Control your coverage.  
Control your drift.  
All with one tip.

COMBO-JET® ER, SR, MR & DR  
Droplet Selective Tip-Caps  
deliver consistent and proven drift reduction  
while providing a choice level of coverage

80° & 110° Spray Tip Charts - US Gallons/Acre on 20” spacing  
for Standard and PWM Sprayer Systems
Are you spending more time cleaning nozzles than spraying? The COMBO-JET® Tip-Cap with snap-in strainer plugs less, is easier to clean, and stays clean longer.

The COMBO-JET® Advantage

- 40% Longer Strainers that snap into place
- Easier Handling with snap-in design
- Fits all nozzle bodies [with adapters]
- ER Series:
  - Push strainer sideways to remove
- Easy to read cap label
  - (MR110-06 = MR Series, 110° tip, 0.6 USGPM flow rate)
- SR, MR, & DR Series:
  - To clean stainless tip
    - Pull strainer (with pre-orifice) up and out
  - To clean plastic pre-orifice
    - Push strainer sideways to release from pre-orifice
  - To use/replace strainer
    - Push strainer down to snap in strainer
- Cap Color matches international flow rates
- Permanent Stainless Steel Tip
- Best Tips for Pulse Width Modulation Systems
  - (i.e. Case AIM Command PRO, Capstan Sharpshooter, Raven Hawkeye)
- COMBO-JET® Drift Reduction - Closed Chamber Design

Unlike air-induction nozzles, COMBO-JET® SR, MR, and DR series of tip-caps do not rely on a steady stream of air to reduce drift. Wilger uses a unique pre-orifice and closed chamber design that reduces drift while creating more meaningful droplets.

Each of the COMBO-JET® drift reduction series (SR/MR/DR) provide different levels of drift reduction and coverage, so you have more flexibility in choosing a tip that fits your application. Without needing consistent airflow for controlling drift, COMBO-JET® tips have become the preferred tip for Pulse Width Modulation (PWM) spraying systems.

For an example of comparison between the four COMBO-JET® tip-cap series, see the next page, or use Tip Wizard found on the wilger.net website or Tip Wizard smartphone app.

If you are tired of picking parts out of the dirt, you will really like COMBO-JET® Tip-Caps!

Since the strainer, O-ring, and tip-cap all snap together tightly, dislodged debris cannot plug the tip while changing or cleaning. COMBO-JET® tip-caps handle as one piece, so they are safer & easier to use.

Not sure which tips to use? Make it easy with Tip Wizard.

Tip Wizard is available on the wilger.net website as well as a FREE smartphone app. Enter your application to receive crucial information to help you make your tip selection and spraying decisions.
Did you know that size matters?

A 500 micron (µ) droplet contains the same volume as 8x 250µ diameter droplets, and halving those 8 droplets would make 64x 125µ droplets. That is why with smaller droplets, with the same flow rate, you get finer coverage.
<table>
<thead>
<tr>
<th>Tip-Cap &amp; Part No.</th>
<th>VMD (Droplet Size in µ)</th>
<th>%&lt;141µ (Drift %)</th>
<th>%&lt;200µ (Drift %)</th>
<th>%&lt;600µ (Small Droplets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER80-02</td>
<td>0.13 60 7.3 5.5 4.4 3.6</td>
<td>33% 9% 19% 89%</td>
<td>32% 5% 11% 78%</td>
<td>30% 1% 23% 72%</td>
</tr>
<tr>
<td>ER80-025</td>
<td>0.24 60 14.5 9.7 8.4 2.0</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-05</td>
<td>0.10 60 6.0 4.8 3.5 2.0</td>
<td>22% 3% 8% 78%</td>
<td>30% 1% 23% 72%</td>
<td>30% 1% 23% 72%</td>
</tr>
<tr>
<td>ER80-015</td>
<td>0.15 60 9.0 6.0 3.5 2.0</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-01</td>
<td>0.10 60 3.0 2.5 2.0 1.5</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-005</td>
<td>0.15 60 9.0 6.0 3.5 2.0</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-04</td>
<td>0.10 60 3.0 2.5 2.0 1.5</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-015</td>
<td>0.15 60 9.0 6.0 3.5 2.0</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-01</td>
<td>0.10 60 3.0 2.5 2.0 1.5</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-005</td>
<td>0.15 60 9.0 6.0 3.5 2.0</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
<tr>
<td>ER80-04</td>
<td>0.10 60 3.0 2.5 2.0 1.5</td>
<td>34% 5% 11% 83%</td>
<td>31% 5% 11% 80%</td>
<td>32% 5% 10% 79%</td>
</tr>
</tbody>
</table>
**Droplet categories:** The above chart is based on the ASABE Standard 572.1. Refer to chemical label to verify which ASABE S572.1 categories should be followed.

