

# HARDI ISO F-110 - Standard flat fan nozzles



All-around use, flat fan nozzle. Recommended for all types of pesticide application where optimum coverage is demanded. This nozzle will give you excellent and uniform liquid distribution at boom heights from 14" to 28" (20" recommended to take care of uneven terrain or boom movements).

- ISO – flow, color and outer dimensions
- Working pressure – 20 to 70 PSI
- Recommended for TWIN sprayers
- SYNTAL – precision molded thermoplastic
- CERAMIC – extremely high durability
- COLOR TIPS – for safe and easy handling

PSI	GPM	Spray Quality	GPA at MPH							
			6	7	8	10	12	14	16	18

0075-Pink	20	0.053	F	2.6	2.3	2.0	1.6	1.3	1.1	1.0	0.9	
	30	0.065	F	3.2	2.8	2.4	1.9	1.6	1.4	1.2	1.1	
	40	0.075	F	3.7	3.2	2.8	2.2	1.9	1.6	1.4	1.2	
	50	0.084	F	4.2	3.6	3.1	2.5	2.1	1.8	1.6	1.4	
	60	0.092	F	4.5	3.9	3.4	2.7	2.3	1.9	1.7	1.5	
	70	0.099	F	4.9	4.2	3.7	2.9	2.5	2.1	1.8	1.6	
				SYNTAL-CT 371964 (12 pcs. 750634)	SYNTAL-S 371963 (12 pcs. 750635)							

01-Orange	20	0.071	F	3.5	3.0	2.6	2.1	1.8	1.5	1.3	1.2	
	30	0.087 <th>F</th> <td>4.3</td> <td>3.7</td> <td>3.2</td> <td>2.6</td> <td>2.1</td> <td>1.8</td> <td>1.6</td> <td>1.4</td>	F	4.3	3.7	3.2	2.6	2.1	1.8	1.6	1.4	
	40	0.100 <th>F</th> <td>5.0</td> <td>4.2</td> <td>3.7</td> <td>3.0</td> <td>2.5</td> <td>2.1</td> <td>1.9</td> <td>1.7</td>	F	5.0	4.2	3.7	3.0	2.5	2.1	1.9	1.7	
	50	0.112 <th>F</th> <td>5.5</td> <td>4.7</td> <td>4.2</td> <td>3.3</td> <td>2.8</td> <td>2.4</td> <td>2.1</td> <td>1.8</td>	F	5.5	4.7	4.2	3.3	2.8	2.4	2.1	1.8	
	60	0.122 <th>F</th> <td>6.1</td> <td>5.2</td> <td>4.5</td> <td>3.6</td> <td>3.0</td> <td>2.6</td> <td>2.3</td> <td>2.0</td>	F	6.1	5.2	4.5	3.6	3.0	2.6	2.3	2.0	
	70	0.132 <th>F</th> <td>6.5</td> <td>5.6</td> <td>4.9</td> <td>3.9</td> <td>3.3</td> <td>2.8</td> <td>2.5</td> <td>2.2</td>	F	6.5	5.6	4.9	3.9	3.3	2.8	2.5	2.2	
				SYNTAL-CT 371764 (12 pcs. 755627)	SYNTAL-S 371706 (12 pcs. 755643)							

015-Green	20	0.106	M	5.3	4.5	3.9	3.2	2.6	2.3	2.0	1.8	
	30	0.130 <th>F</th> <td>6.4</td> <td>5.5</td> <td>4.8</td> <td>3.9</td> <td>3.2</td> <td>2.8</td> <td>2.4</td> <td>2.1</td>	F	6.4	5.5	4.8	3.9	3.2	2.8	2.4	2.1	
	40	0.150 <th>F</th> <td>7.4</td> <td>6.4</td> <td>5.6</td> <td>4.5</td> <td>3.7</td> <td>3.2</td> <td>2.8</td> <td>2.5</td>	F	7.4	6.4	5.6	4.5	3.7	3.2	2.8	2.5	
	50	0.168 <th>F</th> <td>8.3</td> <td>7.1</td> <td>6.2</td> <td>5.0</td> <td>4.2</td> <td>3.6</td> <td>3.1</td> <td>2.8</td>	F	8.3	7.1	6.2	5.0	4.2	3.6	3.1	2.8	
	60	0.184 <th>F</th> <td>9.1</td> <td>7.8</td> <td>6.8</td> <td>5.5</td> <td>4.5</td> <td>3.9</td> <td>3.4</td> <td>3.0</td>	F	9.1	7.8	6.8	5.5	4.5	3.9	3.4	3.0	
	70	0.198 <th>F</th> <td>9.8</td> <td>8.4</td> <td>7.4</td> <td>5.9</td> <td>4.9</td> <td>4.2</td> <td>3.7</td> <td>3.3</td>	F	9.8	8.4	7.4	5.9	4.9	4.2	3.7	3.3	
				SYNTAL-CT 371765 (12 pcs. 755628) CERAMIC-CT 371772 (12 pcs. 755635)	SYNTAL-S 371707 (12 pcs. 755646) CERAMIC-S 371738 (12 pcs. 755667)							

