



Air-Pro® Meter Ultra Test Stand Kit Meter Test Stand



When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

General Information

These are instructions for installing attachments and accessories to mount and operate the Great Plains Air-Pro® Meter on the MeterMax® Ultra Test Stand.

These instructions apply to an installation of:

Kit	Kit Description
403-531A	Air-Pro® Ultra Test Stand Kit

One kit provides everything needed to operate an Air-Pro® meter on the MeterMax®^a Ultra Test Stand, seed disks not included.

Tools Required

- basic hand tools

CAUTION

Entanglement Hazard:

Keep hands, loose clothing, and hair away from all moving parts. Unplug Test Stand when making adjustments or servicing. The drive can cause serious bodily injury.



Figure 1
Air-Pro® Meter Mounted on the
MeterMax® Ultra Test Stand

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Call-Outs

- ① to ⑨ Single-digit callouts identify components in the currently referenced Figure. These numbers may be reused for different items from page to page.
- ⑪ to ⑳ Two-digit callouts in the range 11 to 23 reference new parts from the list on page 22.

^a. MeterMax® is a registered trademark of Precision Planting, Inc.

Remove Existing Attachments

Refer to Figure 2

1. Remove the following six attachments from the MeterMax® UltraTest Stand and store with unit.

- Finger Meter Left Hand ①
- Finger Meter Right Hand ②
- Deere ProSeries™ (2 pieces) ③
- Seed Tube Location Bracket ④
- Seed Tube ⑤

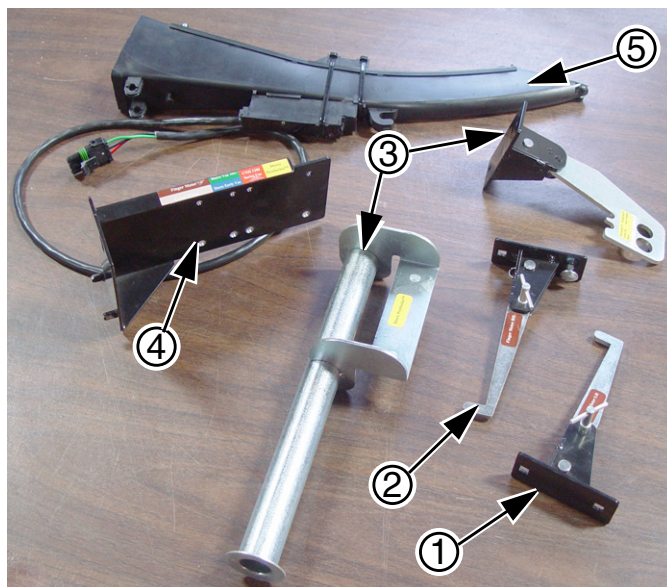


Figure 2
Attachments To Be Removed

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Mount Brackets and Drive Hub

Refer to Figure 3

2. Select one each of the following:
 - ⑭ drive hub
 - ⑮ RH bracket
 - ⑯ LH bracket (meter mount and clamp asy).

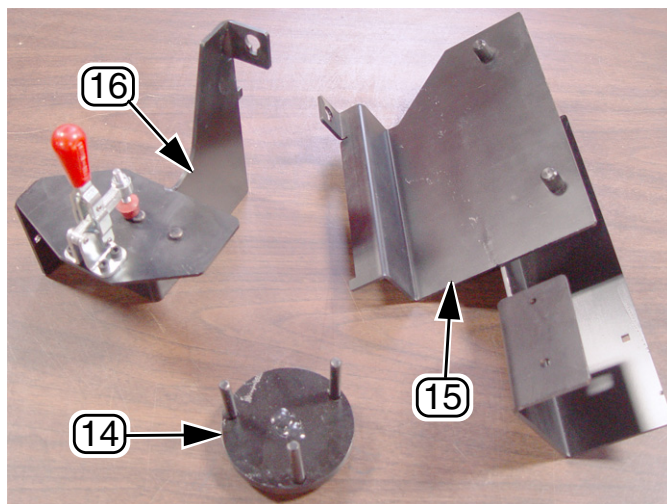


Figure 3
Air-Pro® Mounting Brkts & Drive Hub

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Refer to Figure 4

3. Mount the drive hub (14) and secure with existing long pin (6) (same pin used for the White meter drive).

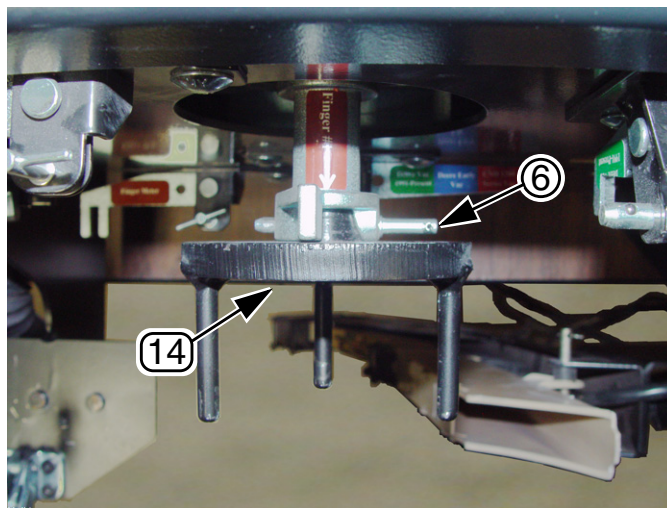


Figure 4
Drive Hub and Long Pin

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Refer to Figure 5

4. Mount the LH Air-Pro® meter mount clamp assembly (16) and secure with existing hardware (8).
5. Mount the RH Air-Pro® MeterMax® mount (15) and secure with existing hardware (7).

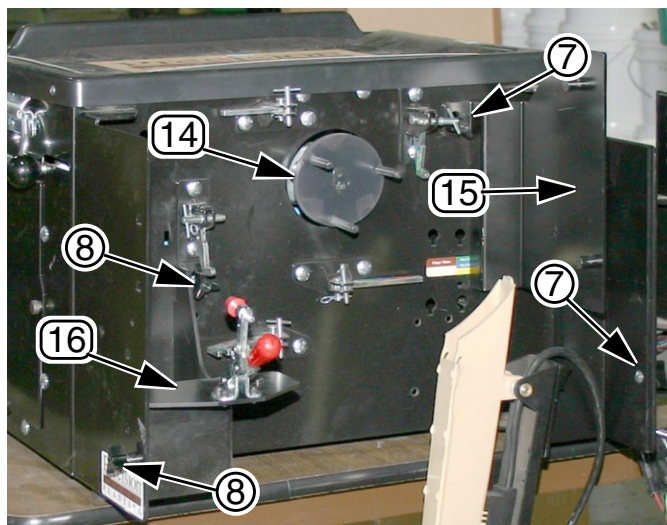


Figure 5
Test Stand Showing Brackets & Drive

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Refer to Figure 6

6. Cut two 1/4in spacers (23) from the pressure sensing 1/4in hose supplied with the Air-Pro® kit.
7. Use the two spacers to center the Air-Pro® seed tube in the seed tube bracket.
8. Position seed tube and holder in its proper location on the RH Air-Pro® meter mount and secure with existing hardware (9).

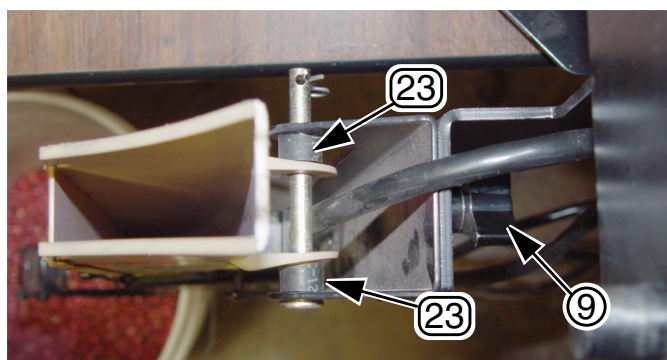


Figure 6
Seed Tube Centered in Bracket

31063

Connect Blower Supply Hose

Refer to Figure 7, Figure 8 and Figure 9

9. The Air-Pro® meter uses the blower port found at the back of the Ultra Test Stand. Make sure you add the hose extension ① for a secure connection.
10. Cap ②① the existing pressure sensing hose that is connected to the blower supply hose.

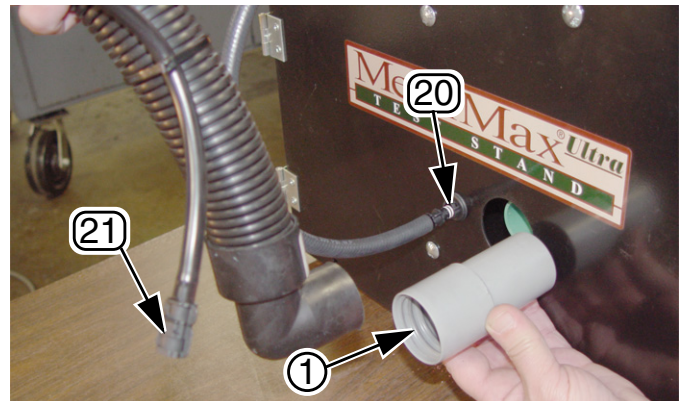


Figure 7
Hose Extension and Sensing Hose

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11. Secure the 1/4in barb quick connect ②② to one end of supplied pressure sensing hose ②③ and plug in back of Ultra Test Stand.

