

INNOVATION IN CLEANING EQUIPMENT



## MONOSPAZZOLE – SINGLE-DISC FLOOR MACHINES

SERIE – SERIES  
MS 13 – MS 17 – MS 20

### ISTRUZIONI PER L'USO

Leggete con attenzione le istruzioni contenute in questo libretto prima di utilizzare la macchina. Conservate lo stesso per ulteriori consultazioni.

### OPERATORS' MANUAL

It is strongly recommended that you read these instructions carefully before using the machine. Save this leaflet for further reference.

### NOTICE D'UTILISATION

Nous vous conseillons de lire avec soin cette notice d'emploi avant d'utiliser la machine. Gardez-la pour des futures consultations.

### WARTUNGS- UND GEBRAUCHSANLEITUNG

Bitte die Hinweise dieser Gebrauchsanweisung sehr sorgfältig durchlesen um richtig zu benutzen. Behalten Sie die Gebrauchsanweisung für jede weitere Notwendigkeit.



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## DICHIARAZIONE CE DI CONFORMITÀ'

La ditta TSM Srl, Via Fratelli Zambon 9 – 33080 Fiume Veneto (PN) Italia, dichiara sotto la propria responsabilità che il prodotto SERIES:

MS 13 – MS 17 – MS 20

Al quale questa dichiarazione si riferisce, risulta conforme alle seguenti norme:

CEI 61-721/I Ed. 1991

V1 (EN60335-2-10 / 1998)

e, quindi, rispondente ai requisiti essenziali delle direttive 73/23/CEE e modifica 93/63/CEE - direttiva EMC 89/336/CEE – 2004/108/EC nella versione 93/31/CEE.

## DECLARATION OF CE CONFORMITY

The company TSM Srl, Via Fratelli Zambon 9 – 33080 Fiume Veneto (PN) Italy, declares under its own responsibility that the product SERIES:

MS 13 – MS 17 – MS 20

to which this declaration refers, is in compliance with the following standards:

CEI 61-721/I Ed. 1991

V1 (EN60335-2-10 / 1998)

and, consequently, it is in conformity with the main requirements of 73/23/CEE and 93/63/CEE amendment – EMC 89/336/EEC – 2004/108/EC version 93/31/CEE.

## EG ÜBEREINSTIMMUNSKERKLÄRUNG

Die Firma TSM Srl, Via Fratelli Zambon 9 – 33080 Fiume Veneto (PN) Italien, erklärt, auf ihre Verantwortung, das Produkte SERIES:

MS 13 – MS 17 – MS 20

Worauf sich diese Erklärung bezieht, folgenden Normen und Vorschriften entspricht:

CEI 61-72/I Ed. 1991

V1 (EN60335-2-10 / 1998)

Und daher der Forderungen der Richtlinien 73/23/CEE und Änderung 93/63/CEE entspricht – EMC 89/336/EEC – 2004/108EC Version 93/31/CEE.

## DECLARATION DE CONFORMITÉ

La société TSM Srl, Via Fratelli Zambon 9 – 33080 Fiume Veneto (PN) Italie, déclare sous sa propre responsabilité, que le produit SERIES :

MS 13 – MS 17 – MS 20

Auquel cette déclaration se réfère, est conforme aux règles suivantes :

CEI 61-721/I Ed. 1991

V1 (EN60335-2-10 / 1998)

et, par conséquent, répond aux conditions essentielles des directives 73/23/CEE et modification 93/336/CEE – EMC 89/336/EEC – 2004/108EC version 93/312/CEE.

Firma/Signature



Gianpietro Moro

Legale Rappresentante

Anno /Year/Année 2012

## FRANÇAIS

### Branchemet électrique

Avant toute connexion sur le réseau électrique s'assurer que :

- La tension et la fréquence du réseau soient identiques à celles inscrites sur la plaque signalétique de la machine.

**Attention :** Le câble d'alimentation doit être régulièrement examiné pour détecter des déteriorations éventuelles. S'il est défectueux, il devra être remplacé.

