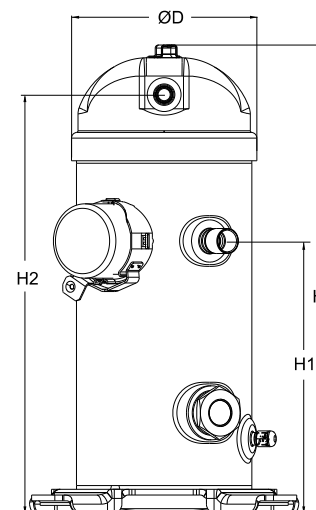


### General Characteristics

Model number (on compressor nameplate)		<b>VZH028CJANA</b>
Code number for Singlepack*		120G0064
Code number for Industrial pack**		120G0135
Drawing number		0VG8213b
Suction and discharge connections		Brazed
Suction connection		3/4 " ODF
Discharge connection		1/2 " ODF
Oil sight glass		Threaded
Oil equalization connection		None
Oil drain connection		1/4" flare
LP gauge port		None
IPR valve		Yes
Swept volume	1.7 in3/rev	
Displacement @ Nominal speed	212.1 m3/h @ 3600 rpm	
Net weight	57 lbs	
Oil charge	37 oz, PVE - FVC32D	
Maximum number of starts per hour	12	
Refrigerant charge limit	8 lbs	
Approved refrigerants	R410A	

### Dimensions



D=6.5 inch, H=16.4 inch,  
H1=9.5 inch, H2=14.6 inch, H3=- inch

### Electrical Characteristics

Nominal voltage	Supply voltage 200-240V/3/50-60Hz
Voltage range	180-264 V supply to frequency converter
Winding resistance (between phases) +/- 7% at 77°F	0.19 Ω
Rated Load Amps (RLA)	22 A
Motor protection	Motor protection by frequency converter

### Recommended Installation torques

Oil sight glass	39 ft.lbs
Power connections / Earth connection	0 ft.lbs / 1 ft.lbs
Mounting bolts	8 ft.lbs

### Parts shipped with compressor

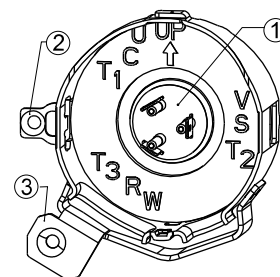
Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

**Approvals :** CE certified, UL certified (file SA11565), -

\*Singlepack: Compressor in cardboard box

\*\*Industrial pack: 12 Unboxed compressors on pallet (order per multiples of 12)

### Terminal box



IP22

- 1: Power connections
- 2: Earth connection
- 3: EMC bracket with shielded cable

**Rotolock accessories, suction side**
**Code no.**

Rotolock adapter (1-1/4" Rotolock, 3/4" ODF)	120Z0366
--	----------

**Rotolock accessories, discharge side**
**Code no.**

Rotolock adapter (1" Rotolock, 1/2" ODF)	120Z0365
--	----------

**Rotolock accessories, sets**
**Code no.**

Solder sleeve adapter set (1-1/4"~3/4"), (1"~1/2")	120Z0126
--	----------

**Oil / lubricants**
**Code no.**
**Crankcase heaters**
**Code no.**

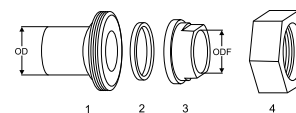
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
Belt type crankcase heater, 70 W, 400/460V, CE mark, UL	120Z5041

**Miscellaneous accessories**
**Code no.**

Acoustic hood	120Z5043
---------------	----------

**Spare parts**
**Code no.**

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers, 2 grounding screws	120Z0622
Terminal box cover	120Z5015

**Solder sleeve adapter set**


- 1: Rotolock adapter (Suc & Dis)
- 2: Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- 4: Rotolock nut (Suc & Dis)

**Performance data at 15 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	-	-	-	4 743	5 905	8 007	-	-	-
60	-	-	-	4 484	5 634	7 702	11 192	-	-
70	-	-	-	4 247	5 381	7 414	10 837	12 894	-
90	-	-	-	-	-	6 659	9 908	11 860	-
100	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-

**Power input in W**

45	-	-	-	325	298	252	-	-	-
60	-	-	-	394	372	325	259	-	-
70	-	-	-	443	427	384	311	277	-
90	-	-	-	-	-	525	451	408	-
100	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-

**Current consumption in A**

45	-	-	-	1.50	1.43	1.25	-	-	-
60	-	-	-	1.71	1.68	1.55	1.10	-	-
70	-	-	-	1.88	1.86	1.76	1.37	1.01	-
90	-	-	-	-	-	2.23	1.95	1.66	-
100	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-