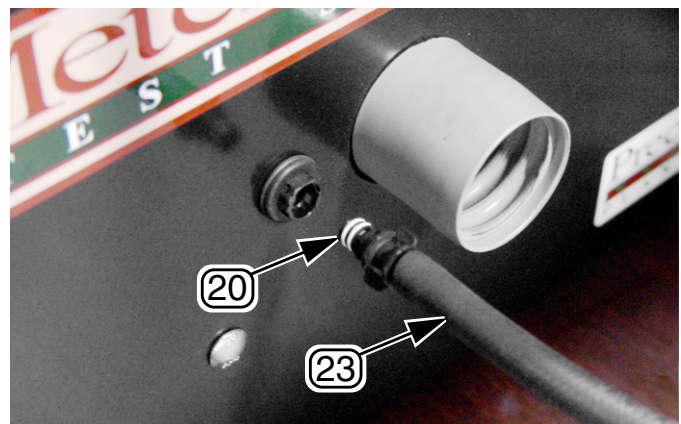


Figure 8
Quick Connect

31065



Figure 9
Hoses Connected Back of Stand

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Mount Air-Pro® Meter

Refer to Figure 10

12. Remove the plastic plug from the meter housing ③.

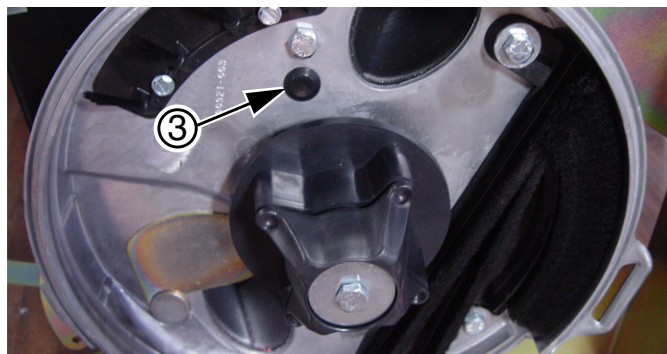


Figure 10
Meter Housing Plastic Plug

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Refer to Figure 11 and Figure 12

13. After you remove the plastic plug from the meter housing install the $\frac{1}{4}$ in pressure port ②② and nut ①⑦ as shown.
14. The pressure sensing hose from back of the Ultra Test Stand is connected at this port.
15. Use the $1\frac{1}{4}$ in to $1\frac{1}{2}$ in adaptor ⑤ to transition the blower supply hose to the air in port of the meter.

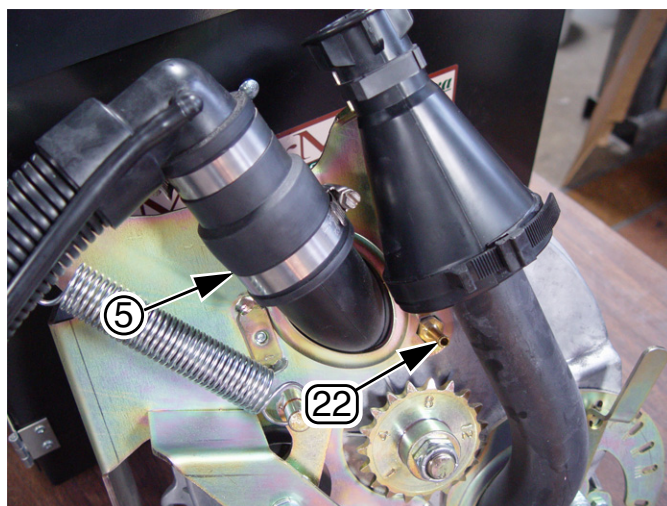


Figure 11
Adaptor for Blower Hose

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Refer to Figure 12

16. Mount the Air-Pro® meter on the locating pins of the brackets installed in Figure 5 and clamp in place.

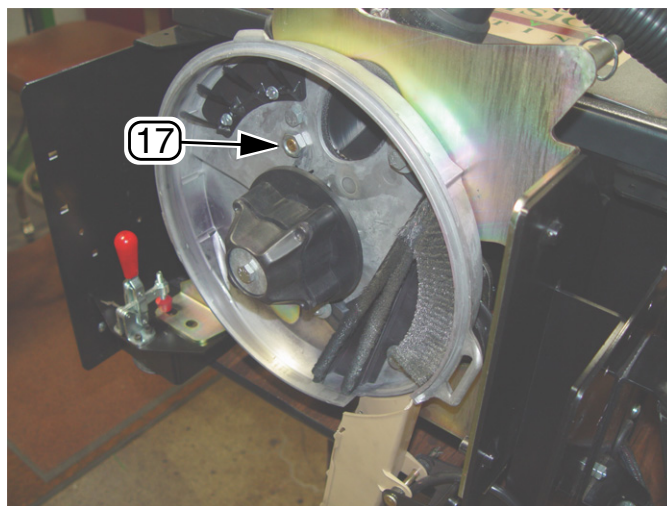


Figure 12
Mount Air-Pro® on Test Stand

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Refer to Figure 13

17. Make sure the top of the seed tube ⑥ is located properly behind the drip apron.

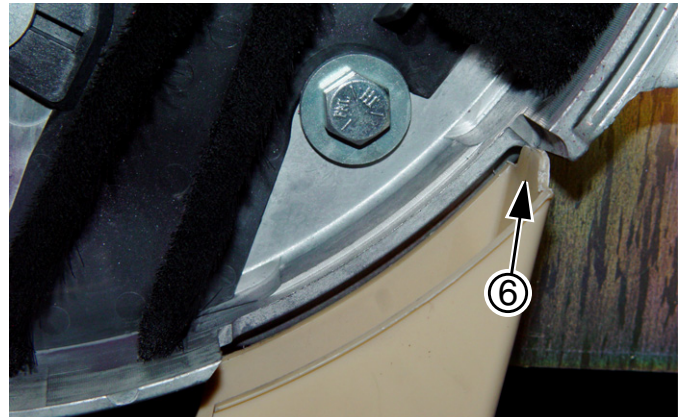


Figure 13
Top of Seed Tube

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Refer to Figure 14

18. Cut seed hose ⑱ 1½ in above the black molded boot. Insert the funnel ⑲ and attach to top of seed in port of the Air-Pro® meter. **Refer to Figure 1 on page 1.**

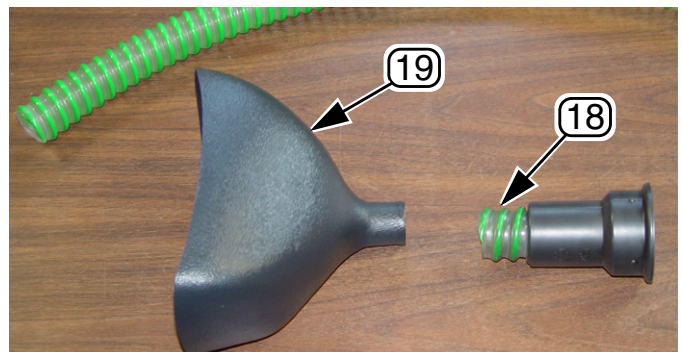


Figure 14
Funnel and Seed Hose

31086

Display Monitor

Refer to Figure 15

NOTICE

Confusion Risk:

Due to the direction of meter rotation program in the vacuum mode, the display will show “Vacuum” ⑦ but the reading you see is actually “PRESSURE IN INCHES OF WATER.”

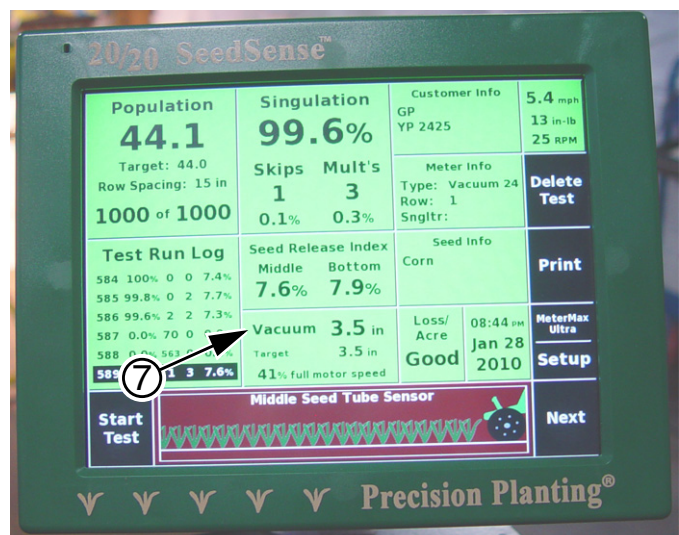


Figure 15
Seed Sense Display Monitor

31070

Meter Pressurization

Note: These are suggested initial (starting) pressures.
Higher or lower pressure adjustments can be expected to maximize singulation.

