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1.1 DBNL₃ Series low noise counter flow FRP cooling tower parameters

| Type | $\tau=28^{\circ}\text{C}$ water flow rate (m ³ /h) | | $\tau=27^{\circ}\text{C}$ water flow rate (m ³ /h) | | Size (mm) | | Air volume (m ³ /h) | Fan Dia. (mm) | Motor Power (KW) | Intake XportDN (mm) | | | | Weight (kg) | | Inlet water pressure kpa | Noise Level dB(A) | | | Dm |
|-------------------------|---|------------------------------|---|------------------------------|-----------|-----------|--------------------------------|---------------|------------------|---------------------|-----------|------------|---------|-------------|------------------|--------------------------|-------------------|------|------|-----|
| | $\Delta t=5^{\circ}\text{C}$ | $\Delta t=8^{\circ}\text{C}$ | $\Delta t=5^{\circ}\text{C}$ | $\Delta t=8^{\circ}\text{C}$ | Height | Max. Dia. | | | | In/Out | Over flow | Drain flow | Make up | N. W | Operating Weight | | Dm | 10m | 16m | |
| CDBNL3-5 | 5 | 3 | 7 | 4 | 1440 | 820 | 4900 | 600 | 0.37 | 40/40 | 25 | 25 | 15 | 71.2 | 224 | 18.7 | 53 | 39.2 | 36.1 | 1.3 |
| CDBNL3-8 | 8 | 6 | 10 | 7 | 1650 | 820 | 5800 | 600 | 0.37 | 40/40 | 25 | 25 | 15 | 88 | 275 | 19.2 | 53 | 39.8 | 36.9 | 1.3 |
| DBNL ₃ -12 | 12 | 9 | 15 | 10 | 2033 | 1210 | 7200 | 700 | 0.6 | 50/100 | 25 | 25 | 15 | 164.8 | 484 | 19.6 | 54 | 40.3 | 36.6 | 1.5 |
| DBNL ₃ -20 | 20 | 15 | 24 | 17 | 2123 | 1460 | 12400 | 800 | 0.8 | 50/100 | 25 | 25 | 15 | 184 | 514 | 20 | 54 | 41.1 | 37.5 | 1.5 |
| DBNL ₃ -30 | 30 | 22 | 35 | 27 | 2342 | 1912 | 18000 | 1200 | 0.8 | 80/125 | 25 | 25 | 15 | 324.8 | 956 | 22.1 | 55 | 43.5 | 39.9 | 1.8 |
| DBNL ₃ -40 | 40 | 30 | 46 | 34 | 2842 | 1912 | 21500 | 1200 | 1.1 | 80/125 | 25 | 25 | 20 | 382.4 | 1118 | 26 | 55 | 43.5 | 39.9 | 1.8 |
| DBNL ₃ -50 | 50 | 37 | 57 | 44 | 2830 | 2215 | 28000 | 1400 | 1.5 | 80/125 | 32 | 25 | 20 | 476.8 | 1480 | 26.5 | 55 | 44.7 | 41.1 | 2.1 |
| DBNL ₃ -60 | 60 | 44 | 68 | 51 | 3080 | 2215 | 32300 | 1400 | 1.5 | 80/125 | 32 | 25 | 20 | 513.6 | 1592 | 29 | 56 | 45.7 | 42.1 | 2.1 |
| DBNL ₃ -70 | 70 | 51 | 79 | 60 | 3094 | 2629 | 39200 | 1600 | 2.2 | 125/200 | 40 | 40 | 20 | 632 | 2064 | 27.8 | 56 | 47 | 43 | 2.5 |
| DBNL ₃ -80 | 80 | 61 | 92 | 70 | 3344 | 2629 | 43400 | 1600 | 2.2 | 125/200 | 40 | 40 | 20 | 700 | 2243 | 30.3 | 56.5 | 47.5 | 43.5 | 2.5 |