**Mass flow in lbs/h**

45	-	-	-	49	60	79	-	-	-
60	-	-	-	48	60	81	115	-	-
70	-	-	-	48	60	81	116	138	-
90	-	-	-	-	-	79	116	138	-
100	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-

**Energy Efficiency Ratio (E.E.R.)**

45	-	-	-	14.60	19.83	31.72	-	-	-
60	-	-	-	11.39	15.15	23.66	43.18	-	-
70	-	-	-	9.59	12.60	19.30	34.82	46.54	-
90	-	-	-	-	-	12.69	21.95	29.10	-
100	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	-	Btu/h	Current consumption	-	A
Power input	-	W	Mass flow	-	lbs/h
E.E.R.	-				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 20 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	-	-	-	6 551	8 180	11 153	-	-	-
60	-	-	-	6 147	7 727	10 598	15 498	-	-
70	-	-	-	5 822	7 361	10 153	14 912	17 794	-
90	-	-	-	-	-	9 099	13 537	16 230	-
100	-	-	-	-	-	8 498	12 757	15 345	-
110	-	-	-	-	-	-	11 921	14 398	-
120	-	-	-	-	-	-	11 032	13 392	-

**Power input in W**

45	-	-	-	388	350	265	-	-	-
60	-	-	-	480	456	391	249	-	-
70	-	-	-	541	528	477	353	266	-
90	-	-	-	-	-	659	573	503	-
100	-	-	-	-	-	758	691	631	-
110	-	-	-	-	-	-	818	767	-
120	-	-	-	-	-	-	953	913	-

**Current consumption in A**

45	-	-	-	1.67	1.58	1.33	-	-	-
60	-	-	-	1.94	1.90	1.73	1.19	-	-
70	-	-	-	2.13	2.10	1.99	1.53	1.12	-
90	-	-	-	-	-	2.51	2.22	1.92	-
100	-	-	-	-	-	2.80	2.59	2.33	-
110	-	-	-	-	-	-	2.97	2.76	-
120	-	-	-	-	-	-	3.38	3.21	-

**Mass flow in lbs/h**

45	-	-	-	67	83	111	-	-	-
60	-	-	-	66	82	111	160	-	-
70	-	-	-	65	82	111	160	190	-
90	-	-	-	-	-	109	159	189	-
100	-	-	-	-	-	107	157	187	-
110	-	-	-	-	-	-	155	185	-
120	-	-	-	-	-	-	152	182	-

**Energy Efficiency Ratio (E.E.R.)**

45	-	-	-	16.86	23.35	42.13	-	-	-
60	-	-	-	12.82	16.94	27.09	62.20	-	-
70	-	-	-	10.76	13.95	21.28	42.26	66.84	-
90	-	-	-	-	-	13.80	23.64	32.24	-
100	-	-	-	-	-	11.21	18.46	24.31	-
110	-	-	-	-	-	-	14.58	18.77	-
120	-	-	-	-	-	-	11.57	14.67	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	-	Btu/h	Current consumption	-	A
Power input	-	W	Mass flow	-	lbs/h
E.E.R.	-				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 25 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	-	-	-	8 349	10 441	14 276	-	-	-
60	-	-	-	7 805	9 812	13 479	19 776	-	-
70	-	-	-	7 394	9 336	12 881	18 965	22 666	-
90	-	-	-	-	-	11 535	17 156	20 585	-
100	-	-	-	-	-	10 795	16 166	19 449	-
110	-	-	-	-	-	-	15 122	18 253	-
120	-	-	-	-	-	-	14 028	17 000	-

**Power input in W**

45	-	-	-	457	408	284	-	-	-
60	-	-	-	570	545	462	249	-	-
70	-	-	-	644	633	575	402	266	-
90	-	-	-	-	-	798	698	605	-
100	-	-	-	-	-	915	847	773	-
110	-	-	-	-	-	-	1 000	944	-
120	-	-	-	-	-	-	1 160	1 121	-

**Current consumption in A**

45	-	-	-	1.85	1.74	1.43	-	-	-
60	-	-	-	2.18	2.12	1.92	1.29	-	-
70	-	-	-	2.39	2.36	2.22	1.71	1.24	-
90	-	-	-	-	-	2.82	2.52	2.19	-
100	-	-	-	-	-	3.13	2.93	2.66	-
110	-	-	-	-	-	-	3.36	3.15	-
120	-	-	-	-	-	-	3.82	3.67	-

**Mass flow in lbs/h**

45	-	-	-	85	105	142	-	-	-
60	-	-	-	84	105	141	204	-	-
70	-	-	-	83	104	141	204	242	-
90	-	-	-	-	-	138	201	239	-
100	-	-	-	-	-	135	199	237	-
110	-	-	-	-	-	-	196	235	-
120	-	-	-	-	-	-	193	231	-

