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

- 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)
- 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.









