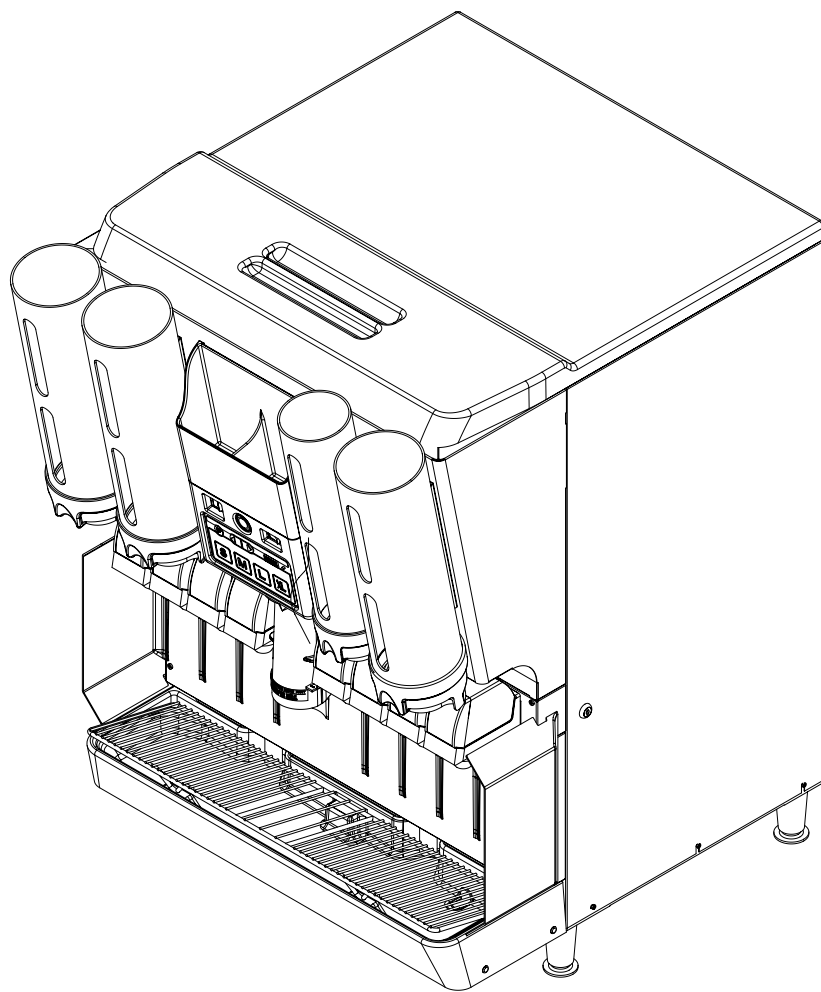




---

# IDC 255 PROGATE DRIVE THRU

## Operator's Manual



**Release Date: June 28, 2006**

**Publication Number: 621057419OPR**

**Revision Date: NA**

**Revision: A**

**Visit the IMI Cornelius web site at [www.cornelius.com](http://www.cornelius.com) for all your Literature needs.**



# **IDC 255 PROGATE DRIVE THRU OPERATOR'S MANUAL**

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

**[www.cornelius.com](http://www.cornelius.com)  
800-238-3600**

Trademarks and copyrights:

Aurora, Cornelius, FlavorFusion, Hydro Boost, Optifill, Pinnacle, and Vanguard are registered trademarks of IMI Cornelius Inc.

This document contains proprietary information and it may not be reproduced in any way without permission from Cornelius.

Printed in U.S.A.

Copyright © 2006, All Rights Reserved, IMI Cornelius, Inc.



# TABLE OF CONTENTS

<b>Safety Instructions</b> .....	<b>1</b>
Read and Follow all Safety Instructions .....	1
Recognize Safety Alerts .....	1
Different Types of Alerts .....	1
Safety Tips .....	1
Qualified Service Personnel .....	1
CO2 (Carbon Dioxide) Warning .....	1
<b>Unit Requirements</b> .....	<b>2</b>
Progate 2 Features .....	2
Progate Portion Ice Control Features .....	2
Lid Dispenser .....	2
Straw Holder .....	2
<b>START-UP AND OPERATING INSTRUCTIONS</b> .....	<b>3</b>
Ice Drink Dispenser .....	3
Lid Dispenser Operation .....	3
Loading of Lid Dispenser .....	3
Plastic Wrapped lids .....	4
Individual lids .....	5
Lid Dispenser Operation .....	6
Lid Dispenser Maintenance .....	6
<b>Cleaning Instructions</b> .....	<b>7</b>
Dispenser .....	7
Daily .....	7
Cleaning Exterior Surfaces .....	7
Lid Dispenser Maintenance .....	7
Ice Chute Maintenance .....	7
Monthly .....	8
Cleaning Interior Surfaces .....	8
<b>Progate 2 Control Box Operation</b> .....	<b>9</b>
Portion Control Box Functions .....	9
Programming (Changing) the Ice Portion .....	10
Agitation Time .....	11
Programming (Changing) the Agitation Time .....	12
Ice Portion Bar .....	13



