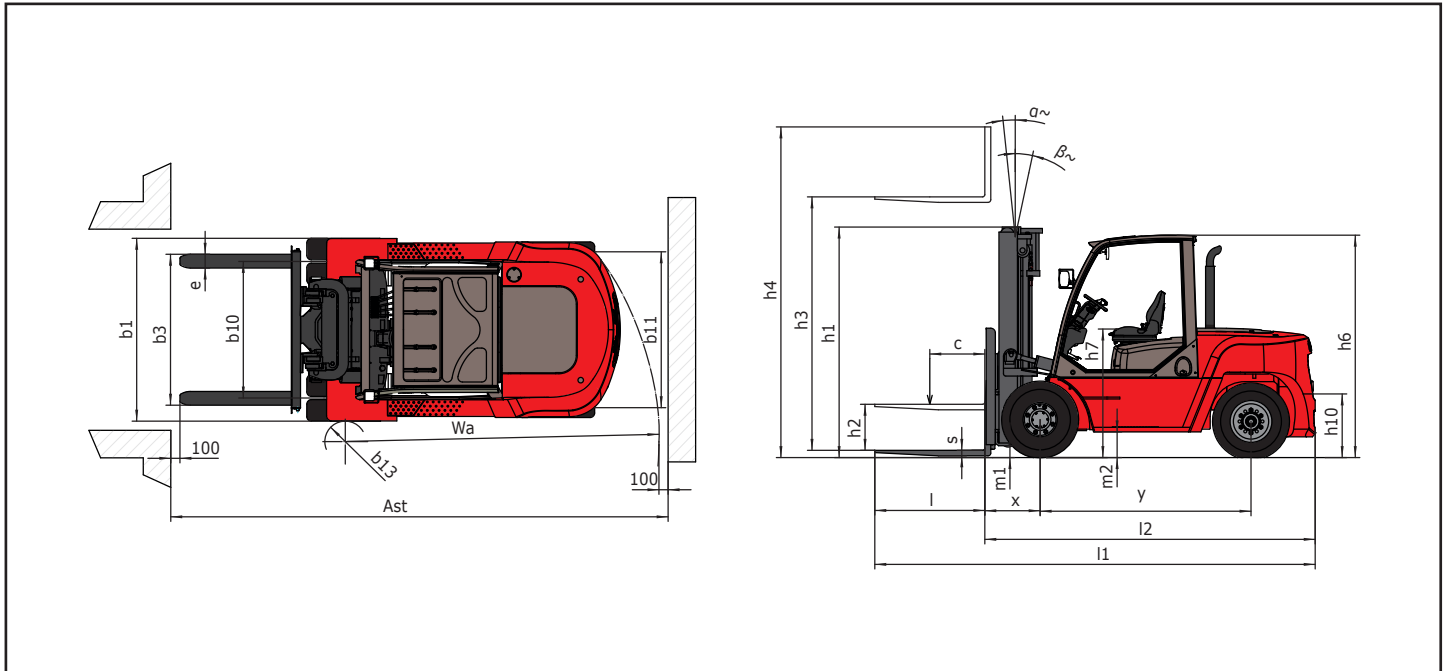
TECHNICAL SPECS

Specifications	1.1	Manufacturer			MANITOU	MANITOU
	1.2	Model			MI 70G	MI-X 70D
	1.3	Power source			LPG	Diesel
	1.4	Driving position			Seated	Seated
	1.5	Nominal capacity	Q	t	7	7
	1.6	Load - Centre of gravity	c	mm	600	600
	1.8	Distance from the load-bearing surface to centre of front axle	x	mm	603	603
	1.9	Wheelbase	y	mm	2300	2300
	Weights	2.1	Operating weight		kg	9595
2.2		Axle load, with load, front / rear		kg	14830 / 1765	14830 / 1765
2.3		Axle load, without load, front / rear		kg	3910 / 5685	3910 / 5685
Tyres, frame	3.1	Tyre equipment : cushion (V), superelastic (SE), pneumatic (L)			SE	SE
	3.2	Size of front wheels			8.25-15-14PR	8.25-15-14PR
	3.3	Size of rear wheels			8.25-15-14PR	8.25-15-14PR
	3.5	Number of front wheels (x=drive wheel) / rear wheels			4x / 2	4x / 2
	3.6	Front wheel gauge (middle of wheels)	b10	mm	1489	1489
	3.7	Rear wheel gauge (middle of wheels)	b11	mm	1700	1700
	Dimensions	4.1	Tilt of mast forwards/backwards (1)	α / β		6 / 12
4.2		Height mast lowered	h1	mm	2500	2500
4.3		Free lift	h2	mm	160	165
4.4		Lift height	h3	mm	3000	3000
4.5		Height mast extended	h4	mm	4420	4420
4.7		Height of overhead guard	h6	mm	2430	2430
4.8		Height of seat	h7	mm	1350	1350
4.12		Height of towing bar	h10	mm	430	430
4.19		Overall length	l1	mm	4804	4804
4.20		Length at fork heels	l2	mm	3604	3604
4.21		Total width (overall)	b1	mm	1990	1990
4.22		Fork dimensions		mm	150 / 65 / 1200	150 / 65 / 1200
4.23		Fork carriage to DIN 15173 A/B			FEM 4A	FEM 4A
4.24		Width of fork carriage b3	b3	mm	1700	1700
4.31		Ground clearance below mast	m1	mm	190	190
4.32		Ground clearance at centre of wheel-base	m2	mm	270	270
4.33		Width of aisle for pallet 1000x1200 crossways	Ast	mm	5150	5150
4.34		Width of aisle for pallet 800x1200 lengthways	Ast	mm	5350	5350
4.35		Turning radius	Wa	mm	3350	3350
4.36		Inner turning radius	b13	mm	1222	1222