02-Yellow	20	0.144	M	7.0	6.0	5.3	4.2	3.5	3.0	2.6	2.3	
	30	0.173 <th>M</th> <td>8.6</td> <td>7.3</td> <td>6.4</td> <td>5.1</td> <td>4.3</td> <td>3.7</td> <td>3.2</td> <td>2.9</td>	M	8.6	7.3	6.4	5.1	4.3	3.7	3.2	2.9	
	40	0.200 <th>F</th> <td>9.9</td> <td>8.5</td> <td>7.4</td> <td>5.9</td> <td>5.0</td> <td>4.2</td> <td>3.7</td> <td>3.3</td>	F	9.9	8.5	7.4	5.9	5.0	4.2	3.7	3.3	
	50	0.224 <th>F</th> <td>11.1</td> <td>9.5</td> <td>8.3</td> <td>6.6</td> <td>5.5</td> <td>4.7</td> <td>4.2</td> <td>3.7</td>	F	11.1	9.5	8.3	6.6	5.5	4.7	4.2	3.7	
	60	0.245 <th>F</th> <td>12.1</td> <td>10.4</td> <td>9.1</td> <td>7.3</td> <td>6.1</td> <td>5.2</td> <td>4.5</td> <td>4.0</td>	F	12.1	10.4	9.1	7.3	6.1	5.2	4.5	4.0	
	70	0.265 <th>F</th> <td>13.1</td> <td>11.2</td> <td>9.8</td> <td>7.9</td> <td>6.5</td> <td>5.6</td> <td>4.9</td> <td>4.4</td>	F	13.1	11.2	9.8	7.9	6.5	5.6	4.9	4.4	
				SYNTAL-CT 371766 (12 pcs. 755629) CERAMIC-CT 371773 (12 pcs. 755636)	SYNTAL-S 371708 (12 pcs. 755649) CERAMIC-S 371739 (12 pcs. 755670)							

025-Lilac	20	0.177	M	8.8	7.5	6.6	5.3	4.4	3.8	3.3	2.9	
	30	0.217 <th>M</th> <td>10.7</td> <td>9.2</td> <td>8.0</td> <td>6.4</td> <td>5.4</td> <td>4.6</td> <td>4.0</td> <td>3.6</td>	M	10.7	9.2	8.0	6.4	5.4	4.6	4.0	3.6	
	40	0.250 <th>M</th> <td>12.4</td> <td>10.6</td> <td>9.3</td> <td>7.4</td> <td>6.2</td> <td>5.3</td> <td>4.6</td> <td>4.1</td>	M	12.4	10.6	9.3	7.4	6.2	5.3	4.6	4.1	
	50	0.280 <th>M</th> <td>13.8</td> <td>11.9</td> <td>10.4</td> <td>8.3</td> <td>6.9</td> <td>5.9</td> <td>5.2</td> <td>4.6</td>	M	13.8	11.9	10.4	8.3	6.9	5.9	5.2	4.6	
	60	0.306 <th>F</th> <td>15.2</td> <td>13.0</td> <td>11.4</td> <td>9.1</td> <td>7.6</td> <td>6.5</td> <td>5.7</td> <td>5.1</td>	F	15.2	13.0	11.4	9.1	7.6	6.5	5.7	5.1	
	70	0.331 <th>F</th> <td>16.4</td> <td>14.0</td> <td>12.3</td> <td>9.8</td> <td>8.2</td> <td>7.0</td> <td>6.1</td> <td>5.5</td>	F	16.4	14.0	12.3	9.8	8.2	7.0	6.1	5.5	
				SYNTAL-CT 371950 (12 pcs. 750626)	SYNTAL-S 371946 (12 pcs. 750628)							

= Spray quality:  
 Fine (F), Medium (M), Coarse (C), Very Coarse (VC).

PSI	GPA	Spray Quality	GPA at MPH								
			6	7	8	10	12	15	20	25	
03-Blue	20	0.212	M	10.5	9.0	7.9	6.3	5.3	4.5	3.9	3.5
	30	0.260	M	12.9	11.0	9.6	7.7	6.4	5.5	4.8	4.3
	40	0.300	M	14.9	12.7	11.1	8.9	7.4	6.4	5.6	5.0
	50	0.335	M	16.6	14.2	12.5	10.0	8.3	7.1	6.2	5.5
	60	0.367	M	18.2	15.6	13.6	10.9	9.1	7.8	6.8	6.1
	70	0.397	M	19.6	16.8	14.7	11.8	9.8	8.4	7.4	6.5
				SYNTAL-CT 371767 (12 pcs. 755630) CERAMIC-CT 371774 (12 pcs. 755637)	SYNTAL-S 371709 (12 pcs. 755652) CERAMIC-S 371740 (12 pcs. 755673)						