# SAFETY INSTRUCTIONS

## READ AND FOLLOW ALL SAFETY INSTRUCTIONS

Read and follow all safety instructions in this manual and on the machine (decals, labels, and laminated cards). Read and understand all applicable OSHA (Occupation Safety and Health Administration) safety regulations before operating the machine.

### Recognize Safety Alerts



This is the safety alert symbol. When you see it in this manual or on the machine be alert to the potential of personal injury or damage to the machine.

## Different Types of Alerts

There are 3 types of safety alerts:



**DANGER** — Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death, or equipment damage.



**WARNING** — Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.



**CAUTION** — Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

## Safety Tips

- Carefully read all safety messages in this manual and safety signs on the machine.
- Keep safety signs in good condition and replace missing or damaged safety signs.
- Learn how to operate the machine and how to use the controls properly.
- Do not let anyone operate the machine without proper training. This appliance is not intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your machine in proper working condition and do not allow unauthorized modifications to the machine.

## Qualified Service Personnel



**CAUTION** — Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES.**

## CO<sub>2</sub> (Carbon Dioxide) Warning



**WARNING** — CO<sub>2</sub> Displaces Oxygen. Strict Attention **must** be observed in the prevention of CO<sub>2</sub> gas leaks in the entire CO<sub>2</sub> and soft drink system. If a CO<sub>2</sub> gas leak is suspected, particularly in a small area, **immediately** ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO<sub>2</sub> gas will experience tremors which are followed rapidly by loss of consciousness.

