

Liste de comparaison
Vergleichsliste

Air - Isobutan
Luft - Isobutan

tube : 1.6 - 300/1.6 S
Rohr : 1.6 - 300/1.6 S

Air 15°/760 mm Hg./abs

Isobutan 15°/760 mm Hg/abs

Facteur
Faktor

cc/min.

Nl/min.

40	0,0554	1.385
35	0,0497	1.419
30	0,0438	1.459
25	0,0377	1.509
20	0,0316	1.578
15	0,0252	1.680
10	0,0182	1.822
5	0,0102	2.046
2	0,0045	2.253

tube : D 3-300/DS
Rohr : D 3-300/DS

150	0,1684	1.122
140	0,1593	1.137
130	0,15	1.154
120	0,1406	1.172
110	0,1311	1.191
100	0,1213	1.213
90	0,1114	1.237
80	0,1012	1.264
70	0,0907	1.295
60	0,0799	1.331
50	0,0688	1.375
40	0,0573	1.431
30	0,0453	1.509
20	0,0328	1.642
10	0,0188	1.883

tube : D 2-300/DS
Rohr : D 2-300/DS

250	0,2537	1.014
240	0,2456	1.023
220	0,229	1.040
200	0,2121	1.060

cc/min.	Nl/min.	
180	0,1949	1.082
160	0,1773	1.108
140	0,1593	1.137
120	0,1406	1.172
100	0,1213	1.213
80	0,1012	1.264
60	0,0799	1.331
40	0,0573	1.431
20	0,0328	1.642

tube : E 3-300/ES

Rohr : E 3-300/ES

500	0,4599	9.197
450	0,422	9.377
400	0,3835	9.587
350	0,3443	9.936
300	0,3041	1.013
250	0,2627	1.050
200	0,2196	1.097
150	0,1742	1.161
100	0,1254	1.253
50	0,071	1.419

tube : E 2-300/ES

Rohr : E 2-300/ES

800	0,679	8.488
750	0,6432	8.576
700	0,6071	8.673
650	0,5708	8.781
600	0,5342	8.903
550	0,4972	9.040
500	0,4599	9.197
450	0,422	9.377
400	0,3835	9.587
350	0,3443	9.836
300	0,3041	1.013
250	0,2627	1.050
200	0,2196	1.097
150	0,1742	1.161
100	0,1254	1.253
80	0,1044	1.305

tube : G-H-300/GA
Rohr : G-H-300/GA

Air 15⁰/760 mm Hg./abs

l/min.

1,2
1,1
1
0,9
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0,1

Isobutan 15⁰/760 mm Hg./abs

Nl/min.

0,9604
0,8907
0,8207
0,7502
0,679
0,6071
0,5342
0,4599
0,3835
0,3041
0,2196
0,1254

Facteur
Faktor

0.800
0.809
0.820
0.833
0.848
0.867
0.890
0.919
0.958
1.013
1.097
1.253

tube : H-F-300/HA
Rohr : H-F-300/HA

2,5
2,4
2,2
2
1,8
1,6
1,4
1,2
1
0,8
0,6
0,4
0,2

2,225
2.152
2.003
1.853
1,7
1,546
1,388
1,226
1.059
0,8852
0,7021
0,5051
0,2858

0,890
0.896
0.910
0.926
0.944
0.965
0.991
1.021
1.058
1.106
1.170
1.262
1.429

tube : H-G-300/HA
Rohr : H-G-300/HA

5
4,5
4
3,5
3
2,5
2
1,5
1
0,6

4,001
3,652
3,302
2,948
2,589
2,225
1,853
1,467
1,059
0,7021

0.800
0.811
0.825
0.842
0.863
0.890
0.926
0.978
1.058
1.170

tube : H-H-300/HA
Rohr : H-H-300/HA

l/min.

Nl/min.

