



# ProMaker

## Boom Profile Creator

Web-based interface

## Operator Manual



Thank you for your business!

At CapstanAG, our goal is to redefine the way people do their chemical application. Our PWM control systems have been setting the bar for maximum productivity for more than 20 years. Our focus on performance, support, and education have dramatically changed the landscape of agricultural chemical application.

CapstanAG specializes in creating proprietary systems for the agricultural industry, primarily focusing on chemical and fertilizer applications. Our inventive process involves research, engineering, design, and lab and field testing.

## Service Contact Information

If a problem occurs with your system that cannot be corrected with the information in this manual, please contact your dealer for service and technical assistance. If further assistance is needed, contact CapstanAG.

System Purchased: \_\_\_\_\_

Dealer: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

City,State/Province, Zip: \_\_\_\_\_

## Factory Service/Repairs

CapstanAG  
4225 S.W. Kirklawn Ave. | Topeka, KS 66609

Hours: 8:00 a.m. to 4:00 p.m. CST

Toll-free number: (855) 628-7722 | Fax: (785) 232-7799

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# Contents

<b>Chapter 1: Introduction.....</b>	<b>5</b>
This Manual.....	5
System Identification.....	5
 <b>Chapter 2: Setup.....</b>	 <b>7</b>
Prepare to Use ProMaker.....	7
Main Webpage Explanation.....	7
 <b>Chapter 3: Operation.....</b>	 <b>9</b>
Make a New ProMaker Profile.....	9
Make a Boom Profile.....	11
Upload and Change a ProMaker Profile.....	13
 <b>Chapter 4: Troubleshooting.....</b>	 <b>15</b>
Troubleshooting Charts.....	15
 <b>Index.....</b>	 <b>17</b>

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# Chapter 1: Introduction

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## This Manual

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This manual includes setup, operation, maintenance, and troubleshooting information for the system you purchased.

Make sure that all personnel have read this manual and that they thoroughly understand the safe and correct operation and maintenance procedures. Failure to do so could result in personal injury or equipment damage.

Right and left sides of the system are determined by facing the direction of forward travel of the machine on which the system is installed.

The information, screenshots, and other illustrations were correct at the time of publication. Changes can occur without notice.

This manual contains important information on how to safely and correctly install, operate, and maintain CapstanAG products. These instructions will help keep personnel safe, reduce downtime, and increase the reliability and life of the equipment, its components, and related systems.

Review the safety information in the manual(s) from the Original Equipment Manufacturer (OEM).

Follow the instructions (in this manual) and in the OEM manual(s) for each step, to make sure that work conditions in and around the OEM equipment are safe.

It is important for all individuals working with chemicals to understand the potential risks, necessary safety precautions, and proper response in the event of accidental contact.

Review the OEM manual(s) for chemical safety information.

Read, understand, and review the procedures in this manual and OEM manual(s). Use the Safety Data Sheets (SDS) and the required Personal Protective Equipment (PPE) for hazardous chemicals.

Please keep this manual and all enclosed documentation in an accessible location known to all operators, installation, and maintenance personnel.

If you do not understand the CapstanAG equipment after reading this manual, please obtain the proper training before working with equipment, to make sure that your own safety, as well as your co-workers' safety, is maintained.

Do not attempt to operate any equipment or system until you completely understand why, when, and how it operates. If you are uncertain after studying this manual, please contact CapstanAG.

## System Identification

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Write the system name, serial number, and other information down in the Service Contact Information on the inside cover of this manual. Your dealer will use these numbers when you order parts. File a copy of the identification numbers in a secure place off the machine.

You will also need login credentials for this software. Contact your CapstanAG representative if you do not have your login information.

If you are not the original owner of this machine, it is in your interest to contact your local CapstanAG dealer to inform them of this unit's serial number. Providing this information will help CapstanAG notify you of any issues or product improvements.



# Chapter 2: Setup

## Prepare to Use ProMaker

A CapstanAG representative must provide credentials for the website before you can use the program.

