The Dremel Saw Max

When imagination and technology combine, the results can be outstanding and this is the case with Dremel's latest offering, the SM 20E Saw Max.

In appearance, the saw max looks like a small angle grinder, but it is in essence, a miniature plunge saw. With a varied range of blades available the saw max will cut a surprising amount of different materials including; wood, plastic, metal, tile and stone.

The Dremel Brand which was founded in 1932 have always been leaders in innovation in the tool industry, with its founder, Albert J Dremel holding 55 patents for his inventions which included products ranging from the first petrol powered lawnmower, to an electric razor blade sharpener.

The core range of Dremel will always be their outstanding rotary tool range but under the guidance of the Bosch group who bought Dremel in 1993 the company has gone from strength to strength introducing new lines such as the Dremel glue gun, the Dremel workstation, the multi max oscillating tool, the trio and now the new saw max.

Let's have a look more closely at this great little machine. To help gain a better understanding of the mechanics of saw max i've labelled all of the major features of the tool in the photos below.

Now let's have a look at the Saw Max in more detail.

The three main keys that I use to evaluate a new tool are Form, Feel and Function.

**FORM** - what's the initial impression of the tool, how is the build quality, how is the overall finish, does it look like something you'd want to use.
FEEL - how does it feel in your hand, is the grip comfortable, is it balanced, is the overall weight proportional to the size of the tool.

FUNCTION - how does the tool perform, in the case of the saw max does it actually cut, does it have sufficient power to perform the stated tasks? Is it safe to use?

By covering these three keys I find that I can come up with a fairly accurate and relevant review of what the tool is all about.

Let's start with form:

Form

I've been in the power tool industry for a lot of years now and it takes something special to get me excited but I must admit to wanting to get my hands on this tool as soon as I saw it. The slimline body has been intuitively designed with non slip soft grip padding covering the plastic casing in all of the major contact areas. The finish is of the typically high standard that you'd expect from Dremel and I found no cast lines or deformities in the body that made it uncomfortable to hold.

The physical dimensions of the saw max are as follows:

<table>
<thead>
<tr>
<th>Overall Length:</th>
<th>300 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate size:</td>
<td>140mm x 70 mm</td>
</tr>
<tr>
<td>Body diameter:</td>
<td>115mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>1.7 kg</td>
</tr>
<tr>
<td>Dust collector port</td>
<td>Internal 11mm</td>
</tr>
<tr>
<td></td>
<td>External 16 mm</td>
</tr>
<tr>
<td></td>
<td>takes standard 27 mm vac hose</td>
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</tbody>
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Feel

The saw max is something a bit different than your average power tool. In use, the tool is held with an overhand grip. It has a completely different feel to your standard circular saw and, to be honest, took a little bit of getting used to. Coming in approximately 1.7 kg and with a body diameter of around 115 mm it is a lot to hold whilst your getting the feel of the tool. I have large hands and found that once I'd got used to the grip I had no real problems handling the tool but by wife, whose hands are considerably smaller, struggled with the weight and body diameter of the tool.

When the saw max is turned on there is minimal vibration and it "feels" very well balanced. The on/off toggle switch is relatively easy to use and I'm sure that it would become easier with more practice.

Function.

In use the tool is a delight. If you end up buying one of these I'd strongly recommend that you allow yourself a couple of hours to play and to get a good feel for how the tool works. There is a definite learning curve needed for this tool as it has a completely different feel to any other cutting tool that
I've used before but I can guarantee that once you've got the feel of it you'll be reaching for the saw max before you reach for your circular saw.

At the heart of the saw max lies a highly efficient worm gear drive which provides an amazing amount of torque and gives the saw max an almost unstoppable feel.

The saw max can be allied to a Festool Ts55 in the fact that they both have the ability to accurately plunge cut and can be accurately set to cut to a pre determined depth. The depth set mechanism on the saw max, whilst feeling a little flimsy, is easy to use and securely locks the table in place.

My first real test on the saw max was to see how well it performed cutting. Rather than use pine, which had been the demonstrators timber of choice when I first encountered the saw max, I chose to test it out on a pile of 16 mm hardwood door frames and skirting boards which had come out of my bathroom renovation. I made a jig to cut against, put a new blade in the saw max and set to work. Once I got into a rhythm the carbide blades on the saw max cut through the hardwood with little effort. The noise level was not excessive, though as with any power tool the use of adequate eye and hearing protection is essential.

