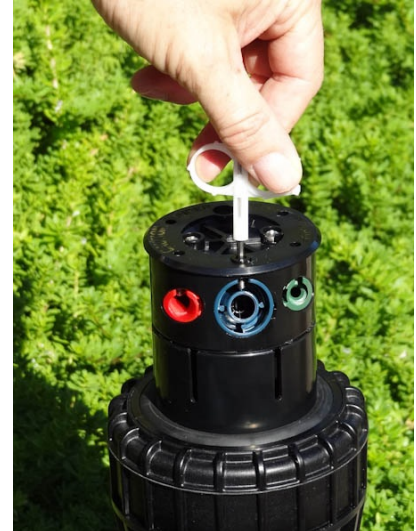


**Products:** [I-90](#) [1]

**Topics:** [FAQs](#), [Installation Procedures](#)

The **I-90-ON** is now compatible with Hunter **PGP** nozzles, the opposing nozzles and the mid and short range nozzles can now be outfitted with normal **PGP** nozzles.

Now that there are multiple options and configurations of nozzle pairings, each nozzle's precip rate will have to be taken into consideration. A total precip rate for all nozzles will no longer be accurate.



[2]

## PGP Red Nozzle Performance Data

### PGP Red Nozzle Performance Data

[View Nozzle](#) [3]

| Nozzle     | Pressure | Radius | Flow | Precip in/hr |      |
|------------|----------|--------|------|--------------|------|
|            | PSI      | ft     | GPM  | ■            | ▲    |
| 1 •<br>Red | 30       | 28     | 0.5  | 0.12         | 0.14 |
|            | 40       | 29     | 0.6  | 0.14         | 0.16 |
|            | 50       | 29     | 0.7  | 0.16         | 0.19 |
|            | 60       | 30     | 0.8  | 0.17         | 0.20 |
| 2 •<br>Red | 30       | 29     | 0.7  | 0.16         | 0.19 |
|            | 40       | 30     | 0.8  | 0.17         | 0.20 |
|            | 50       | 30     | 0.9  | 0.19         | 0.22 |
| 3 •<br>Red | 60       | 31     | 1.0  | 0.20         | 0.23 |
|            | 30       | 30     | 0.9  | 0.19         | 0.22 |
|            | 40       | 31     | 1.0  | 0.20         | 0.23 |
|            | 50       | 31     | 1.2  | 0.24         | 0.28 |
|            | 60       | 32     | 1.3  | 0.24         | 0.28 |
|            | 30       | 32     | 1.2  | 0.23         | 0.26 |
|            | --       | --     | --   | --           | --   |

|             |    |    |      |      |      |
|-------------|----|----|------|------|------|
| 4 •<br>Red  | 40 | 33 | 1.4  | 0.25 | 0.29 |
|             | 50 | 34 | 1.6  | 0.27 | 0.31 |
|             | 60 | 34 | 1.8  | 0.30 | 0.35 |
| 5 •<br>Red  | 30 | 32 | 1.6  | 0.30 | 0.35 |
|             | 40 | 36 | 1.8  | 0.27 | 0.31 |
|             | 50 | 38 | 2.0  | 0.27 | 0.31 |
|             | 60 | 38 | 2.2  | 0.29 | 0.34 |
| 6 •<br>Red  | 30 | 34 | 2.0  | 0.33 | 0.38 |
|             | 40 | 36 | 2.4  | 0.36 | 0.41 |
|             | 50 | 38 | 2.7  | 0.36 | 0.42 |
| 7 •<br>Red  | 60 | 38 | 2.9  | 0.39 | 0.45 |
|             | 30 | 34 | 2.6  | 0.43 | 0.50 |
|             | 40 | 38 | 3.0  | 0.40 | 0.46 |
|             | 50 | 40 | 3.4  | 0.41 | 0.47 |
| 8 •<br>Red  | 60 | 40 | 3.7  | 0.45 | 0.51 |
|             | 30 | 37 | 3.2  | 0.45 | 0.52 |
|             | 40 | 39 | 3.7  | 0.47 | 0.54 |
| 9 •<br>Red  | 50 | 41 | 3.9  | 0.45 | 0.52 |
|             | 60 | 42 | 4.6  | 0.50 | 0.58 |
|             | 30 | 38 | 3.6  | 0.48 | 0.55 |
| 10 •<br>Red | 40 | 41 | 4.3  | 0.49 | 0.57 |
|             | 50 | 44 | 5.2  | 0.52 | 0.60 |
|             | 60 | 45 | 5.5  | 0.52 | 0.60 |
|             | 40 | 44 | 6.0  | 0.60 | 0.69 |
| 11 •<br>Red | 50 | 46 | 6.8  | 0.62 | 0.71 |
|             | 60 | 47 | 7.6  | 0.66 | 0.76 |
|             | 70 | 49 | 8.2  | 0.66 | 0.76 |
| 12 •<br>Red | 40 | 46 | 8.0  | 0.73 | 0.84 |
|             | 50 | 48 | 8.9  | 0.74 | 0.86 |
|             | 60 | 50 | 9.8  | 0.75 | 0.87 |
|             | 70 | 51 | 10.5 | 0.78 | 0.90 |
| 13 •<br>Red | 40 | 46 | 10.5 | 0.96 | 1.10 |
|             | 50 | 48 | 11.9 | 0.99 | 1.15 |
|             | 60 | 50 | 12.7 | 0.98 | 1.13 |
| 14 •<br>Red | 70 | 52 | 14.1 | 1.00 | 1.16 |