**Flow rates based on water (80°F), applied at 20" spacing.**

Please Note:
- In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 005, 0067, 30, 40, 50 & 60 size Tip-Caps, visit our website.
- Cap color determined by flow rate, as per ISO standard.
- Recommended pressure ranges for Tip-Caps are shown.

**Comb-Jet® 80° High Flow Tip-Cap Performance Specifications**

<table>
<thead>
<tr>
<th>Flow Rate USGPM</th>
<th>Application Rate - US Gallons / Acre @ 20°</th>
<th>Tip-Cap &amp; Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>336</td>
<td>ER80-08 40270-08</td>
</tr>
<tr>
<td>7.5</td>
<td>316</td>
<td>ER80-125 40270-125</td>
</tr>
<tr>
<td>10.0</td>
<td>296</td>
<td>ER80-15 40270-15</td>
</tr>
<tr>
<td>15.0</td>
<td>265</td>
<td>ER80-20 40270-20</td>
</tr>
<tr>
<td>20.0</td>
<td>235</td>
<td>ER80-25 40270-25</td>
</tr>
<tr>
<td>25.0</td>
<td>205</td>
<td>ER80-30 40270-30</td>
</tr>
</tbody>
</table>

**FOR STANDARD SPRAYERS**

**80° Tip-Cap Specifications**

**Color Classifications**
- **Very Fine**
- **Fine**
- **Medium**
- **Coarse**
- **Very Coarse**
- **Extremely Coarse**
- **Ultra Coarse**

**ASABE Droplet Categories**
- **Extremely Fine**
- **Very Fine**
- **Fine**
- **Coarse**
- **Very Coarse**
- **Extremely Coarse**
- **Ultra Coarse**

**Pre-orifice Length & Color Differences in tip pre-orifices**
- **Fine**
- **Coarse**

**ASABE Standard 572.1 Classification (2009-current)**

**TIP WIZARD**

Have you tried the TIP WIZARD?

An easy to use spray tip calculator that helps find the best spray tip for your application.

It is as easy as entering your application, and seeing the results.

Tip Wizard is available on the wilger.net website, FREE smartphone app, and Wilger USB.
COMBO-JET® 80° Tip-Cap Performance Specifications for PWM Systems

FOR PWM SPRAYERS

Please Note:
1. Flow and application rates shown are for water only, applied on 20” spacing.
2. For applications where a uniform pattern is required, recommended pressures are higher than in standard spray systems.
3. Cap color determined by flow rate, as per US standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 055, 070, 20, 30, 40, 50 & 60 size Tips-Caps, visit our website.
5. Standard PWM systems have inherent flow capacity up to 1.5 USG/Min

