

<sup>®</sup>  
stryker

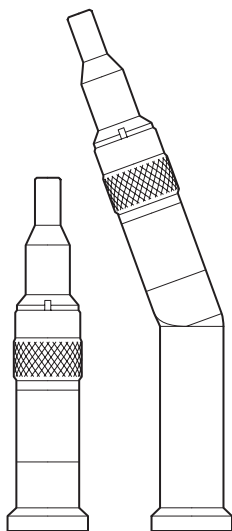
## MD Series Attachments

|     |              |
|-----|--------------|
| REF | 5100-015-250 |
|     | 5100-015-252 |
|     | 5100-015-270 |
|     | 5100-015-272 |

Instructions For Use

R<sub>x</sub> ONLY

CE



ENGLISH (EN)

## Introduction

This *Instructions For Use* manual is the most comprehensive source of information for the safe and effective use of your product. This manual may be used by in-service trainers, physicians, nurses, surgical technologists, biomedical equipment technicians, and central supply/sterile processing technicians. Keep and consult this reference manual during the life of the product.

The following conventions are used in this manual:

- A **WARNING** highlights a safety-related issue. ALWAYS comply with this information to prevent patient and/or healthcare staff injury.
- A **CAUTION** highlights a product reliability issue. ALWAYS comply with this information to prevent product damage.
- A **NOTE** supplements and/or clarifies procedural information.

For additional information, especially safety information, or in-service training, contact your Stryker sales representative or call Stryker customer service. Outside the US, contact your nearest Stryker subsidiary.

**NOTE:** The user and/or patient should report any serious product-related incident to both the manufacturer and the Competent Authority of the European Member State where the user and/or patient is established.

## Indications For Use

See the instructions for use supplied with the handpiece.

## Contraindications

See the instructions for use supplied with the handpiece.

## For Use With

The MD Series Attachments are intended for use with the following Stryker handpieces:

| DESCRIPTION  | REF          |
|--|--------------|
| RemB <sup>®</sup> Electric Micro Drill                                 | 6400-015-000 |
| Consolidated Operating Room Equipment (CORE <sup>™</sup> ) Micro Drill | 5400-015-000 |
| Total Performance System (TPS <sup>™</sup> ) Micro Drill               | 5100-015-000 |

## User/Patient Safety



### WARNINGS:

- Only trained and experienced healthcare professionals should use this equipment.
- Before using any system component or any component compatible with this system, read and understand the instructions. Pay particular attention to WARNING information. Become familiar with system components prior to use.
- Upon initial receipt and before each use, clean and sterilize the equipment as indicated. See the care instructions manual supplied with the handpiece.
- Upon initial receipt and before each use, operate the equipment and inspect each component for damage. DO NOT use any equipment if damage is apparent or the inspection criteria are not met. See the care instructions manual supplied with the handpiece for inspection criteria.
- When operating the handpiece, DO NOT actuate the attachment collar. Actuation may suddenly stop and/or overheat the handpiece.
- DO NOT attempt to insert or remove any cutting accessory or attachment while the handpiece is operating.
- DO NOT apply excessive pressure. Monitor heavy sideloads and/or long operating periods to prevent overheating of the distal tip and body of the handpiece and/or attachment. Excessive pressure may bend or fracture the cutting accessory.
- ALWAYS operate the equipment within the specified environmental condition values. See the Specifications section.
- ALWAYS follow the recommended duty cycle to prevent the equipment from overheating. See the Specifications section.
- Use adequate irrigation during cutting to prevent heat generation.
- When in use, attachments are applied parts. See the instructions for use supplied with the handpiece for information specific to applied parts.

## Accessories



### WARNINGS:

- Use only Stryker-approved system components and accessories unless otherwise specified.
- DO NOT modify any system component or accessory unless otherwise specified.

### NOTES:

- A variety of specialized attachments are available for use with the Micro Drill. Each specialized attachment is supplied with specific instructions.
- For a complete list of accessories, contact your Stryker sales representative or call Stryker customer service. Outside the US, contact your nearest Stryker subsidiary.

The following Stryker-approved accessories are sold separately:

| DESCRIPTION                 | REF          |
|-----------------------------|--------------|
| E-Type Attachment Bur Guard | 5100-015-301 |

## Cutting Accessories



### WARNINGS:

- Upon initial receipt and before use, visually inspect the package for damage to confirm the integrity of the sterile barrier. Do not use the product if damage is apparent, the sterile barrier is compromised, or the package is unintentionally opened.
- All cutting accessories are intended for single use only. Reuse significantly increases wear on the handpiece and attachment.
- DO NOT reuse, reprocess, or repackage a single use device. A single use device is intended for a single use only. A single use device may not withstand chemical, chemical vapor, or high temperature sterilization reprocessing. Design features may make cleaning difficult. Reuse may create a serious risk of contamination and may compromise the structural integrity of the single use device resulting in operational failure. Critical product information may be lost if the single use device is repackaged. Failure to comply may lead to infection or cross-infection and result in patient and/or healthcare staff injury.

