SPRAYMASTER CLASSIC DEAERATORS (Duo Tank)

Dimensions and Ratings
NOTES:

1. Mounted at dim. "H" (top of tank) on non-packaged units.
2. Tank mounted on non-packaged unit.
3. Packaged units only. Mounted on left end, right side of stand on 48" dia. 450 gal, 66" dia. 1400 gal & 72" dia. 2000 gal units as shown.
4. Suction piping includes strainer, gate valve and flexible connector.
5. Discharge piping includes gate valve, check valve, control valve, by-pass orifice, and pressure gauge.
6. All couplings are 3000# F.S.
7. All flanges are 150# F.F. except as noted.
8. Two water and steam inlets used, one shown.
9. Customer to plug all fittings not being used.
10. Mount tank above pump at elevation necessary for static head including safe allowance for piping friction as approved by pump manufacturer.
11. Deaerator section of tank is built to ASME Code.
12. Accompanying dimensions, while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimension prints.
13. Add suffix "P" to Model no. for packaged units (SDP-45).
14. Optional tanks available for 5 minutes storage (except SDP-7 & SDP-15), other combinations of capacities as required - contact your local Cleaver-Brooks authorized representative.
15. Using Warren #377 float cage (except SM7 which uses MCD-M #51), dimension "B" may change with other controls - contact your local Cleaver-Brooks authorized representative.
16. No interconnecting piping or wiring furnished on non-packaged units unless specified, contact your local Cleaver-Brooks authorized representative for specific piping or wiring furnished on packaged assemblies.
17. Capacities other than shown as standard available by proper selection of controls - contact your local Cleaver-Brooks authorized representative.
18. Optional tank sizes and ratings available - contact your local Cleaver-Brooks authorized representative.
19. Lifting lugs are for lifting empty tank only.
20. Raw water make-up should first pass through a water softener if hardness is present.
21. All dimensions, while sufficiently accurate for layout purposes, must be confirmed for construction by certified dimensional prints.
Spraymaster Duo Dimensions and Ratings