<table>
<thead>
<tr>
<th>Tip-Size</th>
<th>Flow Rate USGPM</th>
<th>PSI</th>
<th>Application Rate (US Gallons/Acre)</th>
<th>@ 20”</th>
<th>80° ER Series</th>
<th>80° SR Series</th>
<th>80° MR Series</th>
<th>80° DR Series</th>
<th>VMD</th>
<th>&lt;141µ</th>
<th>&lt;200µ</th>
<th>&lt;600µ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.07</td>
<td>0.14</td>
<td>1.42</td>
<td>0.7-2.8</td>
<td>0.5-2.1</td>
<td>0.4-1.7</td>
<td>0.3-1.4</td>
<td>0.2-1.1</td>
<td>0.1-1.0</td>
<td>176</td>
<td>28%</td>
<td>64%</td>
<td>100%</td>
</tr>
<tr>
<td>0.09</td>
<td>0.20</td>
<td>2.21</td>
<td>0.7-4.0</td>
<td>0.5-4.0</td>
<td>0.4-2.6</td>
<td>0.3-2.4</td>
<td>0.2-2.0</td>
<td>0.1-1.8</td>
<td>156</td>
<td>41%</td>
<td>74%</td>
<td>100%</td>
</tr>
<tr>
<td>0.10</td>
<td>0.25</td>
<td>3.55</td>
<td>0.7-4.0</td>
<td>0.5-4.0</td>
<td>0.4-2.6</td>
<td>0.3-2.4</td>
<td>0.2-2.0</td>
<td>0.1-1.8</td>
<td>144</td>
<td>49%</td>
<td>81%</td>
<td>100%</td>
</tr>
<tr>
<td>0.11</td>
<td>0.30</td>
<td>4.56</td>
<td>0.7-4.0</td>
<td>0.5-4.0</td>
<td>0.4-2.6</td>
<td>0.3-2.4</td>
<td>0.2-2.0</td>
<td>0.1-1.8</td>
<td>135</td>
<td>56%</td>
<td>86%</td>
<td>100%</td>
</tr>
<tr>
<td>0.12</td>
<td>0.35</td>
<td>5.57</td>
<td>0.7-4.0</td>
<td>0.5-4.0</td>
<td>0.4-2.6</td>
<td>0.3-2.4</td>
<td>0.2-2.0</td>
<td>0.1-1.8</td>
<td>126</td>
<td>54%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>0.13</td>
<td>0.40</td>
<td>6.58</td>
<td>0.7-4.0</td>
<td>0.5-4.0</td>
<td>0.4-2.6</td>
<td>0.3-2.4</td>
<td>0.2-2.0</td>
<td>0.1-1.8</td>
<td>117</td>
<td>52%</td>
<td>87%</td>
<td>100%</td>
</tr>
</tbody>
</table>

% <141µ: Percentage of volume which is likely to drift. 141µ is now replacing 200µ as the new standard for driftable fines.
% <200µ: Percentage of volume which is likely to drift. 200µ is shown for reference. 141µ is used as the new standard for driftable fines.
% <600µ: Percentage of volume which is made up of ‘useful’ droplets. As the distribution of driftable droplets lowers, coverage is reduced.

Recommended Strainer mesh of strainer determined by the size of a tip. For larger tips (08+), strainers are not required. For PWM systems, typically 80 mesh inline strainers are used as well.

Strainer Mesh & Tips

Mesh of strainer determined by the size of a tip. For larger tips (08+), strainers are not required. For PWM systems, typically 80 mesh inline strainers are used as well.

Mesh of strainer determined by the size of a tip. For larger tips (08+), strainers are not required. For PWM systems, typically 80 mesh inline strainers are used as well.
6.4-25 GPA per tip. The droplet size is right around 400 microns, and max travel speed (15MPH) is at a ~70% duty cycle. Two tips applying 5GPA. While consulting the tip charts, a suitable choice might be the MR80-04 at 40PSI, with effective volume of 10 US Gallons/Acre; 15 MPH; 400 microns (Systemic Herbicide).

**COMBO-JET® 80° Tip-Cap Performance Specifications for PWM Systems**

Please Note:
1. Flow and application rates shown are for water only, applied at 20” spacing.
2. For applications where a uniform pattern is required, recommended pressures are higher than in standard spray systems.
3. Cap color determined by flow rate, as per ISO standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 005, 0067, 20, 25, 30, 40, 50 & 60 size Tip-Caps, visit our website.
5. Standard PWM systems have inherent flow capacity up to 1.5 USG/Min.

**FOR PWM SPRAYERS**

**80° Tip-Cap Specifications**

**Pulse Width Modulation Spray Systems**

**Recommended pressure varies with each size of tip**

**Target Droplet Size:**
- 10 US Gallons/Acre; 15 MPH; 400 microns (Systemic Herbicide)

**Flow and application rates shown are for water only, applied at 20” spacing.**

**Multi-tip spraying with Pulse Width Modulation Technology**

Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.

Spraying with two separate orifices [right] is possible, but the outlet not controlled by a solenoid will be controlled by the auto-rate controller.

