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CORRECTION FACTORS HIFLUXX

Technical Bulletin

Temperature has influence on the performance of the Parker membranes. As the temperature changes so does the membrane performance. As a consequence the capacity and feed-air factor differ from the ones at nominal temperature (20°C).

Hereafter are the tables with correction factors for temperatures differing from 20°C for the HiFluxx membrane modules

Temperature	Nitrogen flow rate correction factor for HiFluxx at various product concentrations[1]					
	99.5	99	98	97	96	95
5°C	0.9	0.9	0.9	0.9	0.9	0.9
10°C	0.9	0.9	0.9	0.9	0.9	0.9
30°C	1.0	1.0	1.0	1.0	1.0	1.0
40°C	0.6	0.8	1.0	1.0	1.1	1.1
50°C	0.6	0.8	1.0	1.1	1.1	1.2

Table 1

Temperature	Feed-Air consumption correction factor for HiFluxx at various product concentrations[1]					
	99.5	99	98	97	96	95
5°C	0.8	0.8	0.8	0.8	0.8	0.8
10°C	0.9	0.9	0.9	0.9	0.9	0.9
30°C	1.1	1.1	1.1	1.1	1.1	1.1
40°C	1.2	1.2	1.2	1.2	1.2	1.2
50°C	1.3	1.3	1.3	1.3	1.3	1.3

Table 2

1. These numbers are indicative and may vary by +/- 0.1

Example

Sizing conditions	
Inlet pressure	7 barg
Nitrogen purity	97%
Feed-air temperature	50°C
N_2 correction factor	1.1 (table 1)
Feed-air correction factor	1.3 (table 2)
Module	HiFluxx ST1508
N_2 flow rate HiFluxx ST1508	15 m^3/hr (at 20°C)
Feed-air consumption HiFluxx ST1508	52.5 m^3/hr (at 20°C)

Corrected Nitrogen Flow Calculation at 50°C and 97%
Corrected nitrogen flow: 15 m^3/hr x 1.1 = 16.5 m^3/hr

Corrected Feed-Air Calculation at 50°C and 97%
Corrected feed-air flow: 52.5 m^3/hr x 1.3 = 68.3 m^3/hr

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