| DBNL ₃ -100 | 100 | 74 | 114 | 86 | 3294 | 3134 | 56000 | 1800 | 3 | 125/200 | 40 | 40 | 20 | 778.4 | 3064 | 28.6 | 57 | 50 | 46 | 3 |
| DBNL ₃ -125 | 125 | 92 | 142 | 108 | 3544 | 3134 | 67200 | 1800 | 4 | 125/200 | 40 | 40 | 20 | 850 | 3290 | 31.5 | 58 | 50.7 | 47.4 | 3 |
| DBNL ₃ -150 | 150 | 112 | 171 | 129 | 3553 | 3732 | 84000 | 2400 | 4 | 150/250 | 80 | 50 | 25 | 1356 | 4125 | 29 | 58.5 | 52 | 48.6 | 3.6 |
| DBNL ₃ -175 | 175 | 131 | 200 | 150 | 3803 | 3732 | 94300 | 2400 | 5.5 | 150/250 | 80 | 50 | 25 | 1468 | 4461 | 31.5 | 59.5 | 53 | 49.6 | 3.6 |
| DBNL ₃ -200 | 200 | 153 | 231 | 180 | 3835 | 4342 | 112000 | 2800 | 5.5 | 150/250 | 80 | 50 | 32 | 1705 | 5592 | 30.1 | 60 | 54.6 | 51.3 | 4.2 |
| DBNL ₃ -250 | 250 | 186 | 283 | 215 | 4085 | 4342 | 134300 | 2800 | 7.5 | 150/250 | 80 | 50 | 32 | 1875 | 6365 | 32.6 | 61 | 55.6 | 52.3 | 4.2 |
| DBNL ₃ -300 | 300 | 225 | 334 | 260 | 4223 | 5134 | 168000 | 3400 | 7.5 | 200/300 | 80 | 50 | 40 | 2350 | 9229 | 35 | 61 | 56.8 | 53.5 | 5 |
| DBNL ₃ -350 | 350 | 267 | 395 | 304 | 4473 | 5134 | 187400 | 3400 | 11 | 200/300 | 80 | 50 | 40 | 2702 | 9906 | 37.5 | 61.5 | 57.3 | 54 | 5 |
| DBNL ₃ -400 | 400 | 301 | 455 | 341 | 4618 | 6044 | 224000 | 3800 | 11 | 250/300 | 100 | 50 | 50 | 3010 | 12086 | 36 | 62 | 58.8 | 55.7 | 5.9 |
| DBNL ₃ -450 | 450 | 343 | 514 | 387 | 4868 | 6044 | 242000 | 3800 | 11 | 250/300 | 100 | 50 | 50 | 3252 | 13646 | 38.5 | 62 | 58.8 | 55.7 | 5.9 |
| DBNL ₃ -500 | 500 | 375 | 576 | 427 | 5219 | 6476 | 280000 | 4200 | 15 | 300/350 | 100 | 80 | 50 | 4037 | 16258 | 37 | 62 | 60 | 56.9 | 6.6 |
| DBNL ₃ -600 | 600 | 454 | 680 | 516 | 5719 | 6476 | 302200 | 4200 | 18.5 | 300/350 | 100 | 80 | 50 | 4599 | 18360 | 42 | 63 | 61 | 57.4 | 6.6 |
| DBNL ₃ -700 | 700 | 528 | 790 | 600 | 5589 | 7766 | 393500 | 5000 | 18.5 | 350/400 | 100 | 80 | 80 | 4840 | 23194 | 39.5 | 63 | 61.4 | 58.4 | 7.6 |
| DBNL ₃ -800 | 800 | 590 | 890 | 685 | 6089 | 7766 | 408000 | 5000 | 22 | 350/400 | 100 | 80 | 80 | 5588 | 25982 | 44.5 | 63 | 61.4 | 58.4 | 7.6 |
| DBNL ₃ -900 | 900 | 685 | 1035 | 790 | 6040 | 8836 | 505200 | 6000 | 22 | 350/450 | 100 | 80 | 80 | 6253 | 32568 | 42.5 | 63.5 | 62.6 | 59.7 | 8.6 |
| DBNL ₃ -1000 | 1000 | 783 | 1139 | 880 | 6540 | 8836 | 510300 | 6000 | 30 | 350/450 | 100 | 80 | 80 | 7392 | 36420 | 47.5 | 64 | 63.1 | 60.2 | 8.6 |