To use Tip Wizard to help select a multi-tip setup, simply split the total flow rate into two (or more) parts and ensure the tips selected can operate within the same duty cycle range and pressures.

**Example Rate:** 10 US Gallons/Acre; **Speed:** 15 MPH; **Nozzle Spacing:** 20”; **Target Droplet Size:** 400 microns (Systemic Herbicide)

If the total application is 10GPA, the effective rates per tip must add up to 10GPA. For simplicity, split the flow in equal parts; for example, two tips applying 5GPA. While consulting the tip charts, a suitable choice might be the MR80-04 at 40PSI, with effective volume of 5GPA per tip. The droplet size is right around 400 microns, and max travel speed (15MPH) is at a ~70% duty cycle.
**FIND DRIP RANGE**

Tip Caps and Part No.

### 1. Flow Cap Categories

- **Recommended Pressure:**
  - 20-70 PSI
  - 20-100 PSI
  - 20-100 PSI
  - 20-100 PSI

- **Tip-Caps Part #:**
  - ER110-01
  - SR110-015
  - MR110-015
  - DR110-015
  - 40281-01
  - 40281-015
  - 40281-015
  - 40281-015
  - 40281-015

### 2. Strainer Part #: 100 Mesh - Green

- **Strainer Part #:**
  - ER110-015
  - SR110-015
  - MR110-015
  - DR110-015
  - 40281-01
  - 40281-015
  - 40281-015
  - 40281-015
  - 40281-015

### 3. Mesh of strainer determined by the size VMD of droplet range.

### 4. Recommended Pressure

- **Recommended Pressure:**
  - 20-70 PSI
  - 20-100 PSI
  - 20-100 PSI
  - 20-100 PSI

### 5. Strainer Mesh & Tips

- **Strainer Mesh & Tips:**
  - ER110-015
  - SR110-015
  - MR110-015
  - DR110-015
  - 40281-01
  - 40281-015
  - 40281-015
  - 40281-015
  - 40281-015

### 6. Ultra Coarse

- **Ultra Coarse:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 7. Very Coarse

- **Very Coarse:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 8. Coarse

- **Coarse:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 9. Medium

- **Medium:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 10. Fine

- **Fine:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 11. Extremely Fine

- **Extremely Fine:**
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red
  - 50 Mesh  - Red

### 12. Volume Median Diameter (VMD)

- **VMD (Volume Median Diameter):**
  - Size of the median droplet in microns (µ)
  - Size of the median droplet in microns (µ)
  - Size of the median droplet in microns (µ)
  - Size of the median droplet in microns (µ)

### 13. Drop Range

- **Drop Range:**
  - <141 µ
  - <200 µ
  - <600 µ
  - <600 µ

### 14. VMD (Droplet Size in µ, µ)

<table>
<thead>
<tr>
<th>VMD (Droplet Size in µ, µ)</th>
<th>0.18</th>
<th>0.20</th>
<th>0.22</th>
<th>0.25</th>
<th>0.28</th>
<th>0.30</th>
<th>0.31</th>
<th>0.33</th>
<th>0.36</th>
<th>0.38</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-70 PSI</td>
<td>148</td>
<td>166</td>
<td>206</td>
<td>234</td>
<td>260</td>
<td>286</td>
<td>313</td>
<td>335</td>
<td>366</td>
<td>394</td>
</tr>
<tr>
<td>20-100 PSI</td>
<td>153</td>
<td>173</td>
<td>217</td>
<td>255</td>
<td>293</td>
<td>331</td>
<td>368</td>
<td>403</td>
<td>440</td>
<td>482</td>
</tr>
</tbody>
</table>

### 15. Tip-Caps Performance Specifications

<table>
<thead>
<tr>
<th>Tip Cap &amp; Part No.</th>
<th>Strainer Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER110-015</td>
<td>40281-015</td>
</tr>
<tr>
<td>SR110-015</td>
<td>40281-015</td>
</tr>
<tr>
<td>MR110-015</td>
<td>40281-015</td>
</tr>
<tr>
<td>DR110-015</td>
<td>40281-015</td>
</tr>
<tr>
<td>40281-01</td>
<td>40281-01</td>
</tr>
<tr>
<td>40281-015</td>
<td>40281-015</td>
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<tr>
<td>40281-015</td>
<td>40281-015</td>
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<tr>
<td>40281-015</td>
<td>40281-015</td>
</tr>
<tr>
<td>40281-015</td>
<td>40281-015</td>
</tr>
</tbody>
</table>