- DO NOT use a cutting accessory with an overall length greater than 2.25 inches [5.72 cm] with the Micro Drill attachments described in this instruction booklet.

**NOTE:** Sterile cutting accessories are sterilized by irradiation.

| DESCRIPTION                      | REF   |
|----------------------------------|---|
| 5.0 mm Egg Bur                   | 0277-010-050  |
| 3.0 mm Matchhead Bur, Extended   | 0277-010-208  |
| Carbide Burs                     | 0277-010-221<br>0277-010-235<br>0277-010-421<br>5300-010-421<br>5300-010-50X series<br>5300-010-51X series<br>5300-010-70X series<br>5300-010-71X series<br>5300-010-90X series |
| 6.1 mm Pear Bur                  | 1608-002-005  |
| Metal Cutting Diamond Disc       | 1608-006-099S4  |
| Toe Fusion Sets                  | 1608-010-100SX series   |
| Resurfacing Tools                | 1900-010-040<br>1900-015-040<br>1900-015-025  |
| Drill Bits, Medium               | 5300-010-041<br>5300-010-059<br>5300-010-063<br>5300-010-071  |
| Swanson Pilot Point Burs, Medium | 5300-010-13X series   |
| Round Diamond Burs, Medium       | 5300-010-303<br>5300-010-307<br>5300-010-311  |
| Dermabraders                     | 5300-010-911<br>5300-010-94X series   |


If the following symbol is on the device label, the device meets the stated criteria:



This device contains the following substance(s) defined as CMR 1B in a concentration above 0.1% weight by weight: Cobalt; CAS No. 7440-48-4; EC No. 231-158-0. Current scientific evidence supports the position that medical devices manufactured from cobalt alloys or stainless steel alloys containing cobalt do not cause an increased risk of cancer or adverse reproductive effects.

## Definitions

The symbols located on the equipment and/or labeling are defined in this section or in the *Symbol Definition Chart*. See the *Symbol Definition Chart* supplied with the equipment.

| SYMBOL  | DEFINITION             |
|---|------------------------|
| RUN   | Operate Position       |
| LOAD  | Insert/Remove Position |
|  | General warning sign   |

## Instructions

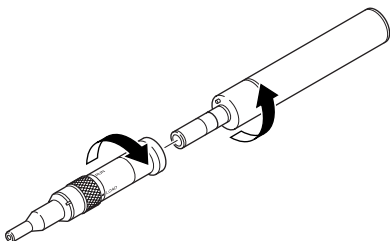
**NOTE:** The Micro Drill handpiece may be operated with the Stryker footswitch or handswitch.

## Assembly



**WARNING:** Ensure the handpiece is off. **DO NOT** attach any cutting accessory or attachment while the handpiece is running.

1. Install the attachment onto the handpiece with a twisting motion until it securely snaps into place. See figure 1.

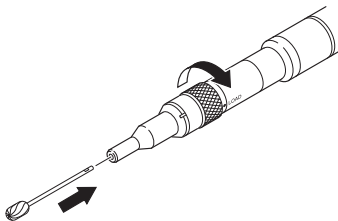


**Figure 1. Attachment Installation**

**NOTE:** Ensure the attachment is secure before running the Micro Drill. Observe the small gap between the attachment and the Micro Drill housing caused by the anti-rotation pin. This gap will not hinder the function of the Micro Drill or the attachment. The gap should not be wider than 0.025 inches [0.65 mm].

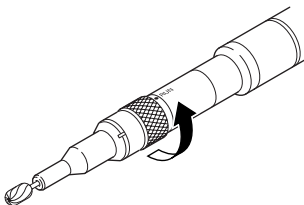
## Assembly (continued)

2. Insert the cutting accessory as follows:
  - 2.1. Rotate the lock collar to the LOAD position. See figure 2.
  - 2.2. Insert the cutting accessory into the attachment with a twisting motion until it bottoms.



**Figure 2. Cutting Accessory Installation**

- 2.3. Rotate the lock collar to the RUN position. See figure 3.



**Figure 3. Cutting Accessory Locked Into Place**

- 2.4. Gently tug on the cutting accessory to ensure that it is locked into place.



**WARNING:** Ensure the cutting accessory is correctly installed. A burn injury may result if the accessory is incorrectly installed and friction occurs between the accessory and the attachment.

## Disassembly

1. Rotate the lock collar to the LOAD position. See figure 4.
2. Pull the cutting accessory straight out of the handpiece.

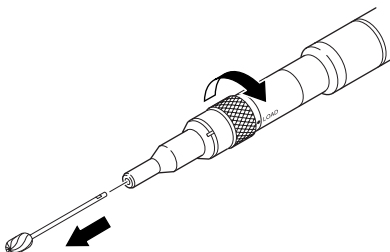


Figure 4. Cutting Accessory Removal

3. Grasp the attachment and pull it away from the handpiece.

## Care Instructions

For processing instructions and disposal/recycle information, see the care instructions manual supplied with the handpiece.