## Main Webpage Explanation

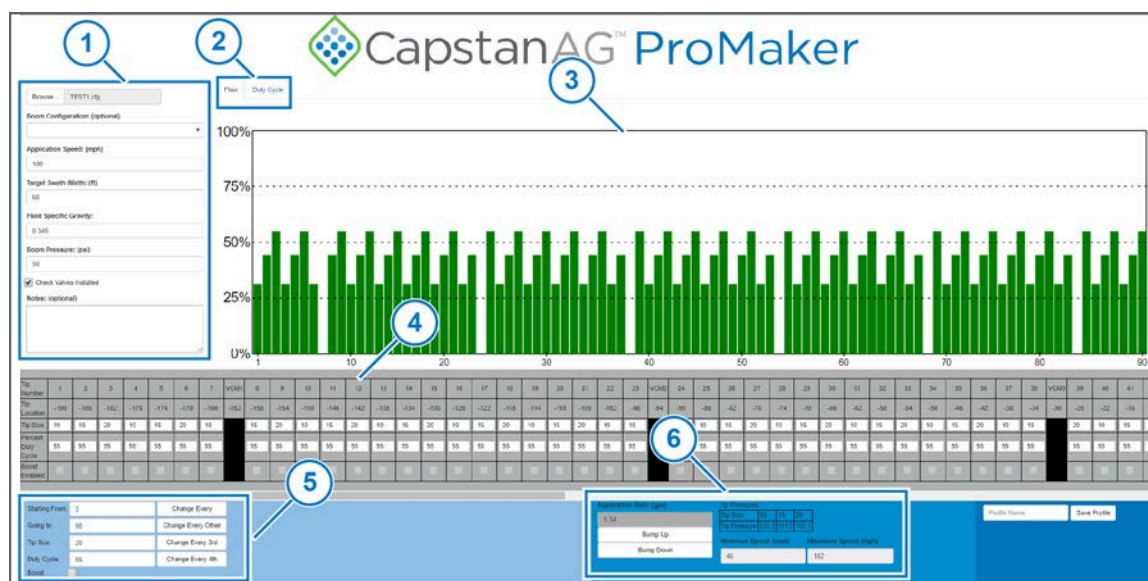


Figure 1:

Left side menu (1) includes:

- **Browse**—Lets you to find and edit an existing profile
- **Boom Configuration: (optional)**—Goes to the boom configuration screen. See make a boom profile for more information.
- **Application Speed**—The target ground speed the product will be applied at
- **Target Swath Width**—The target width of product application
- **Fluid specific gravity**—This information will be found on the label for the chemicals you use
- **Boom Pressure**—The target boom pressure for application
- **Check Valves Installed**—If the boom uses CapstanAG check valves this box should be clicked

The tabs (2) show two different views of nozzles in the bar graph (3) below.

- **Flow**—proportional flow
- **Duty Cycle**—proportional duty cycle

When all nozzles have the same tip size, the bar graphs look the same. At different tip sizes larger tips will show more flow at the same duty cycle

You can manually enter the tip size and duty cycle for each nozzle using the table in the gray box (4) below the menu and bar graph.

To enter information more quickly use the information in the light blue box (5) on the bottom left side.

After the general profile information has been entered, the bottom middle darker blue box (6) will show the application rate and tip pressures for each configured tip size. Use **Bump Up** or **Bump Down** to quickly adjust the target rate. **Minimum Speed:** and **Maximum Speed:** boxes are only relevant when using Synchro mode. This will be the speed range where the target rate can be achieved within the inputted system parameters.



