

ALUMINUM ELECTROLYTIC CAPACITOR



Snap In, CD291 Series

特性Features

- Load life of 2000 hours at 85°C  
在85°C环境中，负荷寿命2000小时
- High ripple current  
能承受较高的纹波电流
- Smaller size  
小型化



主要技术性能Specification

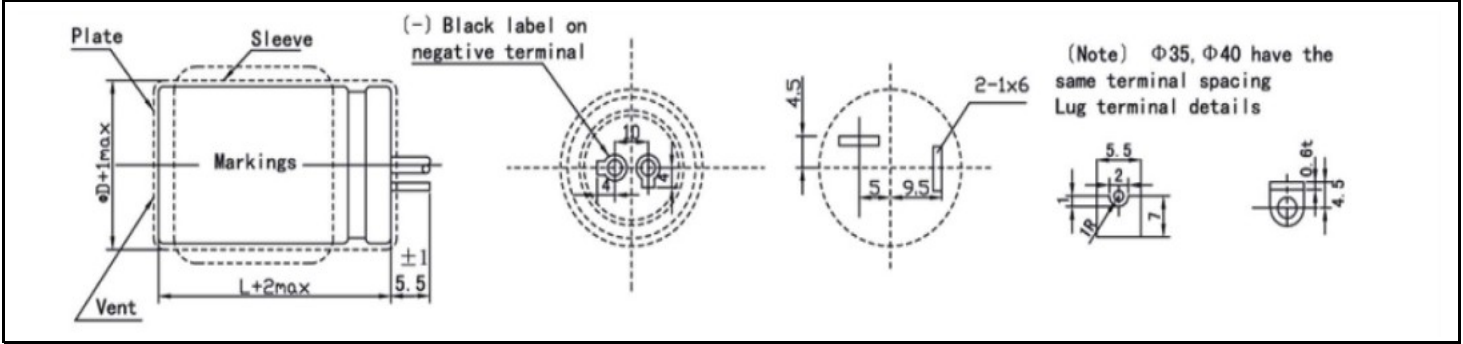
| 项目 Items                                                                         | 特征 Performance Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|--------|---------|-------------------------|---------|---------|--|--|--------------------------|-------|----|-------|--------|---------|-------------------------|---------|------------------------|---------------|---|---|------|------|------|-------------|---------------|------|------|------|------|-------------|------|------|------|------|------|--------|------|------|------|------|---|
| 使用温度范围<br>Operating Tepmerature Range(°C)                                        | -40 ~ +85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |       |        |         | -25 ~ +85°C             |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 额定电压范围<br>Rated Voltage Range(V)                                                 | 10 ~ 400 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |       |        |         | 450 ~ 500 VDC           |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 标称电容量范围<br>Capacitance Range(uF)                                                 | 100 ~ 82000 uF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 标称电容量偏差范围<br>Capacitance Tolerance(20°C,120Hz)                                   | ± 20%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 漏电流<br>Leakage Current (uA)                                                      | After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C: Normal Capacitance(uF) V: Rated Voltage(V)<br>在20°C下加额定电压5分钟后，漏电流不大于0.01CV或者1.5mA,取最小值。                                                                                                                                                                                                                                                                                                                                                               |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 损耗角正切值<br>Dissipation Factor(20°C, 120Hz)<br>(tanδ)                              | <table><tr><td rowspan="5">Cap(uF)<br/>Rated Voltage</td><td>10~16</td><td>25</td><td>35~50</td><td>63</td><td>80~100</td><td rowspan="5">φD(mm)<br/>Rated Voltage</td><td>160~200</td><td>250~500</td></tr><tr><td>≤ 2700</td><td>-</td><td>-</td><td>0.20</td><td>0.15</td><td>0.15</td></tr><tr><td>3300 ~ 4700</td><td>-</td><td>0.35</td><td>0.25</td><td>0.20</td><td>0.15</td></tr><tr><td>5600 ~ 6800</td><td>0.40</td><td>0.35</td><td>0.30</td><td>0.20</td><td>0.20</td></tr><tr><td>≥ 8200</td><td>0.40</td><td>0.35</td><td>0.35</td><td>0.25</td><td>-</td></tr></table> |      |       |        |         |                         |         |         |  |  | Cap(uF)<br>Rated Voltage | 10~16 | 25 | 35~50 | 63     | 80~100  | φD(mm)<br>Rated Voltage | 160~200 | 250~500                | ≤ 2700        | - | - | 0.20 | 0.15 | 0.15 | 3300 ~ 4700 | -             | 0.35 | 0.25 | 0.20 | 0.15 | 5600 ~ 6800 | 0.40 | 0.35 | 0.30 | 0.20 | 0.20 | ≥ 8200 | 0.40 | 0.35 | 0.35 | 0.25 | - |
| Cap(uF)<br>Rated Voltage                                                         | 10~16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 25   | 35~50 | 63     | 80~100  | φD(mm)<br>Rated Voltage | 160~200 | 250~500 |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|                                                                                  | ≤ 2700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -    | -     | 0.20   | 0.15    |                         | 0.15    |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|                                                                                  | 3300 ~ 4700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -    | 0.35  | 0.25   | 0.20    |                         | 0.15    |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|                                                                                  | 5600 ~ 6800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.40 | 0.35  | 0.30   | 0.20    |                         | 0.20    |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|                                                                                  | ≥ 8200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.40 | 0.35  | 0.35   | 0.25    |                         | -       |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 低温稳定性<br>(120Hz下阻抗比)<br>Stability at Low Temperate<br>(Impedance Ratio at 120Hz) | <table><tr><td colspan="2">电压Rated Voltage(V)</td><td>10</td><td>10~35</td><td>50~100</td><td>160~200</td><td>250~400</td><td>450~500</td></tr><tr><td rowspan="2">阻抗比<br/>Impedance Ratio</td><td>Z-25°C/Z+20°C</td><td>5</td><td>4</td><td>3</td><td>3</td><td>4</td><td>4</td></tr><tr><td>Z-40°C/Z+20°C</td><td>18</td><td>15</td><td>10</td><td>6</td><td>8</td><td>-</td></tr></table>                                                                                                                                                                                           |      |       |        |         |                         |         |         |  |  | 电压Rated Voltage(V)       |       | 10 | 10~35 | 50~100 | 160~200 | 250~400                 | 450~500 | 阻抗比<br>Impedance Ratio | Z-25°C/Z+20°C | 5 | 4 | 3    | 3    | 4    | 4           | Z-40°C/Z+20°C | 18   | 15   | 10   | 6    | 8           | -    |      |      |      |      |        |      |      |      |      |   |
| 电压Rated Voltage(V)                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10   | 10~35 | 50~100 | 160~200 | 250~400                 | 450~500 |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 阻抗比<br>Impedance Ratio                                                           | Z-25°C/Z+20°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5    | 4     | 3      | 3       | 4                       | 4       |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
|                                                                                  | Z-40°C/Z+20°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 18   | 15    | 10     | 6       | 8                       | -       |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 耐久性<br>Load Life                                                                 | After applying rated voltage with specified ripple current for 2000 hours at 85°C and then resumed 16 hours:<br>电容量变化：初始值的-20~+20%以内      Capacitance change: within ±15% of the initial value<br>漏电流：不大于初始规定值      Dissipation Factor: Not more than initial specified value<br>损耗角正切：不超过规定值的2.0 倍Dissipation Factor: Not more than 200% of the specified value                                                                                                                                                                                                                       |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |
| 高温储存<br>Shelf Life                                                               | +85°C, 1000小时贮存后，加额定电压30分钟，恢复16小时后<br>After storage for 1000 hours at +85°C, rated voltage to be applied for 30 minutes and then resumed for 16 hours<br>电容量变化：初始值的-20~+20%以内Capacitance change: within ±15% of the initial value<br>漏电流：不大于初始规定值      Dissipation Factor: Not more than initial specified value<br>损耗角正切：不超过规定值的2.0倍Dissipation Factor: Not more than 200% of the specified value                                                                                                                                                                                     |      |       |        |         |                         |         |         |  |  |                          |       |    |       |        |         |                         |         |                        |               |   |   |      |      |      |             |               |      |      |      |      |             |      |      |      |      |      |        |      |      |      |      |   |