1. The noise is the measured value of Dm at the standard point, which is far away from the diameter of the tower wall and 1.5 meters high from the foundation (when the tower diameter is less than 1.5 meters, take Dm=1.5 meters).

2. The noise standard point Dm shall prevail. The values of other points are for users' reference when selecting towers.

3. The standard design working conditions of this series are wet bulb temperature $\tau=28^{\circ}\text{C}$, inlet water temperature $t_1=37^{\circ}\text{C}$, and outlet water temperature $t_2=32$. Inlet water pressure refers to the water pressure at the connection point.

4. This table lists the cooling water supply when $\tau=28^{\circ}\text{C}$, $\Delta t=5^{\circ}\text{C}$ and 8°C , $t_2=32^{\circ}\text{C}$ and $\tau=27^{\circ}\text{C}$, $\Delta t=5^{\circ}\text{C}$ and 8°C , $t_2=32^{\circ}\text{C}$. For reference when selecting, please check the thermal performance curve for the cooling water volume of other parameters.

1.2 CDBNL₃Series low noise counter flow FRP cooling tower parameters

| Type | $\tau=28^{\circ}\text{C}$ water flow rate (m ³ /h) | | $\tau=27^{\circ}\text{C}$ water flow rate (m ³ /h) | | Size (mm) | | Air volume (m ³ /h) | Fan Dia. (mm) | Motor Power (KW) | Intake XportDN (mm) | | | | Weight (kg) | | Inlet water pressure kpa | Noise Level dB(A) | | | Dm |
|-------------------------|---|------------------------------|---|------------------------------|-----------|-----------|--------------------------------|---------------|------------------|---------------------|-----------|------------|---------|-------------|------------------|--------------------------|-------------------|------|------|-----|
| | $\Delta t=5^{\circ}\text{C}$ | $\Delta t=8^{\circ}\text{C}$ | $\Delta t=5^{\circ}\text{C}$ | $\Delta t=8^{\circ}\text{C}$ | Height | Max. Dia. | | | | In/Out | Over flow | Drain flow | Make up | N. W | Operating Weight | | Dm | 10m | 16m | |
| CDBNL ₃ -12 | 12 | 9 | 15 | 10 | 2972 | 1600 | 7200 | 700 | 50/100 | 25 | 25 | 15 | 0.6 | 244 | 584 | 19 | 50 | 37.1 | 33.5 | 1.5 |
| CDBNL ₃ -20 | 20 | 15 | 24 | 17 | 3062 | 2000 | 18000 | 800 | 50/100 | 25 | 25 | 15 | 0.8 | 264 | 644 | 20 | 50 | 36.3 | 32.6 | 1.5 |
| CDBNL ₃ -30 | 30 | 22 | 35 | 27 | 3281 | 2400 | 18000 | 1200 | 80/125 | 25 | 25 | 15 | 0.8 | 436 | 1100 | 22.1 | 51 | 39.5 | 35.9 | 1.8 |