**Energy Efficiency Ratio (E.E.R.)**

45	-	-	-	18.28	25.59	50.24	-	-	-
60	-	-	-	13.69	18.01	29.16	79.54	-	-
70	-	-	-	11.49	14.76	22.41	47.19	85.28	-
90	-	-	-	-	-	14.45	24.57	34.02	-
100	-	-	-	-	-	11.80	19.08	25.15	-
110	-	-	-	-	-	-	15.12	19.33	-
120	-	-	-	-	-	-	12.10	15.17	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	-	Btu/h	Current consumption	-	A
Power input	-	W	Mass flow	-	lbs/h
E.E.R.	-				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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# Datasheet, performance data

# Danfoss scroll compressor. VZH028CJ

## Performance data at 30 Hz, ARI rating conditions

## R410A

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

### Cooling capacity in Btu/h

45	-	-	7 995	10 138	12 689	17 375	-	-	-
60	-	-	7 409	9 458	11 889	16 346	24 025	-	-
70	-	-	6 984	8 963	11 306	15 599	22 996	27 509	-
90	-	-	6 066	7 885	10 034	13 968	20 767	24 927	-
100	-	-	5 577	7 307	9 349	13 090	19 570	23 544	-
110	-	-	-	6 706	8 634	12 173	18 322	22 104	-
130	-	-	-	-	-	10 234	15 682	19 061	-

### Power input in W

45	-	-	558	529	471	311	-	-	-
60	-	-	668	665	638	539	258	-	-
70	-	-	741	751	742	677	458	276	-
90	-	-	904	932	950	942	829	713	-
100	-	-	1 002	1 035	1 062	1 076	1 007	920	-
110	-	-	-	1 151	1 184	1 216	1 186	1 125	-
130	-	-	-	-	-	1 532	1 563	1 545	-

### Current consumption in A

45	-	-	2.12	2.04	1.90	1.54	-	-	-
60	-	-	2.47	2.43	2.36	2.13	1.39	-	-
70	-	-	2.69	2.67	2.63	2.48	1.90	1.37	-
90	-	-	3.14	3.15	3.16	3.14	2.83	2.48	-
100	-	-	3.42	3.42	3.46	3.49	3.29	3.02	-
110	-	-	-	3.74	3.79	3.86	3.77	3.57	-
130	-	-	-	-	-	4.76	4.85	4.77	-

### Mass flow in lbs/h

45	-	-	83	104	128	172	-	-	-
60	-	-	81	102	127	171	248	-	-
70	-	-	80	101	125	170	247	294	-
90	-	-	76	97	122	167	243	290	-
100	-	-	73	95	119	164	241	287	-
110	-	-	-	92	116	161	238	284	-
130	-	-	-	-	-	154	230	276	-

### Energy Efficiency Ratio (E.E.R.)

45	-	-	14.33	19.15	26.96	55.92	-	-	-
60	-	-	11.09	14.22	18.63	30.35	93.26	-	-
70	-	-	9.43	11.93	15.23	23.03	50.19	99.75	-
90	-	-	6.71	8.46	10.56	14.83	25.05	34.97	-
100	-	-	5.57	7.06	8.81	12.17	19.43	25.60	-
110	-	-	-	5.83	7.29	10.01	15.45	19.65	-
130	-	-	-	-	-	6.68	10.03	12.34	-

### Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	14 164	Btu/h	Current consumption	4.85	A
Power input	1 562	W	Mass flow	209	lbs/h
E.E.R.	9.07				

### Pressure switch settings

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

### Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

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**Performance data at 35 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	-	-	9 398	11 918	14 923	20 451	-	-	-
60	-	-	8 707	11 106	13 958	19 198	28 245	-	-
70	-	-	8 219	10 529	13 271	18 307	27 007	32 323	-
90	-	-	7 183	9 297	11 800	16 398	24 367	29 254	-
100	-	-	6 639	8 645	11 020	15 384	22 969	27 631	-
110	-	-	-	7 972	10 211	14 333	21 520	25 952	-
130	-	-	-	-	-	12 126	18 480	22 431	-

**Power input in W**

45	-	-	638	607	538	344	-	-	-
60	-	-	765	765	736	620	276	-	-
70	-	-	849	863	856	785	522	296	-
90	-	-	1 039	1 070	1 092	1 090	964	826	-
100	-	-	1 154	1 187	1 219	1 241	1 171	1 071	-
110	-	-	-	1 322	1 358	1 399	1 376	1 309	-
130	-	-	-	-	-	1 754	1 800	1 787	-