10	7,42	0,741
9	6,741	0,749
8	6,961	0,757
7	5,378	0,768
6	4,692	0,782
5	4,001	0,800
4	3,302	0,825
3	2,589	0,863
2	1,853	0,926
1	1,059	1,058

tube : H-J-300/HA
Rohr : H-J-300/HA

15	10,79	0,719
14	10,12	0,722
13	9,447	0,726
12	8,772	0,731
11	8,096	0,736
10	7,42	0,741
9	6,741	0,749
8	6,061	0,757
7	5,378	0,768
6	4,692	0,782
5	4,001	0,800
4	3,302	0,825
3	2,589	0,863
2	1,853	0,926
1	1,059	1,058

Zuerich, le 12 avril 1983
Zürich, 12. April 1983

Tube 1.6 - 300 (2 & 60 cc/min.)

WIAA

X-Factor for various gases at 15°C and 750mm.Hg.Abs.

	Acetylene	Argon	Butane	CO ₂	CO	Cl ₂	3H ₂ +1N ₂	Cyclopropane	Ethane	Ethylene	He
0.06	1.463	0.823	1.353	1.032	1.033	1.004	1.407	1.405	1.497	1.443	1.057
0.05	1.483	0.821	1.405	1.074	1.034	1.025	1.337	1.441	1.525	1.469	1.053
0.04	1.509	0.820	1.463	1.089	1.035	1.050	1.359	1.484	1.559	1.497	0.930
0.03	1.546	0.817	1.543	1.112	1.035	1.035	1.315	1.543	1.608	1.535	0.955
0.02	1.513	0.811	1.573	1.153	1.039	1.147	1.282	1.542	1.594	1.507	0.930
0.01	1.745	0.810	1.935	1.232	1.041	1.275	1.279	1.849	1.872	1.751	0.937
0.003	1.775	0.810	2.018	1.242	1.041	1.310	1.279	1.910	1.919	1.783	0.927
0.006	1.790	0.810	2.121	1.243	1.041	1.348	1.279	1.980	1.954	1.805	0.927
0.004	1.790	0.810	1.254	1.243	1.041	1.375	1.279	2.054	1.989	1.808	0.927
0.002	1.790	0.810	1.421	1.243	1.041	1.377	1.279	2.081	1.989	1.803	0.927

	H ₂	HCl	H ₂ S	Methane	Neon	Natural Gas	Nitrous Oxide	O ₂	Propane	SO ₂
0.06	2.339	1.117	1.221	1.543	0.559	1.503	1.055	0.912	1.435	1.053
0.05	2.270	1.128	1.235	1.552	0.548	1.512	1.078	0.910	1.475	1.074
0.04	2.193	1.141	1.254	1.563	0.525	1.525	1.094	0.908	1.525	1.101
0.03	2.113	1.161	1.281	1.531	0.504	1.544	1.117	0.904	1.593	1.133
0.02	2.053	1.200	1.331	1.615	0.588	1.580	1.159	0.897	1.706	1.203
0.01	2.057	1.255	1.426	1.657	0.537	1.627	1.239	0.895	1.939	1.337
0.008	2.057	1.270	1.440	1.657	0.537	1.627	1.250	0.895	2.010	1.374
0.006	2.057	1.270	1.444	1.657	0.537	1.627	1.252	0.895	2.094	1.413
0.004	2.057	1.270	1.444	1.657	0.537	1.627	1.252	0.895	2.194	1.442
0.002	2.057	1.270	1.444	1.657	0.537	1.627	1.252	0.895	2.266	1.444

X Factor for various gases at 15°C and 760mm.Hg.Abs. Tube D - 300 { 10 à 150 cc/min. } Air

