



CUTES Europe Liquid ring vacuum pumps

Tel. +49 6172 137 132 www.cutes-europe.com

Max-Planck-Str. 9 , 61381 Friedrichsdorf (Frankfort), Germany

| Temp. [deg.C] | Vapour pressure of water [mbar] | | | | | | | | | |
|------------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 0 | 0,1 | 0,2 | 0,3 | 0,4 | 0,5 | 0,6 | 0,7 | 0,8 | 0,9 |
| 10 | 12,26 | 12,34 | 12,43 | 12,51 | 12,60 | 12,68 | 12,76 | 12,85 | 12,94 | 13,02 |
| 11 | 13,11 | 13,20 | 13,29 | 13,37 | 13,46 | 13,55 | 13,64 | 13,73 | 13,83 | 13,92 |
| 12 | 14,01 | 14,10 | 14,20 | 14,29 | 14,38 | 14,48 | 14,57 | 14,67 | 14,77 | 14,86 |
| 13 | 14,96 | 15,06 | 15,16 | 15,26 | 15,36 | 15,46 | 15,56 | 15,66 | 15,76 | 15,87 |
| 14 | 15,97 | 16,07 | 16,18 | 16,28 | 16,39 | 16,50 | 16,60 | 16,71 | 16,82 | 16,93 |
| 15 | 17,04 | 17,15 | 17,26 | 17,37 | 17,48 | 17,60 | 17,71 | 17,82 | 17,94 | 18,05 |
| 16 | 18,17 | 18,29 | 18,40 | 18,52 | 18,64 | 18,76 | 18,88 | 19,00 | 19,12 | 19,24 |
| 17 | 19,36 | 19,49 | 19,61 | 19,74 | 19,86 | 19,99 | 20,11 | 20,24 | 20,37 | 20,50 |
| 18 | 20,63 | 20,76 | 20,89 | 21,02 | 21,15 | 21,29 | 21,42 | 21,56 | 21,69 | 21,83 |
| 19 | 21,96 | 22,10 | 22,24 | 22,38 | 22,52 | 22,66 | 22,80 | 22,94 | 23,09 | 23,23 |
| 20 | 23,37 | 23,52 | 23,66 | 23,81 | 23,96 | 24,11 | 24,26 | 24,41 | 24,56 | 24,71 |
| 21 | 24,86 | 25,02 | 25,17 | 25,32 | 25,48 | 25,64 | 25,79 | 25,95 | 26,11 | 26,27 |
| 22 | 26,43 | 26,59 | 26,76 | 26,92 | 27,08 | 27,25 | 27,42 | 27,58 | 27,75 | 27,92 |
| 23 | 28,09 | 28,26 | 28,43 | 28,60 | 28,78 | 28,95 | 29,13 | 29,30 | 29,48 | 29,66 |
| 24 | 29,84 | 30,01 | 30,20 | 30,38 | 30,56 | 30,74 | 30,93 | 31,11 | 31,30 | 31,49 |
| 25 | 31,68 | 31,86 | 32,05 | 32,25 | 32,44 | 32,63 | 32,83 | 33,02 | 33,22 | 33,42 |
| 26 | 33,61 | 33,81 | 34,01 | 34,21 | 34,42 | 34,62 | 34,83 | 35,03 | 35,24 | 35,45 |
| 27 | 35,65 | 35,86 | 36,07 | 36,29 | 36,50 | 36,71 | 36,93 | 37,15 | 37,36 | 37,58 |
| 28 | 37,80 | 38,02 | 38,24 | 38,47 | 38,69 | 38,92 | 39,14 | 39,37 | 39,60 | 39,83 |
| 29 | 40,06 | 40,29 | 40,53 | 40,76 | 41,00 | 41,23 | 41,47 | 41,71 | 41,95 | 42,19 |
| 30 | 42,44 | 42,68 | 42,93 | 43,17 | 43,42 | 43,67 | 43,92 | 44,17 | 44,42 | 44,68 |
| 31 | 44,93 | 45,19 | 45,45 | 45,71 | 45,97 | 46,23 | 46,49 | 46,76 | 47,02 | 47,29 |
| 32 | 47,56 | 47,83 | 48,10 | 48,37 | 48,64 | 48,92 | 49,19 | 49,47 | 49,75 | 50,03 |
| 33 | 50,31 | 50,59 | 50,88 | 51,17 | 51,45 | 51,74 | 52,03 | 52,32 | 52,61 | 52,91 |
| 34 | 53,20 | 53,50 | 53,80 | 54,10 | 54,40 | 54,70 | 55,01 | 55,31 | 55,62 | 55,93 |
| 35 | 56,24 | 56,55 | 56,87 | 57,18 | 57,50 | 57,81 | 58,13 | 58,45 | 58,78 | 59,10 |