**Current consumption in A**

45	-	-	2.34	2.24	2.08	1.65	-	-	-
60	-	-	2.74	2.69	2.61	2.34	1.51	-	-
70	-	-	2.98	2.95	2.92	2.74	2.10	1.51	-
90	-	-	3.47	3.48	3.50	3.48	3.16	2.78	-
100	-	-	3.77	3.78	3.82	3.86	3.67	3.39	-
110	-	-	-	4.13	4.18	4.27	4.21	4.01	-
130	-	-	-	-	-	5.26	5.39	5.34	-

**Mass flow in lbs/h**

45	-	-	97	122	151	203	-	-	-
60	-	-	95	120	149	201	291	-	-
70	-	-	94	118	147	200	290	345	-
90	-	-	90	114	143	196	285	340	-
100	-	-	87	112	141	193	283	337	-
110	-	-	-	109	138	190	279	334	-
130	-	-	-	-	-	183	271	325	-

**Energy Efficiency Ratio (E.E.R.)**

45	-	-	14.73	19.64	27.72	59.40	-	-	-
60	-	-	11.37	14.53	18.96	30.95	102.28	-	-
70	-	-	9.68	12.20	15.50	23.33	51.76	109.12	-
90	-	-	6.92	8.69	10.80	15.05	25.27	35.40	-
100	-	-	5.75	7.28	9.04	12.40	19.61	25.80	-
110	-	-	-	6.03	7.52	10.25	15.64	19.82	-
130	-	-	-	-	-	6.91	10.27	12.55	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	16 707	Btu/h	Current consumption	5.38	A
Power input	1 796	W	Mass flow	247	lbs/h
E.E.R.	9.30				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level		dB(A)
With acoustic hood		dB(A)

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**Performance data at 40 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	6 456	8 404	10 795	13 689	17 143	23 504	-	-	-
60	5 846	7 721	10 003	12 749	16 019	22 035	32 437	-	-
70	5 433	7 251	9 451	12 092	15 231	21 005	30 997	37 109	-
90	4 594	6 280	8 298	10 707	13 565	18 825	27 959	33 567	-
100	-	5 781	7 698	9 981	12 690	17 677	26 363	31 710	-
110	-	-	7 084	9 235	11 787	16 493	24 717	29 796	-
130	-	-	-	-	9 904	14 018	21 280	25 805	-

**Power input in W**

45	710	726	723	689	611	385	-	-	-
60	822	848	867	869	839	707	304	-	-
70	909	934	962	980	975	897	593	327	-
90	1 141	1 150	1 178	1 212	1 240	1 242	1 104	946	-
100	-	1 291	1 311	1 345	1 381	1 411	1 339	1 227	-
110	-	-	1 469	1 498	1 537	1 587	1 570	1 497	-
130	-	-	-	-	1 917	1 981	2 041	2 032	-

**Current consumption in A**

45	2.74	2.64	2.56	2.45	2.27	1.78	-	-	-
60	3.15	3.06	3.01	2.96	2.87	2.57	1.64	-	-
70	3.42	3.31	3.27	3.25	3.21	3.02	2.31	1.66	-
90	4.01	3.86	3.82	3.83	3.86	3.85	3.50	3.10	-
100	-	4.21	4.14	4.16	4.21	4.26	4.08	3.78	-
110	-	-	4.53	4.53	4.60	4.71	4.66	4.46	-
130	-	-	-	-	5.60	5.78	5.95	5.93	-

**Mass flow in lbs/h**

45	68	88	112	140	173	233	-	-	-
60	65	86	110	138	171	231	335	-	-
70	64	84	108	136	169	229	333	396	-
90	59	80	104	132	165	224	327	390	-
100	-	77	101	129	162	222	324	387	-
110	-	-	98	126	159	218	321	383	-
130	-	-	-	-	152	211	312	374	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.09	11.58	14.94	19.88	28.05	61.04	-	-	-
60	7.11	9.11	11.53	14.68	19.10	31.15	106.63	-	-
70	5.98	7.76	9.82	12.34	15.62	23.43	52.29	113.47	-
90	4.03	5.46	7.05	8.83	10.94	15.15	25.32	35.48	-
100	-	4.48	5.87	7.42	9.19	12.52	19.68	25.84	-
110	-	-	4.82	6.17	7.67	10.40	15.74	19.90	-
130	-	-	-	-	5.17	7.08	10.42	12.70	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	19 253	Btu/h	Current consumption	5.93	A
Power input	2 034	W	Mass flow	284	lbs/h
E.E.R.	9.47				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 45 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	7 298	9 491	12 187	15 450	19 349	26 534	-	-	-
60	6 622	8 729	11 295	14 388	18 073	24 858	36 601	-	-
70	6 169	8 210	10 682	13 652	17 186	23 692	34 966	41 866	-
90	5 258	7 147	9 411	12 116	15 329	21 248	31 541	37 866	-
100	-	6 604	8 753	11 316	14 359	19 969	29 752	35 780	-
110	-	-	8 081	10 495	13 361	18 653	27 913	33 637	-
130	-	-	-	-	11 285	15 910	24 084	29 182	-

