# GLYCOL CIRCULATION QUICK REFERENCE CHART
## FOR NATURAL GAS DEHYDRATION

International Metric Measurements

| Gas Pressure (kPag) | 689 | 1379 | 2068 | 2758 | 3447 | 4137 | 4826 | 5516 | 6205 | 6895 |
|---|---|---|---|---|---|---|---|---|---|---|
| Inlet Gas Temperature (°C) | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| kg of water per Mm³/day | 2082 | 1121 | 769 | 609 | 481 | 433 | 384 | 352 | 320 | 288 |
| Liters/Hour per Mm³/day | 2185 | 1176 | 807 | 639 | 504 | 454 | 403 | 370 | 336 | 302 |
| Inlet Gas Temperature (°C) | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| kg of water per Mm³/day | 2723 | 1602 | 1057 | 865 | 705 | 545 | 513 | 465 | 433 | 400 |
| Liters/Hour per Mm³/day | 2857 | 1680 | 1109 | 907 | 739 | 571 | 538 | 487 | 454 | 420 |
| Inlet Gas Temperature (°C) | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| kg of water per Mm³/day | 3845 | 2082 | 1442 | 1153 | 929 | 801 | 721 | 641 | 609 | 545 |
| Liters/Hour per Mm³/day | 4033 | 2185 | 1512 | 1210 | 975 | 840 | 756 | 672 | 639 | 571 |
| Inlet Gas Temperature (°C) | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| kg of water per Mm³/day | 5126 | 2883 | 1922 | 1570 | 1249 | 1089 | 993 | 897 | 833 | 737 |
| Liters/Hour per Mm³/day | 5378 | 3025 | 2017 | 1647 | 1311 | 1143 | 1042 | 941 | 874 | 773 |
| Inlet Gas Temperature (°C) | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| kg of water per Mm³/day | 7209 | 4165 | 2803 | 2002 | 1762 | 1442 | 1314 | 1185 | 1121 | 993 |
| Liters/Hour per Mm³/day | 7562 | 4369 | 2942 | 2101 | 1849 | 1512 | 1378 | 1244 | 1176 | 1042 |
| Inlet Gas Temperature (°C) | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| kg of water per Mm³/day | 9611 | 5607 | 3684 | 2883 | 2243 | 1922 | 1762 | 1602 | 1442 | 1282 |
| Liters/Hour per Mm³/day | 10083 | 5882 | 3865 | 3025 | 2353 | 2017 | 1849 | 1680 | 1512 | 1344 |
| Inlet Gas Temperature (°C) | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| kg of water per Mm³/day | 12815 | 6728 | 4806 | 3684 | 2883 | 2483 | 2275 | 2082 | 1890 | 1730 |
| Liters/Hour per Mm³/day | 13444 | 7058 | 5041 | 3865 | 3025 | 2605 | 2386 | 2185 | 1983 | 1815 |

For further assistance please contact your local Kimray representative.

This chart is for quick reference only. If followed and used it should provide adequate gas dehydration to achieve outlet gas water content as desired. The glycol circulation rate in this chart is based on a conversion from a U.S. standard measure of 3 gallons of glycol required to remove 1 lb. of water from the gas stream.

The assumption is made all water will be removed with these circulation rates. Generally, gas contracts do not require total removal of water. Hence these numbers should be good for most applications.

The glycol used for this gas dehydration process chart is TEG (triethylene glycol).

**Reading from the left column top to bottom**

1. Gas pressure is noted in red field (kPag) running horizontally across the top of the page. This pressure will be the gauge operating pressure within the system (tower / contactor)
2. Gas temperature (C) is the temperature of the inlet gas stream to the tower/ contactor. This number will be displayed in each box progressively down the left column. It is located at the top of each box. The chart indicates increasing gas temperatures as you travel downward in the chart.
3. The second line in each box in the left column is the amount of water content associated with the temperature and pressure as noted. This means the gas will carry this amount of water in the gas stream before dehydration. The denotation is in kg of water per Mm3/day.

   Kilograms of water per million cubic meters of gas flow per day.

   The chart lists increasing / decreasing amounts of water content carried in the gas stream based on pressure and temperatures.

   The third and last line in each box in the left column is the glycol circulation rate required to remove all the water from the gas stream. The number of liters of glycol per hour circulated per Million cubic meters per day of gas flow rate.

   To find the required glycol circulation rate, locate the gas pressure of the system in the red field. Read downward until you see the inlet gas temperature under the appropriate pressure column and read the required number of liters per hour per million cubic meters per day.

   This will be the amount of glycol to circulate to achieve proper gas dehydration.

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