# Chapter 3: Operation

## Make a New ProMaker Profile

Figure 2:

- Log into your ProMaker account at [CapstanAG.com](#).  
Contact your CapstanAG representative if you do not have your login information.
- Click in the box (1) below **Application Speed**: and enter the target ground speed the product will be applied at.
- Click in the box (2) below **Target Swath Width**: and enter the target width of product application.
- Click in the box (3) below **Fluid Specific Gravity**: and enter the information for the product you will apply.  
This information can be found on the label for the chemicals you use. You must enter this value, or a message (4) will show.
- Click on the box (5) below **Boom Pressure**: and enter the target boom pressure for application.  
**Note:** This value is NOT the pressure at the tips.  
You must enter this value, or a message (6) will show.
- If the boom uses CapstanAG check valves, make sure to put a check mark in the box (7) next to **Check Valves Installed**.
- If desired, click in the box (8) below **Notes: (optional)** and enter any additional information you want to have with this profile.  
This information will only show in ProMaker and will not show on the CapView display.
- Enter your tip information:
  - Click in the box (9) next to **Starting From**: and enter the starting tip number.
  - Click in the box (10) next to **Going to**: and enter the ending tip number.
  - Click in the box (11) next to **Tip Size**: and enter the correct tip size.

This box can be left blank to change duty cycle without changing the tip size.

- d) Click on the box (12) next to **Duty Cycle:** and enter the value of the desired duty cycle.

This box can be left blank to change tip size without changing the duty cycle.

- e) If you are using boost, make sure to put a check mark in the box (13) next to **Boost**.

A nozzle can only be boost if its duty cycle is 0.

- f) Select which tips to change from the list (14):

- Change Every
- Change Every Other
- Change Every 3rd
- Change Every 4th

Hovering over a button will show the changes you are about to make in orange.

Information will be added to the bar graph (15) and the tip information table (16).

- g) Repeat adding the tip size information until you have all of the tip sizes for your profile added.

If using a boom profile, buttons will show to let you change all valves with the same tip size in the range of start to end. When using a boom profile, tip size is disabled as it is configured in the boom profile.

9. To change the application rate, select **Bump Up** (17) or **Bump Down** (18).

The profile can also be changed by directly editing information in the grey region.

10. Click on the **Profile Name** box (19) and enter the desired name of the profile.

11. Click **Save Profile** (20).

The profile is now ready to upload to the CapView, see the information to [Upload a Profile to the CapView](#).

## Make a Boom Profile

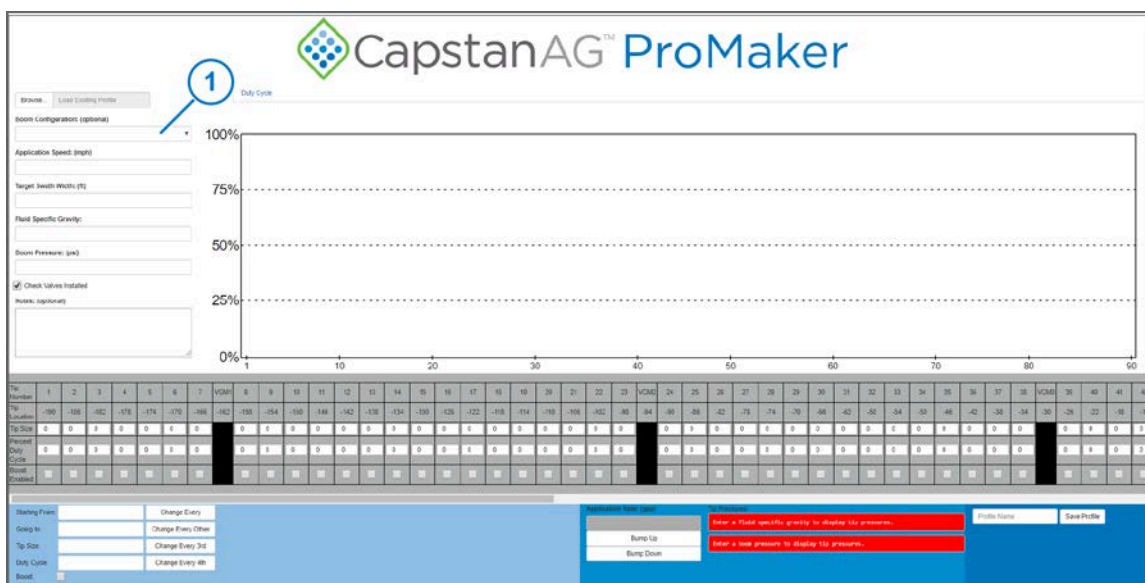


Figure 3:

1. Log into your ProMaker account at [CapstanAG.com](#).  
Contact your CapstanAG representative if you do not have your login information.
2. Click on the menu (1) below **Boom Configuration**.
3. Select **Create a configuration** from the list.