### Figure 1b. Spraymaster Duo Dimensions (sheet 2 of 3)

<table>
<thead>
<tr>
<th>SPRAYMASTER MODEL NO.</th>
<th>SM-7D</th>
<th>SM-15D</th>
<th>SM-30D</th>
<th>SM-45D</th>
<th>SM-70D</th>
<th>SM-100D</th>
<th>SM-140D</th>
<th>SM-200D</th>
<th>SM-280D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratings (lb/h)</td>
<td>7000</td>
<td>15000</td>
<td>30000</td>
<td>45000</td>
<td>70000</td>
<td>100000</td>
<td>140000</td>
<td>200000</td>
<td>280000</td>
</tr>
<tr>
<td>Tank Weight (lbs)</td>
<td>1530</td>
<td>2500</td>
<td>3650</td>
<td>4500</td>
<td>6770</td>
<td>8810</td>
<td>10760</td>
<td>12975</td>
<td>18735</td>
</tr>
<tr>
<td>Tank Weight Flooded</td>
<td>5165</td>
<td>10835</td>
<td>17720</td>
<td>24440</td>
<td>38450</td>
<td>52310</td>
<td>68045</td>
<td>80290</td>
<td>106475</td>
</tr>
<tr>
<td>(lbs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tank Cap-Deaerator</td>
<td>230</td>
<td>300</td>
<td>600</td>
<td>900</td>
<td>1400</td>
<td>2000</td>
<td>2800</td>
<td>4000</td>
<td>5600</td>
</tr>
<tr>
<td>(Gal to Overflow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Cap (Min)</td>
<td>16</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Tank Cap-Rec Section</td>
<td>160</td>
<td>300</td>
<td>600</td>
<td>900</td>
<td>1400</td>
<td>2000</td>
<td>2800</td>
<td>4000</td>
<td>5600</td>
</tr>
<tr>
<td>(Gal to Flooded)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Cap (Min)</td>
<td>11.5</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Tank Size (Dia x Length)</td>
<td>36 x 106-1/2</td>
<td>48 x 141-1/2</td>
<td>54 x 181</td>
<td>60 x 207</td>
<td>66 x 270-1/2</td>
<td>72 x 302</td>
<td>84 x 302-1/4</td>
<td>96 x 308-3/4</td>
<td>108 x 349</td>
</tr>
<tr>
<td>A Overall Height</td>
<td>58</td>
<td>66-1/2</td>
<td>74-1/2</td>
<td>80-1/2</td>
<td>88</td>
<td>96-1/2</td>
<td>109</td>
<td>120-1/2</td>
<td>133</td>
</tr>
<tr>
<td>B Overall Width</td>
<td>51</td>
<td>62</td>
<td>68</td>
<td>75</td>
<td>80</td>
<td>87</td>
<td>99</td>
<td>111</td>
<td>123</td>
</tr>
<tr>
<td>C</td>
<td>8-1/2</td>
<td>10-1/2</td>
<td>11-1/2</td>
<td>12-1/2</td>
<td>13-1/2</td>
<td>14-1/2</td>
<td>16-1/2</td>
<td>18-5/8</td>
<td>20-3/4</td>
</tr>
<tr>
<td>D</td>
<td>28-1/2</td>
<td>72-1/2</td>
<td>92-1/2</td>
<td>101</td>
<td>146</td>
<td>164</td>
<td>146</td>
<td>4 136</td>
<td>4 153</td>
</tr>
<tr>
<td>E</td>
<td>43</td>
<td>54-1/2</td>
<td>74</td>
<td>83</td>
<td>124</td>
<td>142</td>
<td>124</td>
<td>24 116</td>
<td>24 133</td>
</tr>
<tr>
<td>F</td>
<td>48-1/2</td>
<td>34-1/2</td>
<td>54</td>
<td>63</td>
<td>104</td>
<td>122</td>
<td>104</td>
<td>44 96</td>
<td>48 109</td>
</tr>
<tr>
<td>G</td>
<td>11</td>
<td>16</td>
<td>31</td>
<td>42</td>
<td>68</td>
<td>68</td>
<td>73</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>H</td>
<td>21</td>
<td>26</td>
<td>45</td>
<td>54</td>
<td>80</td>
<td>104</td>
<td>86</td>
<td>82</td>
<td>98</td>
</tr>
<tr>
<td>J</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>52</td>
<td>56</td>
<td>90</td>
<td>102</td>
<td>144</td>
<td>164</td>
<td>147</td>
<td>130</td>
<td>144</td>
</tr>
<tr>
<td>P</td>
<td>N/A</td>
<td>31</td>
<td>50</td>
<td>32</td>
<td>35</td>
<td>36</td>
<td>28</td>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>R</td>
<td>N/A</td>
<td>47</td>
<td>65</td>
<td>74</td>
<td>115</td>
<td>132</td>
<td>126</td>
<td>106</td>
<td>123</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>38</td>
<td>60</td>
<td>90</td>
<td>27</td>
<td>27</td>
<td>32</td>
<td>27</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>W</td>
<td>64</td>
<td>90</td>
<td>109</td>
<td>126</td>
<td>169</td>
<td>224</td>
<td>205</td>
<td>160</td>
<td>186</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>69</td>
<td>95</td>
<td>120</td>
<td>145</td>
<td>198</td>
<td>192</td>
<td>177</td>
<td>196</td>
<td>196</td>
</tr>
<tr>
<td>Z</td>
<td>85</td>
<td>115</td>
<td>155</td>
<td>171</td>
<td>230</td>
<td>268</td>
<td>258</td>
<td>258</td>
<td>249</td>
</tr>
<tr>
<td>KK</td>
<td>2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
<td>2-1/2</td>
</tr>
<tr>
<td>LL</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
<td>3/4</td>
<td>1</td>
<td>1-1/2</td>
<td>2</td>
<td>2 @ 1-1/2</td>
<td>2 @ 2</td>
</tr>
<tr>
<td>MM</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>NN</td>
<td>10</td>
<td></td>
<td>C_L</td>
<td>4</td>
<td>7</td>
<td>6-1/2</td>
<td>8</td>
<td>14-1/2</td>
<td>26-1/2</td>
</tr>
<tr>
<td>PP</td>
<td>68</td>
<td>94</td>
<td>112</td>
<td>127</td>
<td>180</td>
<td>197</td>
<td>173</td>
<td>175</td>
<td>191</td>
</tr>
<tr>
<td>RR</td>
<td>74</td>
<td>101</td>
<td>120</td>
<td>133</td>
<td>200</td>
<td>227</td>
<td>205</td>
<td>201-1/2</td>
<td>211</td>
</tr>
<tr>
<td>SS</td>
<td>72</td>
<td>95</td>
<td>126</td>
<td>138</td>
<td>188</td>
<td>214</td>
<td>183</td>
<td>190</td>
<td>229</td>
</tr>
<tr>
<td>TT</td>
<td>82</td>
<td>109</td>
<td>144</td>
<td>160</td>
<td>218</td>
<td>243</td>
<td>232</td>
<td>213</td>
<td>249</td>
</tr>
<tr>
<td>WW</td>
<td>75</td>
<td>108</td>
<td>132</td>
<td>153</td>
<td>208</td>
<td>267</td>
<td>249</td>
<td>206</td>
<td>279</td>
</tr>
<tr>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YY</td>
<td>12</td>
<td>16</td>
<td>19</td>
<td>22</td>
<td>24</td>
<td>27</td>
<td>31</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>ZZ</td>
<td>10</td>
<td>12-1/2</td>
<td>16</td>
<td>19-1/2</td>
<td>22</td>
<td>25</td>
<td>30</td>
<td>34-1/2</td>
<td>40</td>
</tr>
</tbody>
</table>
### Dimensions and Ratings