Initial Meter Pressurization: Cotton

1.5 inches of water (any seed density)

Initial seed inlet Shutter: 2

Initial Meter Pressurization: Milo

1.5 inches of water (all disk, any seed density)

Initial seed inlet Shutter: 1

Initial Meter Pressurization: Soybeans

2.0 inches of water (84 cell disk, any seed density)

3.0 inches of water (168 cell disk, any seed density)

Initial seed inlet Shutter: 2

Initial Meter Pressurization: Sunflowers

817-851C Sunflower Oil Large

8500 seeds/pound (or fewer)

8500-7000 s/lb 1.25 inches of water

7000-5500 s/lb 1.75 inches of water

5500 s/lb and fewer 2.25 inches of water

Adjust pressure as needed to achieve desired population.

Initial seed inlet Shutter: 2

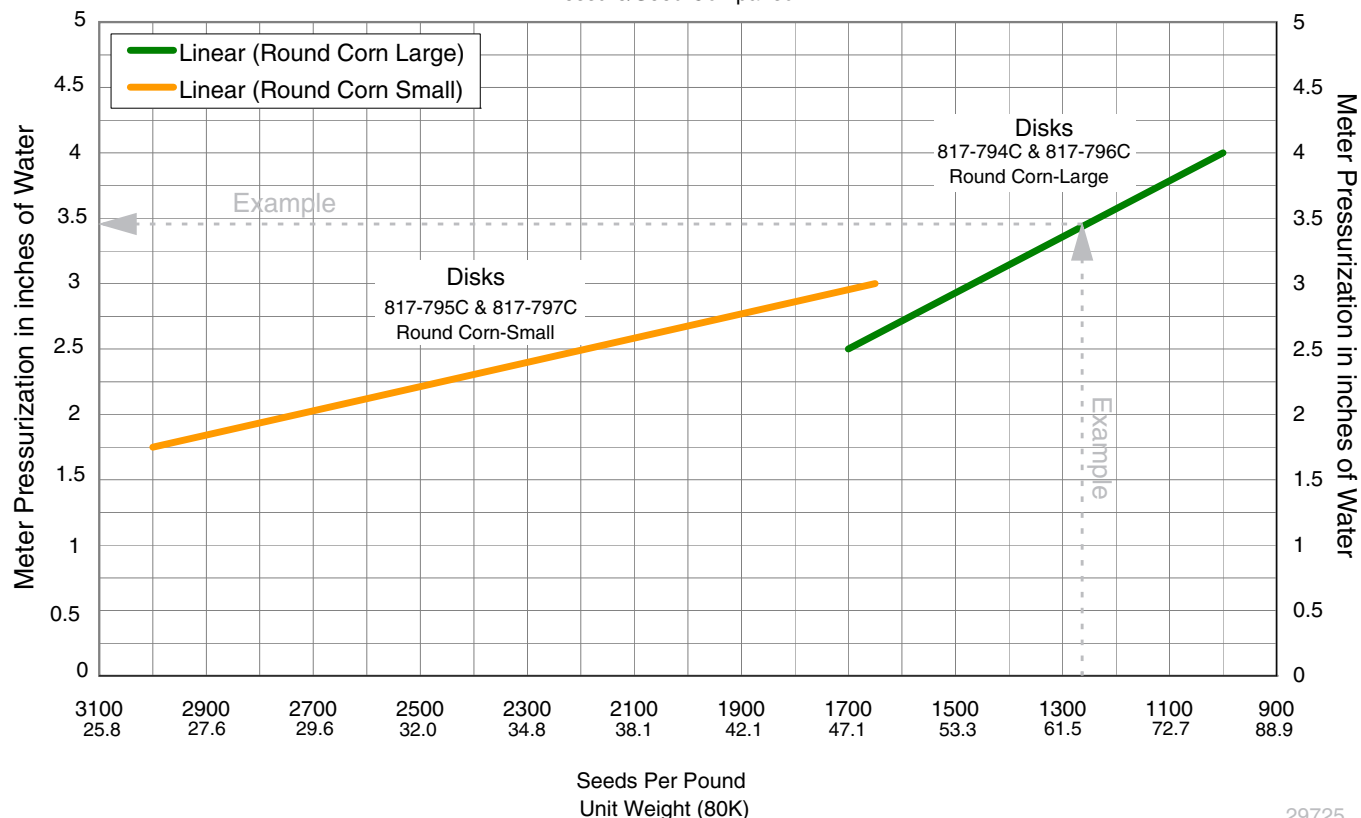
Reading a Corn Pressure Chart

1. Pick the chart based on seed shape (flat, round).
Example: large round corn
2. Pick a line based on seed size (large, small).
Example: the right line below
3. Find the seed density on the bottom scale.
Example: 1260 seeds/pound
4. Read the suggested starting pressure on the left scale, where the line (example shown as dotted gray) intersects the density.
Example: 3.4 inches of water

Initial seed inlet Shutter for corn is: 3

Initial Meter Pressurization: Round Corn

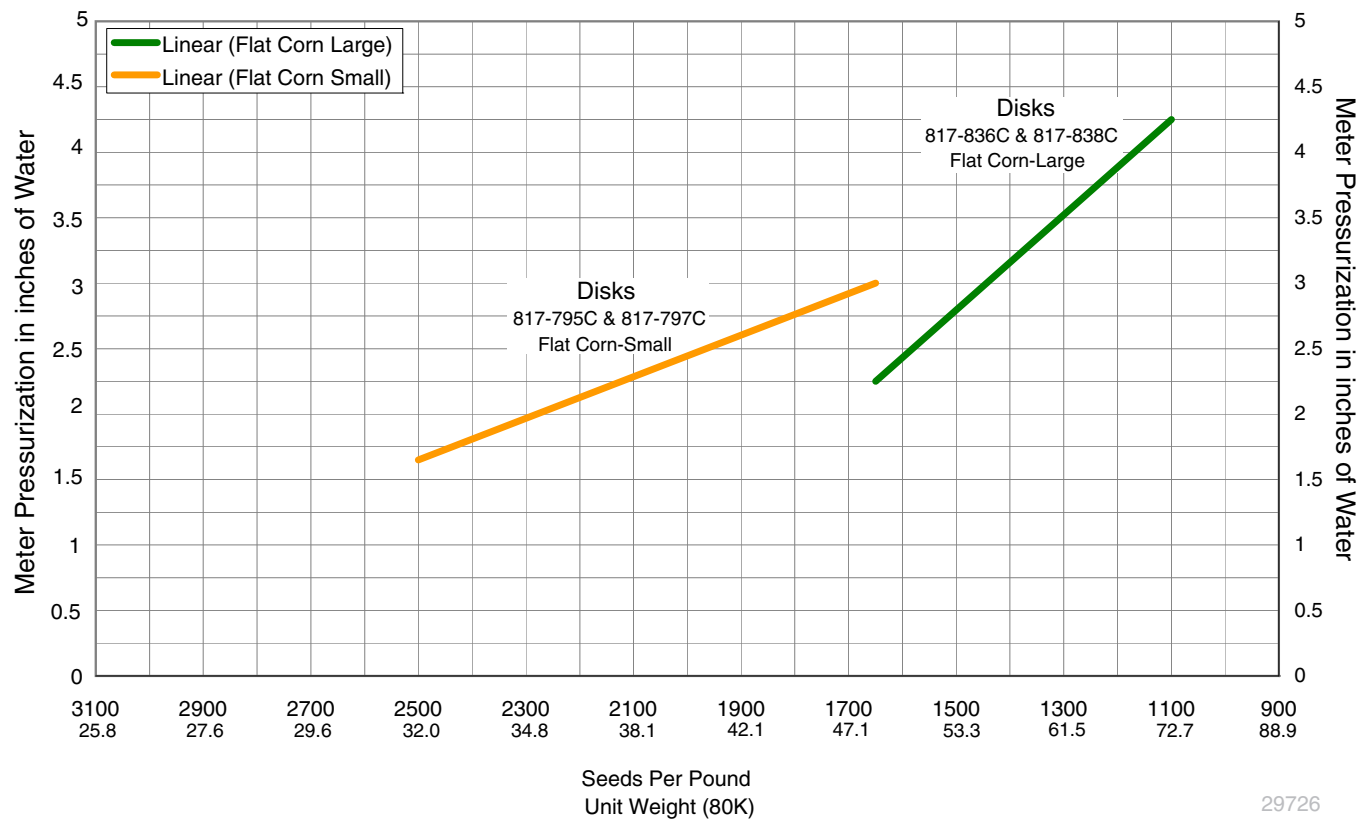
Pressure/Seed Comparison



29725

Initial Meter Pressurization: Flat Corn

Pressure/Seed Comparison



29726

Air-Pro® Meter Disk Selection

CORN

24 Cell Disk

817-794C Corn Round Large

817-795C Corn Round Small

817-836C Corn Flat Large

(Sweet Corn plants in Round Corn disks)

CORN

40 Cell Disk

817-796C Corn Round Large

817-797C Corn Round Small

817-838C Corn Flat Large

Seed Size Recommendations.