### 16. New Standard for Driftable Fines

- **New Standard for Driftable Fines:**
  - 10% 20% 93%
  - 9% 17% 91%
  - 7% 14% 85%
  - 5% 10% 78%
  - 11% 22% 94%
  - 8% 18% 92%
  - 23% 42% 98%

### 17. Recommended Pressure

- **Recommended Pressure:**
  - 20-70 PSI
  - 20-100 PSI
  - 20-100 PSI
  - 20-100 PSI

---

Please Note:
1. Flow rates based on water (80°F), applied at 20’ spacing.
2. For applications where a uniform pattern is required, recommended pressure ranges for Tip-Caps are shown.
3. Cap color determined by flow rate, as per ISO standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 005, 007, 009, 30, 40, 50 & 60 size Tip-Caps, visit our website.
**COMBO-JET® 110° High Flow Tip-Cap Performance Specifications**

Please Note:
2. For applications where a uniform pattern is required, recommended pressure ranges for Tip-Caps are shown.
3. Cap color determined by flow rate, as per ISO standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 005, 0067, 30, 40, 50 & 60 size Tip-Caps, visit our website.

### Tip Wizard
TIP WIZARD is available on the wilger.net website, FREE smartphone app, and Wilger USB.

**Recommended Pressure: 25-70 PSI**

**Recommended Pressure: 75-150 PSI**

**Recommended Pressure: 150-250 PSI**

**Recommended Pressure: 300-500 PSI**

**FOR STANDARD SPRAYERS**

**Pre-orifice Length & Color**

Pre-orifice color and length vary for some applications. For applications which require a uniform pattern, the recommended pressure range is provided. Specified pressure chart is boom pressure.

**ASABE Droplet Categories**

Color Classifications

- **Very Fine**
- **Fine**
- **Medium**
- **Coarse**
- **Very Coarse**
- **Extremely Coarse**
- **Ultra Coarse**

**Flow Rate USGPM**

<table>
<thead>
<tr>
<th>Flow Rate USGPM</th>
<th>PSI</th>
<th>Application Rate - US Gallons / Acre @ 20°</th>
<th>Sprayder Speed - Miles / Hour</th>
<th>110° ER Series</th>
<th>110° SR Series</th>
<th>110° MR Series</th>
<th>110° DR Series</th>
<th>Tip-Cap &amp; Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.57</td>
<td>20</td>
<td>33.6</td>
<td>22.4</td>
<td>16.8 13.4</td>
<td>11.2 9.6</td>
<td>8.4</td>
<td>VMD 144 26%</td>
<td>91%</td>
</tr>
<tr>
<td>0.70</td>
<td>30</td>
<td>51.4</td>
<td>34.2</td>
<td>27.8 19.8</td>
<td>16.6 13.2</td>
<td>10.3</td>
<td>VMD 192 13%</td>
<td>62%</td>
</tr>
<tr>
<td>0.80</td>
<td>40</td>
<td>74.3</td>
<td>47.5</td>
<td>35.4 26.7</td>
<td>20.5 14.9</td>
<td>11.3</td>
<td>VMD 240 18%</td>
<td>55%</td>
</tr>
<tr>
<td>0.98</td>
<td>50</td>
<td>101</td>
<td>64.8</td>
<td>49.1 38.1</td>
<td>25.9 18.5</td>
<td>13.3</td>
<td>VMD 280 23%</td>
<td>46%</td>
</tr>
<tr>
<td>1.06</td>
<td>60</td>
<td>131</td>
<td>82.8</td>
<td>59.2 46.0</td>
<td>29.6 20.7</td>
<td>15.3</td>
<td>VMD 320 28%</td>
<td>37%</td>
</tr>
<tr>
<td>1.22</td>
<td>70</td>
<td>165</td>
<td>101</td>
<td>82.8 63.0</td>
<td>39.5 27.5</td>
<td>17.3</td>
<td>VMD 360 33%</td>
<td>28%</td>
</tr>
<tr>
<td>1.42</td>
<td>80</td>
<td>200</td>
<td>127</td>
<td>102 84.0</td>
<td>52.5 37.5</td>
<td>20.3</td>
<td>VMD 400 38%</td>
<td>19%</td>
</tr>
<tr>
<td>1.65</td>
<td>90</td>
<td>235</td>
<td>153</td>
<td>132 105.0</td>
<td>65.0 48.5</td>
<td>23.3</td>
<td>VMD 440 43%</td>
<td>10%</td>
</tr>
<tr>
<td>1.88</td>
<td>100</td>
<td>270</td>
<td>188</td>
<td>162 135.0</td>
<td>88.0 65.5</td>
<td>26.3</td>
<td>VMD 480 48%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**ASABE Standard S572.1**