- Que la prise utilisée soit correctement reliée à la terre.

### Montage des accessoires

Par mesure de sécurité, ne procéder pas à cette opération (comme pour le démontage) qu'avec la prise débranchée. Incliner la machine en arrière à l'aide du timon en le posant au sol.

Introduire la ferrure (femelle) de la brosse (ou porte-pad dans la ferrure (male) du réducteur.

Pour bloquer l'accessoire : tournez-le sur la droite.

Pour débloquer l'accessoire : tournez-le sur la droite d'un coup sec remettre la mono-brosse en position verticale.

**Attention :** cet appareil a été conçu pour être utilisé avec les brosses recommandées par le fabricant. L'utilisation d'une brosse différente peut affecter sa sécurité de fonctionnement.

### Position de l'opérateur

Actionner la manette droite sans forcer pour incliner le timon vers soi.

La position idéale (ergonomique) est : poignée de la machine à hauteur de hanches.

### Mise en route

- Baisser ou lever légèrement le timon pour sentir son point d'équilibre.
- Actionner la gâchette de sécurité droite ou gauche (indifféremment) qui se situe sur le dessus de la poignée.
- La mono-brosse démarrera en appuyant sur la manette (droite ou gauche) qui se situe au dessous de la poignée.
- Maintenir en position la manette pour un travail continu de l'appareil.
- Pour stopper la mono-brosse, lâcher cette manette.
- Pour le redémarrage réitérer l'opération depuis le point un du paragraphe.

### Utilisation

La mono-brosse devra se déplacer suivant de courts arcs de cercle, de droite et de gauche autour de l'opérateur qui est le pivot.

Pour obtenir un déplacement sur la gauche : abaisser légèrement le timon.

Pour obtenir un déplacement sur la droite : lever légèrement le timon.

Ces mouvements doivent être exécutés avec souplesse pour une meilleure sécurité, efficacité et confort de travail. Pour stabiliser la mono-brosse retrouver le point d'équilibre du démarrage.

**Important** Pendant cette phase, le câble électrique doit passer sur l'épaule de l'opérateur et être entièrement déroulé derrière celui-ci pour éviter que le câble soit en contact avec la brosse.

**Attention** En cas d'utilisation de rallonge :

- Utiliser une rallonge de section minimum identique à celle du câble de la machine (3x3).
- Dérouler entièrement la rallonge.

### Changement de vitesse (modèle MS 17X2)

Pour changer la vitesse, il suffit d'appuyer le bouton positionné sur la poignée. Avant de procéder avec cette opération, il faut être bien sûr que le pad utilisé soit compatible avec la vitesse de 308 tours/min. En démarrant la machine, elle parte toujours en basse vitesse (154 tours/min). Le fonctionnement de la machine à haute vitesse ne change pas par rapport à la basse vitesse. Dans la première situation il faut, en tout cas, manier la machine de façon plus délicate, à cause de la haute vitesse de rotation.

### Fin de travail

- Après avoir stoppé la machine, redresser le timon en position verticale en actionnant la manette droite.
- Débrancher la prise électrique.
- Coucher la machine en arrière.
- Retirer la brosse (ou le porte-pad) pour éviter une déformation des poils de brosse des serrures.
- Enrouler le câble sur la machine.
- Débarrasser la mono-brosse de toute trace de poussières, salissures, traînées de produits, etc.
- Pour le transport de l'appareil : inclinez-le vers l'arrière pour l'appuyer sur les roues prévues à cet effet. (Il est plus facile de tirer que de pousser).

Les données du présent document sont indicatives et peuvent être changées à tout moment sans préavis.

## DEUTSCH

### **Elektrischer Anschluss**

Bevor Sie das Gerät an das Stromnetz anschließen, überprüfen Sie, ob die Netzspannung Ihres Haushalts mit den Angaben auf dem Schildchen identisch ist und dass der Stecker über eine angemessene Erdung verfügt.