| 36 | 59,42 | 59,75 | 60,08 | 60,41 | 60,74 | 61,07 | 61,41 | 61,75 | 62,08 | 62,42 |
| 37 | 62,76 | 63,11 | 63,45 | 63,80 | 64,15 | 64,49 | 64,85 | 65,20 | 65,55 | 65,91 |
| 38 | 66,27 | 66,62 | 66,99 | 67,35 | 67,71 | 68,08 | 68,45 | 68,81 | 69,19 | 69,56 |
| 39 | 69,93 | 70,31 | 70,69 | 71,07 | 71,45 | 71,83 | 72,22 | 72,60 | 72,99 | 73,38 |
| 40 | 73,78 | 74,17 | 74,57 | 74,96 | 75,36 | 75,76 | 76,17 | 76,57 | 76,98 | 77,39 |
| 41 | 77,80 | 78,21 | 78,63 | 79,04 | 79,46 | 79,88 | 80,30 | 80,73 | 81,15 | 81,58 |
| 42 | 82,01 | 82,44 | 82,88 | 83,31 | 83,75 | 84,19 | 84,63 | 85,07 | 85,52 | 85,97 |
| 43 | 86,42 | 86,87 | 87,32 | 87,78 | 88,24 | 88,70 | 89,16 | 89,62 | 90,09 | 90,56 |
| 44 | 91,03 | 91,50 | 91,97 | 92,45 | 92,93 | 93,41 | 93,89 | 94,38 | 94,86 | 95,35 |
| 45 | 95,84 | 96,34 | 96,83 | 97,33 | 97,83 | 98,34 | 98,84 | 99,35 | 99,86 | 100,37 |
| 46 | 100,88 | 101,40 | 101,92 | 102,44 | 102,96 | 103,48 | 104,01 | 104,54 | 105,07 | 105,61 |
| 47 | 106,15 | 106,68 | 107,23 | 107,77 | 108,32 | 108,86 | 109,42 | 109,97 | 110,52 | 111,08 |
| 48 | 111,64 | 112,21 | 112,77 | 113,34 | 113,91 | 114,48 | 115,06 | 115,64 | 116,22 | 116,80 |
| 49 | 117,38 | 117,97 | 118,56 | 119,16 | 119,75 | 120,35 | 120,95 | 121,55 | 122,16 | 122,77 |
| 50 | 123,38 | 123,99 | 124,61 | 125,23 | 125,85 | 126,47 | 127,10 | 127,73 | 128,36 | 128,99 |
| 51 | 129,63 | 130,27 | 130,91 | 131,56 | 132,21 | 132,86 | 133,51 | 134,17 | 134,83 | 135,49 |
| 52 | 136,15 | 136,82 | 137,49 | 138,17 | 138,84 | 139,52 | 140,20 | 140,89 | 141,57 | 142,26 |
| 53 | 142,96 | 143,65 | 144,35 | 145,05 | 145,76 | 146,47 | 147,18 | 147,89 | 148,61 | 149,33 |
| 54 | 150,05 | 150,78 | 151,50 | 152,24 | 152,97 | 153,71 | 154,45 | 155,19 | 155,94 | 156,69 |
| 55 | 157,44 | 158,20 | 158,96 | 159,72 | 160,48 | 161,25 | 162,02 | 162,80 | 163,58 | 164,36 |
| 56 | 165,14 | 165,93 | 166,72 | 167,52 | 168,31 | 169,11 | 169,92 | 170,72 | 171,53 | 172,35 |
| 57 | 173,16 | 173,98 | 174,81 | 175,63 | 176,46 | 177,30 | 178,14 | 178,98 | 179,82 | 180,67 |
| 58 | 181,52 | 182,37 | 183,23 | 184,09 | 184,95 | 185,82 | 186,69 | 187,57 | 188,44 | 189,33 |
| 59 | 190,21 | 191,10 | 191,99 | 192,89 | 193,79 | 194,69 | 195,60 | 196,51 | 197,42 | 198,34 |
| 60 | 199,26 | 200,18 | 201,11 | 202,04 | 202,98 | 203,92 | 204,86 | 205,81 | 206,76 | 207,71 |

| coef. D'Antoine | A | B | C |
|---------------------|---------|----------|-----|
| pour l'eau (0-60°C) | 8,10765 | 1750,286 | 235 |

Antoine coefficients

A = 8.10765
B = 1750.286
C = 285

for water in the range 0 - 60°C
P in mmHg ; T in deg.C
 $\log_{10} (P) = A - (B / T + C)$