Fluorinated Refrigerants

R-410A

R-410A: The most widely used high-safety refrigerant in air conditioning.

R-410A is an A1 refrigerant gas blend of HFCs that is practically azeotropic, due to this characteristic its glide is only 0.1ºC.

It is mainly used in air conditioning and other climatization equipment such as water chillers, etc. due to its high cooling capacity.

It cannot be replaced by R-32, for its direct replacement we highly recommend RS-53 (R-470A).

Components:	ASHRAE Name:
R-32, R-125	R-410A

Technical specifications:

0	2088	A1	POE
ODP	GWP	Safety classification	Compatible lubricants

Temperature Range: High and Medium

Replacement:
R-22 in New Equipment

Type of replacement:
Substitute (New Equipment)

Applications:

- A/C Air Conditioning / Climatization
- Industrial Refrigeration
- Commercial Refrigeration

Packaging sizes for R-410A:

- Cylinders
- Roll Drums
- ISO Tanks

Instructions:

Charge the system in liquid phase.

Thermodinamic properties chart:

Bubble point

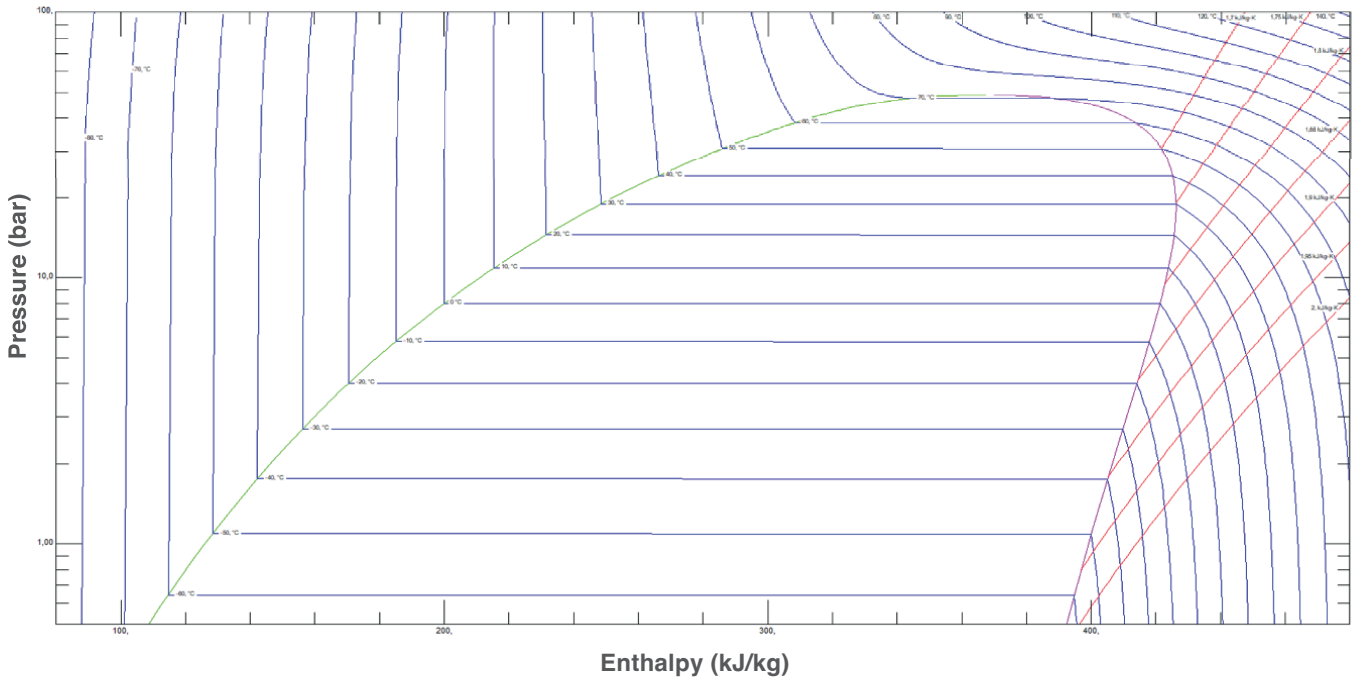
Temperature (ºC)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-70	0,35624	1,4067	0,0015216	101,1	396,26
-65	0,48237	1,3916	0,0020234	107,87	398,77
-60	0,64243	1,3763	0,0026494	114,66	401,26
-55	0,84265	1,3608	0,0034207	121,47	403,73
-50	1,0898	1,3451	0,0043603	128,32	406,16
-45	1,3913	1,3292	0,0054932	135,21	408,55
-40	1,755	1,313	0,006847	142,15	410,89
-35	2,1892	1,2966	0,0084518	149,13	413,16
-30	2,703	1,2798	0,010341	156,17	415,36
-25	3,3055	1,2627	0,01255	163,27	417,47
-20	4,0066	1,2451	0,015121	170,44	419,48
-15	4,8165	1,2271	0,018098	177,69	421,39
-10	5,7458	1,2087	0,021533	185,02	423,17
-5	6,8055	1,1896	0,025484	192,46	424,81
0	8,007	1,17	0,03002	200	426,29
5	9,3623	1,1496	0,035219	207,66	427,6
10	10,884	1,1284	0,041177	215,46	428,7
15	12,584	1,1063	0,048006	223,42	429,57
20	14,476	1,0831	0,055847	231,54	430,17
25	16,574	1,0586	0,064874	239,86	430,46
30	18,893	1,0327	0,075312	248,41	430,39
35	21,448	1,0051	0,087455	257,22	429,89
40	24,256	0,97533	0,10171	266,33	428,88
45	27,335	0,94288	0,11866	275,84	427,22
50	30,706	0,9068	0,13919	285,85	424,75