Performances	5.1	Speed of travel laden / unladen		km/h	27 / 31	26 / 29
	5.2	Speed of raise laden / unladen		m/s	0,43 / 0,46	0,41 / 0,46
	5.3	Speed of lowering laden / unladen m/s		m/s	0,48 / 0,42	0,48 / 0,42
	5.5	Nominal towing power laden / unladen		daN	59000 / 27500	65000 / 27500
	5.7	Gradeability with / without load		%	27	36
	5.10	Service brake			Hydraulic	Hydraulic
Engines	7.1	Engine Manufacturer / Type			PSI 4.3L	Cummins - QSB3,3 Stage 3A
	7.2	Power delivery		kW	74	74
	7.3	Rated speed		tr/min	2300	2200
	7.4	Number of pistons / Cubic capacity		cm ³	6 / 4300	4 / 3300
Misc.	8.2	Operating pressure for attachments		bar	195	195
	8.3	Oil flow for attachments		l/min	120	120
	-	Average weighted acceleration on driver's body (acc to std NF EN 13059)		m/s ²	0,9	0,9

¹ Values with duplex mast

Data is based on standard configurations (forks, battery).
Performance data and dimensions are nominal and subject to tolerances.
Specifications are subject to change without notice.

DIMENSIONAL DRAWINGS



MAST AND RATED CAPACITIES

MI-X 7,0 T			Duplex Total Visibility						Duplex Free Lift				Triplex Free Lift				
			DVT30	DVT33	DVT36	DVT40	DVT45	DVT50	DLL30	DLL33	DLL36	DLL40	TLL45	TLL48	TLL50	TLL55	TLL60
h3*	Lift height	mm	3000	3300	3600	4000	4500	5000	3000	3300	3600	4000	4500	4800	5000	5500	6000
h1	Height mast lowered	mm	2500	2650	2800	3000	3300	3550	2450	2600	2750	2950	2725	2825	2875	3075	3225
h2	Free lift	mm	160	160	160	160	160	160	1335	1485	1635	1835	1500	1600	1672	1800	2000
h4	Height mast extended*	mm	4167	4467	4767	5167	5667	6167	4115	4415	4715	5115	5735	6035	6213	6785	72356
	Residual capacity without attachment	kg	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	6400	6300	6300	6100	5500
	Residual capacity with Integrated sideshift	kg	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500	5900	5800	5800	5600	5000
α / β	Tilt of mast forwards / backwards	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6

