Rubbermaid Reveal Spray Mop:

A Technical Description

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Table of Contents

1. Introduction ................................................................................................................... 3
   1.1. Definition and Purpose.......................................................................................... 3
   1.2 Overall Description................................................................................................. 3

2. Description .................................................................................................................... 4
   2.1. Mop Rod.................................................................................................................. 4
       2.1.1 Handle.............................................................................................................. 5
       2.1.2 Trigger............................................................................................................. 5
       2.1.3 Foam Grip....................................................................................................... 6
       2.1.4 Bottle............................................................................................................... 6
   2.2 Mop Head.................................................................................................................. 7
       2.2.1 Microfiber Pad................................................................................................. 7
       2.2.2 Rivet................................................................................................................ 8

3. Cycle of Operation ....................................................................................................... 8
1. Introduction

1.1 Definition and Purpose

The Reveal Spray Mop is a hand held mechanical device made by Rubbermaid used to quickly and easily clean hard floor surfaces such as laminate, tile, hardwood, and vinyl.

The device is intended for home use and is a valuable tool to create and maintain a clean and hygienic environment. The Reveal Spray Mop can be found in any department or home supply store and can be purchased for $29.99.

1.2 Overall Description

The Reveal Spray Mop is grey and red in colour and made of plastic, metal, and microfiber (see Figure 1). The top of the mop is a plastic handle that contains a plastic trigger (see Figure 2). The handle is attached to a durable metal rod and a bottle is attached to the front of the metal rod, approximately two thirds of the way down. The bottle is made from translucent grey plastic that can be easily removed by pulling upwards, and is used to hold liquid floor cleaner. A flat, rectangular piece of plastic called a mop head is attached to the bottom of the metal rod by a plastic swivelling rivet (see Figure 3). Attached to the bottom of the mop head with strong Velcro is a microfiber cleaning pad that can be removed, cleaned and then reused. The swivelling rivet allows the user to easily push the mop around a floor surface while navigating around corners and furniture.

About the Reveal Spray Mop:

- Weighs 1 kg when the bottle is empty
- Holds 20 oz. of liquid cleaner
- Mop pad measures 16.5”L x 5.5”W
- Mop measures 54” in length
2. Description

The Rubbermaid Reveal Spray Mop consists of two main components: (1) the mop rod and (2) the mop head.

2.1 Mop Rod

The mop rod is a grey metal tube that is approximately 32 inches in length and 1.5 inches in diameter. The rod has two primary functions. The first is to give the device an appropriate length so that the user does not have to bend down while pushing the mop along the floor. This length allows most users to stand comfortably and hold the mop at a comfortable angle which results in a highly ergonomic tool. The second function of the mop rod is to act as a spine that connects all of the parts of the mop together. The mop rod connects to the handle, the trigger, the foam grip, the plastic bottle, and the mop head (see Figure 4).

Figure 4: Mop Rod
2.1.1 Handle

The handle of the Reveal Spray Mop is made of a hard grey and red plastic and is attached to the top of the metal mop rod. The handle is approximately 9 inches in length, 1-inch in diameter, and is curved to create an ergonomic hold (see Figure 5). The handle is moulded into a triangular shape with the wide, slightly curved end at the top of the handle. The handle tapers towards the bottom to create a comfortable grip (see Figure 6). A 2-inch long triangular metal hook is attached to the top of the handle. This hook allows the Reveal Spray Mop to be hung in a closet or on a wall for easy storage. Attached to the handle is the trigger.

![Figure 5: Side View of Handle](image1)

![Figure 6: Tapered Handle](image2)

2.1.2 Trigger

The Reveal Spray Mop trigger is a piece of red plastic attached underneath the grip of the mop handle and is approximately 2.75 inches in length. The trigger is slightly curved to provide a comfortable grip. When the trigger and the mop handle are squeezed together (see Figure 7) a small amount of liquid floor cleaner in the plastic bottle is sprayed onto the floor in front of the mop head.

![Figure 7: Trigger Compressed to Handle](image3)
2.1.3 Foam Grip

A 5-inch long foam grip surrounds the mop rod approximately 8 inches from the top of the rod. The grip is grey in colour and made from soft and cushioned foam. The foam grip creates a comfortable and slip-free hold for the mop user.

2.1.4 Bottle

A translucent plastic bottle is attached to the bottom of the mop rod with a grey plastic canister. The bottle has a plastic screw cap with a small round opening in the top and a rubber gasket around the opening (see Figure 8). The bottle is filled with a liquid cleaning solution, placed upside down in the canister, and when the trigger on the handle is compressed, the cleaning liquid flows through the bottle, into the canister, and sprays out the canister onto the floor. The rubber gasket around the opening of the bottle cap prevents the liquid from leaking out of the canister. The bottle is oblong shaped, 7 inches in height, and 3.75 inches in diameter. Up to 20 ounces of cleaning solution can be stored in the bottle (see Figure 9).

![Figure 8: Bottle](image1.png)  
![Figure 9: Bottle Attached to Mop Rod](image2.png)
2.2 Mop Head

The mop head is a flat piece of grey plastic that is attached to the end of the mop rod. The mop head is rectangular in shape and measures 15 inches in length, 5 inches in width, and approximately 0.4 inches in depth (see Figure 10). There is a very strong plastic Velcro attached to the bottom of the mop head and this is used to attach the mop pad to the bottom of the mop head (see Figure 11). The user pushes the mop head along the floor surface with the mop rod. The mop head consists of two main parts: (1) the microfiber pad and (2) the rivet.

![Figure 10: Top of Mop Head](image)

![Figure 11: Bottom of Mop Head](image)

2.2.1 Microfiber Pad

The microfiber pad is a cushioned red and white rectangular pad that measures 16.5 inches in length and 5.5 inches in width. The white side of the microfiber pad is a soft material that securely attaches to the Velcro on the bottom of the mop head. The red side of the microfiber pad is made from super fine filaments that efficiently pick up dust
and dirt on the floor surface while scrubbing the floor surface clean. The microfiber pad can be removed from the mop head, cleaned, and then reapplied to the mop head for re-use up to 100 times.

2.2.2 Rivet

The rivet is a red piece of durable plastic that attaches the mop rod to the mop head. The rivet is in the shape of an upside down “T”; the horizontal piece of the rivet attaches to the top of the mop head, and the vertical part of the rivet attaches to the bottom of the mop rod. The rivet allows the mop head to swivel in all directions for easy navigation. It measures approximately 1.25 inches in width at the widest point, 2 inches in height at the highest point, and 0.5 inches in diameter (see Figure 12 and Figure 13).

3. Cycle of Operation

The bottle attachment to the Rubbermaid Reveal Spray Mop must be filled with floor cleaning solution and then inserted upside down into the canister located near the bottom of the mop rod. The mop is held by the handle in the users hand in an upright, slightly angled position. The user can hold the foam grip on the mop rod with their free hand for easier navigation. Holding the foam grip also allows the user to apply extra pressure to the mop head for scrubbing the floor surface. The trigger can be squeezed towards the handle to spray liquid floor cleaner onto the floor surface in front of the mop head. After the liquid is sprayed onto the floor surface the mop is pushed around the floor surface. When the user is done using the mop it can be hung by the metal hook on the handle in a closet or on a wall for easy storage.