W Float	Acetylene	Argon	Butane	CO ₂	CO	Cl ₂	3H ₂ +1N ₂	Cyclopropane	Ethane	Ethylene	He
0.40	1.250	0.834	0.958	0.942	1.027	0.809	1.558	1.089	1.227	1.231	1.593
0.35	1.275	0.833	0.993	0.952	1.027	0.823	1.544	1.112	1.247	1.248	1.465
0.30	1.295	0.832	1.023	0.954	1.023	0.841	1.528	1.138	1.271	1.253	1.426
0.25	1.318	0.830	1.061	0.977	1.029	0.851	1.511	1.171	1.301	1.292	1.380
0.20	1.346	0.829	1.110	0.994	1.030	0.887	1.492	1.213	1.337	1.321	1.323
0.15	1.380	0.827	1.177	1.014	1.031	0.921	1.468	1.257	1.383	1.359	1.245
0.10	1.427	0.825	1.275	1.041	1.032	0.953	1.436	1.344	1.447	1.409	1.131
0.05	1.504	0.820	1.452	1.085	1.035	1.045	1.365	1.475	1.553	1.491	0.995
0.04	1.531	0.818	1.513	1.103	1.035	1.072	1.332	1.520	1.589	1.521	0.956
0.03	1.573	0.815	1.598	1.128	1.037	1.111	1.296	1.584	1.644	1.565	0.940
0.02	1.552	0.810	1.740	1.177	1.041	1.181	1.279	1.695	1.742	1.647	0.927
0.01	1.771	0.810	2.003	1.241	1.041	1.304	1.279	1.899	1.910	1.773	0.927
	H ₂	HCl	H ₂ S	Methane	Neon	Natural Gas	Nitrous Oxide	O ₂	Propane	SO ₂	
0.40	2.808	1.012	1.073	1.456	0.830	1.410	0.944	0.927	1.079	0.943	
0.35	2.758	1.021	1.087	1.464	0.815	1.418	0.954	0.925	1.103	0.953	
0.30	2.723	1.031	1.101	1.472	0.801	1.428	0.966	0.924	1.132	0.931	
0.25	2.673	1.043	1.118	1.482	0.785	1.438	0.980	0.920	1.159	0.903	
0.20	2.617	1.057	1.138	1.494	0.755	1.451	0.995	0.918	1.214	0.930	
0.15	2.547	1.075	1.162	1.509	0.742	1.467	1.017	0.915	1.276	0.955	
0.10	2.443	1.099	1.195	1.528	0.706	1.487	1.045	0.908	1.354	1.014	
0.05	2.207	1.138	1.250	1.561	0.629	1.522	1.091	0.903	1.516	1.095	
0.04	2.143	1.153	1.270	1.574	0.611	1.536	1.108	0.905	1.567	1.124	
0.03	2.035	1.177	1.301	1.595	0.595	1.558	1.134	0.901	1.741	1.155	
0.02	2.057	1.221	1.359	1.635	0.537	1.601	1.183	0.895	1.757	1.238	

Tube E - 300 { 50 - 500 cc/min. }
 { 80 - 800 cc/min. } Air
 { 100 - 1200 cc/min. }

X Factor for various gases at 15°C and 750mm.Hg.Abs.

ES Float

	Acetylene	Argon	Butane	CO ₂	CO	Cl ₂	3H ₂ +1N ₂	Cyclopropane	Ethane	Ethylene	He
1.50	1.146	0.843	0.809	0.870	1.022	0.711	1.687	0.941	1.088	1.112	1.903
1.25	1.160	0.841	0.828	0.880	1.023	0.723	1.557	0.959	1.105	1.127	1.831
1.00	1.180	0.840	0.854	0.892	1.023	0.740	1.642	0.984	1.129	1.147	1.745
0.75	1.209	0.837	0.893	0.910	1.025	0.764	1.509	1.021	1.164	1.177	1.643
0.50	1.255	0.834	0.959	0.939	1.026	0.804	1.563	1.081	1.220	1.225	1.517
0.25	1.340	0.829	1.099	0.990	1.029	0.882	1.495	1.204	1.329	1.315	1.335
0.20	1.357	0.828	1.150	1.006	1.030	0.908	1.477	1.245	1.355	1.344	1.277
0.15	1.401	0.825	1.219	1.026	1.031	0.941	1.455	1.301	1.411	1.381	1.193
0.10	1.446	0.824	1.319	1.052	1.033	0.987	1.421	1.377	1.474	1.419	1.089
0.05	1.525	0.818	1.500	1.099	1.035	1.066	1.339	1.510	1.581	1.514	0.971

