

内导流和外导流换热器及冷凝器主要参数

一、内导流换热器和冷凝器的主要参数

表 2-3-1 内导流换热器和冷凝器参数

| DN | N | n ^① | | 中心排管数 | | 管程流通面积, m ² | | | A ^② , m ² | | | | | | | |
|-----|---|----------------|-----|--------|--------|------------------------|------------|------------|---------------------------------|----------|-----------|------|-------|-----------|------|----|
| | | d | | | | d×δ _t | | | L=3m | | L=4.5m | | L=6m | | L=9m | |
| | | 19 | 25 | 1 9 | 2 5 | 19×2 | 25×2 | 25× 2.5 | 19 | 25 | 19 | 25 | 19 | 25 | 19 | 25 |
| 325 | 2 | 60 | 32 | 7 | 5 | 0.005 3 | 0.005 5 | 0.005 0 | 10. 5 | 7.4 | 15.8 | 11.1 | — | — | — | — |
| | 4 | 52 | 28 | 6 | 4 | 0.002 3 | 0.002 4 | 0.002 2 | 9.1 | 6.4 | 13.7 | 9.7 | — | — | — | — |
| 426 | 2 | 120 | 74 | 8 | 7 | 0.010 6 | 0.012 6 | 0.011 6 | 20. 9 | 16. 9 | 31.6 | 25.6 | 42.3 | 34.4 | — | — |
| | 4 | 108 | 68 | 9 | 6 | 0.004 8 | 0.005 9 | 0.005 3 | 18. 8 | 15. 6 | 28.4 | 23.6 | 38.1 | 31.6 | — | — |
| 500 | 2 | 206 | 124 | 1 1 | 8 | 0.018 2 | 0.021 5 | 0.019 4 | 35. 7 | 28. 3 | 54.1 | 42.8 | 72.5 | 57.4 | — | — |
| | 4 | 192 | 116 | 1 0 | 9 | 0.008 5 | 0.010 0 | 0.009 1 | 33. 2 | 26. 4 | 50.4 | 40.1 | 67.6 | 53.7 | — | — |
| 600 | 2 | 324 | 198 | 1 4 | 1 | 0.028 6 | 0.034 3 | 0.031 1 | 55. 8 | 44. 9 | 84.8 | 68.2 | 113.9 | 91.5 | — | — |
| | 4 | 308 | 188 | 1 4 | 1 | 0.013 6 | 0.016 3 | 0.014 8 | 53. 1 | 42. 6 | 80.7 | 64.8 | 108.2 | 86.9 | — | — |
| | 6 | 284 | 158 | 1 4 | 1 | 0.008 3 | 0.009 1 | 0.008 3 | 48. 9 | 35. 8 | 74.4 | 54.4 | 99.8 | 73.1 | — | — |
| 700 | 2 | 468 | 268 | 1 6 | 1 3 | 0.041 4 | 0.046 4 | 0.042 1 | 80. 4 | 60. 6 | 122. 2 | 92.1 | 164.1 | 123. 7 | — | — |

