

Technical sheet :

# **MSI 50 ST5**

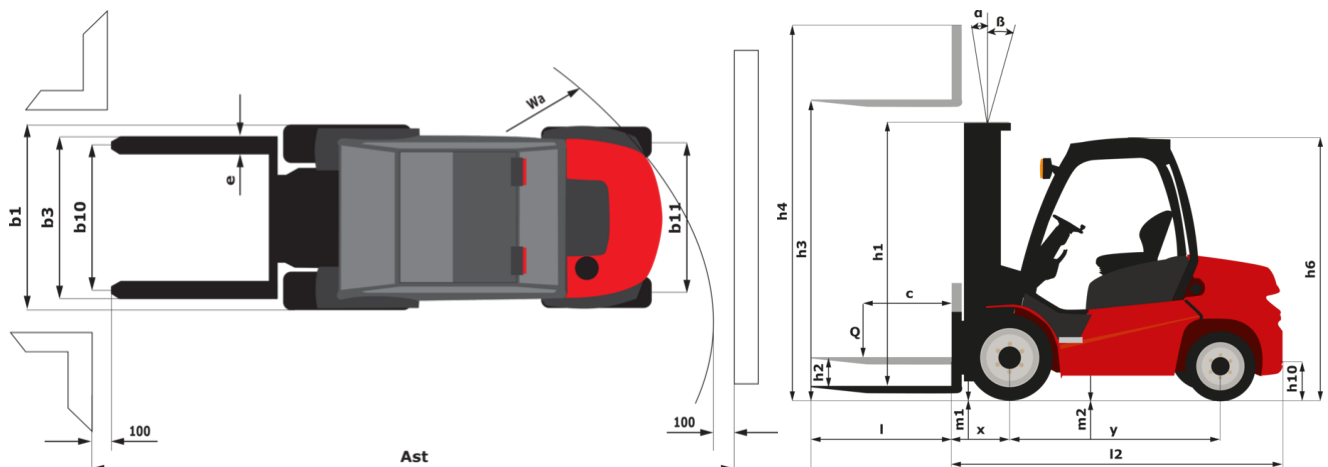
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 **MANITOU**  
HANDLING YOUR WORLD