After about 20 minutes of continuous use the head of the saw max got quite hot and I decided to call a halt after 30 minutes as the unit was fast becoming a tad too warm to hold comfortably. I was pleasantly surprised to find that even when the saw max started to get hot, that there was no degradation in performance at all.

There was a bit of variation in the timber sizes so I had time to have a good play with the depth adjustment. Using the depth scale on the side of the Saw Max, I found no problems adjusting the table so that the tip of the blade just scored my bench top, (most of the time).

**Blades**

One of the best features of this tool is the new style of blades that Dremel has designed specifically for it. Unlike conventional saws with toothed blades, the saw max blades are 75 mm discs which have either carbide or diamond bonded coatings for cutting a wide variety of materials.

A list of the blades available is shown below:

- **SM500**: Tungsten carbide metal-bonded wheel for cutting a variety of materials
- **SM510**: Aluminum oxide organic bonded wheel for cutting metal
- **SM520**: Diamond metal bonded wheel for cutting ceramics and masonry
- **SM540**: Silicon carbide organic bonded wheel for cutting masonry
- **SM600**: Flush cut tungsten carbide metal bonded wheel for cutting a variety of materials
For the plunge and straight cut testing I used the SM 500 tungsten carbide blade. At the onset I put a brand new blade in and after nearly two days of solid testing in a variety of hardwoods the blade still had plenty of life in it. There is a distinctly different feel to cutting timber with a carbide grit blade to a standard toothed blade. I found that the blade seemed to "pull" the tool through the timber which contributes to the easy handling of the saw max. The carbide tipped blades on the saw max give an exceptionally fine cut, even on difficult and figured timbers.

The next blade on my hit list was the SM 540 which is a silicon carbide blade and is designed to cut masonry. My original intention was to use this blade in the saw max to remove the grout from the tiles in my bathroom which it does exceptionally well. This is another situation where the adjustable depth mechanism excels, as you can easily adjust the saw max to cut to the thickness of the tile so you don't damage the wall behind. If you're going to use the saw max for this application be sure to check the width of your grout lines first. The SM 540 blade has a 2.5 mm kerf which is slightly wider than what is commonly used.

Dust Collection

The carbide tipped blades that come with the saw max give an extremely good cut but do generate a lot of dust. To counter this the saw max has an extremely effective dust collection system. The adapter, which comes as standard with the saw max, fits into the port on the saw max which is adjacent to the saw head, and when connected to a dust extractor or vacuum, collects upwards of 90% of the dust generated when cutting.

Whilst it was very effective I found that when attached to a vacuum hose the saw max became a bit more challenging to use as the drag of the hose tended to pull the unit to one side. If the angle of the port was changed so the hose ran parallel to the body of the saw max I feel that it would greatly improve the balance when using the tool with extraction.
Accessories

Mitre and trim cutting guide

The Saw-Max Miter Guide is the portable solution for cutting skirting, molding, window/door casing and picture frames with your Dremel Saw-Max tool. Make straight and miter cuts with a depth of cut up to 21mm and bevel cuts with a depth of cut up to 15mm using the Saw-Max flush cut wheel.

In Conclusion

In today's somewhat overcrowded tool market, it's refreshing to see a brand new style of tool make its debut. With its ability to quickly, safely and accurately perform a huge variety of cutting tasks the Saw Max is guaranteed to be a success. Whilst Dremel has targeted this tool to the home renovation market I feel that tradesmen, particularly those in the flooring industry will embrace the Saw Max for its ability to plunge cut and to quickly and accurately undercut door frames and skirting boards. With its ability to cut most sheet timber products and its safe carbide blade system the Saw Max will appeal to those hobby woodworkers who are nervous about using circular saws.

As for myself, I loved it. Once I'd had some time to play with the Saw Max and got a feel for it I found it easy and safe to use. The uses for this tool will only be limited by the user's imagination and I'm sure that this will become a favorite with many woodworkers, both professional and hobby in the near future.

Available now for $169.00