## UNIT REQUIREMENTS

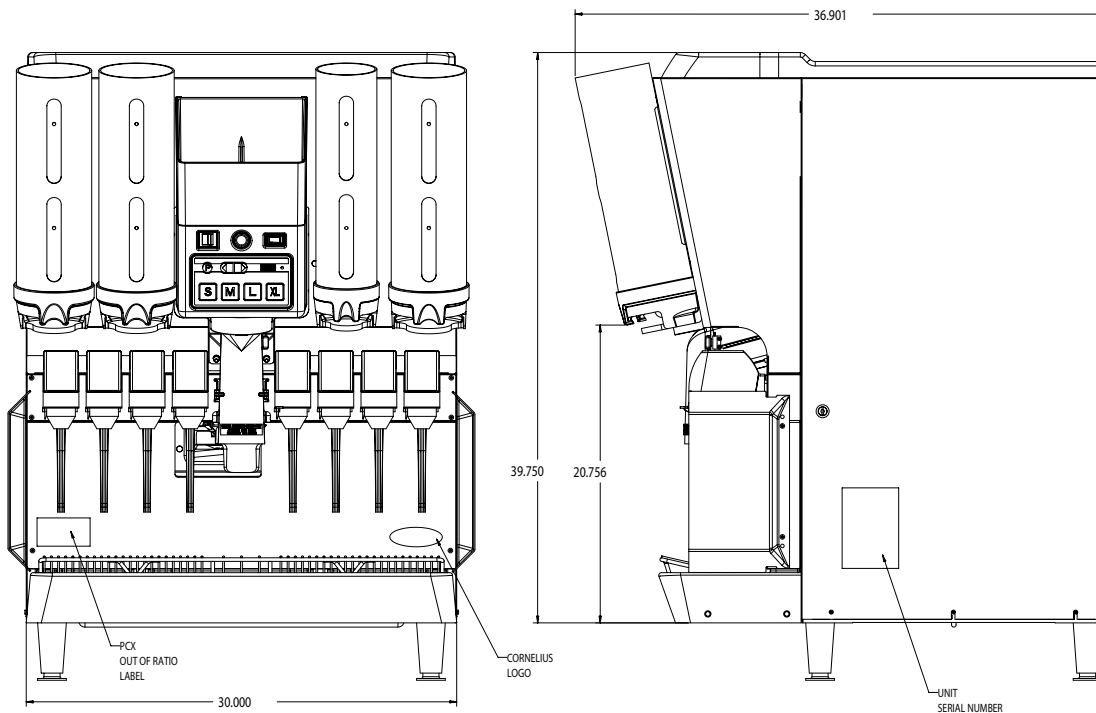


FIGURE 1

**Electrical Connections:** 6 ft long power cord with 3-prong plug attached to dispenser.

**Power Requirements:** 9.3 amps at 120 volts dedicated power supply.

**Water Supply Requirements:** 100 psi (7 bar) maximum static pressure 40 psi (28 bar) minimum dynamic pressure. 3/8" minimum water line recommended.

**CO2 Requirements:** 100 psi max to unit regulated to 35 psi (2.4 bar) to Progate 2 ice gate system, 75 psi (5.2 bar) carbonator.

### Progate 2 Features

#### Progate Portion Ice Control Features

- 4 Programmable ice dispense sizes
- Automatic/Manual Ice Dispense Modes
- Unit Power On/Off Switch
- Programmable Agitation Time

#### Lid Dispenser

- 4 lid dispenser locations on the unit
- 3 Separate removable lid dispensers for small/medium, large, and extra large lids

#### Straw Holder

- Holds up to 140 regular sleeved straws

# START-UP AND OPERATING INSTRUCTIONS

## ICE DRINK DISPENSER

The ice drink dispenser shall be installed by qualified personnel. Fill the hopper with ice. Dispense several large cups of ice (approximately 20 to 30 seconds total dispensing time) to allow ice to fill the cold plate cabinet. Add ice to the hopper as necessary to refill, and then replace the lid. Allow 10 to 15 minutes for the cold plate to cool down. Repeat this procedure whenever the dispenser has run out of ice. Start up the beverage system and adjust faucets to the proper brix. Contact local syrup distributor for complete information on the beverage system.

In normal operation, pushing the ice dispenser mechanism will cause ice to flow from the ice chute. Dispensing of any faucet will provide beverage of the appropriate flavor.

## LID DISPENSER OPERATION

The new lid holder assembly is designed to help with lid storage and dispensing in a crew serve environment. The holder comes in several sizes to accommodate different size lids.

- Small/Medium holder accommodates both small and medium size lids.
- Large holder accommodates only large lids.
- Extra large holder accommodates only extra large lids.

The lid dispensers are designed to be removed from the front of the merchandiser to make loading the dispensers simpler and allow for cleaning of the merchandiser and lid dispensers. The dispensers can be arranged in any configuration with room for four on the merchandiser face.

## LOADING OF LID DISPENSER

**IMPORTANT:** To assure best operation lids should be replaced when the last lid is below the black plastic bottom.

## Plastic Wrapped lids

1. To remove grab the lid dispenser lifting and pulling away from merchandiser.



**FIGURE 2**



**FIGURE 3**

2. Get fresh sleeve of lids and position so that lid bottom is up.
3. Remove lid dispenser top if present.
4. Tear open bag.



**FIGURE 4**

5. Slide sleeve into tube Pull plastic from stack replace top and place lid dispenser back in position on the merchandiser.



**FIGURE 5**



**FIGURE 6**



## INDIVIDUAL LIDS

1. Stack lids on clean flat surface with lid top facing down.
2. Turn dispenser upside down and trap lids in the tube.
3. Place your hand over the top to capture lids and turn it right side up.



**FIGURE 7**



**FIGURE 8**



**FIGURE 9**

## Lid Dispenser Operation

To dispense a lid:

1. Place hand in finger slot
2. Grab edge of lid and pull.

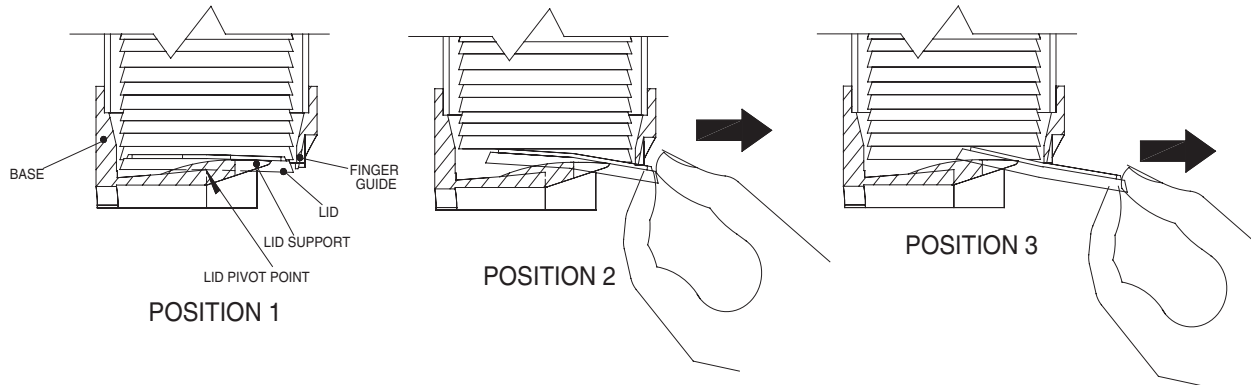


FIGURE 10

## LID DISPENSER MAINTENANCE

The lid dispensers are manufactured out of materials that can survive chlorine-based cleaners and warm water <math><100^{\circ}\text{F}</math>. Ensure that the parts are thoroughly dried before refilling with lids.

**NOTE:** Lid dispenser parts should not be soaked in the powersoak washing machine as this will result in the parts getting scratched. Instead the dispenser parts should be rinsed in warm soap water and then dried.

# CLEANING INSTRUCTIONS

## DISPENSER

### Daily



**WARNING:** Disconnect Power Before Cleaning. Do not use metal scrapers, sharp objects or abrasives on the ice storage hopper, top cover and the agitator disk, as damage may result. Do not use solvents or other cleaning agents, as they may attack the plastic material.

- Soap solution – Use a mixture of mild detergent and warm (100°F) potable water.
- Sanitizing solution – Dissolve 2 packets (4 oz.) Stera Sheen Green Label into 2 gallons of warm (80-100°F) water to ensure 200 ppm of available chlorine.

### Cleaning Exterior Surfaces

Important: Perform the following daily.

1. Remove cup rest from drip tray.
2. Wash the drip tray with soap solution. Rinse drip tray with clean water and allow solution to run down the drain.
3. Wash cup rest with soap solution and rinse in clean water. Install the cup rest in the drip tray.
4. Clean all exterior surfaces of Unit with soap solution, then rinse with clean water.

### Lid Dispenser Maintenance

The lid dispensers are manufactured out of materials that can survive chlorine-based cleaners and warm water <100°F. Ensure that the parts are thoroughly dried before refilling with lids.

**NOTE:** Lid dispenser parts should not be soaked in the powersoak washing machine as this will result in the parts getting scratched. Instead the dispenser parts should be rinsed in warm soapy water when dry.

### Ice Chute Maintenance

The Ice chute needs to be cleaned daily to remove buildups.

**NOTE:** The ice chute has an built in safety feature meaning that when the ice chute cover is removed the unit is disabled. If the ice chute cover is not properly installed the agitator and ice chute gate will not function.

### Removing and Reinstalling the Ice Chute

1. Grab ice chute and slide up until it comes to a stop.
2. Pull forward.
3. Properly clean the ice chute. The ice chute is manufactured out of materials that can survive chlorine-based cleaners and warm water <100°F.

**IMPORTANT:** Do not put the ice chute into a dishwasher.

4. Replace when finished.
5. If agitator or ice chute does not operate remove and reinstall chute cover.

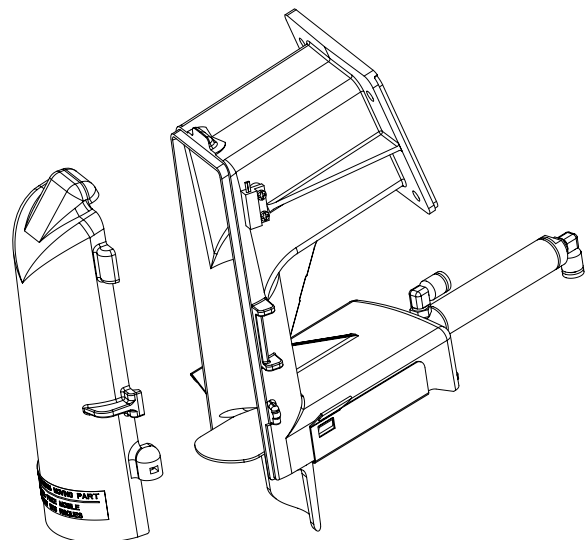


FIGURE 11

## Monthly

### Cleaning Interior Surfaces



CAUTION: When pouring liquid into the hopper, do not exceed the rate of 1/2 gallon per minute.