Refer to label to verify which ASABE S572.1 categories should be followed.

### New for 2017

- **Square Lug Compatibility**
- **COMBO-JET® Adapters**
  - Square Lug Compatibility
  - Combo-Jet® tip-cap use a radaknock O-ring seal to secure the cap to the nozzle body. Adapters are available to mount a radaknock cap on a non-radaknock nozzle body.

**ASABE Droplet Categories**

<table>
<thead>
<tr>
<th>Droplet Categories as per ASABE S572.1 Classification (2009-current)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Fine</td>
</tr>
<tr>
<td>&lt;60</td>
</tr>
</tbody>
</table>

Have you tried the TIP WIZARD?

An easy to use spray tip calculator that helps find the best spray tip for your application. It is as easy as entering your application, and seeing the results.

Tip Wizard is available on the wilger.net website, FREE smartphone app, and Wilger USB.
### FOR PWM SPRAYERS

#### 110° Tip-Cap Performance Specifications for PWM Systems

**Please Note:**
1. Flow and application rates shown are for water only, applied on 20° spacing.
2. For applications where a uniform pattern is required, recommended pressures are higher than in standard spray systems.
3. Cap color determines flow rate, as per ISO standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown.

For specifications for 005, 0067, 20, 25, 30, 40, 50 & 60 size Tip-Caps, visit our website.

#### Standard PWM systems have inherent flow capacity up to 1.5 US Gallons/Min

**Flow Rate (USGPM)** | **Sprayer Speed Range (Rounded)**
---|---
0.26 | 1.0-2.7
0.30 | 1.3-5.1
0.10 | 1.5-5.9
0.11 | 1.7-6.6
0.15 | 2.0-2.8
0.07 | 2.9-3.5
0.11 | 3.0-4.0
0.10 | 4.0-5.0
0.09 | 5.0-6.0
0.07 | 6.0-7.0
0.06 | 7.0-11.0

---

**Recommended Pressure:**

<table>
<thead>
<tr>
<th>25-70 PSI</th>
<th>35-100 PSI</th>
<th>35-100 PSI</th>
<th>35-100 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMD (&lt;141µ)</td>
<td>%&lt;200µ</td>
<td>%&lt;600µ</td>
<td>%&lt;141µ</td>
</tr>
</tbody>
</table>

---

**Recommended Pressure:**

<table>
<thead>
<tr>
<th>25-70 PSI</th>
<th>35-100 PSI</th>
<th>35-100 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMD (&lt;141µ)</td>
<td>%&lt;200µ</td>
<td>%&lt;600µ</td>
</tr>
</tbody>
</table>

---

**Recommended Pressure:**

<table>
<thead>
<tr>
<th>35-100 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMD (&lt;141µ)</td>
</tr>
</tbody>
</table>

---

**Tip-Cap & Part No.**

<table>
<thead>
<tr>
<th>VMD (&lt;141µ)</th>
<th>%&lt;200µ</th>
<th>%&lt;600µ</th>
</tr>
</thead>
<tbody>
<tr>
<td>%&lt;141µ</td>
<td>%&lt;200µ</td>
<td>%&lt;600µ</td>
</tr>
</tbody>
</table>

---

**Volume Median Diameter**

Size of the median droplet in microns [µ] for a sprayed volume. Half of the volume is made up of droplets smaller than the VMD, half is made up of droplets larger.