Thermodinamic properties chart:

Dew point

Temperature (ºC)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-70	0,35444	1,4204	0,0015581	102,42	389,2
-65	0,48012	1,4046	0,0020704	109,04	391,98
-60	0,63962	1,3887	0,0027092	115,7	394,72
-55	0,83916	1,3726	0,0034959	122,39	397,4
-50	1,0855	1,3565	0,0044539	129,14	400,02
-45	1,386	1,3401	0,0056088	135,92	402,57
-40	1,7485	1,3235	0,0069885	142,76	405,04
-35	2,1814	1,3067	0,0086236	149,65	407,44
-30	2,6935	1,2896	0,010548	156,61	409,75
-25	3,2931	1,2722	0,012798	163,62	411,97
-20	3,993	1,2543	0,015415	170,72	414,08
-15	4,8002	1,236	0,018446	177,89	416,09
-10	5,7265	1,2173	0,021942	185,15	417,97
-5	6,7827	1,1979	0,025963	192,51	419,71
0	7,9806	1,1779	0,030576	199,98	421,31
5	9,3315	1,1572	0,035863	207,58	422,73
10	10,848	1,1357	0,041917	215,31	423,96
15	12,543	1,1132	0,048855	223,2	424,97
20	14,43	1,0895	0,056814	231,26	425,73
25	16,522	1,0647	0,065972	239,53	426,19
30	18,835	1,0383	0,076553	248,02	426,31
35	21,385	1,0101	0,088851	256,78	426,03
40	24,187	0,97983	0,10327	265,86	425,26
45	27,261	0,94676	0,1204	275,33	423,88
50	30,628	0,91001	0,14114	285,33	421,72

Pressure diagram chart:



Normative:

GRIT (Gases Research Innovation & Technology) is committed to the continuous improvement of our inbuilt Quality Control, Environment and Major Accident Prevention Systems as well as close collaboration with our product and service providers. The scope of the system includes the packaging, commercialisation, storage and innovation of technical gases and the management of residual fluorinated gas and halogenated solvents.

All this work is reflected in our certificates ISO 9001 & ISO 14001. GRIT also meets AHRI 700 standard for new and recycled refrigerants.

More information:

If you want more information about our products, contact us.

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