**Power input in W**

45	795	813	811	775	689	433	-	-	-
60	922	950	974	977	946	800	342	-	-
70	1 021	1 048	1 080	1 102	1 098	1 013	671	368	-
90	1 289	1 293	1 321	1 360	1 393	1 399	1 249	1 071	-
100	-	1 454	1 471	1 507	1 549	1 586	1 512	1 387	-
110	-	-	1 650	1 678	1 721	1 779	1 768	1 689	-
130	-	-	-	-	2 142	2 213	2 287	2 281	-

**Current consumption in A**

45	2.97	2.88	2.79	2.67	2.47	1.92	-	-	-
60	3.42	3.34	3.29	3.24	3.15	2.81	1.78	-	-
70	3.71	3.61	3.58	3.57	3.53	3.32	2.53	1.82	-
90	4.36	4.22	4.18	4.20	4.24	4.23	3.87	3.43	-
100	-	4.59	4.53	4.55	4.61	4.68	4.50	4.19	-
110	-	-	4.95	4.96	5.04	5.17	5.14	4.94	-
130	-	-	-	-	6.13	6.33	6.55	6.53	-

**Mass flow in lbs/h**

45	77	99	126	158	195	263	-	-	-
60	74	97	124	156	193	261	378	-	-
70	72	95	122	154	191	259	375	447	-
90	68	91	118	149	186	253	369	440	-
100	-	88	115	146	183	250	366	437	-
110	-	-	112	144	180	247	362	433	-
130	-	-	-	-	173	240	354	423	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.18	11.67	15.02	19.93	28.09	61.29	-	-	-
60	7.18	9.19	11.60	14.72	19.11	31.08	107.08	-	-
70	6.04	7.83	9.89	12.39	15.65	23.38	52.10	113.68	-
90	4.08	5.53	7.12	8.91	11.01	15.19	25.26	35.34	-
100	-	4.54	5.95	7.51	9.27	12.59	19.68	25.79	-
110	-	-	4.90	6.25	7.76	10.48	15.79	19.91	-
130	-	-	-	-	5.27	7.19	10.53	12.79	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	21 801	Btu/h	Current consumption	6.51	A
Power input	2 276	W	Mass flow	322	lbs/h
E.E.R.	9.58				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 50 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	8 138	10 576	13 573	17 203	21 541	29 540	-	-	-
60	7 397	9 735	12 585	16 021	20 118	27 665	40 737	-	-
70	6 904	9 167	11 911	15 209	19 136	26 370	38 913	46 594	-
90	5 917	8 011	10 521	13 523	17 091	23 668	35 113	42 151	-
100	-	7 421	9 805	12 649	16 027	22 259	33 136	39 843	-
110	-	-	9 074	11 753	14 934	20 813	31 107	37 475	-
130	-	-	-	-	12 662	17 802	26 891	32 562	-

**Power input in W**

45	883	905	905	866	772	488	-	-	-
60	1 025	1 057	1 085	1 091	1 057	897	389	-	-
70	1 136	1 166	1 202	1 228	1 226	1 135	757	420	-
90	1 436	1 438	1 469	1 512	1 550	1 561	1 398	1 203	-
100	-	1 617	1 634	1 675	1 721	1 766	1 688	1 552	-
110	-	-	1 833	1 862	1 910	1 977	1 969	1 885	-
130	-	-	-	-	2 372	2 450	2 536	2 532	-

**Current consumption in A**

45	3.20	3.11	3.03	2.90	2.68	2.06	-	-	-
60	3.69	3.62	3.58	3.53	3.43	3.06	1.93	-	-
70	4.00	3.92	3.90	3.89	3.85	3.63	2.77	1.99	-
90	4.72	4.58	4.55	4.58	4.63	4.63	4.25	3.78	-
100	-	4.98	4.93	4.97	5.04	5.13	4.94	4.61	-
110	-	-	5.39	5.41	5.50	5.65	5.64	5.43	-
130	-	-	-	-	6.68	6.91	7.16	7.16	-