04-Red	20	0.283	M	14.0	12.0	10.5	8.4	7.0	6.0	5.3	4.7	
	30	0.346 <th>M</th> <td>17.1</td> <td>14.7</td> <td>12.9</td> <td>10.3</td> <td>8.6</td> <td>7.3</td> <td>6.4</td> <td>5.7</td>	M	17.1	14.7	12.9	10.3	8.6	7.3	6.4	5.7	
	40	0.400 <th>M</th> <td>19.8</td> <td>17.0</td> <td>14.9</td> <td>11.9</td> <td>9.9</td> <td>8.5</td> <td>7.4</td> <td>6.6</td>	M	19.8	17.0	14.9	11.9	9.9	8.5	7.4	6.6	
	50	0.447 <th>M</th> <td>22.1</td> <td>19.0</td> <td>16.6</td> <td>13.3</td> <td>11.1</td> <td>9.5</td> <td>8.3</td> <td>7.4</td>	M	22.1	19.0	16.6	13.3	11.1	9.5	8.3	7.4	
	60	0.490 <th>M</th> <td>24.2</td> <td>20.8</td> <td>18.2</td> <td>14.5</td> <td>12.1</td> <td>10.4</td> <td>9.1</td> <td>8.1</td>	M	24.2	20.8	18.2	14.5	12.1	10.4	9.1	8.1	
	70	0.529 <th>M</th> <td>26.2</td> <td>22.5</td> <td>19.6</td> <td>15.7</td> <td>13.1</td> <td>11.2</td> <td>9.8</td> <td>8.7</td>	M	26.2	22.5	19.6	15.7	13.1	11.2	9.8	8.7	
				SYNTAL-CT 371768 (12 pcs. 755631) CERAMIC-CT 371775 (12 pcs. 755638)	SYNTAL-S 371710 (12 pcs. 755655) CERAMIC-S 371741 (12 pcs. 755676)							

05-Brown	20	0.354	C	17.5	15.0	13.1	10.5	8.8	7.5	6.6	5.8	
	30	0.433 <th>C</th> <td>21.4</td> <td>18.4</td> <td>16.1</td> <td>12.9</td> <td>10.7</td> <td>9.2</td> <td>8.0</td> <td>7.1</td>	C	21.4	18.4	16.1	12.9	10.7	9.2	8.0	7.1	
	40	0.500 <th>M</th> <td>24.8</td> <td>21.2</td> <td>18.6</td> <td>14.9</td> <td>12.4</td> <td>10.6</td> <td>9.3</td> <td>8.3</td>	M	24.8	21.2	18.6	14.9	12.4	10.6	9.3	8.3	
	50	0.559 <th>M</th> <td>27.7</td> <td>23.7</td> <td>20.8</td> <td>16.6</td> <td>13.8</td> <td>11.9</td> <td>10.4</td> <td>9.2</td>	M	27.7	23.7	20.8	16.6	13.8	11.9	10.4	9.2	
	60	0.612 <th>M</th> <td>30.3</td> <td>26.0</td> <td>22.7</td> <td>18.2</td> <td>15.2</td> <td>13.0</td> <td>11.4</td> <td>10.1</td>	M	30.3	26.0	22.7	18.2	15.2	13.0	11.4	10.1	
	70	0.661 <th>M</th> <td>32.7</td> <td>28.1</td> <td>24.6</td> <td>19.6</td> <td>16.4</td> <td>14.0</td> <td>12.3</td> <td>10.9</td>	M	32.7	28.1	24.6	19.6	16.4	14.0	12.3	10.9	
				SYNTAL-CT 371769 (12 pcs. 755632) CERAMIC-CT 371776 (12 pcs. 755639)	SYNTAL-S 371711 (12 pcs. 755658) CERAMIC-S 371742 (12 pcs. 755679)							