纹波电流修正系数Multiplier for ripple current

| 频率系数Frequency coefficient       |      |       |      |       |        |  |                        |      |     |     |     |     |
|---------------------------------|------|-------|------|-------|--------|--|------------------------|------|-----|-----|-----|-----|
| 电压Rated Voltage(V) \ 频率Freq(Hz) | 50Hz | 120Hz | 1KHz | 10KHz | 100KHz |  | 环境温度<br>Temperature °C | ≤+40 | +55 | +70 | +85 | 105 |
| ≤ 100                           | 0.95 | 1.00  | 1.10 | 1.15  | 1.15   |  | 修正系数<br>Coefficient    | 2.7  | 2.5 | 2.1 | 1.7 | 1   |
| 160~250                         | 0.87 | 1.00  | 1.11 | 1.18  | 1.20   |  |                        |      |     |     |     |     |
| ≥ 8200                          | 0.80 | 1.00  | 1.14 | 1.19  | 1.20   |  |                        |      |     |     |     |     |

ALUMINUM ELECTROLYTIC CAPACITOR

外形图 Dimensions



额定值标准 Rating for CD291 Series

额定值标准 Rating for CD291 Series- Table 1

| CD291   | U <sub>R</sub> | 10V(1A) |     | 16V(1C) |     | 25V(1E) |     | 35V(1V) |     | 50V(1H) |     | 63V(1J) |     | 80V(1K) |     |
|---------|----------------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|
| Cap(μF) | U <sub>s</sub> | 13V     |     | 20V     |     | 32V     |     | 44V     |     | 63V     |     | 79V     |     | 100V    |     |
|         | Code           | DxL     | (A) | DxL     | (A) | DxL     | (A) | DxL     | (A) | DxL     | (A) | DxL     | (A) | DxL     | (A) |
| 2200    | 222            |         |     |         |     |         |     |         |     |         |     |         |     | 30x25   | 2.2 |
| 2700    | 272            |         |     |         |     |         |     |         |     |         |     |         |     | 30x30   | 2.5 |
|         |                |         |     |         |     |         |     |         |     |         |     |         |     | 35x25   | 2.5 |
| 3300    | 332            |         |     |         |     |         |     |         |     |         |     | 30x25   | 2.3 | 30x35   | 2.8 |
| 3900    | 392            |         |     |         |     |         |     |         |     | 30x25   | 2.4 | 30x30   | 2.6 | 30x40   | 3.2 |
|         |                |         |     |         |     |         |     |         |     |         |     | 35x25   | 2.7 | 35x30   | 3.2 |
| 4700    | 472            |         |     |         |     |         |     |         |     |         |     |         |     | 30x45   | 3.6 |
|         |                |         |     |         |     |         |     |         |     |         |     |         |     | 35x35   | 3.6 |
| 5600    | 562            |         |     |         |     |         |     |         |     | 30x30   | 2.5 | 30x35   | 3.2 | 30x50   | 3.5 |
|         |                |         |     |         |     |         |     |         |     | 35x25   | 2.6 | 35x30   | 3.3 | 35x40   | 3.5 |
| 6800    | 682            |         |     |         |     |         |     | 30x25   | 2.7 | 30x35   | 2.8 | 30x40   | 3.6 | 35x50   | 4.1 |
|         |                |         |     |         |     |         |     |         |     |         |     | 35x35   | 3.7 |         |     |
| 8200    | 822            |         |     |         |     |         |     | 30x30   | 2.8 | 30x40   | 3.0 | 30x50   | 3.7 |         |     |
|         |                |         |     |         |     |         |     | 35x25   | 2.9 | 35x30   | 3.0 | 35x40   | 3.8 |         |     |
| 10000   | 103            |         |     |         |     | 30x25   | 3.0 | 30x35   | 3.2 | 30x45   | 3.4 | 35x45   | 4.3 |         |     |
|         |                |         |     |         |     |         |     |         |     | 35x35   | 3.4 |         |     |         |     |
| 12000   | 123            |         |     |         |     | 30x30   | 3.4 | 30x40   | 3.5 | 30x50   | 3.8 | 35x50   | 4.8 |         |     |
|         |                |         |     |         |     |         |     | 35x30   | 3.6 | 35x40   | 3.8 |         |     |         |     |
| 15000   | 153            |         |     | 30x25   | 3.4 | 35x25   | 3.9 | 30x45   | 4.1 | 35x50   | 4.5 |         |     |         |     |
|         |                |         |     |         |     |         |     | 35x35   | 4.1 |         |     |         |     |         |     |
| 18000   | 183            |         |     |         |     | 30x35   | 4.2 | 30x50   | 4.6 |         |     |         |     |         |     |
|         |                |         |     |         |     | 35x30   | 4.4 | 35x40   | 4.7 |         |     |         |     |         |     |
| 22000   | 223            | 30x25   | 4.1 | 30x30   | 4.2 | 30x40   | 4.8 | 35x45   | 5.3 |         |     |         |     |         |     |
|         |                |         |     | 35x25   | 4.4 | 35x35   | 5.0 |         |     |         |     |         |     |         |     |
| 27000   |                |         |     | 30x35   | 5.0 |         |     | 35x50   | 7.0 |         |     |         |     |         |     |
| 33000   | 333            | 30x30   | 4.8 | 30x40   | 5.6 | 35x40   | 6.5 |         |     |         |     |         |     |         |     |
|         |                | 35x25   | 4.8 | 35x30   | 5.6 |         |     |         |     |         |     |         |     |         |     |
| 39000   | 393            | 30x35   | 5.3 | 30x45   | 6.2 | 35x45   | 7.5 |         |     |         |     |         |     |         |     |
|         |                |         |     | 35x35   | 6.3 |         |     |         |     |         |     |         |     |         |     |
| 47000   | 473            | 30x40   | 6.0 | 30x50   | 7.0 |         |     |         |     |         |     |         |     |         |     |
|         |                | 35x30   | 6.0 | 35x40   | 7.2 |         |     |         |     |         |     |         |     |         |     |
| 56000   | 563            | 30x45   | 6.7 | 35x45   | 8.0 |         |     |         |     |         |     |         |     |         |     |
|         |                | 35x35   | 6.8 |         |     |         |     |         |     |         |     |         |     |         |     |
| 68000   | 683            | 30x50   | 7.5 |         |     |         |     |         |     |         |     |         |     |         |     |
|         |                | 35x40   | 7.7 |         |     |         |     |         |     |         |     |         |     |         |     |
| 82000   | 823            | 35x45   | 8.7 |         |     |         |     |         |     |         |     |         |     |         |     |