	H ₂	HCl	H ₂ S	Methane	Neon	Natural Gas	Nitrous Oxide	O ₂	Propane	SO ₂
1.50	3.215	0.946	0.990	1.497	0.958	1.348	0.871	0.939	0.921	0.745
1.25	3.150	0.955	1.001	1.405	0.945	1.357	0.881	0.937	0.940	0.753
1.00	3.067	0.965	1.016	1.416	0.917	1.363	0.893	0.935	0.935	0.775
0.75	2.982	0.933	1.037	1.431	0.881	1.383	0.912	0.932	1.005	0.801
0.50	2.823	1.003	1.071	1.453	0.835	1.407	0.940	0.928	1.071	0.843
0.25	2.629	1.054	1.133	1.492	0.770	1.449	0.993	0.921	1.205	0.924
0.20	2.574	1.069	1.153	1.503	0.752	1.461	1.009	0.919	1.252	0.952
0.15	2.504	1.086	1.177	1.517	0.727	1.476	1.029	0.916	1.314	0.987
0.10	2.391	1.109	1.209	1.536	0.687	1.496	1.055	0.913	1.402	1.035
0.05	2.155	1.150	1.255	1.571	0.615	1.533	1.104	0.905	1.556	1.117

HA Float	X Factor for various gases at 1°C and 760mm.Hg.Abs.										Tube H - 300 { 0,2 à 2,5 l/min. - 0,6 à 5 l/min. 1 à 10 " - 1 à 15 "			
	Acetylene	Argon	Butane	CO ₂	CO	3H ₂ -1N ₂	Cyclopropane	Ethane	Ethylene	He				
15	1.095	0.847	0.747	0.338	1.019	1.733	0.881	1.029	1.050	2.235				
14	1.098	0.847	0.751	0.340	1.020	1.758	0.884	1.032	1.053	2.215				
13	1.102	0.846	0.755	0.342	1.020	1.753	0.888	1.035	1.055	2.183				
12	1.105	0.845	0.759	0.345	1.020	1.747	0.893	1.040	1.070	2.150				
11	1.110	0.845	0.765	0.347	1.020	1.740	0.896	1.045	1.074	2.127				
10	1.115	0.845	0.771	0.351	1.020	1.732	0.904	1.051	1.080	2.091				
9	1.121	0.845	0.778	0.355	1.021	1.722	0.911	1.059	1.085	2.050				
8	1.128	0.844	0.787	0.359	1.021	1.712	0.920	1.057	1.094	2.003				
7	1.137	0.843	0.799	0.365	1.022	1.693	0.931	1.078	1.103	1.949				
6	1.149	0.842	0.813	0.372	1.022	1.682	0.945	1.091	1.115	1.887				
5	1.164	0.841	0.832	0.382	1.023	1.663	0.953	1.109	1.130	1.815				
4	1.184	0.839	0.759	0.395	1.024	1.637	0.989	1.133	1.151	1.731				
3	1.213	0.837	0.899	0.913	1.025	1.604	1.025	1.159	1.182	1.630				
2	1.259	0.834	0.955	0.942	1.027	1.559	1.088	1.225	1.230	1.505				
1	1.345	0.829	1.108	0.993	1.030	1.492	1.211	1.335	1.320	1.325				
0.8	1.372	0.827	1.160	1.009	1.030	1.474	1.253	1.371	1.349	1.266				
0.6	1.405	0.826	1.228	1.029	1.031	1.451	1.308	1.417	1.385	1.182				
0.4	1.450	0.823	1.329	1.055	1.033	1.418	1.365	1.480	1.434	1.091				
0.2	1.530	0.818	1.511	1.102	1.035	1.333	1.518	1.588	1.520	0.957				