**Notes:**

**Bold** = Recommended pressure.

All precipitation rates calculated for 180 degree operation. For the precipitation rate for a 360 degree sprinkler, divide by 2.

## I90-36V Performance Data

### I-90-36V Nozzle Performance Data

[View Nozzle](#) <sup>[4]</sup>

| Nozzle            | Pressure | Radius<br>ft | Flow<br>GPM | Precip in/hr |      |      |
|-------------------|----------|--------------|-------------|--------------|------|------|
|                   | PSI      |              |             | ■            | ▲    |      |
| 25 •<br>Lt. Blue  |          | 80           | 73          | 30.5         | 0.55 | 0.64 |
|                   |          | 90           | 75          | 32.4         | 0.55 | 0.64 |
|                   |          | 100          | 76          | 34.3         | 0.57 | 0.66 |
|                   |          | 110          | 78          | 36.5         | 0.58 | 0.67 |
| 33 •<br>Grey      |          | 80           | 77          | 36.3         | 0.59 | 0.68 |
|                   |          | 90           | 78          | 38.4         | 0.61 | 0.7  |
|                   |          | 100          | 80          | 40.6         | 0.61 | 0.71 |
| 38 •<br>Red       |          | 110          | 81          | 42.7         | 0.63 | 0.72 |
|                   |          | 80           | 80          | 40.6         | 0.61 | 0.71 |
|                   |          | 90           | 82          | 42.9         | 0.61 | 0.71 |
|                   |          | 100          | 83          | 45.3         | 0.63 | 0.73 |
| 43 •<br>Dk. Brown |          | 110          | 85          | 47.7         | 0.64 | 0.73 |
|                   |          | 80           | 83          | 46.2         | 0.65 | 0.75 |
|                   |          | 90           | 84          | 48.6         | 0.66 | 0.77 |
| 48 •<br>Dk. Green |          | 100          | 85          | 50.9         | 0.68 | 0.78 |
|                   |          | 110          | 86          | 53.4         | 0.69 | 0.8  |
|                   |          | 80           | 86          | 49.6         | 0.65 | 0.75 |
|                   |          | 90           | 89          | 52.5         | 0.64 | 0.74 |
| 53 •<br>Dk. Blue* |          | 100          | 90          | 54.8         | 0.65 | 0.75 |
|                   |          | 110          | 91          | 57.3         | 0.67 | 0.77 |
|                   |          | 80           | 89          | 54.2         | 0.66 | 0.76 |
| 63 •<br>Black     |          | 90           | 90          | 56.7         | 0.67 | 0.78 |
|                   |          | 100          | 92          | 59.2         | 0.67 | 0.78 |
|                   |          | 110          | 93          | 61.7         | 0.69 | 0.79 |
|                   |          | 120          | 94          | 64.2         | 0.7  | 0.81 |
|                   |          | 80           | 92          | 63.2         | 0.72 | 0.83 |
|                   |          | 90           | 94          | 65.9         | 0.72 | 0.83 |
|                   |          | 100          | 96          | 69.4         | 0.72 | 0.84 |
|                   |          | 110          | 97          | 72           | 0.74 | 0.85 |
|                   |          | 120          | 98          | 74.9         | 0.75 | 0.87 |
|                   |          | 80           | 96          | 72.1         | 0.75 | 0.87 |
|                   |          | 90           | 98          | 75           | 0.75 | 0.87 |

|                |     |     |      |      |      |
|----------------|-----|-----|------|------|------|
| 73 •<br>Orange | 100 | 99  | 77.8 | 0.76 | 0.88 |
|                | 110 | 102 | 80.5 | 0.74 | 0.86 |
|                | 120 | 103 | 83.3 | 0.76 | 0.87 |

\* Factory installed nozzle.

**Notes:**

Precipitation rates for 36V models are calculated for 360-degree operation. All triangular rates are equilateral. For low angle nozzle performance, reduce radius by 15%. Complies to ASAE standard.

