

Technical sheet :

# **MSI 50 ST5**



 **MANITOU**  
HANDLING YOUR WORLD

Technical characteristics		Imperial	
1.1	Manufacturer		MANITOU
1.2	Model Name		MSI 50 ST5
1.3	Power source		Diesel
1.4	Operator type		Seated
1.5	Max. capacity	Q	11023 lb
1.6	Load center of gravity	c	24 in
1.8	Load distance, centre of drive axle to fork	x	28 in
1.9	Wheelbase	y	82 in
	Standard mast reference of the machine		FVD 37
Weight			
2.1	Service weight		18563 lb
2.2	Weight on front axle (laden) / rear axle (laden)		25287 lb / 3660 lb
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		7694 lb / 10626 lb
Wheels			
3.1	Tires type		Pneumatic
3.2	Dimensions of front wheels		315/70 R22,5 KMAX S
3.3	Dimensions of rear wheels		225/75 R15 XZM
3.5	Number of front wheels / rear wheels		2 / 2
3.5.2	Number of drive wheels		2
3.6	Front wheel gauge	b10	56 in
3.7	Rear wheel gauge	b11	45 in
Dimensions			
4.8	Seat height/stand height	h7	56 in
4.7	Height of overhead guard (cabin)	h6	96 in
4.12	Height of towing bar (coupling height)	h10	24 in
4.19	Overall length	l1	180 in
4.20	Length to face of forks	l2	133 in
4.21	Overall width	b1	68 in
4.22	Forks section / width / length	s / e / l	2 in x 6 in x 47 in
4.23	Fork carriage ISO 2328 (class/form) A/B		4A
4.24	Fork carriage width	b3	66 in
4.31	Ground clearance below mast	m1	7 in
4.32	Ground clearance at centre of wheelbase	m2	9 in
4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	206 in
4.35	Turning radius	Wa	116 in
Performances			
5.1	Travel speed (laden / unladen)		12 mph-12 mph
5.2	Lifting speed (laden / unladen)		1 ft/s-1 ft/s
5.3	Lowering speed (laden / unladen)		2 ft/s-1 ft/s
5.5	Drawbar pull (Laden / Unladen)		3393 daN / 2471 daN
5.7	Gradeability (laden / unladen)		32 % / 29 %
5.10	Service brake		Hydraulic
	Transmission type		Hydrostatic
Engine			
7.1	Engine brand / model / norm		Deutz / TCD 2,9L / Stage V
7.2	Engine power (Hp / kW)		75 Hp/55 kW
7.3	Rated speed		2200 rpm
7.4	Number of cylinders / Capacity of cylinders		4 - 177 in³
Miscellaneous			
8.1	Type of drive control		Electronic
8.2	Working hydraulic pressure for attachments		3336 PSI
8.3	Oil flow rate for attachments		12 US gpm
8.4	Sound level at the driver's ear according to DIN 12 053		81 dB

MSI 50 ST5 - Dimensional drawing



## Characteristics of masts and residual capacities

Full Visibility Duplex (FVD)		FVD 30	FVD 33	FVD 35	FVD 37	FVD 40	FVD 45	FVD 50
α - Mast/fork carriage tilt, forward	°	10	10	10	10	10	10	10
β - Mast/fork carriage tilt, backward	°	12	12	12	12	12	12	12
h1 - Mast lowered height	in	95.5	101.4	105.3	109.3	115.2	125	134.8
h3 - Mast lifting height	in	118.1	129.9	137.8	145.7	157.5	177.2	196.9
h4 - Mast extended height	in	156.4	168.2	176.1	183.9	195.7	215.4	235.1
Residual capacity at max height	lb	11023	11023	11023	11023	11023	11023	11023
Residual capacity with hooked-on side shift at max height	lb	11023	11023	11023	11023	11023	11023	11023
Height at max capacity	in	118.1	129.9	137.8	145.7	157.5	177.2	196.9
Height at max capacity with hooked-on sideshift	in	118.1	129.9	137.8	145.7	157.5	177.2	196.9

Free Lift Triplex (FLT)		FLT 37	FLT 40	FLT 43	FLT 45	FLT 47	FLT 50	FLT 55	FLT 60
α - Mast/fork carriage tilt, forward	°	10	10	10	10	10	10	10	10
β - Mast/fork carriage tilt, backward	°	12	12	12	12	12	12	12	12
h1 - Mast lowered height	in	85.6	89.6	93.5	96.5	98.8	103.3	109.3	116.1
h2 - Mast free lift	in	49.5	53.5	57.4	60.4	62.7	67.2	73.1	80
h3 - Mast lifting height	in	145.7	157.5	169.3	177.2	185	196.9	216.5	236.2
h4 - Mast extended height	in	183.9	195.7	207.6	215.4	223.3	235.1	254.8	274.5
Residual capacity at max height	lb	11023	11023	11023	11023				9480
Residual capacity with hooked-on side shift at max height	lb	11023	11023	11023	11023				
Height at max capacity	in	145.7	157.5	169.3	177.2	98.4	98.4	98.4	98.4
Height at max capacity with hooked-on sideshift	in	145.7	157.5	169.3	177.2				

**Head Office**

B.P. 249 - 430 rue de l'Aubinière  
44150 Ancenis Cedex - France

Tel: +33 (0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97

[www.manitou.com](http://www.manitou.com)



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