Corn Round Large	Seeds per Pound 1700 (or fewer)	Unit Weight (or heavier) 47 pounds
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Corn Round Small	Seeds per Pound 1650 (or more)	Unit Weight (or lighter) 48.5 pounds
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Corn Flat Large	Seeds per Pound 1650 (or fewer)	Unit Weight (or lighter) 48.5 pounds
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Corn Flat Small	Seeds per Pound 1650 (or more)	Unit Weight (or lighter) 48.5 pounds
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ATTENTION: This Corn is planted with the Corn Round Small Disks!!!!!!

		(Recommended)
40in Rows	Below 19 400 Population @ 5.5 MPH	24 Cell Disk
	Above 19 400 Population @ 5.5 MPH	40 Cell Disk
38in Rows	Below 20 500 Population @ 5.5 MPH	24 Cell Disk
	Above 20 500 Population @ 5.5 MPH	40 Cell Disk
36in Rows	Below 21 600 Population @ 5.5 MPH	24 Cell Disk
	Above 21 600 Population @ 5.5 MPH	40 Cell Disk
30in Rows	Below 25 900 Population @ 5.5 MPH	24 Cell Disk
	Above 25 900 Population @ 5.5 MPH	40 Cell Disk
22in Rows	Below 35 300 Population @ 5.5 MPH	24 Cell Disk
	Above 35 300 Population @ 5.5 MPH	40 Cell Disk
Twin Row 40in 20in Rows	Below 38 900 Population @ 5.5 MPH	24 Cell Disk
	Above 38 900 Population @ 5.5 MPH	40 Cell Disk
Twin Row 38in	Below 40 900 Population @ 5.5 MPH	24 Cell Disk
	Above 40 900 Population @ 5.5 MPH	40 Cell Disk
Twin Row 36in	Below 43 200 Population @ 5.5 MPH	24 Cell Disk
	Above 43 200 Population @ 5.5 MPH	40 Cell Disk
Twin Row 30in 15in Rows	Below 51 800 Population @ 5.5 MPH	24 Cell Disk
	Above 51 800 Population @ 5.5 MPH	40 Cell Disk

COTTON

60 Cell Disk

817-857C

Seed Size Recommendations.

This disk should plant all seed sizes and row spacings for Cotton.

32228A

AIR-PRO® METER DISK SELECTION

MILO
65 Cell Disk
817-849C

MILO
130 Cell Disk
817-800C

Seed Size Recommendations.

These disks should plant all seed sizes of Milo and Pelletized Sugar Beets.		
		<i>(Recommended)</i>
40in Rows	Below 48 300 Population @ 6 MPH Above 48 300 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
38in Rows	Below 50 800 Population @ 6 MPH Above 50 800 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
36in Rows	Below 53 600 Population @ 6 MPH Above 53 600 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
30in Rows	Below 64 300 Population @ 6 MPH Above 64 300 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
22in Rows	Below 87 700 Population @ 6 MPH Above 87 700 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
Twin Row 40in 20in Rows	Below 96 500 Population @ 6 MPH Above 96 500 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
Twin Row 38in	Below 101 600 Population @ 6 MPH Above 101 600 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
Twin Row 36in	Below 107 200 Population @ 6 MPH Above 107 200 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
Twin Row 30in 15in Rows	Below 128 700 Population @ 6 MPH Above 128 700 Population @ 6 MPH	65 Cell Disk 130 Cell Disk
10in Rows	Below 193 000 Population @ 6 MPH Above 193 000 Population @ 6 MPH	65 Cell Disk 130 Cell Disk

SOYBEAN
84 Cell Disk
817-798C

SOYBEAN
168 Cell Disk
403-551D

Seed Size Recommendations.

These disks should plant all seed sizes of Soybeans. Small edible beans (navy, black jack, black eye peas, etc) will plant with this disk also.		
		<i>(Recommended)</i>
40in Rows	Below 76 900 Population @ 6 MPH Above 76 900 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
38in Rows	Below 81 000 Population @ 6 MPH Above 81 000 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
36in Rows	Below 85 500 Population @ 6 MPH Above 85 500 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
30in Rows	Below 102 500 Population @ 6 MPH Above 102 500 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
22in Rows	Below 139 800 Population @ 6 MPH Above 139 800 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
Twin Row 40in 20in Rows	Below 153 800 Population @ 6 MPH Above 153 800 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
Twin Row 38in	Below 161 900 Population @ 6 MPH Above 161 900 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
Twin Row 36in	Below 170 900 Population @ 6 MPH Above 170 900 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
Twin Row 30in 15in Rows	Below 205 100 Population @ 6 MPH Above 205 100 Population @ 6 MPH	84 Cell Disk 168 Cell Disk
10in Rows	Below 307 700 Population @ 6 MPH Above 307 700 Population @ 6 MPH	84 Cell Disk 168 Cell Disk

32228B

AIR-PRO® METER DISK SELECTION

SUNFLOWER
24 Cell Disk
817-851C SUNFLOWER OIL LARGE

This disk should plant all seed sizes of popcorn.

Seed Size Recommendations.

Sunflower Oil Large	Seeds per Pound
2's - most 3's	8500 (or fewer)
And a few of the larger 4's	(or fewer)

Volumetric No.1 84 Cell Disk
817-867C

Available for:

Wheat

Air Meter Blank Disk
817-841C

These disks are used in (Off Row Meters) when changing from 15" to 30" Rows. Twin Row 30" to 30" Rows. Twin Row 40" to 40" Rows. (etc)

32228C

Seed Spacing

Seed Spacing (U.S. Customary units, page 1 of 2)

Plant Population (seeds/acre)	Row Spacings									
		<i>Twin Row</i>	<i>Twin Row</i>	<i>Twin Row</i>	<i>Twin Row</i>					
		<i>30in</i>	<i>36in</i>	<i>38in</i>	<i>40in</i>					
	10in Rows	15in Rows			20in Rows	22in Rows	30in Rows	36in Rows	38in Rows	40in Rows
Seed Spacing (inches)										
14 000	44.8	29.9	24.9	23.6	22.4	20.4	14.9	12.4	11.8	11.2
15 000	41.8	27.9	23.2	22.0	20.9	19.0	13.9	11.6	11.0	10.5
16 000	39.2	26.1	21.8	20.6	19.6	17.8	13.1	10.9	10.3	9.8
17 000	36.9	24.6	20.5	19.4	18.4	16.8	12.3	10.2	9.7	9.2
18 000	34.8	23.2	19.4	18.3	17.4	15.8	11.6	9.7	9.2	8.7
19 000	33.0	22.0	18.3	17.4	16.5	15.0	11.0	9.2	8.7	8.3
20 000	31.4	20.9	17.4	16.5	15.7	14.3	10.5	8.7	8.3	7.8
21 000	29.9	19.9	16.6	15.7	14.9	13.6	10.0	8.3	7.9	7.5
22 000	28.5	19.0	15.8	15.0	14.3	13.0	9.5	7.9	7.5	7.1
23 000	27.3	18.2	15.2	14.4	13.6	12.4	9.1	7.6	7.2	6.8
24 000	26.1	17.4	14.5	13.8	13.1	11.9	8.7	7.3	6.9	6.5
25 000	25.1	16.7	13.9	13.2	12.5	11.4	8.4	7.0	6.6	6.3
26 000	24.1	16.1	13.4	12.7	12.1	11.0	8.0	6.7	6.3	6.0
27 000	23.2	15.5	12.9	12.2	11.6	10.6	7.7	6.5	6.1	5.8
28 000	22.4	14.9	12.4	11.8	11.2	10.2	7.5	6.2	5.9	5.6
29 000	21.6	14.4	12.0	11.4	10.8	9.8	7.2	6.0	5.7	5.4
30 000	20.9	13.9	11.6	11.0	10.5	9.5	7.0	5.8	5.5	5.2
31 000	20.2	13.5	11.2	10.6	10.1	9.2	6.7	5.6	5.3	5.1
32 000	19.6	13.1	10.9	10.3	9.8	8.9	6.5	5.4	5.2	4.9
33 000	19.0	12.7	10.6	10.0	9.5	8.6	6.3	5.3	5.0	4.8
34 000	18.4	12.3	10.2	9.7	9.2	8.4	6.1	5.1	4.9	4.6
35 000	17.9	11.9	10.0	9.4	9.0	8.1	6.0	5.0	4.7	4.5
36 000	17.4	11.6	9.7	9.2	8.7	7.9	5.8	4.8	4.6	4.4
37 000	17.0	11.3	9.4	8.9	8.5	7.7	5.7	4.7	4.5	4.2
38 000	16.5	11.0	9.2	8.7	8.3	7.5	5.5	4.6	4.3	4.1
39 000	16.1	10.7	8.9	8.5	8.0	7.3	5.4	4.5	4.2	4.0
40 000	15.7	10.5	8.7	8.3	7.8	7.1	5.2	4.4	4.1	3.9
41 000	15.3	10.2	8.5	8.1	7.6	7.0	5.1	4.2	4.0	3.8
42 000	14.9	10.0	8.3	7.9	7.5	6.8	5.0	4.1	3.9	3.7
43 000	14.6	9.7	8.1	7.7	7.3	6.6	4.9	4.1	3.8	3.6
44 000	14.3	9.5	7.9	7.5	7.1	6.5	4.8	4.0	3.8	3.6
45 000	13.9	9.3	7.7	7.3	7.0	6.3	4.6	3.9	3.7	3.5
46 000	13.6	9.1	7.6	7.2	6.8	6.2	4.5	3.8	3.6	3.4
47 000	13.3	8.9	7.4	7.0	6.7	6.1	4.4	3.7	3.5	3.3
48 000	13.1	8.7	7.3	6.9	6.5	5.9	4.4	3.6	3.4	3.3
49 000	12.8	8.5	7.1	6.7	6.4	5.8	4.3	3.6	3.4	3.2
50 000	12.5	8.4	7.0	6.6	6.3	5.7	4.2	3.5	3.3	3.1