**Mass flow in lbs/h**

45	86	111	141	176	217	293	-	-	-
60	83	108	138	173	215	290	420	-	-
70	81	106	136	171	212	288	418	497	-
90	76	102	131	166	207	282	411	490	-
100	-	99	129	164	205	279	408	486	-
110	-	-	126	161	201	276	404	482	-
130	-	-	-	-	194	268	395	472	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.22	11.69	15.00	19.86	27.92	60.55	-	-	-
60	7.22	9.21	11.60	14.69	19.03	30.83	104.74	-	-
70	6.08	7.86	9.91	12.38	15.60	23.24	51.42	110.96	-
90	4.12	5.57	7.16	8.94	11.03	15.17	25.11	35.04	-
100	-	4.59	6.00	7.55	9.31	12.61	19.63	25.66	-
110	-	-	4.95	6.31	7.82	10.53	15.80	19.88	-
130	-	-	-	-	5.34	7.27	10.61	12.86	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	24 351	Btu/h	Current consumption	7.12	A
Power input	2 523	W	Mass flow	360	lbs/h
E.E.R.	9.65				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 55 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	8 976	11 657	14 953	18 947	23 720	32 522	-	-	-
60	8 169	10 739	13 872	17 650	22 156	30 458	44 843	-	-
70	7 635	10 122	13 137	16 763	21 081	29 038	42 839	51 294	-
90	6 570	8 871	11 629	14 929	18 851	26 084	38 677	46 422	-
100	-	8 233	10 853	13 979	17 694	24 549	36 516	43 897	-
110	-	-	10 062	13 007	16 506	22 973	34 300	41 309	-
130	-	-	-	-	14 036	19 694	29 701	35 945	-

**Power input in W**

45	975	1 001	1 003	962	859	550	-	-	-
60	1 131	1 169	1 200	1 208	1 174	1 000	446	-	-
70	1 254	1 288	1 329	1 359	1 359	1 261	850	482	-
90	1 583	1 586	1 621	1 669	1 713	1 727	1 552	1 340	-
100	-	1 783	1 802	1 847	1 899	1 950	1 869	1 722	-
110	-	-	2 018	2 051	2 104	2 180	2 174	2 084	-
130	-	-	-	-	2 606	2 692	2 789	2 787	-

**Current consumption in A**

45	3.43	3.36	3.28	3.14	2.90	2.22	-	-	-
60	3.96	3.90	3.88	3.84	3.73	3.32	2.08	-	-
70	4.30	4.23	4.23	4.23	4.19	3.95	3.01	2.17	-
90	5.07	4.95	4.94	4.99	5.05	5.06	4.64	4.14	-
100	-	5.39	5.35	5.40	5.49	5.60	5.40	5.05	-
110	-	-	5.85	5.89	5.99	6.17	6.16	5.94	-
130	-	-	-	-	7.26	7.51	7.80	7.81	-

**Mass flow in lbs/h**

45	94	122	155	194	239	323	-	-	-
60	91	119	152	191	236	319	463	-	-
70	89	117	150	189	234	317	460	547	-
90	85	113	145	184	229	311	453	540	-
100	-	110	143	181	226	308	449	536	-
110	-	-	140	178	223	304	445	531	-
130	-	-	-	-	216	296	436	521	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.20	11.65	14.91	19.70	27.60	59.14	-	-	-
60	7.22	9.19	11.56	14.61	18.88	30.44	100.63	-	-
70	6.09	7.86	9.88	12.33	15.51	23.03	50.41	106.42	-
90	4.15	5.59	7.17	8.94	11.01	15.11	24.91	34.63	-
100	-	4.62	6.02	7.57	9.32	12.59	19.54	25.49	-
110	-	-	4.99	6.34	7.84	10.54	15.77	19.82	-
130	-	-	-	-	5.38	7.31	10.65	12.90	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	26 905	Btu/h	Current consumption	7.75	A
Power input	2 774	W	Mass flow	397	lbs/h
E.E.R.	9.70				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 60 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	9 812	12 735	16 328	20 681	25 885	35 482	-	-	-
60	8 940	11 741	15 156	19 274	24 185	33 236	48 922	-	-
70	8 365	11 076	14 362	18 314	23 021	31 695	46 745	55 965	-
90	7 218	9 727	12 735	16 333	20 610	28 497	42 231	50 679	-
100	-	9 040	11 898	15 308	19 360	26 836	39 891	47 942	-
110	-	8 343	11 044	14 258	18 077	25 132	37 492	45 140	-
130	-	-	-	12 075	15 405	21 586	32 514	39 332	-

**Power input in W**

45	1 071	1 101	1 105	1 062	952	619	-	-	-
60	1 241	1 284	1 321	1 331	1 294	1 109	512	-	-
70	1 374	1 414	1 461	1 495	1 496	1 392	950	554	-
90	1 730	1 736	1 777	1 832	1 880	1 897	1 711	1 484	-
100	-	1 949	1 973	2 024	2 082	2 139	2 054	1 896	-
110	-	2 209	2 206	2 245	2 304	2 387	2 384	2 288	-
130	-	-	-	2 812	2 845	2 940	3 045	3 044	-