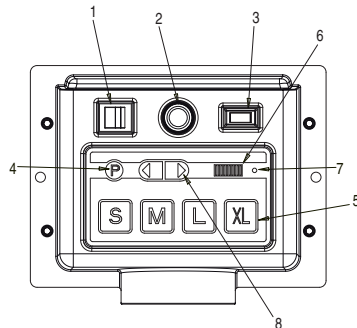
### **IMPORTANT: Perform the following at least once a month.**

1. Remove agitator assembly.
2. Using a nylon bristle brush or sponge, clean the interior of the hopper, top cover and agitator assembly with soap solution. Thoroughly rinse the hopper, cover and agitator surfaces with clean potable water.
3. Reassemble agitator assembly. Take special care to ensure that the thumbscrew is tight.
4. Using a mechanical spray bottle filled with sanitizing solution, spray the entire interior and agitator assembly. Allow to air dry.
5. Remove merchandiser and ice chute cover from unit.
6. With a nylon bristle brush or sponge, clean the inside of the ice chute, gasket, and cover with soap solution and rinse thoroughly to remove all traces of detergent.
7. Reassemble ice chute assembly.
8. Using a mechanical spray bottle filled with sanitizing solution, spray the inside of the ice chute. Allow to air dry.
9. Reinstall merchandiser.
10. Pour the unused sanitizer into the drip tray, this will help prevent the drain line from clogging.

# PROGATE 2 CONTROL BOX OPERATION

## PORTION CONTROL BOX FUNCTIONS

The portion control box on the PROGATE 2 has several functions including dispensing 4 programmed ice portions for 4 cup sizes, programming and a manual dispense mode.










1. MAIN POWER ON/OFF
2. AGITATOR PUSH ON
3. MODE SWITCH MANUAL/PROGATE
4. PROGRAM BUTTON
5. ICE PORTION DISPENSE BUTTONS
6. ICE PORTION BAR
7. PROGATE ON LIGHT
8. PORTION SIZE UP/DOWN KEYS

FIGURE 12

1. **Main Power ON OFF:** Turns power to the entire machine off. Lights Orange when ON.
2. **Agitator Push ON:** Turns on agitator and opens ice gate allowing continuous dispense. This button will turn green in the manual mode and be off in PROGATE automatic. This button will also agitate in the automatic mode but not dispense ice.
3. **Mode Switch Manual/Progate:** Turns on agitator and opens ice gate allowing unlimited ice portion.
4. **Program Button:** The programming button is used with cup size button enabling the user to enter the portion programming mode to adjust the ice portions. The programming button is used with the directional arrow buttons to adjust the agitation time.
5. **Ice Portion Dispense Buttons:** Used to dispense the appropriate ice portion. Can also be used in conjunction with the program button to program a portion size.
6. **Ice Size Program Bar:** The program bar is only active in the program mode as a visual aid in setting the portion size.
7. **Light:** On start up of the unit or during a mode change (Manual to Progate) this light turns orange to inform the user that the unit is going through a self diagnostic test. On completion of this test the light turns green to inform the user that the machine is ready to dispense. If the light remains solid on red and the unit is not dispensing any ice when an ice portion is pressed this should generate a service call. During ice dispense if there is insufficient ice in the ice chute then the light turns red instantaneously to inform the user that there is insufficient ice. Once the user releases the portioned button then the red light goes out.
8. **Portion Up/Down Buttons:** The program bar is only active in the program mode to change the ice dispense program size.

## Programming (Changing) the Ice Portion

To change the size of any of the four ice dispense sizes follow the steps below.

1. To enter the program mode press the **Program Button**  and **Desired Size** button  at the same time and hold for 5 seconds.
2. The Ice Portion Bar will come on 
3. Press the UP ARROW button  to increase the amount of dispensed ice. The LED will move towards the right indicating the Ice Portion has been increased.
4. Press the DOWN ARROW button  to decrease the amount of dispensed ice. The LED will move towards the left indicating the Ice Portion has been decreased.
5. To exit the program mode press the Desired Size button  or wait 10 seconds and the control will return to the dispense mode.
6. Place a cup under the ice chute and press the just programmed dispense size button  If amount dispense amount is not the desired amount repeat the process.

## Agitation Time

The software coding for the progate system involves a direct relationship between the dispense time and the agitation time.