---

**Droplet Categories as per ASABE S572.1 Classification (2009-current)**

- **UltraCoarse**: 500-665µ
- **Coarse**: 341-403µ
- **Very Coarse**: 404-502µ
- **Extremely Coarse**: 503-665µ
- **Coarse**: 341-403µ
- **Very Coarse**: 404-502µ
- **Extremely Coarse**: 503-665µ

---

**Mesh Strainer & Tips**

Recommended Strainer mesh

- **Very Fine**: 60-105µ
- **Fine**: 106-235µ
- **Medium**: 236-340µ
- **Coarse**: 341-403µ
- **Very Coarse**: 404-502µ
- **Extremely Coarse**: 503-665µ
- **Ultra Coarse**: 500-665µ
6.4-25
5GPA per tip. The droplet size is right around 400 microns, and max travel speed (15 MPH) is at a ~70% duty cycle.

If the total application is 10GPA, the effective rates per tip must add up to 10GPA. For simplicity, split the flow in equal parts; for example, two tips applying 5GPA. While consulting the tip charts, a suitable choice might be the MR110-04 at ~35PSI, with effective volume of 5GPA per tip. The droplet size is right around 400microns, and max travel speed (15MPH) is at a ~70% duty cycle.

**FOR PWM SPRAYERS**

**110° Tip-Cap Specifications**

<table>
<thead>
<tr>
<th>Tip-Cap &amp; Part No.</th>
<th>Tip-Cap</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>ER110-10</td>
<td>40281-10</td>
</tr>
<tr>
<td></td>
<td>SR110-10</td>
<td>40287-10</td>
</tr>
<tr>
<td></td>
<td>MR110-10</td>
<td>40291-10</td>
</tr>
<tr>
<td></td>
<td>DR110-10</td>
<td>40286-10</td>
</tr>
<tr>
<td>125</td>
<td>ER110-125</td>
<td>40281-125</td>
</tr>
<tr>
<td></td>
<td>SR110-125</td>
<td>40287-125</td>
</tr>
<tr>
<td></td>
<td>MR110-125</td>
<td>40291-128</td>
</tr>
<tr>
<td></td>
<td>DR110-125</td>
<td>40286-125</td>
</tr>
</tbody>
</table>

---

**110° Tip-Cap Performance Specifications for PWM Systems**

Please Note:
1. Flow and application rates shown are for water only, applied on 20° spacing.
2. For applications where a uniform pattern is required, recommended pressures are higher than in standard spray systems.
3. Cap color determined by flow rate, as per ISO standard.
4. In order to make this chart easier to use, not all available tip-cap sizes are shown. For specifications for 000, 0067, 20, 25, 30, 40, 50 & 60 size Tip-Caps, visit our website.
5. Standard PWM systems have inherent flow capacity up to 1.5 USC/min

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>Rate</th>
<th>10 US Gallons/Acre</th>
<th>Nozzle Spacing</th>
<th>Target Droplet Size: 100 microns (Systemic Herbicide)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>0.79</td>
<td>12-47</td>
<td>7.9-31</td>
<td>5GPA per tip. The droplet size is right around 400 microns, and max travel speed (15 MPH) is at a ~70% duty cycle.</td>
</tr>
<tr>
<td>0.64</td>
<td>0.84</td>
<td>13-50</td>
<td>8.3-33</td>
<td>For PWM systems, the pressure loss through system components is accounted for in these charts. Specified pressure in chart is for whole system. Additional solvent wear may occur for pressures above 60PSI.</td>
</tr>
<tr>
<td>1.0</td>
<td>1.11</td>
<td>16-66</td>
<td>11-44</td>
<td>Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.</td>
</tr>
<tr>
<td>125</td>
<td>1.19</td>
<td>18-71</td>
<td>12-47</td>
<td>Multi-tip spraying with Pulse Width Modulation Technology</td>
</tr>
<tr>
<td>1.43</td>
<td>1.43</td>
<td>21-65</td>
<td>14-56</td>
<td>Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.</td>
</tr>
</tbody>
</table>