HA Float

X Factor for various gases at 15°C and 760mm.Hg.Abs. Tube H - 300 { 0,2 à 2,5 l/min. - 0,6 à 5 l/min. }
 { 1 à 10 " - 1 à 15 l/min. }

HA Float	H ₂	Methane	Neon	Natural Gas	Nitrous Oxide	O ₂	Propane
15	3.437	1.369	1.055	1.319	0.838	0.945	0.857
14	3.470	1.371	1.053	1.321	0.840	0.945	0.851
13	3.450	1.373	1.051	1.323	0.843	0.944	0.855
12	3.428	1.375	1.043	1.325	0.845	0.944	0.870
11	3.403	1.378	1.034	1.327	0.848	0.943	0.875
10	3.374	1.380	1.024	1.330	0.851	0.943	0.882
9	3.341	1.384	1.012	1.334	0.855	0.942	0.889
8	3.302	1.388	0.999	1.338	0.850	0.941	0.899
7	3.257	1.393	0.983	1.344	0.855	0.940	0.910
6	3.202	1.399	0.963	1.350	0.873	0.939	0.925
5	3.135	1.407	0.940	1.359	0.883	0.937	0.944
4	3.052	1.418	0.912	1.370	0.895	0.935	0.971
3	2.917	1.433	0.876	1.385	0.914	0.932	1.011
2	2.811	1.455	0.831	1.410	0.943	0.927	1.073
1	2.519	1.494	0.767	1.451	0.995	0.920	1.213
0.8	2.555	1.505	0.748	1.463	1.012	0.918	1.250
0.6	2.494	1.519	0.724	1.478	1.032	0.916	1.322
0.4	2.378	1.538	0.683	1.498	1.059	0.913	1.410
0.2	2.145	1.573	0.612	1.535	1.107	0.905	1.555

Tube J - 300 { 2 à 25 l/min. }
 { 4 à 40 l/min. }

X Factor for various gases at 15°C and 750mm.Hg.Abs.

JA Float	Acetylene	Argon	Butane	CO2	CO	3H2+1N2	Cyclopropane	Ethane	Ethylene	He
40	1.073	0.849	0.717	0.824	1.018	1.801	0.854	1.003	1.035	2.443
35	1.075	0.849	0.722	0.825	1.019	1.796	0.853	1.005	1.040	2.413
30	1.080	0.849	0.729	0.828	1.019	1.789	0.853	1.011	1.044	2.375
25	1.085	0.843	0.735	0.832	1.019	1.779	0.859	1.017	1.049	2.324
20	1.093	0.847	0.745	0.837	1.019	1.766	0.873	1.025	1.058	2.255
15	1.105	0.845	0.750	0.845	1.020	1.746	0.893	1.041	1.071	2.154
10	1.129	0.844	0.789	0.850	1.021	1.710	0.921	1.068	1.094	1.997
5	1.135	0.839	0.851	0.896	1.024	1.635	0.991	1.135	1.153	1.735
4	1.203	0.839	0.892	0.910	1.025	1.610	1.019	1.162	1.176	1.545
3	1.240	0.838	0.937	0.929	1.025	1.577	1.051	1.201	1.209	1.554
2	1.283	0.832	1.012	0.959	1.028	1.534	1.128	1.252	1.251	1.441
1	1.373	0.827	1.153	1.010	1.030	1.473	1.256	1.374	1.351	1.262