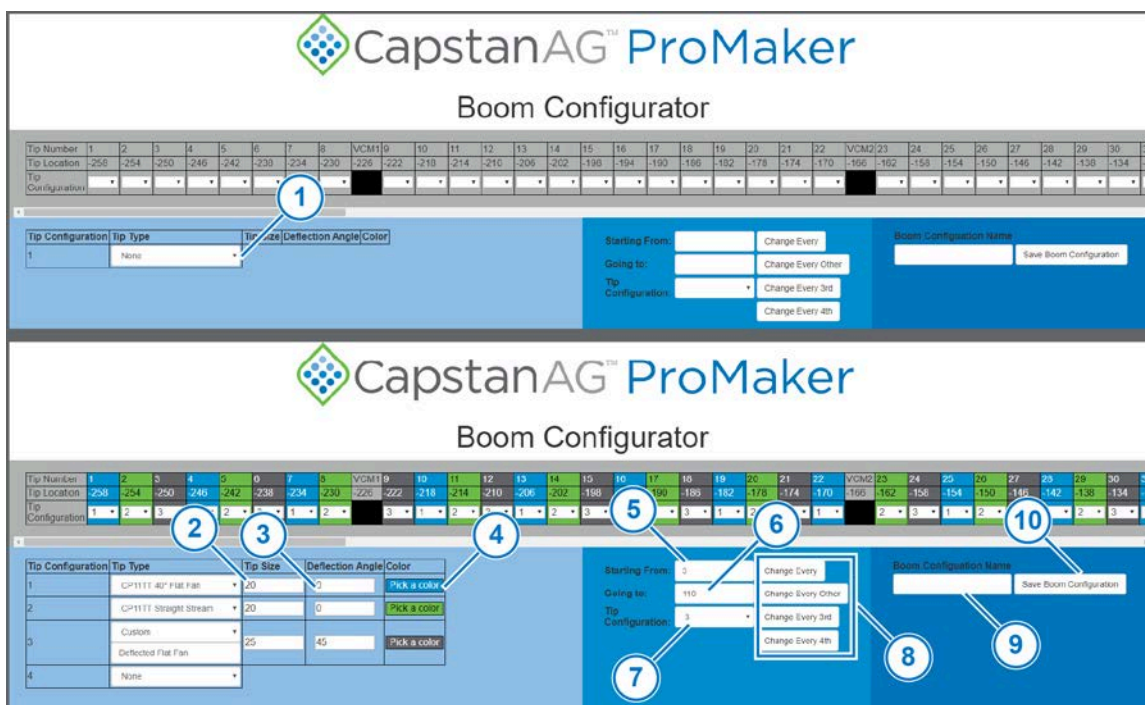


Figure 4:

4. Click on the box (1) below **Tip Type**.
5. Select the desired tip type from the list.  
Only use custom if the desired tip is not shown on the existing list.
6. Click on the box (2) below **Tip Size**.
7. Enter the correct type size.
8. Click on the box (3) below **Deflection Angle**.
9. Enter the correct value.
10. If desired, click on **Pick a color** (4).
11. Pick the desired color and click anywhere outside the box that shows.
12. Repeat Steps 4 to 12 for each tip type installed on the boom.
13. After the tip configurations are made, assign the tips to the correct location on the boom.
  - a) Click in the box (5) next to **Starting From:** and enter the starting tip number.
  - b) Click in the box (6) next to **Going to:** and enter the ending tip number.
  - c) Click in the box (7) next to **Tip Configuration:** and enter the correct tip configuration list on the left side of the page.
  - d) Select which tips to change from the list (8):
    - Change Every
    - Change Every Other
    - Change Every 3rd
    - Change Every 4th
  - e) Repeat adding the tip configuration information until you have all of the information correct for your profile.  
Tip configurations can also be changed individually using the menu for each tip in the gray box.
14. Click on the **Boom Configuration Name** box (9) and enter the desired name of the configuration.
15. Click **Save Boom Configuration** (10).