* Without backrest

8000 - 10000 kg

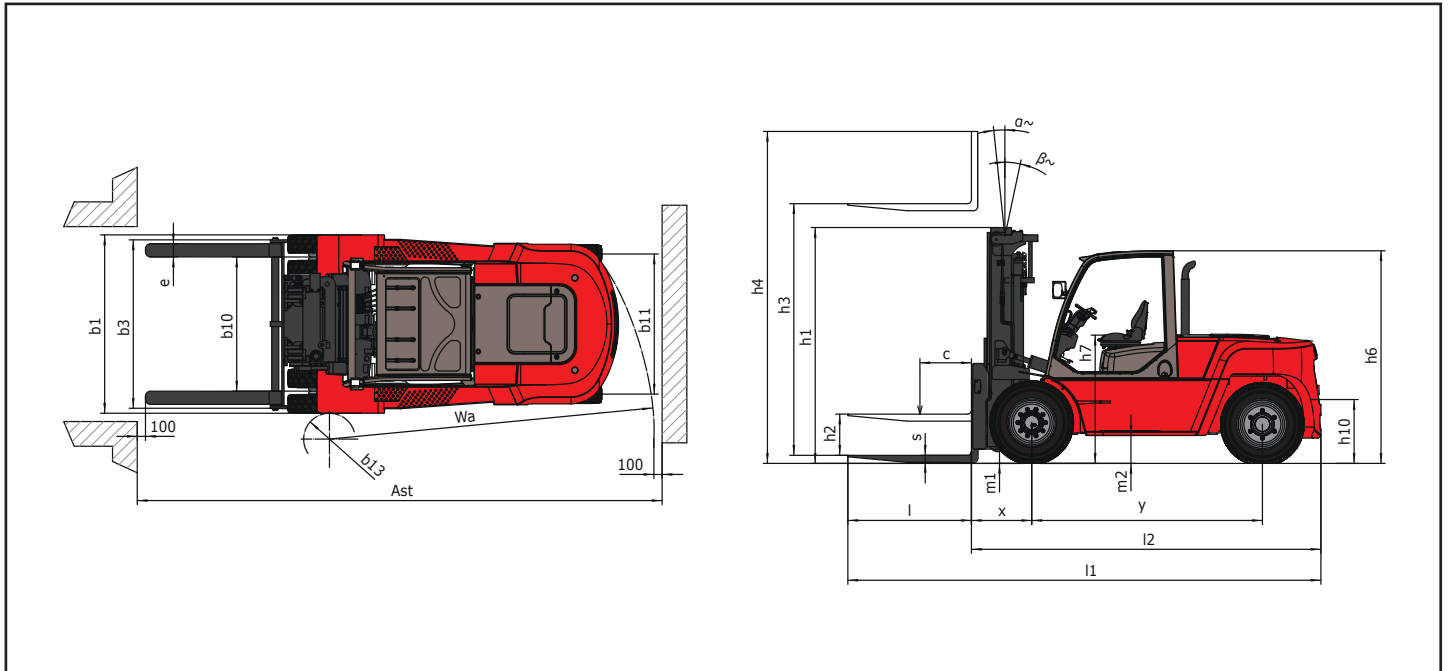
TECHNICAL SPECS

Specifications	1.1	Manufacturer			MANITOU	MANITOU
	1.2	Model			MI-X 80D	MI-X 100D
	1.3	Power source			Diesel	Diesel
	1.4	Driving position			Seated	Seated
	1.5	Nominal capacity	Q	t	8	10
	1.6	Load - Centre of gravity	c	mm	600	600
	1.8	Distance from the load-bearing surface to centre of front axle	x	mm	705	732
	1.9	Wheelbase	y	mm	2500	2800
	Weights	2.1	Operating weight		kg	11790
2.2		Axle load, with load, front / rear		kg	17670 / 2120	21330 / 2560
2.3		Axle load, without load, front / rear		kg	4870 / 6920	6430 / 7160
Tyres, frame	3.1	Tyre equipment : cushion (V), superelastic (SE), pneumatic (L)			SE	SE
	3.2	Size of front wheels			9.00-20-14PR	9.00-20-14PR
	3.3	Size of rear wheels			9.00-20-14PR	9.00-20-14PR
	3.5	Number of front wheels (x=drive wheel) / rear wheels			4x / 2	4x / 2
	3.6	Front wheel gauge (middle of wheels)	b10	mm	1628	1628
	3.7	Rear wheel gauge (middle of wheels)	b11	mm	1700	1700
	Dimensions	4.1	Tilt of mast forwards/backwards (1)	α / β		6 / 12
4.2		Height mast lowered	h1	mm	2700	2850
4.3		Free lift	h2	mm	200	200
4.4		Lift height	h3	mm	3000	3000
4.5		Height mast extended	h4	mm	4210	4555
4.7		Height of overhead guard	h6	mm	2580	2580
4.8		Height of seat	h7	mm	1505	1505
4.12		Height of towing bar	h10	mm	505	505
4.19		Overall length	l1	mm	5395	5742
4.20		Length at fork heels	l2	mm	3895	4242
4.21		Total width (overall)	b1	mm	2165	2165
4.22		Fork dimensions		mm	160 / 75 / 1500	160 / 80 / 1500
4.23		Fork carriage to DIN 15173 A/B				
4.24		Width of fork carriage b3	b3	mm	2040	2044
4.31		Ground clearance below mast	m1	mm	185	190
4.32		Ground clearance at centre of wheel-base	m2	mm	339	339
4.33		Width of aisle for pallet 1000x1200 crossways	Ast	mm	5535	5862
4.34		Width of aisle for pallet 800x1200 lengthways	Ast	mm	5735	6062
4.35	Turning radius	Wa	mm	3630	3940	
4.36	Inner turning radius	b13	mm	1327	1396	
Performances	5.1	Speed of travel laden / unladen		km/h	28 / 32	26 / 31
	5.2	Speed of raise laden / unladen		m/s	0,43 / 0,46	0,32 / 0,35
	5.3	Speed of lowering laden / unladen m/s		m/s	0,45 / 0,36	0,45 / 0,36
	5.5	Nominal towing power laden / unladen		daN	78600 / 45000	83000 / 54000
	5.7	Gradeability with / without load		%	44	44
	5.10	Service brake			Hydraulic	Hydraulic
Engines	7.1	Engine Manufacturer / Type			Cummins - QSB4,5 Stage 3A	Cummins - QSB4,5 Stage 3A
	7.2	Power delivery		kW	82	82
	7.3	Rated speed		tr/min	2200	2200
	7.4	Number of pistons / Cubic capacity		cm ³	4 / 4500	4 / 4500
Misc.	8.2	Operating pressure for attachments		bar	195	195
	8.3	Oil flow for attachments		l/min	180	180
	-	Average weighted acceleration on driver's body (acc to std NF EN 13059)		m/s ²	1,2	1,2