**Current consumption in A**

45	3.66	3.61	3.54	3.40	3.13	2.38	-	-	-
60	4.23	4.19	4.19	4.15	4.04	3.60	2.25	-	-
70	4.59	4.55	4.57	4.58	4.55	4.28	3.27	2.36	-
90	5.43	5.33	5.34	5.40	5.48	5.50	5.06	4.52	-
100	-	5.80	5.79	5.86	5.97	6.08	5.88	5.51	-
110	-	6.38	6.32	6.38	6.51	6.70	6.70	6.48	-
130	-	-	-	7.76	7.87	8.15	8.46	8.48	-

**Mass flow in lbs/h**

45	103	133	169	211	261	352	-	-	-
60	100	130	166	208	258	349	505	-	-
70	98	128	164	206	256	346	502	597	-
90	93	123	159	201	250	340	495	589	-
100	-	121	156	198	247	336	491	585	-
110	-	118	153	195	244	333	486	580	-
130	-	-	-	188	237	325	477	571	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.16	11.56	14.78	19.47	27.18	57.31	-	-	-
60	7.20	9.14	11.48	14.48	18.69	29.97	95.59	-	-
70	6.09	7.83	9.83	12.25	15.39	22.77	49.20	100.93	-
90	4.17	5.60	7.17	8.92	10.96	15.02	24.68	34.16	-
100	-	4.64	6.03	7.56	9.30	12.55	19.42	25.28	-
110	-	3.78	5.01	6.35	7.85	10.53	15.73	19.73	-
130	-	-	-	4.29	5.41	7.34	10.68	12.92	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	29 460	Btu/h	Current consumption	8.41	A
Power input	3 029	W	Mass flow	435	lbs/h
E.E.R.	9.73				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	77	dB(A)
With acoustic hood	70	dB(A)

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**Performance data at 65 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	10 646	13 809	17 697	22 406	28 036	38 418	-	-	-
60	9 709	12 742	16 437	20 893	26 207	36 000	52 972	-	-
70	9 091	12 027	15 585	19 862	24 956	34 343	50 629	60 607	-
90	7 860	10 579	13 839	17 736	22 368	30 907	45 776	54 922	-
100	-	9 841	12 940	16 635	21 025	29 123	43 260	51 980	-
110	-	9 090	12 021	15 507	19 646	27 292	40 683	48 967	-
130	-	-	-	13 154	16 770	23 477	35 329	42 722	-

**Power input in W**

45	1 172	1 206	1 212	1 167	1 050	695	-	-	-
60	1 354	1 404	1 445	1 458	1 420	1 223	588	-	-
70	1 496	1 544	1 597	1 635	1 638	1 527	1 058	637	-
90	1 876	1 890	1 938	1 999	2 052	2 072	1 875	1 633	-
100	-	2 116	2 147	2 205	2 270	2 333	2 242	2 075	-
110	-	2 393	2 397	2 442	2 508	2 599	2 597	2 494	-
130	-	-	-	3 049	3 088	3 192	3 306	3 305	-

**Current consumption in A**

45	3.89	3.86	3.80	3.66	3.37	2.56	-	-	-
60	4.49	4.49	4.50	4.48	4.36	3.89	2.42	-	-
70	4.88	4.87	4.91	4.94	4.91	4.63	3.54	2.56	-
90	5.79	5.71	5.75	5.84	5.93	5.96	5.49	4.91	-
100	-	6.23	6.24	6.33	6.46	6.60	6.38	5.98	-
110	-	6.86	6.82	6.90	7.05	7.26	7.27	7.03	-
130	-	-	-	8.38	8.51	8.81	9.15	9.17	-

**Mass flow in lbs/h**

45	112	145	183	229	283	381	-	-	-
60	109	142	180	226	279	377	547	-	-
70	106	139	178	223	277	375	543	647	-
90	101	134	173	218	271	369	536	639	-
100	-	131	170	215	268	365	532	634	-
110	-	128	167	212	265	361	528	630	-
130	-	-	-	205	258	353	519	620	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.09	11.45	14.60	19.21	26.70	55.25	-	-	-
60	7.17	9.08	11.37	14.33	18.46	29.45	90.16	-	-
70	6.08	7.79	9.76	12.15	15.24	22.48	47.86	95.09	-
90	4.19	5.60	7.14	8.87	10.90	14.92	24.42	33.63	-
100	-	4.65	6.03	7.54	9.26	12.48	19.29	25.05	-
110	-	3.80	5.01	6.35	7.83	10.50	15.67	19.63	-
130	-	-	-	4.31	5.43	7.35	10.69	12.93	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	32 018	Btu/h	Current consumption	9.09	A
Power input	3 288	W	Mass flow	473	lbs/h
E.E.R.	9.74				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 70 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	11 478	14 881	19 060	24 123	30 173	41 330	-	-	-
60	10 477	13 740	17 715	22 507	28 220	38 749	56 994	-	-
70	9 816	12 977	16 805	21 407	26 886	36 980	54 492	65 221	-
90	8 496	11 429	14 941	19 137	24 123	33 313	49 311	59 151	-
100	-	10 637	13 978	17 961	22 689	31 408	46 625	56 009	-
110	-	9 829	12 992	16 752	21 214	29 452	43 872	52 791	-
130	-	-	-	14 226	18 131	25 369	38 148	46 115	-