ALUMINUM ELECTROLYTIC CAPACITOR

额定值标准 Rating for CD291 Series- Table 2

| CD291   | U <sub>R</sub> | 100V(2A) |     | 160V(2C) |     | 200V(2D) |     | 250V(2E) |     | 350V(2V) |     | 400V(2G) |      | 450V(2W) |      |
|---------|----------------|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|----------|------|----------|------|
| Cap(uF) | U <sub>s</sub> | 125V     |     | 200V     |     | 250V     |     | 300V     |     | 400V     |     | 450V     |      | 500V     |      |
|         | Code           | DxL      | (A) | DxL      | (A) | DxL      | (A) | DxL      | (A) | DxL      | (A) | DxL      | (A)  | DxL      | (A)  |
| 150     | 151            |          |     |          |     |          |     |          |     |          |     | 30x25    | 0.95 | 30x30    | 0.98 |
| 180     | 181            |          |     |          |     |          |     |          |     | 30x25    | 1.1 | 30x30    | 1.1  | 30x35    | 1.1  |
|         |                |          |     |          |     |          |     |          |     |          |     | 35x25    | 1.2  | 35x25    | 1.2  |
| 220     | 221            |          |     |          |     |          |     |          |     | 30x30    | 1.2 | 30x35    | 1.2  | 30x40    | 1.3  |
|         |                |          |     |          |     |          |     |          |     | 35x25    | 1.3 |          |      | 35x30    | 1.3  |
| 270     | 271            |          |     |          |     |          |     |          |     | 30x35    | 1.4 | 30x40    | 1.4  | 30x45    | 1.4  |
|         |                |          |     |          |     |          |     |          |     |          |     | 35x30    | 1.5  | 35x35    | 1.5  |
| 330     | 331            |          |     |          |     |          |     | 30X25    | 1.5 | 35x30    | 1.6 | 30x45    | 1.6  |          |      |
|         |                |          |     |          |     |          |     |          |     |          |     | 35x35    | 1.7  |          |      |
| 390     | 391            |          |     |          |     |          |     |          |     | 30x40    | 1.7 | 30x50    | 1.8  | 35x45    | 1.9  |
|         |                |          |     |          |     |          |     |          |     | 35x35    | 1.8 | 35x40    | 1.8  |          |      |
| 470     | 471            |          |     |          |     | 30X25    | 1.9 | 30X30    | 1.8 | 30x45    | 2.0 | 35x45    | 2.1  | 35x50    | 2.2  |
|         |                |          |     |          |     |          |     | 35X25    | 1.9 | 35x40    | 2.0 |          |      |          |      |
| 560     | 561            |          |     | 30X25    | 2.0 | 30X30    | 2.1 | 30X35    | 2.0 | 35x45    | 2.3 |          | 2.3  |          |      |
|         |                |          |     |          |     | 35X25    | 2.0 |          |     |          |     |          |      |          |      |
| 680     | 681            |          |     |          |     | 30X35    | 2.4 | 30X40    | 2.3 |          |     |          |      |          |      |
|         |                |          |     |          |     |          |     | 35X30    | 2.4 |          |     |          |      |          |      |
| 820     | 821            |          |     | 30X30    | 2.5 | 30X40    | 2.7 | 30X45    | 2.6 |          |     |          |      |          |      |
|         |                |          |     | 35X25    | 2.4 | 35X30    | 2.5 | 35X35    | 2.6 |          |     |          |      |          |      |
| 1000    | 102            |          |     | 30X35    | 2.8 | 30X45    | 3.1 | 35X40    | 3.0 |          |     |          |      |          |      |