06-Grey	20	0.424	C	21.0	18.0	15.8	12.6	10.5	9.0	7.9	7.0	
	30	0.520 <th>C</th> <td>25.7</td> <td>22.0</td> <td>19.3</td> <td>15.4</td> <td>12.9</td> <td>11.0</td> <td>9.6</td> <td>8.6</td>	C	25.7	22.0	19.3	15.4	12.9	11.0	9.6	8.6	
	40	0.600 <th>C</th> <td>29.7</td> <td>25.5</td> <td>22.3</td> <td>17.8</td> <td>14.9</td> <td>12.7</td> <td>11.1</td> <td>9.9</td>	C	29.7	25.5	22.3	17.8	14.9	12.7	11.1	9.9	
	50	0.671 <th>C</th> <td>33.2</td> <td>28.5</td> <td>24.9</td> <td>19.9</td> <td>16.6</td> <td>14.2</td> <td>12.5</td> <td>11.1</td>	C	33.2	28.5	24.9	19.9	16.6	14.2	12.5	11.1	
	60	0.735 <th>C</th> <td>36.4</td> <td>31.2</td> <td>27.3</td> <td>21.8</td> <td>18.2</td> <td>15.6</td> <td>13.6</td> <td>12.1</td>	C	36.4	31.2	27.3	21.8	18.2	15.6	13.6	12.1	
	70	0.794 <th>C</th> <td>39.3</td> <td>33.7</td> <td>29.5</td> <td>23.6</td> <td>19.6</td> <td>16.8</td> <td>14.7</td> <td>13.1</td>	C	39.3	33.7	29.5	23.6	19.6	16.8	14.7	13.1	
				SYNTAL-CT 371770 (12 pcs. 755633) CERAMIC-CT 371777 (12 pcs. 755640)	SYNTAL-S 371712 (12 pcs. 755661) CERAMIC-S 371743 (12 pcs. 755682)							

08-White	20	0.566	VC	28.0	24.0	21.0	16.8	14.0	12.0	10.5	9.3	
	30	0.693 <th>C</th> <td>34.3</td> <td>29.4</td> <td>25.7</td> <td>20.6</td> <td>17.1</td> <td>14.7</td> <td>12.9</td> <td>11.4</td>	C	34.3	29.4	25.7	20.6	17.1	14.7	12.9	11.4	
	40	0.800 <th>C</th> <td>39.6</td> <td>33.9</td> <td>29.7</td> <td>23.8</td> <td>19.8</td> <td>17.0</td> <td>14.9</td> <td>13.2</td>	C	39.6	33.9	29.7	23.8	19.8	17.0	14.9	13.2	
	50	0.894 <th>C</th> <td>44.3</td> <td>37.9</td> <td>33.2</td> <td>26.6</td> <td>22.1</td> <td>19.0</td> <td>16.6</td> <td>14.8</td>	C	44.3	37.9	33.2	26.6	22.1	19.0	16.6	14.8	
	60	0.980 <th>C</th> <td>48.5</td> <td>41.6</td> <td>36.4</td> <td>29.1</td> <td>24.2</td> <td>20.8</td> <td>18.2</td> <td>16.2</td>	C	48.5	41.6	36.4	29.1	24.2	20.8	18.2	16.2	
	70	1.058 <th>C</th> <td>52.4</td> <td>44.9</td> <td>39.3</td> <td>31.4</td> <td>26.2</td> <td>22.5</td> <td>19.6</td> <td>17.5</td>	C	52.4	44.9	39.3	31.4	26.2	22.5	19.6	17.5	
				SYNTAL-CT 371771 (12 pcs. 755634)	SYNTAL-S 371713 (12 pcs. 755664)							

10-Light blue	20	0.707	VC	35.0	30.0	26.3	21.0	17.5	15.0	13.1	11.7	
	30	0.866 <th>VC</th> <td>42.9</td> <td>36.7</td> <td>32.2</td> <td>25.7</td> <td>21.4</td> <td>18.4</td> <td>16.1</td> <td>14.3</td>	VC	42.9	36.7	32.2	25.7	21.4	18.4	16.1	14.3	
	40	1.000 <th>VC</th> <td>49.5</td> <td>42.4</td> <td>37.1</td> <td>29.7</td> <td>24.8</td> <td>21.2</td> <td>18.6</td> <td>16.5</td>	VC	49.5	42.4	37.1	29.7	24.8	21.2	18.6	16.5	
	50	1.118 <th>VC</th> <td>55.3</td> <td>47.4</td> <td>41.5</td> <td>33.2</td> <td>27.7</td> <td>23.7</td> <td>20.8</td> <td>18.4</td>	VC	55.3	47.4	41.5	33.2	27.7	23.7	20.8	18.4	
	60	1.225 <th>C</th> <td>60.6</td> <td>52.0</td> <td>45.5</td> <td>36.4</td> <td>30.3</td> <td>26.0</td> <td>22.7</td> <td>20.2</td>	C	60.6	52.0	45.5	36.4	30.3	26.0	22.7	20.2	
	70	1.323 <th>C</th> <td>65.5</td> <td>56.1</td> <td>49.1</td> <td>39.3</td> <td>32.7</td> <td>28.1</td> <td>24.6</td> <td>21.8</td>	C	65.5	56.1	49.1	39.3	32.7	28.1	24.6	21.8	
				SYNTAL-CT 371970 (12 pcs. 750636)	SYNTAL-S 371966 (12 pcs. 750638)							

The nozzles are available both as single nozzles (S) and as COLOR TIPS (CT), where the nozzle is integrated in the SNAP-FIT.