### **Montage der Zuberhörteile**

Jede Manipulation aus Sicherheitsgründen nur bei ausgezogenem Netzstecker vornehmen. An die Maschinenbasis gelangen Sir, indem Sie das Gerät aufstellen – der Fuß drückt dabei auf die Hinterräder. Den Bürstenflansch in den Flanschhalter schieben und durch Eindrehen gegen den Uhrzeigersinn blockieren. Das Gerät wieder in horizontale Lage bringen.

### **Betriebsbereitschaft**

Mit Druck auf den rechten Auslösehebel den Stiel und die Handführung auf Hüfthöhe bringen; so wird eine bestmögliche Balance erreicht.

### **Funktion**

Stecker an das Netz anschließen. Nach Erstellen der Betriebsbereitschaft (siehe oben) wird das Gerät aktiviert: die Sicherheitsschieber zur Mitte der Handführung schieben, danach mittels Druck auf die beiden Hebel unter der Handführung (EIN) einschalten. Solange auf die Hebel Druck ausgeübt wird, ist das Gerät in Betrieb. Beim Loslassen schaltet das Gerät automatisch ab (AUS).

### **Betrieb**

Der Druck auf den Schalter (EIN/AUS) setzt das Gerät in Betrieb und wird nun mit kreisförmigen Bewegungen über die zu reinigende Fläche geführt; der Bediener des Geräts steht im Zentrum dieser Bögen. Die Rotation wird gesteuert, indem die Handführung des Gerätes leicht angehoben oder gesenkt wird. Durch leichten Druck bzw., leichtes Absenken der Handführung bewegt sich das Gerät nach links. Durch leichten Zug bzw., leichtes Anheben der Handführung bewegt sich das Gerät nach rechts.

### **VORSICHT:** Diese Manipulationen müssen mit äußerster Behutsamkeit ausgeführt werden!

Nur so wird das Gerät fügsam reagieren. Um das Gerät an Ort rotieren zu lassen, genügt es, die Handführung in der Ausgangsstellung festzuhalten.

**ACHTUNG** Während des Einsatzes der Maschine unbedingt darauf achten, dass das Kabel nicht mit der Bürst in Berührung kommt, um eine konkrete Gefahr zu vermeiden!

### **Schaltung (MS 17X2)**

Bei der Handlung des Druckknopfs am rücken des Griffes, verdoppelt die Maschine seine Geschwindigkeit. Bevor diese Unternehmung zu handeln, soll man sich versichern dass die verwendete Scheibe zu einer 308 Umdrehungen Geschwindigkeit geeignet ist. Einmal ausgeschaltet fangt diese Maschine immer von den niedrigeren Geschwindigkeit wieder an, nach dem gewöhnlichen Gangsverfahren. Bei hoch Geschwindigkeit sowie bei niedriger Geschwindigkeit ergibt sich die Verwendung immer identisch. Aber, man soll bei diesen fall zu den Führungsbewegungen vorsichtiger sein, da sie wegen der höheren Umdrehungsgeschwindigkeit auch zarter sein müssen.

### **Wassertank**

Einfüllen mit Wasser (ca.7lt.) gemischt mit neutralem und schaumarmen Reinigungsprodukt. Hebel des Sprayergeräts ziehen und Produkt gleichmäßig auf dem Boden verteilen.

### **Aufbewahrung des Geräts**

Alle Zubehörteile abnehmen: ihr Gewicht drückt auf die Bürsten bzw. Scheuerscheiben und kann diese verformen. Das Kabel aufrollen. Das Antriebsgehäuse und die Zubehörteile immer reinigen. Sie vermeiden so eine Verkrustung durch die Reinigungsmittel.

**Reparaturen,** Ersatzteile und Zubehör: Wenden Sie sich nur an Fachgeschäfte, die über Original Ersatzteile verfügen. Reparaturen bzw., andere Interventionen dürfen nur von ausgewiesenen Fachleuten durchgeführt werden.

Die hier enthaltenen Daten sind richtungweisend und können jederzeit ohne Vorankündigung geändert werden.