32320A

Seed Spacing (U.S. Customary units, page 2 of 2)

Plant Population (seeds/acre)	Row Spacings									
		<i>Twin Row</i> 30in	<i>Twin Row</i> 36in	<i>Twin Row</i> 38in	<i>Twin Row</i> 40in					
	10in Rows	15in Rows			20in Rows	22in Rows	30in Rows	36in Rows	38in Rows	40in Rows
Seed Spacing (inches)										
50 000	12.5	8.4	7.0	6.6	6.3	5.7	4.2	3.5	3.3	3.1
55 000	11.4	7.6	6.3	6.0	5.7	5.2	3.8	3.2	3.0	2.9
60 000	10.5	7.0	5.8	5.5	5.2	4.8	3.5	2.9	2.8	2.6
65 000	9.7	6.4	5.4	5.1	4.8	4.4	3.2	2.7	2.5	2.4
70 000	9.0	6.0	5.0	4.7	4.5	4.1	3.0	2.5	2.4	2.2
75 000	8.4	5.6	4.6	4.4	4.2	3.8	2.8	2.3	2.2	2.1
80 000	7.8	5.2	4.4	4.1	3.9	3.6	2.6	2.2	2.1	2.0
85 000	7.4	4.9	4.1	3.9	3.7	3.4	2.5	2.0	1.9	1.8
90 000	7.0	4.6	3.9	3.7	3.5	3.2	2.3	1.9	1.8	1.7
95 000	6.6	4.4	3.7	3.5	3.3	3.0	2.2	1.8	1.7	1.7
100 000	6.3	4.2	3.5	3.3	3.1	2.9	2.1	1.7	1.7	1.6
105 000	6.0	4.0	3.3	3.1	3.0	2.7	2.0	1.7	1.6	1.5
110 000	5.7	3.8	3.2	3.0	2.9	2.6	1.9	1.6	1.5	1.4
115 000	5.5	3.6	3.0	2.9	2.7	2.5	1.8	1.5	1.4	1.4
120 000	5.2	3.5	2.9	2.8	2.6	2.4	1.7	1.5	1.4	1.3
125 000	5.0	3.3	2.8	2.6	2.5	2.3	1.7	1.4	1.3	1.3
130 000	4.8	3.2	2.7	2.5	2.4	2.2	1.6	1.3	1.3	1.2
135 000	4.6	3.1	2.6	2.4	2.3	2.1	1.5	1.3	1.2	1.2
140 000	4.5	3.0	2.5	2.4	2.2	2.0	1.5	1.2	1.2	1.1
145 000	4.3	2.9	2.4	2.3	2.2	2.0	1.4	1.2	1.1	1.1
150 000	4.2	2.8	2.3	2.2	2.1	1.9	1.4	1.2	1.1	1.0
155 000	4.0	2.7	2.2	2.1	2.0	1.8	1.3	1.1	1.1	1.0
160 000	3.9	2.6	2.2	2.1	2.0	1.8	1.3	1.1	1.0	1.0
165 000	3.8	2.5	2.1	2.0	1.9	1.7	1.3	1.1	1.0	1.0
170 000	3.7	2.5	2.0	1.9	1.8	1.7	1.2	1.0	1.0	0.9
175 000	3.6	2.4	2.0	1.9	1.8	1.6	1.2	1.0	0.9	0.9
180 000	3.5	2.3	1.9	1.8	1.7	1.6	1.2	1.0	0.9	0.9
185 000	3.4	2.3	1.9	1.8	1.7	1.5	1.1	0.9	0.9	0.8
190 000	3.3	2.2	1.8	1.7	1.7	1.5	1.1	0.9	0.9	0.8
195 000	3.2	2.1	1.8	1.7	1.6	1.5	1.1	0.9	0.8	0.8
200 000	3.1	2.1	1.7	1.7	1.6	1.4	1.0	0.9	0.8	0.8
225 000	2.8	1.9	1.5	1.5	1.4	1.3	0.9	0.8	0.7	0.7
250 000	2.5	1.7	1.4	1.3	1.3	1.1	0.8	0.7	0.7	0.6
275 000	2.3	1.5	1.3	1.2	1.1	1.0	0.8	0.6	0.6	0.6
300 000	2.1	1.4	1.2	1.1	1.0	1.0	0.7	0.6	0.6	0.5

32320B

Seed Lubricants

Air-Pro® Meters (all seeds)

Ezee Glide Plus Talc + Graphite Mix

821-069C bucket, 5 gallon (19 liter)

Ezee Glide Plus Lubricant

To maximize performance of Great Plains metering systems, it is imperative to use only “Ezee Glide Plus” lubricant. “Ezee Glide Plus” Talc + Graphite lubricant is mandatory for all seeds, especially treated or inoculated seed. **Thorough mixing of seed and added lubricant is required.**

Recommended Usage:

For clean seeds other than milo, cotton, and sunflowers sprinkle one cup of Ezee Glide Plus per 4 bushels or units (170 ml per 100 liters) of seed.

For milo, cotton, and sunflowers double the application to one cup (or more) per 2 bu or units (335 ml per 100 liters) of seed.

Adjust this rate as necessary so all seeds become coated while avoiding an accumulation of lubricant in the bottom of the hopper.

For seed with excessive treatment, or for humid planting environments, increase the rate as needed for smooth meter operation.



Irritation and Chronic Exposure Hazard:

Wear gloves. DO NOT use hands or any part of your body to mix seed lubricant. Wear a respirator when transferring and mixing. Avoid breathing lubricant dust. Not an acute hazard. May cause mechanical eye or skin irritation in high concentrations. As with all mineral spills, minimize dusting during clean-up. Prolonged inhalation may cause lung injury. Product can become slippery when wet.



Metric Charts

Air-Pro® Meter Disk Selection - Metric

CORN
24 Cell Disk
 817-794C Corn Round Large
 817-795C Corn Round Small
 817-836C Corn Flat Large

CORN
40 Cell Disk
 817-796C Corn Round Large
 817-797C Corn Round Small
 817-838C Corn Flat Large

(Sweet Corn plants in Round Corn disks)

Seed Size Recommendations.

Corn Round Large	Seeds per Kilogram 3750 (or fewer)
------------------	---------------------------------------

Corn Round Small	Seeds per Kilogram 3640 (or more)
------------------	--------------------------------------

Corn Flat Large	Seeds per Kilogram 3640 (or fewer)
-----------------	---------------------------------------

Corn Flat Small	Seeds per Kilogram 3640 (or more)
-----------------	--------------------------------------

ATTENTION: This Corn is planted with the Corn Round Small Disks!!!!!!