| CDBNL ₃ -40 | 40 | 30 | 46 | 34 | 3781 | 2400 | 21500 | 1200 | 80/125 | 25 | 25 | 20 | 1.1 | 494 | 1258 | 26 | 51 | 39.5 | 35.9 | 1.8 |
| CDBNL ₃ -50 | 50 | 37 | 57 | 44 | 3816 | 2800 | 28000 | 1400 | 80/125 | 32 | 25 | 20 | 1.5 | 604 | 1640 | 26.5 | 51 | 40.7 | 37.1 | 2.1 |
| CDBNL ₃ -60 | 60 | 44 | 68 | 51 | 4066 | 2800 | 32300 | 1400 | 80/125 | 32 | 25 | 20 | 1.5 | 760 | 1752 | 29 | 52 | 41.7 | 38.1 | 2.1 |
| CDBNL ₃ -70 | 70 | 51 | 79 | 60 | 4153 | 3300 | 39200 | 1600 | 125/200 | 40 | 40 | 20 | 2.2 | 798 | 2272 | 27.8 | 52 | 43 | 39 | 2.5 |
| CDBNL ₃ -80 | 80 | 61 | 92 | 70 | 4403 | 3300 | 43400 | 1600 | 125/200 | 40 | 40 | 20 | 2.2 | 866 | 2451 | 30.3 | 52.5 | 43.5 | 39.5 | 2.5 |
| CDBNL ₃ -100 | 100 | 74 | 114 | 86 | 4410 | 3900 | 56000 | 1800 | 125/200 | 40 | 40 | 20 | 3 | 984 | 3322 | 28.6 | 53 | 46 | 42 | 3 |
| CDBNL ₃ -125 | 125 | 92 | 142 | 108 | 4690 | 3900 | 67200 | 1800 | 125/200 | 40 | 40 | 20 | 4 | 1056 | 3422 | 31.5 | 54 | 46.7 | 43.4 | 3 |
| CDBNL ₃ -150 | 150 | 112 | 171 | 129 | 4765 | 4600 | 84000 | 2400 | 150/250 | 80 | 50 | 25 | 4 | 1636 | 4475 | 29 | 54 | 47.5 | 44.1 | 3.6 |
| CDBNL ₃ -175 | 175 | 131 | 200 | 150 | 5015 | 4600 | 94300 | 2400 | 150/250 | 80 | 50 | 25 | 5.5 | 1745 | 4808 | 31.5 | 55 | 48.5 | 45.1 | 3.6 |
| CDBNL ₃ -200 | 200 | 153 | 231 | 180 | 5194 | 5700 | 112000 | 2800 | 150/250 | 80 | 50 | 32 | 5.5 | 1917 | 6123 | 30.1 | 55 | 49.6 | 46.3 | 4.2 |
| CDBNL ₃ -250 | 250 | 186 | 283 | 215 | 5444 | 5700 | 134300 | 2800 | 150/250 | 80 | 50 | 32 | 7.5 | 2012 | 6892 | 32.6 | 56 | 50.6 | 47.3 | 4.2 |
| CDBNL ₃ -300 | 300 | 225 | 334 | 260 | 5713 | 6400 | 168000 | 3400 | 250/300 | 80 | 50 | 40 | 7.5 | 2892 | 9805 | 35 | 56 | 51.8 | 48.5 | 5 |
| CDBNL ₃ -350 | 350 | 267 | 395 | 304 | 5963 | 6400 | 187400 | 3400 | 250/300 | 80 | 50 | 40 | 11 | 3103 | 10479 | 37.5 | 56.5 | 52.3 | 49 | 5 |
| CDBNL ₃ -400 | 400 | 301 | 455 | 341 | 6269 | 7400 | 224000 | 3800 | 250/300 | 100 | 50 | 50 | 11 | 3996 | 12782 | 36 | 57 | 53.8 | 50.7 | 5.9 |
| CDBNL ₃ -450 | 450 | 343 | 514 | 387 | 6519 | 7400 | 242000 | 3800 | 250/300 | 100 | 50 | 50 | 11 | 3738 | 14160 | 38.5 | 57 | 53.8 | 50.7 | 5.9 |
| CDBNL ₃ -500 | 500 | 375 | 576 | 427 | 6890 | 8200 | 280000 | 4200 | 300/350 | 100 | 80 | 50 | 15 | 4628 | 17102 | 37 | 57 | 55 | 51.9 | 6.6 |
| CDBNL ₃ -600 | 600 | 454 | 680 | 516 | 7390 | 8200 | 302200 | 4200 | 300/350 | 100 | 80 | 50 | 18.5 | 5189 | 12904 | 42 | 58 | 56 | 52.4 | 6.6 |