|         |                |          |     | 35X30    | 2.7 | 35X35    | 2.8 |          |     |          |     |          |      |          |      |
| 1200    | 122            |          |     | 30X40    | 3.2 | 30X50    | 3.4 | 35X45    | 3.4 |          |     |          |      |          |      |
|         |                |          |     | 35X35    | 3.0 | 35X40    | 3.2 |          |     |          |     |          |      |          |      |
| 1500    | 152            | 30X25    | 1.8 | 30X45    | 3.7 | 35X50    | 3.8 |          |     |          |     |          |      |          |      |
|         |                |          |     | 35X40    | 3.5 |          |     |          |     |          |     |          |      |          |      |
| 1800    | 182            | 30X30    | 2.1 | 35X45    | 3.9 |          |     |          |     |          |     |          |      |          |      |
|         |                | 35X25    | 2.2 |          |     |          |     |          |     |          |     |          |      |          |      |
| 2200    | 222            | 30X35    | 2.3 | 35X50    | 4.5 |          |     |          |     |          |     |          |      |          |      |
|         |                | 35X30    | 2.5 |          |     |          |     |          |     |          |     |          |      |          |      |
| 2700    | 272            | 30X40    | 2.7 |          |     |          |     |          |     |          |     |          |      |          |      |
| 3300    | 332            | 30X45    | 3.0 |          |     |          |     |          |     |          |     |          |      |          |      |
|         |                | 35X35    | 3.1 |          |     |          |     |          |     |          |     |          |      |          |      |
| 3900    | 392            | 30X50    | 3.4 |          |     |          |     |          |     |          |     |          |      |          |      |
|         |                | 35X40    | 3.4 |          |     |          |     |          |     |          |     |          |      |          |      |
| 4700    | 472            | 35X50    | 4.0 |          |     |          |     |          |     |          |     |          |      |          |      |

额定值标准 Rating for CD291 Series - Table 3

| CD291   | U <sub>R</sub> | 500V(2H) |     |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|----------------|----------|-----|--|--|--|--|--|--|--|--|--|--|--|--|
| Cap(uF) | U <sub>s</sub> | 550V     |     |  |  |  |  |  |  |  |  |  |  |  |  |
|         | Code           | DxL      | (A) |  |  |  |  |  |  |  |  |  |  |  |  |
| 100     | 101            | 30x25    | 0.9 |  |  |  |  |  |  |  |  |  |  |  |  |
| 120     | 121            | 30x30    | 1.0 |  |  |  |  |  |  |  |  |  |  |  |  |
|         |                | 35x25    | 1.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| 150     | 151            | 30x35    | 1.2 |  |  |  |  |  |  |  |  |  |  |  |  |
| 180     | 181            | 30x40    | 1.4 |  |  |  |  |  |  |  |  |  |  |  |  |
|         |                | 35x30    | 1.3 |  |  |  |  |  |  |  |  |  |  |  |  |
| 220     | 221            | 30x45    | 1.6 |  |  |  |  |  |  |  |  |  |  |  |  |
|         |                | 35x35    | 1.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| 270     | 271            | 30x50    | 1.8 |  |  |  |  |  |  |  |  |  |  |  |  |
|         |                | 35x40    | 1.7 |  |  |  |  |  |  |  |  |  |  |  |  |
| 330     | 331            | 35x45    | 2.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| 390     | 391            | 35x50    | 2.3 |  |  |  |  |  |  |  |  |  |  |  |  |