(Recommended)

101.6cm Rows	Below 48 000 seeds/ha @ 8.9kph	24 Cell Disk
	Above 48 000 seeds/ha @ 8.9kph	40 Cell Disk
96.5cm Rows	Below 50 600 seeds/ha @ 8.9kph	24 Cell Disk
	Above 50 600 seeds/ha @ 8.9kph	40 Cell Disk
91.4cm Rows	Below 53 400 seeds/ha @ 8.9kph	24 Cell Disk
	Above 53 400 seeds/ha @ 8.9kph	40 Cell Disk
76.2cm Rows	Below 64 000 seeds/ha @ 8.9kph	24 Cell Disk
	Above 64 000 seeds/ha @ 8.9kph	40 Cell Disk
70cm Rows	Below 69 700 seeds/ha @ 8.9kph	24 Cell Disk
	Above 69 700 seeds/ha @ 8.9kph	40 Cell Disk
55.9cm Rows	Below 87 300 seeds/ha @ 8.9kph	24 Cell Disk
	Above 87 300 seeds/ha @ 8.9kph	40 Cell Disk
Twin Row 101.6cm 50.8cm Rows	Below 96 100 seeds/ha @ 8.9kph	24 Cell Disk
	Above 96 100 seeds/ha @ 8.9kph	40 Cell Disk
Twin Row 96.5cm	Below 101 100 seeds/ha @ 8.9kph	24 Cell Disk
	Above 101 100 seeds/ha @ 8.9kph	40 Cell Disk
Twin Row 91.4cm	Below 106 700 seeds/ha @ 8.9kph	24 Cell Disk
	Above 106 700 seeds/ha @ 8.9kph	40 Cell Disk
Twin Row 76.2cm 38.1cm Rows	Below 129 000 seeds/ha @ 8.9kph	24 Cell Disk
	Above 129 000 seeds/ha @ 8.9kph	40 Cell Disk
Twin Row 70cm 35cm Rows	Below 139 400 seeds/ha @ 8.9kph	24 Cell Disk
	Above 139 400 seeds/ha @ 8.9kph	40 Cell Disk

COTTON
60 Cell Disk
 817-857C

Seed Size Recommendations.

This disk should plant all seed sizes and row spacings for Cotton.
--

32200A

METRIC AIR-PRO® METER DISK SELECTION

MILO
65 Cell Disk
817-849C

MILO
130 Cell Disk
817-800C

Seed Size Recommendations.

These disks should plant all seed sizes of Milo and Pelletized Sugar Beets.		
		<i>(Recommended)</i>
101.6cm Rows	Below 119 300 seeds/ha @ 9.7kph Above 119 300 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
96.5cm Rows	Below 125 500 seeds/ha @ 9.7kph Above 125 500 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
91.4cm Rows	Below 132 500 seeds/ha @ 9.7kph Above 132 500 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
76.2cm Rows	Below 159 000 seeds/ha @ 9.7kph Above 159 000 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
70cm Rows	Below 173 100 seeds/ha @ 8.9kph Above 173 100 seeds/ha @ 8.9kph	65 Cell Disk 130 Cell Disk
55.9cm Rows	Below 216 800 seeds/ha @ 9.7kph Above 216 800 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
Twin Row 101.6cm	Below 238 500 seeds/ha @ 9.7kph	65 Cell Disk
50.8cm Rows	Above 238 500 seeds/ha @ 9.7kph	130 Cell Disk
Twin Row 96.5cm	Below 251 100 seeds/ha @ 9.7kph Above 251 100 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
Twin Row 91.4cm	Below 265 000 seeds/ha @ 9.7kph Above 265 000 seeds/ha @ 9.7kph	65 Cell Disk 130 Cell Disk
Twin Row 76.2cm	Below 318 000 seeds/ha @ 9.7kph	65 Cell Disk
38.1cm Rows	Above 318 000 seeds/ha @ 9.7kph	130 Cell Disk
Twin Row 70cm	Below 346 200 seeds/ha @ 8.9kph	65 Cell Disk
35cm Rows	Above 346 200 seeds/ha @ 8.9kph	130 Cell Disk

SOYBEAN
84 Cell Disk
817-798C

SOYBEAN
168 Cell Disk
403-551D

Seed Size Recommendations.

These disks should plant all seed sizes of Soybeans. Small edible beans (navy, black jack, black eye peas, etc) will plant with this disk also.		
		<i>(Recommended)</i>
101.6cm Rows	Below 190 100 seeds/ha @ 9.7kph Above 190 100 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
96.5cm Rows	Below 200 100 seeds/ha @ 9.7kph Above 200 100 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
91.4cm Rows	Below 211 200 seeds/ha @ 9.7kph Above 211 200 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
76.2cm Rows	Below 253 400 seeds/ha @ 9.7kph Above 253 400 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
70cm Rows	Below 275 900 seeds/ha @ 8.9kph Above 275 900 seeds/ha @ 8.9kph	84 Cell Disk 168 Cell Disk
55.9cm Rows	Below 345 600 seeds/ha @ 9.7kph Above 345 600 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
Twin Row 101.6cm	Below 380 100 seeds/ha @ 9.7kph	84 Cell Disk
50.8cm Rows	Above 380 100 seeds/ha @ 9.7kph	168 Cell Disk
Twin Row 96.5cm	Below 400 200 seeds/ha @ 9.7kph Above 400 200 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
Twin Row 91.4cm	Below 422 400 seeds/ha @ 9.7kph Above 422 400 seeds/ha @ 9.7kph	84 Cell Disk 168 Cell Disk
Twin Row 76.2cm	Below 506 900 seeds/ha @ 9.7kph	84 Cell Disk
38.1cm Rows	Above 506 900 seeds/ha @ 9.7kph	168 Cell Disk
Twin Row 70cm	Below 551 800 seeds/ha @ 8.9kph	84 Cell Disk
35cm Rows	Above 551 800 seeds/ha @ 8.9kph	168 Cell Disk

32200B

METRIC
AIR-PRO® METER DISK SELECTION

SUNFLOWER
24 Cell Disk
817-851C SUNFLOWER OIL LARGE

This disk should plant all seed sizes of popcorn.

Seed Size Recommendations.	
Sunflower Oil Large	Seeds per Kilogram
2's - most 3's	18700
And a few of the larger 4's	(or fewer)

Volumetric No.1 84 Cell Disk
817-867C

Available for:
Wheat

Air Meter Blank Disk
817-841C

These disks are used in (Off Row Meters) when changing from 35cm to 70cm Rows. (etc)
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32200C

Seed Spacing - Metric

Plant Population (seeds/ha)	Row Spacings											
		<i>Twin Row 70cm</i>	<i>Twin Row 76.2cm</i>	<i>Twin Row 91.4cm</i>	<i>Twin Row 96.5cm</i>	<i>Twin Row 101.6cm</i>						
	25.4cm	35cm	38.1cm			50.8cm	55.9cm	70cm	76.2cm	91.4cm	96.5cm	101.6cm
	Rows	Rows	Rows			Rows	Rows	Rows	Rows	Rows	Rows	Rows
	Seed Spacing (cm)											
34 594	113.8	82.6	75.9	63.2	59.9	56.9	51.7	41.3	37.9	31.6	29.9	28.5
37 064	106.2	77.1	70.8	59.0	55.9	53.1	48.3	38.5	35.4	29.5	28.0	26.6
39 535	99.6	72.3	66.4	55.3	52.4	49.8	45.3	36.1	33.2	27.7	26.2	24.9
42 006	93.7	68.0	62.5	52.1	49.3	46.9	42.6	34.0	31.2	26.0	24.7	23.4
44 477	88.5	64.2	59.0	49.2	46.6	44.3	40.2	32.1	29.5	24.6	23.3	22.1
46 948	83.9	60.9	55.9	46.6	44.1	41.9	38.1	30.4	28.0	23.3	22.1	21.0
49 419	79.7	57.8	53.1	44.3	41.9	39.8	36.2	28.9	26.6	22.1	21.0	19.9
51 890	75.9	55.1	50.6	42.1	39.9	37.9	34.5	27.5	25.3	21.1	20.0	19.0
54 361	72.4	52.6	48.3	40.2	38.1	36.2	32.9	26.3	24.1	20.1	19.1	18.1
56 832	69.3	50.3	46.2	38.5	36.5	34.6	31.5	25.1	23.1	19.2	18.2	17.3
59 303	66.4	48.2	44.3	36.9	34.9	33.2	30.2	24.1	22.1	18.4	17.5	16.6
61 774	63.7	46.2	42.5	35.4	33.5	31.9	29.0	23.1	21.2	17.7	16.8	15.9
64 245	61.3	44.5	40.9	34.0	32.3	30.6	27.9	22.2	20.4	17.0	16.1	15.3
66 716	59.0	42.8	39.3	32.8	31.1	29.5	26.8	21.4	19.7	16.4	15.5	14.8
69 187	56.9	41.3	37.9	31.6	29.9	28.5	25.9	20.6	19.0	15.8	15.0	14.2
71 658	54.9	39.9	36.6	30.5	28.9	27.5	25.0	19.9	18.3	15.3	14.5	13.7
74 129	53.1	38.5	35.4	29.5	28.0	26.6	24.1	19.3	17.7	14.8	14.0	13.3
76 600	51.4	37.3	34.3	28.6	27.1	25.7	23.4	18.6	17.1	14.3	13.5	12.8
79 071	49.8	36.1	33.2	27.7	26.2	24.9	22.6	18.1	16.6	13.8	13.1	12.4
81 542	48.3	35.0	32.2	26.8	25.4	24.1	21.9	17.5	16.1	13.4	12.7	12.1
84 013	46.9	34.0	31.2	26.0	24.7	23.4	21.3	17.0	15.6	13.0	12.3	11.7
86 484	45.5	33.0	30.3	25.3	24.0	22.8	20.7	16.5	15.2	12.6	12.0	11.4
88 955	44.3	32.1	29.5	24.6	23.3	22.1	20.1	16.1	14.8	12.3	11.6	11.1
91 426	43.1	31.2	28.7	23.9	22.7	21.5	19.6	15.6	14.4	12.0	11.3	10.8
93 897	41.9	30.4	28.0	23.3	22.1	21.0	19.1	15.2	14.0	11.6	11.0	10.5
96 368	40.9	29.6	27.2	22.7	21.5	20.4	18.6	14.8	13.6	11.3	10.8	10.2
98 839	39.8	28.9	26.6	22.1	21.0	19.9	18.1	14.5	13.3	11.1	10.5	10.0
101 310	38.9	28.2	25.9	21.6	20.5	19.4	17.7	14.1	13.0	10.8	10.2	9.7
103 781	37.9	27.5	25.3	21.1	20.0	19.0	17.2	13.8	12.6	10.5	10.0	9.5
106 252	37.1	26.9	24.7	20.6	19.5	18.5	16.8	13.4	12.4	10.3	9.8	9.3
108 723	36.2	26.3	24.1	20.1	19.1	18.1	16.5	13.1	12.1	10.1	9.5	9.1
111 193	35.4	25.7	23.6	19.7	18.6	17.7	16.1	12.8	11.8	9.8	9.3	8.9
113 664	34.6	25.1	23.1	19.2	18.2	17.3	15.7	12.6	11.5	9.6	9.1	8.7
116 135	33.9	24.6	22.6	18.8	17.8	16.9	15.4	12.3	11.3	9.4	8.9	8.5
118 606	33.2	24.1	22.1	18.4	17.5	16.6	15.1	12.0	11.1	9.2	8.7	8.3
121 077	32.5	23.6	21.7	18.1	17.1	16.3	14.8	11.8	10.8	9.0	8.6	8.1
123 548	31.9	23.1	21.2	17.7	16.8	15.9	14.5	11.6	10.6	8.9	8.4	8.0