## ITALIANO

### **Collegamento elettrico**

La macchina viene fornita con spina omologata provista di messa a terra. Prima di collegare l'apparecchio verificare che la tensione sia uguale a quella riportata sulla targa dati e che la presa utilizzata sia fornita di un efficace messa a terra. La portata amperometrica della stessa deve essere sufficiente all'assorbimento indicato.

Attenzione: Prima di utilizzare la macchina verificare che il cavo non presenti abrasioni o tagli. In caso affermativo rivolgersi ad un punto assistenza per la sostituzione.

### **Controlli prima dell'uso**

**Disco trascinatore:** Verificare la corretta dimensione e che la faccia a contatto con il tampone no sia danneggiata.

**Tamponi (pads):** Assicurarsi che il tampone sia del tipo necessario per il lavoro prefissato, pulito, ed in buone condizioni.

**Spazzole:** Selezionata secondo il lavoro richiesto deve presentarsi pulita e in buone condizioni.

**Attenzione** Questa macchina è stata disegnata per uso con spazzole raccomandate dal costruttore. L'uso di spazzole diverse può compromettere la sicurezza di funzionamento.

### **Montaggio accessori**

Agire sempre per nome di sicurezza a spina disinserita. Per accedere al vano porta-spazzole coricare la macchina facendo perno, a manico diritto, con il piede sulle ruote posteriori. Inserire la flangia della spazzola nel porta-flangia e bloccare ruotando la stessa in posizione verticale.

Riportare la macchina in posizione verticale.

### **Assetto per l'uso**

Agendo sulla leva destra di sgancio portare lo stelo e l'impugnatura all'altezza delle anche curando la posizione di massimo bilanciamento.

### **Funzionamento**

Inserita la presa di corrente, e con l'assetto come detto in precedenza, la macchina si accende agendo prima sui cursori di sicurezza spingendoli verso il centro dell'impugnatura e poi premendo l'interruttore elettrico a mezzo di una delle due leve posizionate sotto l'impugnatura. Tale leva va mantenuta premuta per ottenere il funzionamento continuo della macchina. Al rilascio, la stessa si bloccherà automaticamente.

### **Cambio di velocità (MS 17X2)**

Mediante azionamento del pulsante posto sul retro dell'impugnatura, la macchina raddoppia la velocità. Prima di compiere tale operazione assicurarsi che il pad utilizzato sia idoneo ad una velocità di rotazione pari a 308 rpm. Una volta spenta, la macchina ripartirà sempre a bassa velocità, secondo la normale procedura di avvio.

### **Uso**

La macchina, premuto l'interruttore di alimentazione, si metterà in funzione e dovrà essere utilizzata descrivendo brevi archi di cerchio essendo il centro di questi l'operatore stesso. Tale brandeggio si ottiene premendo od alzando leggermente l'impugnatura della macchina. Premendo, ovvero abbassando leggermente l'impugnatura, la macchina si sposta verso sinistra. Tirando, ovvero alzando leggermente l'impugnatura, la macchina si sposta verso destra. Attenzione: questo movimento deve essere effettuato in modo dolcissimo per avere una docile risposta della macchina stessa. Anche ad alta velocità l'utilizzo si rivela identico a quello della bassa velocità. Bisogna però in questo caso, prestare maggiore attenzione ai movimenti di guida che dovranno essere ancor più delicati data la maggiore velocità di rotazione. Per tenere la macchina in un determinato punto è sufficiente mantenere l'impugnatura ferma nella posizione di partenza.

**Attenzione** Durante il funzionamento evitare che il cavo di alimentazione venga a contatto con la spazzola onde impedire una possibile situazione di pericolo.

### **Serbatoio**

Riempire con una soluzione (8lt) di acqua e detergente neutro a schiuma frenata. Agendo sulla maniglia sinistra dosare la fuoriuscita del liquido sufficiente per coprire il suolo da trattare con un velo di soluzione.

