Technical sheet:

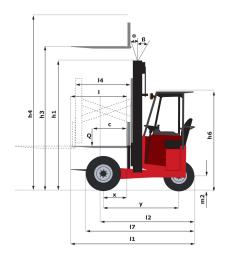
## **TMM 20 ST5**

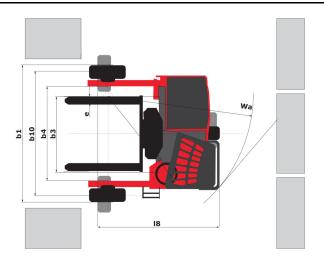




|       |   |           | , .                                  |
|-------|---|-----------|--------------------------------------|
|       | Technical characteristics                               |           | Metric                               |
| 1.1   | Manufacturer  |           | MANITOU                              |
| 1.2   | Model Name  |           | TMM 20 ST5                           |
| 1.2.1 | Reach out equipment                                     |           | Pantograph                           |
| 1.3   | Power source  |           | Diesel                               |
| 1.4   | Operator type   |           | Seated                               |
| 1.5   | Max. capacity   | Q         | 2000 kg                              |
| 1.6   | Load centre of gravity                                  | c         | 500 mm                               |
| 1.8   | Load distance, centre of drive axle to fork             | x         | 500 mm                               |
| 1.9   | Wheelbase   | у         | 1598 mm                              |
|       | Weight  |           |                                      |
| 2.1   | Service weight  |           | 2290 kg                              |
| 2.2   | Weight on front axle (laden) / rear axle (laden)        |           | 3050 kg / 1240 kg                    |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)    |           | 1050 kg / 1240 kg                    |
|       | Wheels  |           |                                      |
| 3.1   | Tyres type  |           | Pneumatic                            |
| 3.2   | Dimensions of front wheels                              |           | 23x9-10 IC30                         |
| 3.3   | Dimensions of rear wheels                               |           | 23x9-10 IC30                         |
| 3.5   | Number of front wheels / rear wheels                    |           | 2/1                                  |
| 3.5.2 | Drive wheels (front / rear)                             |           | 2/1                                  |
| 3.6   | Front wheel gauge                                       | b10       | 2103 mm                              |
|       | Dimensions  |           |                                      |
| 4.7   | Height of overhead guard (cabin)                        | h6        | 2080 mm                              |
| 4.8   | Seat height/stand height                                | h7        | 1030 mm                              |
| 4.19  | Overall length  | I1        | 2598 mm                              |
| 4.21  | Overall width   | b1        | 2323 mm                              |
| 4.22  | Forks section / width / length                          | s / e / l | 40 mm x 122 mm / 1200 mm             |
| 4.22  | -   | 3/6/1     | 2A                                   |
|       | Fork carriage ISO 2328 (class/form) A/B                 | h2        | 1260 mm                              |
| 4.24  | Fork carriage width                                     | b3        |                                      |
| 4.25  | Distance between support arms                           | b5        | 1165 mm                              |
| 4.26  | Distance between wheel arms/loading surfaces            | b4        | 1600 mm                              |
| 4.32  | Ground clearance at centre of wheelbase                 | m2        | 231 mm                               |
| 4.28  | Max. Reach  | 14        | 1005 mm                              |
| 4.37  | Overall length (without forks)                          | 17        | 1398 mm                              |
| 4.34  | Aisle width for 800 x 1200 pallet lengthways            | Ast       | 3363 mm                              |
| 4.35  | Turning radius  | Wa        | 2463 mm                              |
| 4.36  | Internal turning radius (over tyres)                    | b13       | 672 mm                               |
|       | Performances  |           |                                      |
| 5.1   | Travel speed (laden / unladen)                          |           | 9.4 km/h / 9.5 km/h                  |
| 5.2   | Lifting speed (laden / unladen)                         |           | 0.26 m/s / 0.24 m/s                  |
| 5.3   | Lowering speed (laden / unladen)                        |           | 0.38 m/s / 0.24 m/s                  |
| 5.7   | Gradeability (laden / unladen)                          |           | 56 % / 51 %                          |
| 5.10  | Service brake   |           | Hydraulic brakes by loss of pressure |
| 5.9   | Acceleration time (laden / unladen)                     |           | 4.1 s / 2.6 s                        |
| 5.11  | Transmission type                                       |           | Hydrostatic                          |
|       | Engine  |           |                                      |
| 7.1   | Engine brand / norm                                     |           | Kubota - Stage V                     |
| 7.4   | Number of cylinders / Capacity of cylinders             |           | 3 - 1123 cm³                         |
| 7.3   | Rated speed   |           | 3000 rpm                             |
| 7.2   | Engine power according to ISO 1585                      |           | 18.5 kW                              |
| 8.1   | Type of drive control                                   |           | Cable                                |
| 7.5   | Fuel consumption according to VDI cycle                 |           | 3.4 l/h                              |
|       | Miscellaneous   |           |                                      |
| 8.2   | Working hydraulic pressure for attachments              |           | 190 Bar                              |
| 8.3   | Oil flow rate for attachments                           |           | 43 I/min                             |
| 8.4   | Sound level at the driver's ear according to DIN 12 053 |           | 86 dB(A)                             |
|       | 2   |           |                                      |

## **Dimensional drawing**





## Characteristics of masts and residual capacities

|                                 |               | Full Visibility Duplex                         |    | FVD 30 | FVD 36 | FVD 39 |
|---------------------------------|---------------|--|----|--------|--------|--------|
|                                 |               | h1 - Height mast lowered *                     | mm | 2352   | 2702   | 2852   |
|                                 |               | h3 - Lifting Height                            | mm | 3000   | 3600   | 3900   |
|                                 |               | h4 - Height mast extended *                    | mm | 4455   | 5055   | 5355   |
| 009                             |               | Pantograph reach in                            | kg | 2000   | 2000   | 2000   |
| = D                             |               | Pantograph reach out with stabilizers          | kg | 1750   | 1750   | 1750   |
|                                 | Reach         | Pantograph reach out without stabilizers       | kg | 1050   | 1050   | 1050   |
| eigh                            | <u>е</u><br>Ж | Telescopic forks reach in                      | kg | 2000   | 2000   | 2000   |
| Ξ<br>E                          | Simple        | Telescopic Forks reach out with stabilizers    | kg | 1300   | 1300   | 1300   |
| dual Capacity (Maximum Height & | 01            | Telescopic Forks reach out without stabilizers | kg | 1100   | 1150   | 1100   |
| £ (>                            | Oouble Reach  | Pantograph & TF reach in                       | kg | 2000   | 2000   | 2000   |
| paci                            |               | Pantograph & TF reach out with stabilizers     | kg | 1100   | 1100   | 1100   |
| dual Ca                         |               | Pantograph & TF reach out without stabilizers  | kg | 550    | 550    | 550    |





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