32321A

Seed Spacing - Metric (cont.)

Plant Population (seeds/ha)	Row Spacings											
		<i>Twin Row</i> 70cm	<i>Twin Row</i> 76.2cm	<i>Twin Row</i> 91.4cm	<i>Twin Row</i> 96.5cm	<i>Twin Row</i> 101.6cm						
	25.4cm Rows	35cm Rows	38.1cm Rows			50.8cm Rows	55.9cm Rows	70cm Rows	76.2cm Rows	91.4cm Rows	96.5cm Rows	101.6cm Rows
	Seed Spacing (cm)											
123 548	31.9	23.1	21.2	17.7	16.8	15.9	14.5	11.6	10.6	8.9	8.4	8.0
135 903	29.0	21.0	19.3	16.1	15.2	14.5	13.2	10.5	9.7	8.0	7.6	7.2
148 258	26.6	19.3	17.7	14.8	14.0	13.3	12.1	9.6	8.9	7.4	7.0	6.6
160 613	24.5	17.8	16.3	13.6	12.9	12.3	11.1	8.9	8.2	6.8	6.5	6.1
172 968	22.8	16.5	15.2	12.6	12.0	11.4	10.3	8.3	7.6	6.3	6.0	5.7
185 322	21.2	15.4	14.2	11.8	11.2	10.6	9.7	7.7	7.1	5.9	5.6	5.3
197 677	19.9	14.5	13.3	11.1	10.5	10.0	9.1	7.2	6.6	5.5	5.2	5.0
210 032	18.7	13.6	12.5	10.4	9.9	9.4	8.5	6.8	6.2	5.2	4.9	4.7
222 387	17.7	12.8	11.8	9.8	9.3	8.9	8.0	6.4	5.9	4.9	4.7	4.4
234 742	16.8	12.2	11.2	9.3	8.8	8.4	7.6	6.1	5.6	4.7	4.4	4.2
247 097	15.9	11.6	10.6	8.9	8.4	8.0	7.2	5.8	5.3	4.4	4.2	4.0
259 451	15.2	11.0	10.1	8.4	8.0	7.6	6.9	5.5	5.1	4.2	4.0	3.8
271 806	14.5	10.5	9.7	8.0	7.6	7.2	6.6	5.3	4.8	4.0	3.8	3.6
284 161	13.9	10.1	9.2	7.7	7.3	6.9	6.3	5.0	4.6	3.8	3.6	3.5
296 516	13.3	9.6	8.9	7.4	7.0	6.6	6.0	4.8	4.4	3.7	3.5	3.3
308 871	12.7	9.2	8.5	7.1	6.7	6.4	5.8	4.6	4.2	3.5	3.4	3.2
321 226	12.3	8.9	8.2	6.8	6.5	6.1	5.6	4.4	4.1	3.4	3.2	3.1
333 580	11.8	8.6	7.9	6.6	6.2	5.9	5.4	4.3	3.9	3.3	3.1	3.0
345 935	11.4	8.3	7.6	6.3	6.0	5.7	5.2	4.1	3.8	3.2	3.0	2.8
358 290	11.0	8.0	7.3	6.1	5.8	5.5	5.0	4.0	3.7	3.1	2.9	2.7
370 645	10.6	7.7	7.1	5.9	5.6	5.3	4.8	3.9	3.5	3.0	2.8	2.7
383 000	10.3	7.5	6.9	5.7	5.4	5.1	4.7	3.7	3.4	2.9	2.7	2.6
395 355	10.0	7.2	6.6	5.5	5.2	5.0	4.5	3.6	3.3	2.8	2.6	2.5
407 709	9.7	7.0	6.4	5.4	5.1	4.8	4.4	3.5	3.2	2.7	2.5	2.4
420 064	9.4	6.8	6.2	5.2	4.9	4.7	4.3	3.4	3.1	2.6	2.5	2.3
432 419	9.1	6.6	6.1	5.1	4.8	4.6	4.1	3.3	3.0	2.5	2.4	2.3
444 774	8.9	6.4	5.9	4.9	4.7	4.4	4.0	3.2	3.0	2.5	2.3	2.2
457 129	8.6	6.2	5.7	4.8	4.5	4.3	3.9	3.1	2.9	2.4	2.3	2.2
469 484	8.4	6.1	5.6	4.7	4.4	4.2	3.8	3.0	2.8	2.3	2.2	2.1
481 838	8.2	5.9	5.4	4.5	4.3	4.1	3.7	3.0	2.7	2.3	2.2	2.0
494 193	8.0	5.8	5.3	4.4	4.2	4.0	3.6	2.9	2.7	2.2	2.1	2.0
555 967	7.1	5.1	4.7	3.9	3.7	3.5	3.2	2.6	2.4	2.0	1.9	1.8
617 742	6.4	4.6	4.2	3.5	3.4	3.2	2.9	2.3	2.1	1.8	1.7	1.6
679 516	5.8	4.2	3.9	3.2	3.0	2.9	2.6	2.1	1.9	1.6	1.5	1.4
741 290	5.3	3.9	3.5	3.0	2.8	2.7	2.4	1.9	1.8	1.5	1.4	1.3

32321B

Meter Pressurization - Metric

Note: These are suggested initial (starting) pressures.
Use the seed monitor console to adjust them up or down per the procedure in the Meter Stand Operator Manuals.

Corn: Reading a Pressure Chart (below, next page)

1. Pick the chart based on seed shape (flat, round).
Example: large round corn
2. Pick a line based on seed size (large, small).
Example: the right line below
3. Find the seed density on the bottom scale.
Example: 2800 seeds/kg
4. Read the suggested starting pressure on the left scale, where the line (example shown as dotted gray) intersects the density.
Example: 3.4 inches of water