Once a boom configuration has been saved there is no way to edit, copy, or delete a boom configuration.

You will automatically go back to the main ProMaker page.

## Upload and Change a ProMaker Profile

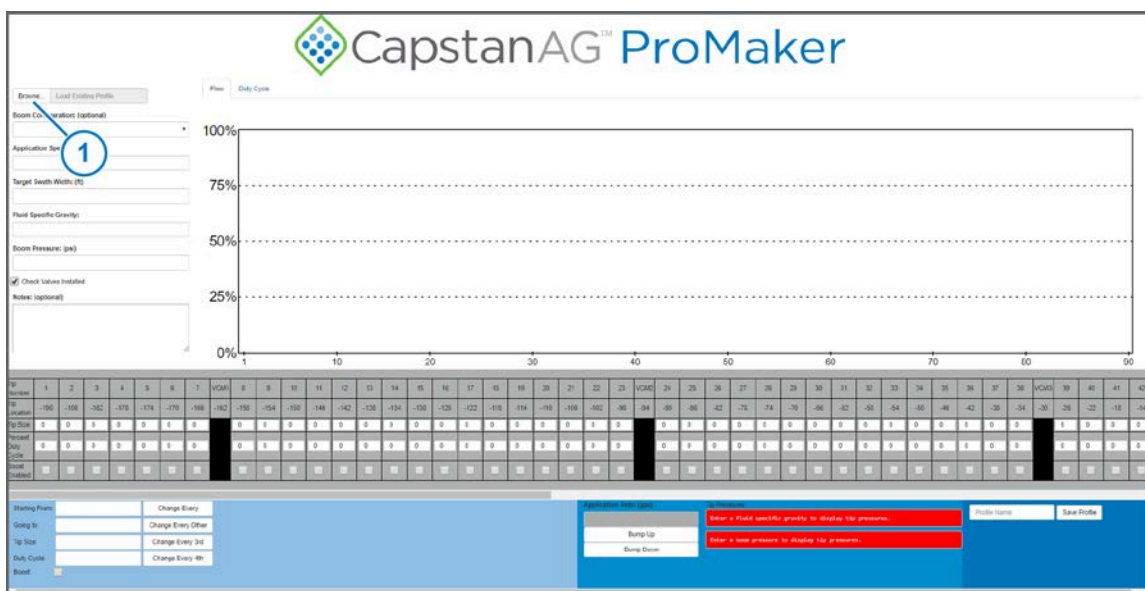


Figure 5:

1. Log into your ProMaker account at
2. Click on **Browse** (1).
3. Find the profile that you want to use and click **Open**.  
The profile information will show.