---

**COMBO-JET® 110° Tip-Cap Performance Specifications for PWM Systems**

**Recommended pressure ranges for each size of tip**

<table>
<thead>
<tr>
<th>Recomm. Pressure Range for Tips</th>
<th>Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extremely Fine</strong></td>
<td>Very Fine</td>
</tr>
<tr>
<td>&lt;60</td>
<td>60-105µ</td>
</tr>
</tbody>
</table>

---

**Pre-orifice Length & Color**

<table>
<thead>
<tr>
<th>Pre-orifice Color Categories</th>
<th>Pulse Width Modulation (PWM) provides the ability to hold tip pressure constant; therefore, holding the droplet size constant as well. This holds true with multi-tip spraying as well.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASABE Standard S572.1</strong></td>
<td><strong>Color Classifications</strong></td>
</tr>
<tr>
<td><strong>ASABE Standard S572.1</strong></td>
<td><strong>Color Classifications</strong></td>
</tr>
<tr>
<td><strong>Ultra Coarse</strong></td>
<td><strong>Using Tip Wizard</strong></td>
</tr>
<tr>
<td><strong>ASABE Standard S572.1</strong></td>
<td><strong>Color Classifications</strong></td>
</tr>
<tr>
<td><strong>ASABE Standard S572.1</strong></td>
<td><strong>Color Classifications</strong></td>
</tr>
<tr>
<td><strong>Ultra Coarse</strong></td>
<td><strong>Using Tip Wizard</strong></td>
</tr>
</tbody>
</table>

---

**Example Rate:** 10 US Gallons/Acre; **Speed:** 15 MPH; **Nozzle Spacing:** 20”; **Target Droplet Size:** 400 microns (Systemic Herbicide)

If the total application is 10GPA, the effective rates per tip must add up to 10GPA. For simplicity, split the flow in equal parts; for example, two tips applying 5GPA. While consulting the tip charts, a suitable choice might be the MR110-04 at ~35PSI, with effective volume of 5GPA per tip. The droplet size is right around 400microns, and max travel speed (15MPH) is at a ~70% duty cycle.
**Spray Tips**

**Drift vs. Efficacy**

Generally speaking, smaller droplets deposit on the target more effectively than larger droplets, but larger droplets will drift less. So, when balancing drift control and efficacy, ensure to consider chemical labels and guidelines to designate the required droplet size/category. Find the below chart as an illustration showing the general differences in how different droplet sizes are required for different applications.

<table>
<thead>
<tr>
<th>Droplet Size VMD Range</th>
<th>ASABE S-572.1 Classification Category</th>
<th>Color Code</th>
<th>Contact Insecticide &amp; Fungicide</th>
<th>Systemic Insecticide &amp; Fungicide</th>
<th>Contact Foliar Herbicide</th>
<th>Systemic Foliar Herbicide</th>
<th>Soil-Applied Herbicide</th>
<th>Incorporated Soil-Applied Herbicide</th>
<th>Fertilizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 60</td>
<td>Extremely Fine (XF)</td>
<td>Purple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-105</td>
<td>Very Fine (VF)</td>
<td>Red</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106-235</td>
<td>Fine (F)</td>
<td>Orange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>236-340</td>
<td>Medium (M)</td>
<td>Yellow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>341-403</td>
<td>Coarse (C)</td>
<td>Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>404-502</td>
<td>Very Coarse (VC)</td>
<td>Green</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>503-665</td>
<td>Extremely Coarse (XC)</td>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 665</td>
<td>Ultra Coarse (UC)</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table provides general guidelines regarding chemical efficacy vs. droplet size. It is always recommended that you carefully read and follow the chemical manufacturers application label and instructions.

**Minimum Spray Tip Height**

<table>
<thead>
<tr>
<th>Tip Spacing</th>
<th>Minimum Spray Tip Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ER, SR, MR &amp; DR 80 Degree Tips</td>
</tr>
<tr>
<td>10</td>
<td>10&quot;</td>
</tr>
<tr>
<td>20</td>
<td>17&quot;</td>
</tr>
<tr>
<td>30</td>
<td>26&quot;</td>
</tr>
</tbody>
</table>

For additional information on droplet sizes and considerations, visit the Knowledge Center section of the www.wilger.net website, or contact Wilger.