### **Stoccaggio della macchina**

- Staccare ogni tipo di accessorio usato per evitare che il peso della macchina deformi in modo permanente le spazzole o i dischi abrasivi.

- Avvolgere il cavo e procedere ad una pulizia delle parti esterne e degli accessori, per evitare formazioni di incrostazioni dovute all'effetto dei prodotti chimici.
- Riporre in luogo coperto privo di umidità.

#### **Avvertenza**

- Leggere attentamente le istruzioni d'uso prima di utilizzare la macchina.
- Conservare sempre la macchina pulita ed efficiente.
- Rimuovere spazzole disco, serbatoio, riponendoli puliti dopo l'utilizzo di prodotti chimici.
- Staccare sempre la spina quando la macchina non è in funzione e prima di intervenire sulla stessa per cambio di accessori, pulizia o altro.

#### **Non**

- Lasciare la macchina con spazzola o disco inserito.
- Stoccare la stessa previa accurata pulizia.
- Disinserire la spina dalla presa agendo sul cavo.
- Usare prolunghi di cavo con sezione inferiore a quelle consentite dalla normativa.

**Riparazioni** – parti di ricambio – accessori. Per esigenze rivolgersi ai centri di assistenza che utilizzino parti originali. Interventi o riparazioni sulla maniglia devono essere effettuati da un centro autorizzato. I dati contenuti nel presente stampato si intendono indicativi e potranno essere cambiati in qualunque momento senza preavviso.

## ENGLISH

#### **Safety check before operation**

**Plug:** The standard single-brush machine comes fitted with a standard 13 amp 3 pin plug. Before connecting the appliance to the power socket check that the technical data match those of the current network.

**Cable:** Before operating the machine check that the power supply cable is in good condition and has no cuts or abrasions revealing the internal wires. In case the plug or cable are not satisfactory, do not use the machine and contact your maintenance department immediately.

**Machine failure:** If for any reason the machine fails to start once it has been correctly plugged into a power socket and turned on, do not attempt any form of repair. Contact your maintenance department immediately.

#### **Pre-start checks**

**Drive board:** Before assembling the machine please ensure that the drive board is of the correct size for the machine and that its drive face is not damaged.

**Chemicals:** Ensure that the floor maintenance pads that you have are suitable for the cleaning task to be performed and that they are clean and in good condition.

**Brushes:** If the cleaning operation requires brushes please ensure that the brushes are clean, in good condition and match the requirements of the machine.

**Warning:** This appliance has been designed for use with the brushes specified by the manufacturer. The fitting of other brushes may affect its safety.

#### **Assembly**

**Tank:** If the cleaning task requires a solution tank to be mounted onto the machine, you will note that the top and the bottom of the solution tank has a tongue: these tongues should be placed into the recesses on the black quick release tank holders mounted on the handle shaft of the machine. The bottom tongue lies in a partially covered recess whilst the top tongue lies in a partially covered recess which is locked into position by a securing collar. The solution feed tube can then be fed into either side of the machine where there is a solution feed hole. The chain mechanism which actuates the solution feed must then be assembled into the bottom left hand lever as you stand behind the machine. Adjustments may be made to put it in its normal position with the lever in a downward position and to make sure there is some slack in the chain so as not to hold the solution valve open and continuously drain the solution from the tank.

**Drive board and pads:** Once you have selected the pad required for the cleaning task, it must be centrally mounted on the drive board. The drive board is mounted into the machine by tilting the machine into its transport wheels and allowing the handle to rest on the floor thus exposing the drive mechanism. The drive board may then be centrally mounted into the drive mechanism and locked into position by turning it anti-clockwise. This can be checked by lightly pulling on the drive board.

**Brush:** If the cleaning operation requires a brush, connect the selected brush to the drive mechanism in exactly the same way as the drive board and pad.

#### **Operation**

**Main connection:** Return the machine to its upright position with either pad or brush suitably mounted on the drive mechanism of the machine. Uncoil the cable from the machine and plug it into the nearest supply and switch on.