	H2	Methane	Neon	Natural Gas	Nitrous Oxide	O2	Propane
40	3.532	1.357	1.117	1.305	0.824	0.948	0.830
35	3.612	1.358	1.110	1.307	0.825	0.948	0.833
30	3.585	1.351	1.100	1.310	0.828	0.947	0.833
25	3.550	1.364	1.087	1.313	0.832	0.946	0.845
20	3.499	1.358	1.059	1.318	0.837	0.945	0.855
15	3.424	1.375	1.042	1.325	0.845	0.944	0.871
10	3.293	1.388	0.997	1.339	0.850	0.941	0.900
5	3.047	1.418	0.910	1.371	0.897	0.935	0.973
4	2.955	1.430	0.882	1.383	0.911	0.932	1.001
3	2.855	1.446	0.849	1.400	0.931	0.929	1.049
2	2.739	1.469	0.807	1.424	0.951	0.925	1.121

1.6S Float

0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005

X Factor for various gases at 15°C and 760mm.Hg.Abs.

Butane.

1.35
1.37
1.39
1.42
1.45
1.49
1.53
1.58
1.65
1.76
1.91
2.15

tube 1.6-300
- 2-30 cc/min. air
2-40 cc/min. air
2-60 cc/min. air

X Factor for various gases at 15°C and 760mm.Hg.Abs.

DS Float

Butane.

0.40' 0.96
0.38 0.97
0.36 0.98
0.34 0.99
0.32 1.00
0.30 1.02
0.28 1.03
0.26 1.04
0.24 1.06
0.22 1.08
0.20 1.10
0.18 1.13
0.16 1.15
0.14 1.18
0.12 1.22
0.10 1.26
0.08 1.32
0.06 1.39
0.04 1.50
0.02 1.72

Tubes D 300 / 10-150 cc/min air
tubes D2-300 / D2 20-250 cc/min air

X Factor for various gases at 15°C and 760mm.Hg.Abs.

ES Float	Dutane.		
1.50	0.81		
1.45	0.81		
1.40	0.81		
1.35	0.82		
1.30	0.82		
1.25	0.825		
1.20	0.83		
1.15	0.83		
1.10	0.84		
1.05	0.845		
1.00	0.85		
0.95	0.86		
0.90	0.86		
0.85	0.87		
0.80	0.88		
0.75	0.89		
0.70	0.90		
0.65	0.91		
0.60	0.92		
0.55	0.94		
0.50	0.95		
0.45	0.97		
0.40	1.00		
0.35	1.02		
0.30	1.05	0.15	1.21
0.25	1.09	0.10	1.31

tube E3-300 50-300 cc/min air
 E2-300 80-200 cc/min air
 E-300 0.1-1.2 cc/min air

X Factor for various gases at 15°C and 700mm.Hg.Abs.

HA Float

Butane.

15	0.75
14.5	0.75
14	0.75
13.5	0.75
13	0.75
12.5	0.755
12	0.76
11.5	0.76
11	0.76
10.5	0.77
10	0.77
9.5	0.77
9	0.78
8.5	0.78
8	0.785
7.5	0.79
7	0.80
6.5	0.80
6	0.81
5.5	0.82
5	0.83
4.5	0.84
4	0.85
3.5	0.87
3	0.895
2.5	0.92
2	0.95

1.5	1.01
1	1.10
0.5	1.25

tubes

H-F-300/HA
H-G-300/HA
H-H-300/HA
H-J-300/HA

0.2 - 2.5 c/min. air
0.6 - 5.0 c/min. air
1 - 10 c/min. air
1 - 15 c/min. air

X Factor for various gases at 15°C and 700mm.Hg.Abs.

JA Float

Butane.

40	0.72	Tube J-C-300/JA	2-25 l/min. air
38	0.72		
36	0.72	Tube J-D-300/JA	4-40 l/min. air
34	0.72		
32	0.725	Tube J- -300/JA	6-60 l/min air
30	0.73		
28	0.73		
26	0.73		
24	0.735		
22	0.74		
20	0.74		
18	0.75		
16	0.755		
14	0.76		
12	0.77		
10	0.79		
8	0.81		
6	0.84		
4	0.89		
2	1.00		