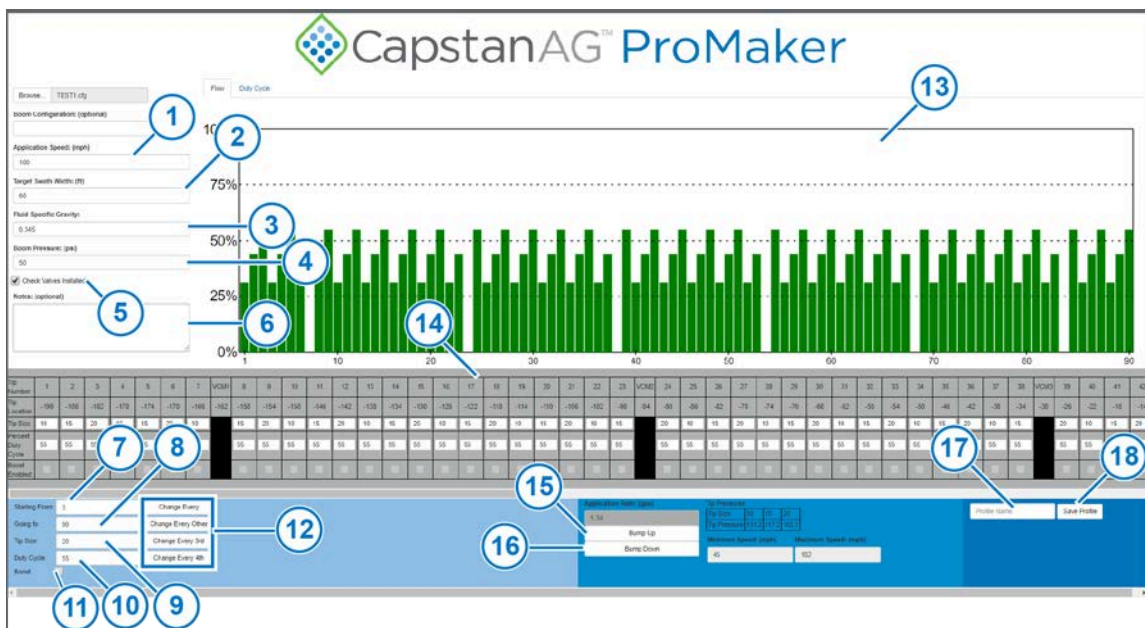


Figure 6:

4. To change the application speed, click in the box (1) below **Application Speed:** and enter the target ground speed the product will be applied at.

5. To change the swath width, click in the box (2) below **Target Swath Width:** and enter the target width of product application.
6. To change the fluid specific gravity, click in the box (3) below **Fluid Specific Gravity:** and enter the information for the product you will apply.
7. To change the boom pressure, click on the box (4) below **Boom Pressure:** and enter the target boom pressure for application.

**Note:** This value is NOT the pressure at the tips.

8. If the boom uses CapstanAG check valves, make sure to put a check mark in the box (5) next to **Check Valves Installed.**
9. If desired, click in the box (6) below **Notes: (optional)** and enter any additional information you want to have with this profile.
10. Add the tip size information to the profile:
  - a) Click in the box (7) next to **Starting From:** and enter the starting tip number.
  - b) Click in the box (8) next to **Going to:** and enter the ending tip number.
  - c) Click in the box (9) next to **Tip Size:** and enter the correct tip size.
  - d) Click on the box (10) next to **Duty Cycle:** and enter the value of the desired duty cycle.
  - e) If you are using boost, make sure to put a check mark in the box (11) next to **Boost.**
  - f) Select which tips to change from the list (12):
    - Change Every
    - Change Every Other
    - Change Every 3rd
    - Change Every 4th

Information will be added to the bar graph (13) and the tip information table (14).

- g) Repeat adding the tip size information until you have all of the tip sizes for your profile added.
11. To change the application rate, select **Bump Up** (15) or **Bump Down** (16).
12. Click on the **Profile Name** box (17) and enter the desired name of the profile.
13. Click **Save Profile** (18).

# Chapter 4: Troubleshooting

## Troubleshooting Charts

Problem	Correction
If you have configured valves with duty cycles but the graph is blank .	verify application speed, swath width, specific gravity, and boom pressure are appropriate values otherwise the graph will be blank
If you can't horizontally scroll to more valves	verify you use the scrollbar at the bottom of the gray box not the scroll bar at the bottom of the page.
If you can't enable boost on a nozzle	verify the duty cycle for that nozzle is 0.
If you can't change the tip size for a nozzle but you wish to	make you are not using a boom profile or make a boom profile with the desired changes.





# Index

## B

Boom Profile [11](#)

## C

Change a ProMaker Profile [13](#)

## M

Main Webpage Explanation [7](#)

Make a Boom Profile [11](#)

Make a New ProMaker Profile [9](#)

## P

Prepare to Use ProMaker [7](#)

## S

System Identification [5](#)

## T

This Manual [5](#)

Troubleshooting [15](#)

## U

Upload a ProMaker Profile [13](#)

Upload and Change a ProMaker Profile [13](#)



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