1. The noise is the measured value of Dm at the standard point, which is far away from the diameter of the tower wall and 1.5 meters high from the foundation (when the tower diameter is less than 1.5).
2. The noise standard point Dm shall prevail. The values of other points are for users' reference when selecting towers.
3. The standard design working conditions of this series are wet bulb temperature $\tau=28^{\circ}\text{C}$, inlet water temperature $t_1=37^{\circ}\text{C}$, and outlet water temperature $t_2=32$. Inlet water pressure refers to the water pressure at the connection point.
4. This table lists the cooling water supply when $\tau=28^{\circ}\text{C}$, $\Delta t=5^{\circ}\text{C}$ and 8°C , $t_2=32^{\circ}\text{C}$ and $\tau=27^{\circ}\text{C}$, $\Delta t=5^{\circ}\text{C}$ and 8°C , $t_2=32^{\circ}\text{C}$. For reference when selecting, please check the thermal performance curve for the cooling water volume of other parameters.

1.3 GBNL₃ Series Industrial Counter flow Open cooling tower

| Parameter Type | τ=28℃ Water flow rate (m ³ /h) | | | τ=27℃ Water flow rate (m ³ /h) | | | Size (mm) | | Air volume (m ³ /h) | Fan Dia. (mm) | Motor power (KW) | Intake XportDN (mm) | | | | Weight (kg) | | Inlet water pressure kpa | Noise Level dB(A) | | | Dm |
|------------------------|--|--------|--------|--|--------|--------|-----------|-----------|--------------------------------------|------------------|------------------------|---------------------|-----------|------------|---------|-------------|---------------------|-----------------------------------|-------------------|------|------|-----|
| | Δt=10℃ | Δt=20℃ | Δt=25℃ | Δt=10℃ | Δt=20℃ | Δt=25℃ | Height | Max. Dia. | | | | In/Out | Over flow | Drain flow | Make up | N. W | Operating Weight | | Dm | 10m | 16m | |
| GBNL ₃ -8 | 8 | 6 | 4 | 11 | 7 | 5 | 2033 | 1210 | 7200 | 700 | 0.55 | 40/40 | 25 | 25 | 15 | 306 | 584 | 19 | 54 | 40.3 | 36.6 | 1.5 |
| GBNL ₃ -12 | 12 | 10 | 8 | 14 | 11 | 9 | 2123 | 1460 | 12400 | 800 | 0.75 | 50/100 | 25 | 25 | 15 | 330 | 644 | 20 | 54 | 41.1 | 37.5 | 1.5 |
| GBNL ₃ -20 | 20 | 17 | 14 | 23 | 19 | 16 | 2342 | 1912 | 18000 | 1200 | 0.75 | 50/100 | 25 | 25 | 15 | 548 | 1100 | 22.1 | 55 | 43.5 | 39.9 | 1.8 |
| GBNL ₃ -25 | 25 | 21 | 18 | 29 | 23 | 24 | 2842 | 2215 | 21500 | 1200 | 1.1 | 50/100 | 25 | 25 | 15 | 618 | 1258 | 26 | 55 | 44.7 | 41.1 | 2.1 |
| GBNL ₃ -30 | 30 | 25 | 21 | 34 | 28 | 25 | 2830 | 2215 | 28000 | 1400 | 1.5 | 80/125 | 25 | 25 | 15 | 756 | 1640 | 26.5 | 56 | 45.7 | 42.1 | 2.1 |
| GBNL ₃ -40 | 40 | 33 | 28 | 45 | 37 | 33 | 3080 | 2215 | 32300 | 1600 | 2.2 | 80/125 | 25 | 25 | 20 | 998 | 2272 | 27.8 | 56 | 45.7 | 42.1 | 2.1 |
| GBNL ₃ -50 | 50 | 41 | 35 | 55 | 45 | 41 | 3094 | 2629 | 39200 | 1600 | 2.2 | 80/125 | 32 | 25 | 20 | 755 | 2064 | 29 | 56 | 47 | 43 | 2.5 |
| GBNL ₃ -60 | 60 | 49 | 42 | 66 | 54 | 49 | 3344 | 2629 | 43400 | 1600 | 2.2 | 80/125 | 32 | 25 | 20 | 825 | 2243 | 30.3 | 56.5 | 47.5 | 43.5 | 2.5 |
| GBNL ₃ -70 | 70 | 64 | 56 | 77 | 68 | 60 | 3294 | 3134 | 40800 | 1800 | 2.2 | 125/200 | 40 | 40 | 20 | 943 | 3034 | 28.6 | 57 | 50 | 46 | 3 |