Initial seed inlet Shutter for corn is: 3

Initial Meter Pressurization: Cotton

1.5 inches of water (any seed density)
Initial seed inlet Shutter: 2

Initial Meter Pressurization: Milo

1.5 inches of water (all disk, any seed density)
Initial seed inlet Shutter: 1

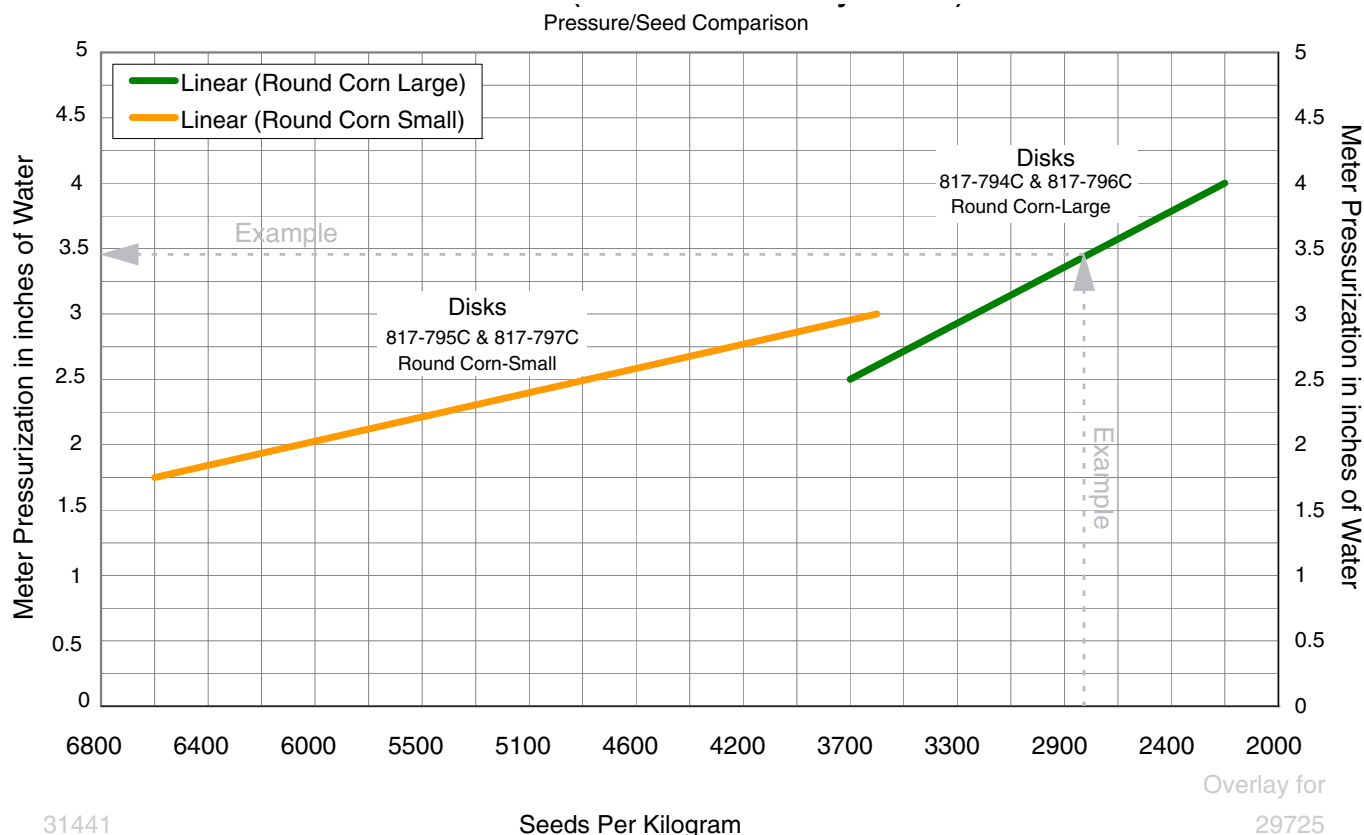
Initial Meter Pressurization: Soybeans

2.0 inches of water (84 cell disk, any seed density)
3.0 inches of water (168 cell disk, any seed density)
Initial seed inlet Shutter: 2

Initial Meter Pressurization: Sunflower

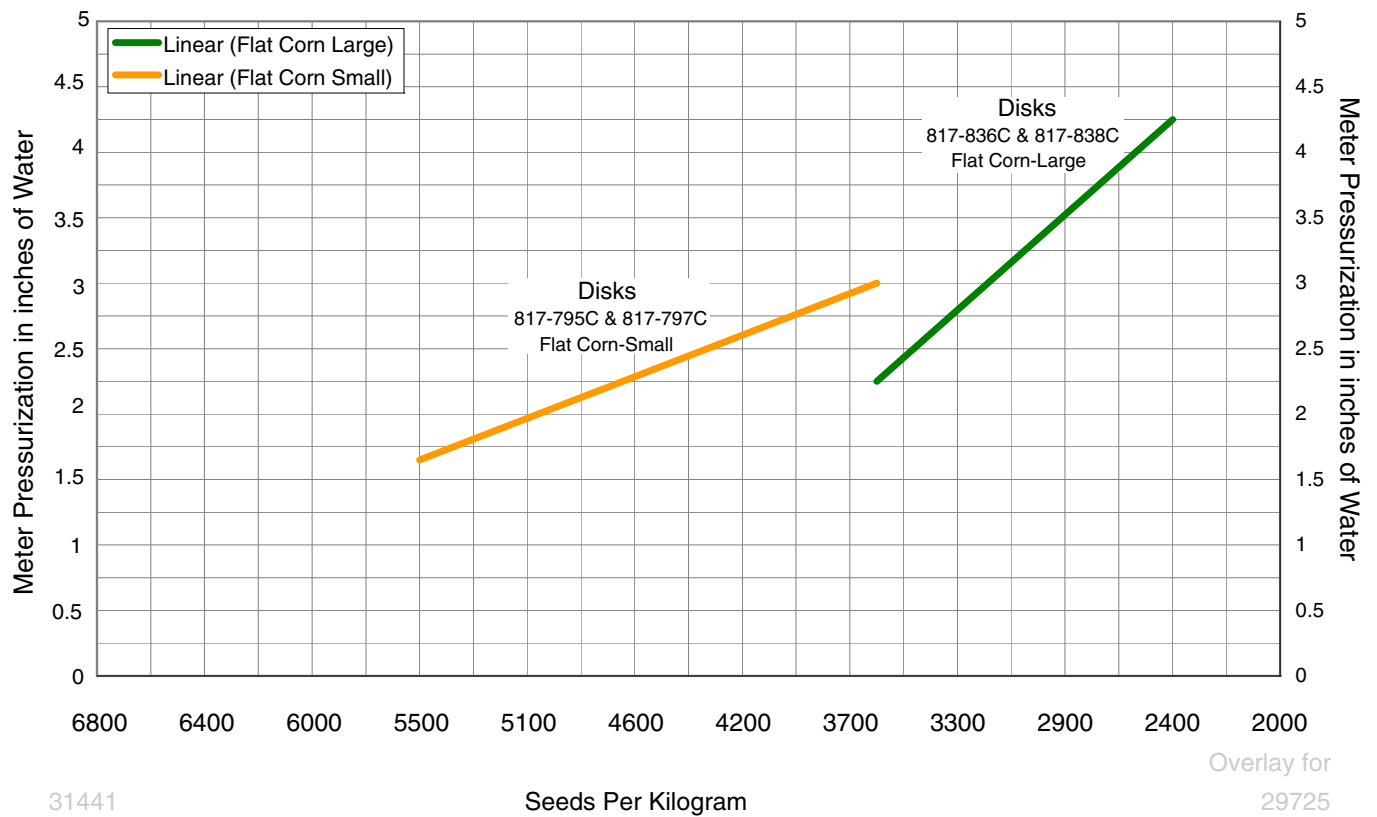
Disk: 817-851C SUNFLOWER OIL LARGE
18700 seeds/kg (or fewer)
18700 - 15400 s/kg 1.25 inches of water
15400 - 12100 s/kg 1.75 inches of water
12100 s/kg and fewer 2.25 inches of water
Adjust pressure as needed for desired population.
Initial seed inlet Shutter: 2

Initial Meter Pressurization: Round Corn



Initial Meter Pressurization: Flat Corn

Pressure/Seed Comparison



APPENDIX

New Parts

The part call-out numbers in this list match all Figures in these installation instructions. Part descriptions match those in your updated Parts Manual.

Quantities are units ("ea").

Kit Content

403-531A Air-Pro® Test Stand Meter Mount Kit

Callout	Quantity	Part Number	Part Description
11	1	403-533M	MANUAL METER TEST STAND
12	1	403-271K	AIR METER ASSY, 25 SER
13	1	403-301S	SEED TUBE AM TB,CLIP & SENS
14	1	403-528H	TEST STAND PIN DRIVER F/ 19
15	1	403-530H	RH METER MAX MOUNT FOR AIR
16	1	403-532K	METER MOUNT & CLAMP ASY
17	1	803-374C	NUT HEX JAM 7/16-20 PLT
18	1	817-613C	SEED DISCHARGE HOSE 42
19	1	817-868C	TEST STAND FUNNEL
20	1	830-414C	CP KENT CAT4 M QD X 1/4 HB
21	1	830-415C	CP KENT CAT4 F QD X CAP
22	1	891-122C	AD 7/16MORB X 1/4HB BRASS
23	3	990-021R	HOSE 1/4 RUBBER AIR

Abbreviations

ASSY	Assembly
CAT	Category
CP	Coupler
HB	Hose Barb
LH	Left Hand

MORB	Male O-Ring Boss
PLT	Plated
QD	Quick Disconnect
RH	Right Hand
TB	Tube

Great Plains Manufacturing, Inc.

Corporate Office P.O. Box 5060
Salina, Kansas 67402-5060 USA