Dispense Rime (mS)	Agitation Ratio	Agitation Time (mS)
50	10	500
70	10	700
90	10	900
110	10	1100
130	10	1300
150	10	1500
170	10	1700
190	10	1900
210	10	2100
230	10	2300

Dispense Rime (mS)	Agitation Ratio	Agitation Time (mS)
50	16	800
70	16	1120
90	16	1440
110	16	1760
130	16	2080
150	16	2400
170	16	2720
190	16	3040
210	16	3360
230	16	3680

Dispense Rime (mS)	Agitation Ratio	Agitation Time (mS)
50	28	1400
70	28	1960
90	28	2520
110	28	3080
130	28	3640
150	28	4200
170	28	4760
190	28	5320
210	28	5880
230	28	6440

The relationship is expressed below.

$$\text{Agitation Time (A}_T\text{)} = \text{Dispense Time (D}_T\text{)} \times \text{Agitation Ratio}^2 \text{ (R}_A\text{)}$$

The agitation time equals the dispense time multiplied by the agitation ratio. The user is given the flexibility to change the agitation ratio thereby altering the agitation time in order to ensure that the ice chute is always filled with ice for all the different ice types.

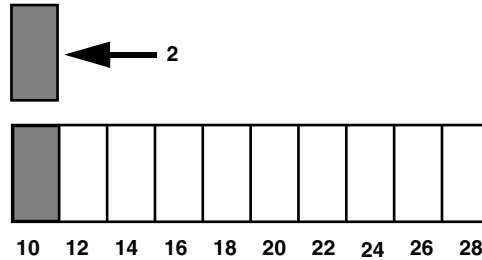



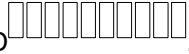


FIGURE 13

### Programming (Changing) the Agitation Time

1. Simultaneously Press and hold for 3 seconds, the  button and also both direction arrow buttons   to enter the programming mode.
2. The LED meter turns ON once the programming mode is entered. Visual feedback of ratio/agitation time is obtained from the visual programming LED . The LED meter shows the existing agitation ratio enabling the user to.
3. Vary the agitation time using the directional arrow buttons. Left to decrease and right direction arrow button to increase.



## Ice Portion Bar

The portion bar is used to determine the amount of time programmed for each size button. Each button has a minimum and maximum amount of time that can be programmed. If a button cannot be adjusted to the size desired use another button to get the desired results.

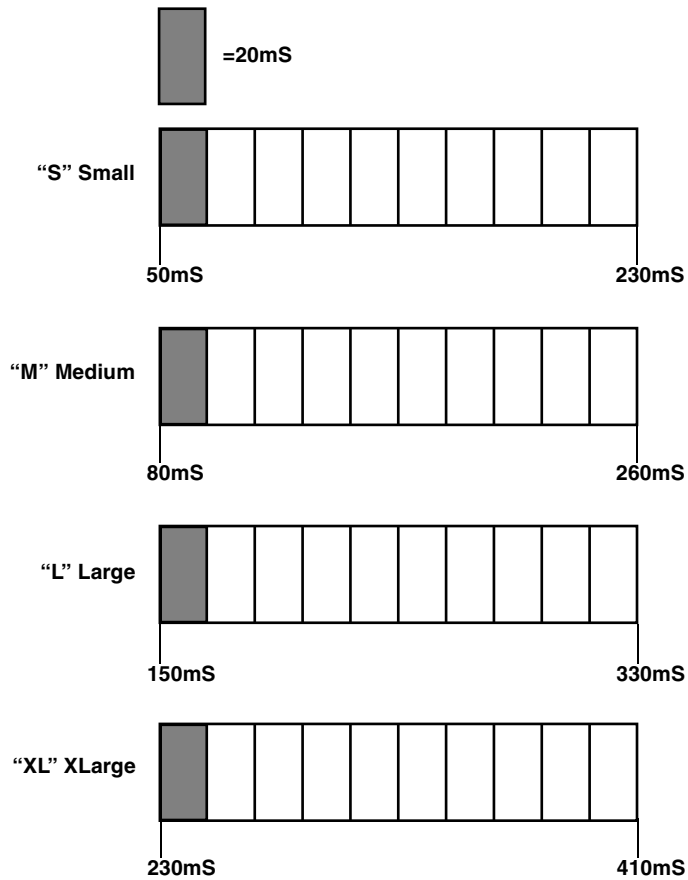


FIGURE 14

**IMI Cornelius Inc.**  
**[www.cornelius.com](http://www.cornelius.com)**