1 Values with duplex mast

Data is based on standard configurations (forks, battery).
Performance data and dimensions are nominal and subject to tolerances.
Specifications are subject to change without notice.

DIMENSIONAL DRAWINGS



MAST AND RATED CAPACITIES

MI-X 8,0 T			Duplex Total Visibility						Triplex Free Lift				
			DVT30	DVT33	DVT36	DVT40	DVT45	DVT50	TLL45	TLL48	TLL50	TLL55	TLL60
h3*	Lift height	mm	3000	3300	3600	4000	4500	5000	4500	4800	5000	5500	6000
h1	Height mast lowered	mm	2700	2850	3000	3200	3500	3750	2750	2850	2950	3100	3250
h2	Free lift	mm	200	200	200	200	200	200	1485	1585	1600	1800	1985
h4	Height mast extended*	mm	4210	4510	4810	5210	5710	6210	5775	6075	6360	6810	7275
	Residual capacity without attachment	kg	8000	8000	8000	8000	8000	8000	7000	7000	6500	6100	5600
	Residual capacity with Integrated sideshift	kg	7600	7600	7600	7600	7600	7600	6600	6600	6100	5700	5200
α / β	Tilt of mast forwards / backwards	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6

* Without backrest

MI-X 10,0 T			Duplex Total Visibility						Triplex Free Lift				
			DVT30	DVT33	DVT36	DVT40	DVT45	DVT50	TLL45	TLL48	TLL50	TLL55	TLL60
h3*	Lift height	mm	3000	3300	3600	4000	4500	5000	4500	4800	5000	5500	6000
h1	Height mast lowered	mm	2850	3000	3150	3350	3650	3900	2850	2950	3050	3200	3350
h2	Free lift	mm	200	200	200	200	200	200	1305	1405	1505	1655	1805
h4	Height mast extended*	mm	4555	4855	5155	5555	6055	6555	6055	6355	6555	7055	7555
	Residual capacity without attachment	kg	10000	10000	10000	10000	10000	10000	8500	8500	8200	7700	7000
	Residual capacity with Integrated sideshift	kg	9600	9600	9600	9600	9600	9600	8100	8100	7800	7300	6600
α / β	Tilt of mast forwards / backwards	deg	6 / 12	6 / 12	6 / 12	6 / 12	6 / 6	6 / 6	6 / 6	6 / 6	6 / 6	3 / 6	3 / 6

* Without backrest

Your nearest MANITOU dealer:



Head office

B.P. 249 - 430 rue de l'Aubinière - 44158 Ancenis Cedex - France
Tel: 00 33 (0)2 40 09 10 11 - Fax: 00 33 (0)2 40 09 10 97
www.manitou.com

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