#### Spraymaster Duo

**Figure 1c. Spraymaster Duo Dimensions (sheet 3 of 3)**

<table>
<thead>
<tr>
<th>TANK CAPACITY (GAL)</th>
<th>230</th>
<th>300</th>
<th>600</th>
<th>900</th>
<th>1400</th>
<th>2000</th>
<th>2800</th>
<th>4000</th>
<th>5600</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Outside Length</td>
<td>87</td>
<td>115</td>
<td>154</td>
<td>175-1/2</td>
<td>237-1/2</td>
<td>276</td>
<td>268</td>
<td>144</td>
<td>297</td>
</tr>
<tr>
<td>B2 C_L to C_L Anchor Bolt Holes</td>
<td>82</td>
<td>110</td>
<td>148</td>
<td>169-1/2</td>
<td>230-1/2</td>
<td>269</td>
<td>265</td>
<td>137</td>
<td>294</td>
</tr>
<tr>
<td>C3 Outside Width</td>
<td>49</td>
<td>62</td>
<td>66</td>
<td>71</td>
<td>76</td>
<td>81</td>
<td>86-1/2</td>
<td>102</td>
<td>112</td>
</tr>
<tr>
<td>D4 C_L to C_L Anchor Bolt Holes</td>
<td>46</td>
<td>59</td>
<td>63</td>
<td>68</td>
<td>73</td>
<td>78</td>
<td>79-1/2</td>
<td>99</td>
<td>101</td>
</tr>
<tr>
<td>E5</td>
<td>3/4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1-1/8</td>
<td>1-1/8</td>
<td>1-1/8</td>
<td>1-1/8</td>
<td>1-1/8</td>
</tr>
<tr>
<td>F6</td>
<td>5/6</td>
<td>7/8</td>
<td>7/8</td>
<td>7/8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

#### TANK CONNECTION SIZES

1. **Relief-Valve(s)**
   - Contact Your Local Cleaver-brooks Authorized Representative