**Adjusting the handle:** After returning the machine to its upright position you will notice two black thumb slides on the top of the machine handle and directly beneath, two levers. Beneath these two levers as you stand behind the machine, are two long levers, the left hand lever is the solution control lever for when you have a tank fitted, and the bottom right hand lever is the handle adjustment control lever. This lever should be pulled upwards and the handle lowered to a comfortable working position, with your back straight and your arms slightly bent at the elbows. In this position, lock the handle by releasing the adjustment lever. The adjustment position must then be checked by raising and lowering the handle so that the locking pin engages in the adjustment gear. With a correct, comfortable working height, the machine base should be parallel with the floor.

**Starting the machine:** With a comfortable working position, either the left or right thumb lever should be pushed towards the centre of the handle and the respective lever on the underside of the hand grip pulled in. This will immediately start the machine. The instant the machine starts the handle will try to move from left to right for a split second: this is perfectly normal. With the machine running and the brush or pad flat on the floor the machine will stay in a central position. The move the machine from side to side the handle must be raised or lowered very slightly. To move to the right, raise the handle of the machine. To move to the left slightly lower the handle of the machine. The speed at which the machine moves either left or right will depend entirely on the amount the handle is raised or lowered. If you should feel at any time that you are no longer in control of the machine or that it is becoming difficult to control, release the levers and the machine will stop. To master then efficient use of your machine we suggest that you practice these exercises. When you have mastered the technique you will find that you can control the machine very easily with no effort. If you should experience any difficulties in the operation of the machine, please contact your supervisor. Depending on the cleaning task, check your floor pad regularly. If the floor pad becomes clogged or dirty it will lose its effectiveness and the pad must be either cleaning by under a tap or simply turned over.

#### **Speed selection (MS 17X2)**

By operating on the push-button located on the handle's rear side, the device doubles its speed. Before proceeding with this operation, please make sure to use a pad suitable for a rotation speed of 308 rpm. Once switched off, the machine will always start from the lower speed, according to the usual starting procedure. The mode of operation is identical for both speeds. It is always necessary to be more careful during driving movements at higher speed which should be even softer because of the higher rotation speed.

#### **End of use**

At the conclusion of the cleaning task, it will be necessary to remove all accessories from the machine. If a tank has been fitted, the solution must be drained from it and then the tank must be removed by removing the solution control chain and solution feed tube, lifting the black collar, withdrawing the top tank tongue and lifting the tank from the machine. Always rinse the tank after use. To remove the drive board, tilt the machine back onto its transportation wheels and lay the handle on the floor and with the pad still in position twist the drive board clockwise. On new machines, due to manufacturing tolerances, the drive board or brush might be a little sticky and require a firm hand to release it from its coupling. Never leave a drive board or brush on the machine.

**Cable cleaning:** Return the machine to its upright position and wipe the cable as you are coiling it, checking for nicks or abrasions that reveal the inner wiring to be reported immediately to your maintenance department. Prior to storing the machine, always wipe away any accumulation of dirt and dust. After the machine has been cleaned and stored, take any used pads and run them under a tap, ensuring that any residue, dust or dirt build-up is removed and then hang them to dry.

**Drive board storage:** NEVER store the machine on its drive board as this will distort the drive board and make the machine difficult to handle in the future.

**Cable storage:** Special attention should always be given to the cable. Always wind the cable around the bottom cable hook and handle rather than looping the cable loosely around the machine handle.

#### **Do's and Don'ts**

**Do** read these instructions thoroughly before starting any cleaning operation

**Do** keep the machine clean and tidy.

**Do** rinse off all equipment, especially the solution tank if chemicals have been used.

**Do not** store the machine on either its drive board or a brush.

**Do not** leave the machine in a dirty condition.

**Do not** operate if the main power cable is damaged.

**Do not** over-reach the machine: unplug and move to a nearer power point.

**Do not** try to remove the plug from the socket by pulling on the cable.

The data contained in this leaflet are for informational purposes only and may be updated or changed at any time without prior notice.