| | | | | | | | | | | | | | | | | |
|----------|---|----------|-----|--------|--------|------------|------------|------------|----------|----------|-----------|-----------|-------|-----------|-------|-------|
| | 4 | 448 | 256 | 1 7 | 1 2 | 0.019 8 | 0.022 2 | 0.020 1 | 76. 9 | 57. 8 | 117. 0 | 87.9 | 157.1 | 118. 1 | — | — |
| | 6 | 382 | 224 | 1 5 | 1 0 | 0.011 2 | 0.012 9 | 0.011 6 | 65. 5 | 50. 6 | 99.9 | 76.9 | 133.9 | 103. 4 | — | — |
| 800 | 2 | 610 | 366 | 1 9 | 1 5 | 0.053 9 | 0.064 3 | 0.057 5 | — | — | 158. 9 | 125. 4 | 213.5 | 168. 5 | — | — |
| | 4 | 588 | 352 | 1 8 | 1 4 | 0.026 0 | 0.030 5 | 0.027 6 | — | — | 153. 2 | 120. 6 | 205.8 | 162. 1 | — | — |
| | 6 | 518 | 316 | 1 6 | 1 4 | 0.015 2 | 0.018 2 | 0.016 5 | — | — | 134. 9 | 108. 3 | 181.3 | 145. 5 | — | — |
| 900 | 2 | 800 | 472 | 2 2 | 1 7 | 0.070 7 | 0.081 7 | 0.074 1 | — | — | 207. 6 | 161. 2 | 279.2 | 216. 8 | — | — |
| | 4 | 776 | 456 | 2 1 | 1 6 | 0.034 3 | 0.039 5 | 0.035 2 | — | — | 201. 4 | 155. 7 | 270.8 | 209. 4 | — | — |
| | 6 | 720 | 426 | 2 1 | 1 6 | 0.021 2 | 0.024 6 | 0.022 3 | — | — | 186. 9 | 145. 5 | 251.3 | 195. 6 | — | — |
| 100 0 | 2 | 100 6 | 606 | 2 4 | 1 9 | 0.089 0 | 0.105 0 | 0.095 2 | — | — | 260. 6 | 206. 6 | 350.6 | 277. 9 | — | — |
| | 4 | 980 | 588 | 2 3 | 1 8 | 0.043 3 | 0.050 9 | 0.046 2 | — | — | 253. 9 | 200. 4 | 341.6 | 269. 7 | — | — |
| | 6 | 892 | 564 | 2 1 | 1 8 | 0.026 2 | 0.032 6 | 0.029 5 | — | — | 231. 1 | 192. 2 | 311.0 | 258. 7 | — | — |
| 110 0 | 2 | 124 0 | 736 | 2 7 | 2 1 | 0.110 0 | 0.127 0 | 0.116 0 | — | — | 320. 3 | 250. 2 | 431.3 | 336. 8 | — | — |
| | 4 | 121 2 | 716 | 2 6 | 2 0 | 0.053 6 | 0.062 0 | 0.056 2 | — | — | 313. 1 | 243. 4 | 421.6 | 327. 7 | — | — |
| | 6 | 112 0 | 692 | 2 4 | 2 0 | 0.032 9 | 0.039 9 | 0.036 2 | — | — | 289. 3 | 235. 2 | 389.6 | 316. 7 | — | — |
| 120 0 | 2 | 145 2 | 880 | 2 8 | 2 2 | 0.129 0 | 0.152 0 | 0.138 0 | — | — | 374. 4 | 298. 6 | 504.3 | 402. 4 | 764.2 | 609.4 |
| | 4 | 142 4 | 860 | 2 8 | 2 2 | 0.062 9 | 0.074 5 | 0.067 5 | — | — | 367. 2 | 291. 8 | 494.6 | 393. 1 | 749.5 | 595.6 |
| | 6 | 132 8 | 828 | 2 7 | 2 1 | 0.039 6 | 0.047 8 | 0.043 4 | — | — | 347. 6 | 280. 9 | 468.2 | 378. 4 | 709.5 | 573.4 |

| | | | | | | | | | | |
|------|---|------|-----|----|----|--------|--------|--------|-------|-------|
| 500 | 2 | 224 | 132 | 13 | 10 | 0.0198 | 0.0229 | 0.0207 | 78.8 | 61.1 |
| | 4 | 218 | 124 | 12 | 10 | 0.0092 | 0.0107 | 0.0161 | 73.2 | 57.4 |
| 600 | 2 | 338 | 206 | 16 | 12 | 0.0298 | 0.0357 | 0.0324 | 118.8 | 95.2 |
| | 4 | 320 | 196 | 15 | 12 | 0.0141 | 0.0170 | 0.0154 | 112.4 | 90.6 |
| 700 | 2 | 480 | 280 | 18 | 15 | 0.0425 | 0.0485 | 0.0440 | 168.3 | 129.2 |
| | 4 | 460 | 268 | 17 | 14 | 0.0203 | 0.0232 | 0.0210 | 161.3 | 123.6 |
| 800 | 2 | 636 | 378 | 21 | 16 | 0.0562 | 0.0655 | 0.0594 | 222.6 | 174.0 |
| | 4 | 612 | 364 | 20 | 16 | 0.0271 | 0.0315 | 0.0285 | 214.2 | 167.6 |
| 900 | 2 | 822 | 490 | 24 | 19 | 0.0726 | 0.0848 | 0.0769 | 286.9 | 225.1 |
| | 4 | 796 | 472 | 23 | 18 | 0.0357 | 0.0409 | 0.0365 | 277.8 | 216.7 |
| | 6 | 742 | 452 | 23 | 16 | 0.0217 | 0.0261 | 0.0237 | 259.0 | 207.5 |
| 1000 | 2 | 1050 | 628 | 26 | 21 | 0.0929 | 0.0929 | 0.0987 | 365.9 | 288.0 |
| | 4 | 1020 | 608 | 27 | 20 | 0.0451 | 0.0526 | 0.0478 | 355.5 | 278.9 |
| | 6 | 938 | 580 | 25 | 20 | 0.0276 | 0.0335 | 0.0301 | 327.0 | 266.0 |

注:1. 排管数按正方形旋转 45° 排列计算。

2. 计算换热面积按光管及公称压力 2.5 MPa 的管板厚度确定。