| GBNL ₃ -80 | 80 | 73 | 65 | 88 | 78 | 68 | 3544 | 3134 | 54000 | 1800 | 3 | 125/200 | 40 | 40 | 20 | 1003 | 3230 | 31.5 | 58 | 50.7 | 47.4 | 3 |
| GBNL ₃ -100 | 100 | 91 | 83 | 110 | 96 | 85 | 3553 | 3732 | 71300 | 2400 | 3 | 150/250 | 80 | 50 | 25 | 1695 | 4125 | 29 | 58.5 | 52 | 48.6 | 3.6 |
| GBNL ₃ -125 | 125 | 114 | 100 | 137 | 120 | 106 | 3803 | 3732 | 84000 | 2400 | 4 | 150/250 | 80 | 50 | 25 | 1835 | 4461 | 31.5 | 59.5 | 53 | 49.6 | 3.6 |
| GBNL ₃ -150 | 150 | 136 | 119 | 166 | 145 | 127 | 3835 | 4342 | 106000 | 2800 | 4 | 150/250 | 80 | 50 | 32 | 2132 | 5592 | 30.1 | 60 | 54.6 | 51.3 | 4.2 |
| GBNL ₃ -175 | 175 | 157 | 139 | 192 | 168 | 148 | 4085 | 4342 | 118000 | 2800 | 5.5 | 150/250 | 80 | 50 | 32 | 2344 | 6365 | 32.6 | 61 | 55.6 | 52.3 | 4.2 |
| GBNL ₃ -200 | 200 | 180 | 159 | 220 | 191 | 169 | 4223 | 5134 | 141300 | 3400 | 5.5 | 200/300 | 80 | 50 | 40 | 3408 | 9080 | 35 | 61 | 56.8 | 53.5 | 5 |
| GBNL ₃ -250 | 250 | 225 | 199 | 275 | 239 | 212 | 4473 | 5134 | 167900 | 3400 | 7.5 | 200/300 | 80 | 50 | 40 | 3697 | 9743 | 37.5 | 61.5 | 57.3 | 54 | 5 |
| GBNL ₃ -300 | 300 | 270 | 240 | 332 | 290 | 253 | 4618 | 6044 | 212000 | 3800 | 11 | 250/300 | 100 | 50 | 50 | 4180 | 12560 | 36 | 62 | 58.8 | 55.7 | 5.9 |
| GBNL ₃ -350 | 350 | 316 | 276 | 386 | 336 | 296 | 4868 | 6044 | 235300 | 3800 | 11 | 250/300 | 100 | 50 | 50 | 4526 | 13344 | 38.5 | 62 | 58.8 | 55.7 | 5.9 |
| GBNL ₃ -400 | 400 | 360 | 315 | 442 | 383 | 338 | 5219 | 6476 | 282800 | 4200 | 11 | 300/350 | 100 | 80 | 50 | 5588 | 16078 | 37 | 62 | 60 | 56.9 | 6.6 |
| GBNL ₃ -450 | 450 | 406 | 358 | 495 | 431 | 381 | 5719 | 6476 | 285000 | 4200 | 15 | 300/350 | 100 | 80 | 50 | 6390 | 18180 | 42 | 63 | 61 | 57.4 | 6.6 |
| GBNL ₃ -500 | 500 | 449 | 393 | 550 | 477 | 422 | 5589 | 7766 | 353200 | 5000 | 15 | 350/400 | 100 | 80 | 80 | 6430 | 22709 | 39.5 | 63 | 61.4 | 58.4 | 7.6 |
| GBNL ₃ -600 | 600 | 545 | 480 | 660 | 576 | 507 | 6089 | 7766 | 381400 | 5000 | 18.5 | 350/400 | 100 | 80 | 80 | 7566 | 25565 | 44.5 | 63 | 61.4 | 58.4 | 7.6 |
| GBNL ₃ -700 | 700 | 629 | 558 | 775 | 673 | 591 | 6040 | 8836 | 495500 | 6000 | 22 | 350/450 | 100 | 80 | 80 | 8574 | 32210 | 42.5 | 63.5 | 62.6 | 59.7 | 8.6 |
| GBNL ₃ -800 | 800 | 728 | 644 | 880 | 772 | 680 | 6540 | 8836 | 507500 | 6000 | 30 | 350/450 | 100 | 80 | 80 | 10200 | 36040 | 47.5 | 64 | 63.1 | 60.2 | 8.6 |

1. The standard point noise value can be parameterized to the noise value of the DBNL3 series equal-diameter tower. When using a planetary gear reducer, the noise value should be increased by 2-5 decibels.

2. The cooling water volume listed in this table is when the wet bulb temperature τ=28℃ and τ=27℃. The working conditions are as follows: when the water temperature drops Δt=10℃, the inlet water temperature t1=43℃, the outlet water temperature t2= 33; When the water temperature drops Δt=20℃ and 25℃, the inlet water temperature t1 is 55℃ and 60℃ respectively, and the outlet water temperature t2=35.

3. The water inlet pipe pressure refers to the water pressure at the connection point 1Kgf/cm²=9.8×10⁴ Pa, so the water pressure of this series is between 0.2~0.49Kgf/cm².