## PGP Blue Standard Nozzle Performance Data

### PGP Blue Nozzle Performance Data

[View Nozzle](#) <sup>[5]</sup>

| Nozzle        | Pressure<br>PSI | Radius<br>ft | Flow<br>GPM | Precip in/hr |      |
|---------------|-----------------|--------------|-------------|--------------|------|
|               |                 |              |             | ■            | ▲    |
| 1.5 •<br>Blue | 25              | 29           | 1.2         | 0.27         | 0.32 |
|               | 35              | 31           | 1.4         | 0.28         | 0.32 |
|               | 45              | 31           | 1.5         | 0.30         | 0.35 |
|               | 55              | 32           | 1.8         | 0.34         | 0.39 |
|               | 65              | 32           | 1.9         | 0.36         | 0.41 |
| 2.0 •<br>Blue | 25              | 33           | 1.4         | 0.25         | 0.29 |
|               | 35              | 33           | 1.7         | 0.30         | 0.35 |
|               | 45              | 34           | 2.0         | 0.33         | 0.38 |
|               | 55              | 34           | 2.1         | 0.35         | 0.40 |
|               | 65              | 34           | 2.3         | 0.38         | 0.44 |
| 2.5 •<br>Blue | 25              | 33           | 1.7         | 0.30         | 0.35 |
|               | 35              | 35           | 2.1         | 0.33         | 0.38 |
|               | 45              | 35           | 2.5         | 0.39         | 0.45 |
|               | 55              | 35           | 2.6         | 0.41         | 0.47 |
|               | 65              | 35           | 2.9         | 0.46         | 0.53 |
| 3.0 •<br>Blue | 25              | 35           | 2.2         | 0.35         | 0.40 |
|               | 35              | 36           | 2.7         | 0.40         | 0.46 |
|               | 45              | 38           | 3.0         | 0.40         | 0.46 |
|               | 55              | 39           | 3.4         | 0.43         | 0.50 |
|               | 65              | 39           | 3.7         | 0.47         | 0.54 |
| 4.0 •<br>Blue | 25              | 37           | 3.0         | 0.42         | 0.49 |
|               | 35              | 39           | 3.5         | 0.44         | 0.51 |
|               | 45              | 40           | 4.0         | 0.48         | 0.56 |
|               | 55              | 41           | 4.5         | 0.52         | 0.60 |
|               | 65              | 41           | 4.8         | 0.55         | 0.63 |
|               | 25              | 37           | 3.7         | 0.52         | 0.60 |

|               |    |    |     |      |      |
|---------------|----|----|-----|------|------|
| 5.0 •<br>Blue | 35 | 39 | 4.5 | 0.57 | 0.66 |
|               | 45 | 42 | 5.0 | 0.55 | 0.63 |
|               | 55 | 42 | 5.7 | 0.62 | 0.72 |
|               | 65 | 42 | 6.2 | 0.68 | 0.78 |
| 6.0 •<br>Blue | 25 | 38 | 4.3 | 0.57 | 0.66 |
|               | 35 | 40 | 5.6 | 0.67 | 0.78 |
|               | 45 | 43 | 6.0 | 0.62 | 0.72 |
|               | 55 | 44 | 6.7 | 0.67 | 0.77 |
|               | 65 | 44 | 7.3 | 0.73 | 0.84 |
| 8.0 •<br>Blue | 25 | 37 | 6.0 | 0.84 | 0.97 |
|               | 35 | 41 | 7.0 | 0.80 | 0.93 |
|               | 45 | 44 | 8.0 | 0.80 | 0.92 |
|               | 55 | 46 | 9.0 | 0.82 | 0.95 |
|               | 65 | 46 | 9.8 | 0.89 | 1.03 |

#### Notes:

**Bold** = Recommended pressure.

All precipitation rates calculated for 180 degree operation. For the precipitation rate for a 360 degree sprinkler, divide by 2.

#### Rate this Article:



Average: 3 (1 vote)

#### Related Links

Source URL (retrieved on 27/01/2015 - 21:19): <http://www.hunterindustries.com/en-metric/support/how-do-you-calculate-precipitation-rates-i-90-rotor-opposing-nozzles>

#### Links:

- [1] <http://www.hunterindustries.com/en-metric/irrigation-product/rotors/i-90>
- [2] [http://www.hunterindustries.com/sites/default/files/ts\\_i90\\_adj\\_install-3\\_0.jpg](http://www.hunterindustries.com/sites/default/files/ts_i90_adj_install-3_0.jpg)
- [3] <http://www.hunterindustries.com/sites/default/files/pgp-red-nozzles.png>
- [4] [http://www.hunterindustries.com/sites/default/files/i90\\_nozzles.png](http://www.hunterindustries.com/sites/default/files/i90_nozzles.png)
- [5] [http://www.hunterindustries.com/sites/default/files/pgp-adj-nozzles\\_Blue\\_sm.png](http://www.hunterindustries.com/sites/default/files/pgp-adj-nozzles_Blue_sm.png)