

Standard are the Obvious Con-Serv Qualities: Table of contents

Saving Qur World's Water User Friendly = Quality Construction = Performance = Low Cost to Operate = Inexpensive to Perchase

## MANUFACTURING

## CON-SERV MFG Temperature Correction Factors for membrane flow rates

Feed water temperature plays a major role in the product flow- rate in Reverse Osmosis equipment. Each membrane type will have a similar change in flow. The chart below can give you an estimate on membrane performance due to the temperature. You will see a factor of 1.00 (test condition) is at 25 C. or 77 F. (An example would be a flow rate of 100 gpm with 25C Water, if the water was 22C the corrected flow rate would be; 100 divided by 1.109 or 90 gpm.)

| Temperature | Temperature<br>Correction | Temperature |        | Temperature |        | Temperature | Temperature<br>Correction | Temperature |        |
|-------------|---------------------------|-------------|--------|-------------|--------|-------------|---------------------------|-------------|--------|
| ° C         | Factor                    | ° C         | Factor | ° C         | Factor | ° C         | Factor                    | ° C         | Factor |
| 10.0        | 1.711                     | 14.0        | 1.475  | 18.0        | 1.276  | 22.0        | 1.109                     | 26.0        | 0.971  |
| 10.1        | 1.705                     | 14.1        | 1.469  | 18.1        | 1.272  | 22.1        | 1.105                     | 26.1        | 0.968  |
| 10.2        | 1.698                     | 14.2        | 1.464  | 18.2        | 1.267  | 22.2        | 1.101                     | 26.2        | 0.965  |
| 10.3        | 1.692                     | 14.3        | 1.459  | 18.3        | 1.262  | 22.3        | 1.097                     | 26.3        | 0.962  |
| 10.4        | 1.686                     | 14.4        | 1.453  | 18.4        | 1.258  | 22.4        | 1.093                     | 26.4        | 0.959  |
| 10.5        | 1.679                     | 14.5        | 1.448  | 18.5        | 1.254  | 22.5        | 1.090                     | 26.5        | 0.957  |
| 10.6        | 1.673                     | 14.6        | 1.443  | 18.6        | 1.249  | 22.6        | 1.086                     | 26.6        | 0.954  |
| 10.7        | 1.667                     | 14.7        | 1.437  | 18.7        | 1.245  | 22.7        | 1.082                     | 26.7        | 0.951  |
| 10.8        | 1.660                     | 14.8        | 1.432  | 18.8        | 1.240  | 22.8        | 1.078                     | 26.8        | 0.948  |
| 10.9        | 1.654                     | 14.9        | 1.427  | 18.9        | 1.236  | 22.9        | 1.075                     | 26.9        | 0.945  |
| 11.0        | 1.648                     | 15.0        | 1.422  | 19.0        | 1.232  | 23.0        | 1.071                     | 27.0        | 0.943  |
| 11.1        | 1.642                     | 15.1        | 1.417  | 19.1        | 1.227  | 23.1        | 1.067                     | 27.1        | 0.940  |
| 11.2        | 1.636                     | 15.2        | 1.411  | 19.2        | 1.223  | 23.2        | 1.064                     | 27.2        | 0.937  |
| 11.3        | 1.630                     | 15.3        | 1.406  | 19.3        | 1.219  | 23.3        | 1.060                     | 27.3        | 0.934  |
| 11.4        | 1.624                     | 15.4        | 1.401  | 19.4        | 1.214  | 23.4        | 1.056                     | 27.4        | 0.932  |
| 11.5        | 1.618                     | 15.5        | 1.396  | 19.5        | 1.210  | 23.5        | 1.053                     | 27.5        | 0.929  |
| 11.6        | 1.611                     | 15.6        | 1.391  | 19.6        | 1.206  | 23.6        | 1.049                     | 27.6        | 0.926  |
| 11.7        | 1.605                     | 15.7        | 1.386  | 19.7        | 1.201  | 23.7        | 1.045                     | 27.7        | 0.924  |
| 11.8        | 1.600                     | 15.8        | 1.381  | 19.8        | 1.197  | 23.8        | 1.042                     | 27.8        | 0.921  |
| 11.9        | 1.594                     | 15.9        | 1.376  | 19.9        | 1.193  | 23.9        | 1.038                     | 27.9        | 0.918  |
| 12.0        | 1.588                     | 16.0        | 1.371  | 20.0        | 1.189  | 24.0        | 1.035                     | 28.0        | 0.915  |
| 12.1        | 1.582                     | 16.1        | 1.366  | 20.1        | 1.185  | 24.1        | 1.031                     | 28.1        | 0.913  |
| 12.2        | 1.576                     | 16.2        | 1.361  | 20.2        | 1.180  | 24.2        | 1.028                     | 28.2        | 0.910  |
| 12.3        | 1.570                     | 16.3        | 1.356  | 20.3        | 1.176  | 24.3        | 1.024                     | 28.3        | 0.908  |
| 12.4        | 1.564                     | 16.4        | 1.351  | 20.4        | 1.172  | 24.4        | 1.021                     | 28.4        | 0.905  |
| 12.5        | 1.558                     | 16.5        | 1.347  | 20.5        | 1.168  | 24.5        | 1.017                     | 28.5        | 0.902  |
| 12.6        | 1.553                     | 16.6        | 1.342  | 20.6        | 1.164  | 24.6        | 1.014                     | 28.6        | 0.900  |
| 12.7        | 1.547                     | 16.7        | 1.337  | 20.7        | 1.160  | 24.7        | 1.010                     | 28.7        | 0.897  |
| 12.8        | 1.541                     | 16.8        | 1.332  | 20.8        | 1.156  | 24.8        | 1.007                     | 28.8        | 0.894  |
| 12.9        | 1.536                     | 16.9        | 1.327  | 20.9        | 1.152  | 24.9        | 1.003                     | 28.9        | 0.892  |
| 13.0        | 1.530                     | 17.0        | 1.323  | 21.0        | 1.148  | 25.0        | 1.000                     | 29.0        | 0.889  |
| 13.1        | 1.524                     | 17.1        | 1.318  | 21.1        | 1.144  | 25.1        | 0.997                     | 29.1        | 0.887  |
| 13.2        | 1.519                     | 17.2        | 1.313  | 21.2        | 1.140  | 25.2        | 0.994                     | 29.2        | 0.884  |
| 13.3        | 1.513                     | 17.3        | 1.308  | 21.3        | 1.136  | 25.3        | 0.991                     | 29.3        | 0.882  |
| 13.4        | 1.508                     | 17.4        | 1.304  | 21.4        | 1.132  | 25.4        | 0.988                     | 29.4        | 0.879  |
| 13.5        | 1.502                     | 17.5        | 1.299  | 21.5        | 1.128  | 25.5        | 0.985                     | 29.5        | 0.877  |
| 13.6        | 1.496                     | 17.6        | 1.294  | 21.6        | 1.124  | 25.6        | 0.982                     | 29.6        | 0.874  |
| 13.7        | 1.491                     | 17.7        | 1.290  | 21.7        | 1.120  | 25.7        | 0.979                     | 29.7        | 0.871  |
| 13.8        | 1.486                     | 17.8        | 1.285  | 21.8        | 1.116  | 25.8        | 0.977                     | 29.8        | 0.869  |
| 13.9        | 1.480                     | 17.9        | 1.281  | 21.9        | 1.112  | 25.9        | 0.974                     | 29.9        | 0.866  |

Corrected Flow Rate = (Measured Flow Rate)\*(TCF @ Feed Water Temp.)