

diamond 100 with side brush



diamod 100 is our biggest scrubbing machine with a working width of 100cm and works with three selectable pressures of 95kg, 125kg and 155kg. The drawing shows that, the brushes base is in the central position, between the traction motor wheel and the two rear wheels, making it difficult to clean in areas where the surface is not free. That is why we needed to create a device that permits to easily clean near walls or shelves or where there are direction changes (angles).



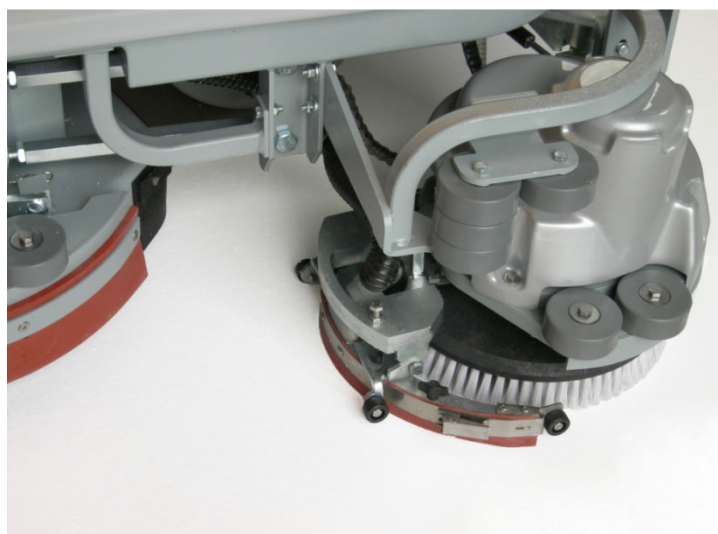
For this reason we have created an autonomous brush group that, being positioned in the front right part of the machine, has the peculiar purpose to cover all those floor positions which become difficult to clean with the standard brushes base.

It is important to notice that, this brush does not influence in any way the standard machine's performances, because it can be used or excluded at any time even while working.

The side brush operates on the floor with a pressure of 35kg, that corresponds to the pressure P2 of the standard brushes base; in fact, the total surface covered by the two brushes of 20" is of about 2900sqcm, the brushes work with a total weight of 125kg and consequently for every sqcm there will be a pressure of $p=0,04\text{kg/sqcm}$. The side brush has a bristle surface of 785sqcm, that with a load of 35kg gives exactly the pressure of $p=0,04\text{kg/sqcm}$.

This to say that the side brush can be used also to increase the cleaning width from 100cm to 120cm, bringing therefore the working capacity from 7000sqm/h to 8400 sqm/h.

The component that makes really autonomous the side brush group is the presence of an independent squeegee.



This squeegee "takes" the vacuum from the recovery tank, but an electro controlled valve interrupts the air flow when the brush is not used. To activate/deactivate the side brush is extremely easy, as it is controlled by a switch on the instrument board and it is independent from any other function. Furthermore, like the standard squeegee, during reverse movement, the complete side brush device is lifted from the floor. When the side brush is in the rest position, it moves under the machine and it is protected by a bumper screwed onto the main frame, to avoid accidental hits, whilst when working the group moves automatically inwards when it comes across obstacles.



The side brush is an optional and it has to be ordered separately from the machine, but in any case when ordering, because the retrofit is not so easy.

It is worth to provide you with an important note for the **diamond** regarding the maximum speed control while making turns.

Actually, this is made by a tension control of the traction motor wheel through a potentiometer connected directly to the steering-gear. In this way, the narrower the turn is the bigger the speed reduction will be. Consequently, even the most incautious user, that is to say the one who keeps the accelerator pedal continuously pressed, will be able to move in absolute security even in the most tortuous passages.