|       | Technical characteristics                               |           | Metric                   |
|-------|---------------------------------------------------------|-----------|--------------------------|
| 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         | 5000 kg                  |
| 1.6   | Load center of gravity                                  | c         | 600 mm                   |
| 1.8   | Load distance, centre of drive axle to fork             | x         | 701 mm                   |
| 1.9   | Wheelbase                                               | y         | 2075 mm                  |
|       | <b>Weight</b>                                           |           |                          |
|       | Standard mast reference of the machine                  |           | FVD 37                   |
| 2.1   | Service weight                                          |           | 8420 kg                  |
| 2.2   | Weight on front axle (laden) / rear axle (laden)        |           | 11470 kg / 1660 kg       |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)    |           | 3490 kg / 4820 kg        |
|       | <b>Wheels</b>                                           |           |                          |
| 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       | 1420 mm                  |
| 3.7   | Rear wheel gauge                                        | b11       | 1142 mm                  |
|       | <b>Dimensions</b>                                       |           |                          |
| 4.7   | Height of overhead guard (cabin)                        | h6        | 2440 mm                  |
| 4.8   | Seat height/stand height                                | h7        | 1435 mm                  |
| 4.12  | Height of towing bar (coupling height)                  | h10       | 605 mm                   |
| 4.19  | Overall length                                          | l1        | 4584 mm                  |
| 4.20  | Length to face of forks                                 | l2        | 3384 mm                  |
| 4.21  | Overall width                                           | b1        | 1732 mm                  |
| 4.22  | Forks section / width / length                          | s / e / l | 60 mm x 150 mm x 1200 mm |
| 4.23  | Fork carriage ISO 2328 (class/form) A/B                 |           | 4A                       |
| 4.24  | Fork carriage width                                     | b3        | 1670 mm                  |
| 4.31  | Ground clearance below mast                             | m1        | 185 mm                   |
| 4.32  | Ground clearance at centre of wheelbase                 | m2        | 220 mm                   |
| 4.33  | Aisle Width for pallets 1000 x 1200 crossways           | Ast       | 5241 mm                  |
| 4.35  | Turning radius                                          | Wa        | 2950 mm                  |
|       | <b>Performances</b>                                     |           |                          |
| 5.1   | Travel speed (laden / unladen)                          |           | 20 km/h-20 km/h          |
| 5.2   | Lifting speed (laden / unladen)                         |           | 0.37 m/s-0.39 m/s        |
| 5.3   | Lowering speed (laden / unladen)                        |           | 0.48 m/s-0.34 m/s        |
| 5.5   | Drawbar pull (Laden / Unladen)                          |           | 3393 daN / 2471 daN      |
| 5.7   | Gradeability (laden / unladen)                          |           | 32 % / 29 %              |
| 5.10  | Service brake                                           |           | Hydraulic                |
|       | <b>Engine</b>                                           |           |                          |
| 7.1   | Engine brand / model                                    |           | Deutz / TCD 2,9L         |
| 7.2   | Engine power according to ISO 1585                      |           | 55 kW                    |
| 7.3   | Rated speed                                             |           | 2200 rpm                 |
| 7.4   | Number of cylinders / Capacity of cylinders             |           | 4 - 2900 cm³             |
|       | <b>Miscellaneous</b>                                    |           |                          |
| 8.1   | Type of drive control                                   |           | Electronic               |
| 8.2   | Working hydraulic pressure for attachments              |           | 230 bar                  |
| 8.3   | Oil flow rate for attachments                           |           | 45 l/min                 |
| 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 |
|-----------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                          | °  | 10     | 10     | 10     | 10     | 10     | 10     | 10     |
| Mast/fork carriage tilt, backward                         | °  | 12     | 12     | 12     | 12     | 12     | 12     | 12     |
| h1 - Mast lowered height                                  | mm | 2425   | 2575   | 2675   | 2775   | 2925   | 3175   | 3425   |
| h3 - Mast lifting height                                  | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4500   | 5000   |
| h4 - Mast extended height                                 | mm | 3972   | 4272   | 4472   | 4672   | 4972   | 5472   | 5972   |
| Residual capacity at max height                           | kg | 5000   | 5000   | 5000   | 5000   | 5000   | 5000   | 5000   |
| Residual capacity with hooked-on side shift at max height | kg | 5000   | 5000   | 5000   | 5000   | 5000   | 5000   | 5000   |
| Height at max capacity                                    | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4500   | 5000   |
| Height at max capacity with hooked-on sideshift           | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4500   | 5000   |

| Free Lift Triplex (FLT)                                   |    | FLT 37 | FLT 40 | FLT 43 | FLT 45 | FLT 47 | FLT 50 | FLT 55 | FLT 60 |
|-----------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                          | °  | 10     | 10     | 10     | 10     | 10     | 10     | 10     | 10     |
| Mast/fork carriage tilt, backward                         | °  | 12     | 12     | 12     | 12     | 12     | 12     | 12     | 12     |
| h1 - Mast lowered height                                  | mm | 2175   | 2275   | 2375   | 2450   | 2510   | 2625   | 2775   | 2950   |
| h2 - Mast free lift                                       | mm | 1258   | 1358   | 1458   | 1533   | 1593   | 1708   | 1858   | 2033   |
| h3 - Mast lifting height                                  | mm | 3700   | 4000   | 4300   | 4500   | 4700   | 5000   | 5500   | 6000   |
| h4 - Mast extended height                                 | mm | 4672   | 4972   | 5272   | 5472   | 5672   | 5972   | 6472   | 6972   |
| Residual capacity at max height                           | kg | 5000   | 5000   | 5000   | 5000   |        |        |        |        |
| Residual capacity with hooked-on side shift at max height | kg | 5000   | 5000   | 5000   | 5000   |        |        |        |        |
| Height at max capacity                                    | mm | 3700   | 4000   | 4300   | 4500   | 2500   | 2500   | 2500   | 2500   |
| Height at max capacity with hooked-on sideshift           | mm | 3700   | 4000   | 4300   | 4500   |        |        |        |        |



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