## Troubleshooting



**WARNING:** DO NOT disassemble or service this equipment, unless otherwise specified.

**NOTE:** For service, contact your Stryker sales representative or call Stryker customer service. Outside the US, contact your nearest Stryker subsidiary.

| PROBLEM  | CAUSE                                     | SOLUTION  |
|--|---|---|
| Attachment is difficult to install or remove from the handpiece. | The connector requires a break-in period. | Install and remove the attachment repeatedly until the connector functions smoothly.  |
| Attachment will not retain the cutting accessory.                | Lock collar is not fully engaged.         | Rotate the collar to the LOAD position. Reinstall the cutting accessory. Fully rotate the collar to the RUN position. Gently tug on the cutting accessory to ensure it is secure. |



| <b>PROBLEM</b>   | <b>CAUSE</b>   | <b>SOLUTION</b>   |
|--|--|---|
| Handpiece will not run.  | Lock collar is not fully engaged.                        | Fully rotate the collar to the RUN position.  |
| Cutting accessory will not disengage from the attachment.                  | Lock collar is not fully disengaged.                     | Fully rotate the collar to the LOAD position.   |
| Cutting accessory seizes in the attachment.                                | Lock collar is not fully engaged.                        | Rotate the collar to the LOAD position. Reinstall the cutting accessory. Fully rotate the collar clockwise to the RUN position. Gently tug on the cutting accessory to ensure it is secure. |
|  | Attachment is not properly installed into the handpiece. | Reinstall the attachment. Ensure the connection is flush to the handpiece.  |
| Attachment runs at a gradually higher temperature over its operating life. | Attachment is beginning to wear.                         | Return the attachment to Stryker for evaluation and possible replacement.   |
| Attachment heats up rapidly during use.                                    | Debris is trapped inside the attachment.                 | Clean and sterilize the attachment.   |
|  | Internal components of the attachment are damaged.       | Return the attachment to Stryker for evaluation and possible replacement.   |
| Attachment contains moisture and leaks fluid during use.                   | Attachment was improperly cleaned and sterilized.        | Clean and sterilize the attachment. Comply with Dry Cycle requirements.   |

## Specifications



**WARNING:** ALWAYS check any documentation that accompanies attachments and/or cutting accessories for special duty cycle and usage instructions.

|                           |  |
|---------------------------|--|
| <b>Model:</b>             | MD Series Straight Attachment<br>(REF 5100-015-250)  |
| <b>Dimensions:</b>        | 3.4 inch [87.2 mm] length<br>0.8 inch [19.6 mm] diameter   |
| <b>Mass:</b>              | 0.15 lb [69.3 g]   |
| <b>Model:</b>             | MD Series Angled Attachment<br>(REF 5100-015-252)  |
| <b>Dimensions:</b>        | 5.2 inch [130.9 mm] length<br>0.8 inch [19.6 mm] diameter  |
| <b>Mass:</b>              | 0.26 lb [117.0 g]  |
| <b>Model:</b>             | MD Series Long Straight Attachment<br>(REF 5100-015-270)   |
| <b>Dimensions:</b>        | 4.3 inch [109.0 mm] length<br>0.8 inch [19.6 mm] diameter  |
| <b>Mass:</b>              | 0.18 lb [80.3 g]   |
| <b>Model:</b>             | MD Series Long Angled Attachment<br>(REF 5100-015-272)   |
| <b>Dimensions:</b>        | 6.0 inch [153.5 mm] length<br>0.8 inch [19.7 mm] diameter  |
| <b>Mass:</b>              | 0.28 lb [127.7 g]  |
| <b>Equipment Type:</b>    | See the instructions for use supplied with the handpiece.  |
| <b>Mode of Operation:</b> | Non-continuous Operation   |
| Duty Cycle:               | 20 seconds on/20 seconds off, 10 times   |
| Rest Between Cycles:      | 30 minutes   |
| <b>Applied Part:</b>      | When used with handpieces, the attachments described in this manual are applied parts. For more information, see the instructions for use supplied with the handpiece. |

# Specifications (continued)

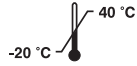
**Maximum Temperature of Applied Part:** Less than 124 °F [51 °C] (Maximum surface temperature as tested to the standards listed under *Product Safety Certification* in the instructions for use supplied with the console.)

**Environmental Conditions:**

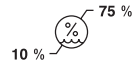
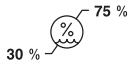
**Operation**

**Storage and Transportation**

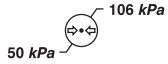
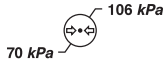
Temperature Limitation:



Humidity Limitation:



Atmospheric Pressure Limitation:



|                |              |
|----------------|--------------|
| ES/DE/FR/IT/NL | 5100-015-718 |
| JA/ZH/KO       | 5100-015-722 |
| SV/DA/FI/PT/NO | 5100-015-731 |
| PL/EL          | 5100-015-750 |



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