2. **Overflow (Dea)**
   - 1-1/4 NPT
   - 3 NPT
   - 3 NPT
   - 4 FLG
   - 4 FLG
   - 4 FLG
   - 6 FLG
   - 6 FLG

3. **Steam Inlet (Dea Flg)**
   - 1 NPT
   - 1-1/2 NPT
   - 2 NPT
   - 2 NPT
   - 3 NPT
   - 3 NPT
   - 4 FLG
   - 4 FLG
   - 4 FLG
   - 6 FLG

4. **High Temp Return**
   - 1-1/4 NPT
   - 1-1/2 NPT
   - 2 NPT
   - 2 NPT
   - 3 NPT
   - 3 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT

5. **Water Inlet (150# RF Flg)**
   - 1 NPT
   - 1-1/2 NPT
   - 2 NPT
   - 2 NPT
   - 3 NPT
   - 3 NPT
   - 4 NPT
   - 4 NPT
   - 6 NPT

6. **Drain (Dea)**
   - 1-1/4 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 2 NPT

7. **Overflow (Rec)**
   - 2 NPT
   - 2 NPT
   - 2 NPT
   - 3 NPT
   - 3 NPT
   - 4 NPT
   - 4 NPT
   - 6 NPT

8. **Pump Suction (Optional)**
   - 3 NPT
   - 3 NPT
   - 3 NPT
   - 3 NPT
   - 4 NPT
   - 4 NPT
   - 4 NPT
   - 6 NPT

9. **Control Panel, (optional)**
   - Contact Your Local Cleaver-Brooks Authorized Representative

10. **Make-Up Valve, (optional)**

11. **Gauge Glass Assembly**

12. **Level Alarms (1 NPT), (optional)**

13. **Level Control (1-1/2 NPT), (optional)**

14. **Sample Connection (1/2 NPT)**

15. **Recirculation Connection (1 NPT), (optional) (For each pump)**

16. **Diffuser Tube (2-1/2 NPT, (optional)**

17. **Breather Connection (1/2 NPT -Do Not Plug)**

18. **Discharge Piping, (optional) (For each pump) (NOTE 5)**

---

**ITEM LIST**

<table>
<thead>
<tr>
<th>Item</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Suction Pump, (optional) (For each pump) (Note 4)</td>
</tr>
<tr>
<td>15</td>
<td>Pump/Motor, (optional)</td>
</tr>
<tr>
<td>16</td>
<td>Control Panel, (optional)</td>
</tr>
<tr>
<td>17</td>
<td>Manway 11 x 15</td>
</tr>
<tr>
<td>18</td>
<td>Overflow Drainer, (optional)</td>
</tr>
<tr>
<td>19</td>
<td>Make-Up Valve, (optional)</td>
</tr>
<tr>
<td>20</td>
<td>Gauge Glass Assembly</td>
</tr>
<tr>
<td>21</td>
<td>Pressure Gauge</td>
</tr>
<tr>
<td>22</td>
<td>Thermometer (3/4 NPT)</td>
</tr>
<tr>
<td>23</td>
<td>Level Alarms (1 NPT), (optional)</td>
</tr>
<tr>
<td>24</td>
<td>Level Control (1-1/2 NPT), (optional)</td>
</tr>
<tr>
<td>25</td>
<td>Sample Connection (1/2 NPT)</td>
</tr>
<tr>
<td>26</td>
<td>Recirculation Connection (1 NPT), (optional) (For each pump)</td>
</tr>
<tr>
<td>27</td>
<td>High Temp Return Connection-Rec (3 NPT)</td>
</tr>
<tr>
<td>28</td>
<td>Diffuser Tube (2-1/2 NPT, (optional)</td>
</tr>
<tr>
<td>29</td>
<td>Breather Connection (1/2 NPT -Do Not Plug)</td>
</tr>
<tr>
<td>30</td>
<td>Discharge Piping, (optional) (For each pump) (NOTE 5)</td>
</tr>
</tbody>
</table>

Sizes listed for items 22 thru 29 are for tank connections only.