**Power input in W**

45	1 276	1 316	1 323	1 276	1 153	779	-	-	-
60	1 470	1 528	1 575	1 589	1 550	1 342	673	-	-
70	1 621	1 677	1 738	1 781	1 784	1 668	1 173	731	-
90	2 022	2 045	2 102	2 171	2 230	2 252	2 043	1 788	-
100	-	2 285	2 325	2 392	2 463	2 531	2 435	2 259	-
110	-	2 577	2 590	2 644	2 718	2 817	2 813	2 705	-
130	-	-	-	3 288	3 335	3 450	3 571	3 568	-

**Current consumption in A**

45	4.13	4.12	4.08	3.93	3.62	2.75	-	-	-
60	4.76	4.79	4.83	4.81	4.69	4.18	2.61	-	-
70	5.17	5.20	5.27	5.32	5.30	5.00	3.82	2.77	-
90	6.14	6.11	6.18	6.30	6.41	6.44	5.93	5.32	-
100	-	6.67	6.71	6.83	6.98	7.13	6.90	6.48	-
110	-	7.34	7.33	7.44	7.61	7.85	7.86	7.60	-
130	-	-	-	9.03	9.17	9.50	9.86	9.88	-

**Mass flow in lbs/h**

45	121	156	197	247	305	410	-	-	-
60	117	153	194	243	301	406	588	-	-
70	115	150	192	241	298	403	585	696	-
90	110	145	187	235	293	397	577	688	-
100	-	142	184	232	290	394	573	683	-
110	-	139	180	229	286	390	569	679	-
130	-	-	-	222	279	382	560	669	-

**Energy Efficiency Ratio (E.E.R.)**

45	9.00	11.31	14.41	18.90	26.17	53.07	-	-	-
60	7.12	8.99	11.25	14.16	18.21	28.88	84.71	-	-
70	6.05	7.74	9.67	12.02	15.07	22.17	46.46	89.26	-
90	4.20	5.59	7.11	8.81	10.82	14.80	24.13	33.08	-
100	-	4.65	6.01	7.51	9.21	12.41	19.15	24.80	-
110	-	3.81	5.02	6.34	7.81	10.46	15.59	19.52	-
130	-	-	-	4.33	5.44	7.35	10.68	12.92	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	34 579	Btu/h	Current consumption	9.80	A
Power input	3 552	W	Mass flow	511	lbs/h
E.E.R.	9.74				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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# Datasheet, performance data

# Danfoss scroll compressor. VZH028CJ

## Performance data at 75 Hz, ARI rating conditions

## R410A

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

### Cooling capacity in Btu/h

45	12 309	15 949	20 418	25 830	32 296	44 220	-	-	-
60	11 242	14 737	18 990	24 116	30 226	41 483	60 987	-	-
70	10 538	13 925	18 024	22 949	28 811	39 607	58 334	69 806	-
90	9 127	12 274	16 040	20 537	25 877	35 716	52 837	63 366	-
100	-	11 427	15 013	19 284	24 351	33 692	49 985	60 030	-
110	-	10 560	13 959	17 995	22 781	31 611	47 060	56 612	-
130	-	-	-	15 290	19 488	27 260	40 970	49 512	-

### Power input in W

45	1 384	1 429	1 439	1 390	1 261	869	-	-	-
60	1 590	1 656	1 708	1 725	1 684	1 466	768	-	-
70	1 749	1 815	1 883	1 930	1 935	1 813	1 295	834	-
90	2 167	2 204	2 271	2 348	2 412	2 436	2 216	1 950	-
100	-	2 455	2 507	2 583	2 661	2 734	2 632	2 447	-
110	-	2 760	2 786	2 851	2 932	3 039	3 034	2 920	-
130	-	-	-	3 529	3 586	3 712	3 839	3 835	-

### Current consumption in A

45	4.36	4.39	4.36	4.21	3.89	2.94	-	-	-
60	5.02	5.10	5.16	5.16	5.03	4.49	2.80	-	-
70	5.47	5.54	5.64	5.71	5.69	5.37	4.11	2.99	-
90	6.50	6.51	6.62	6.77	6.90	6.94	6.40	5.74	-
100	-	7.11	7.19	7.35	7.52	7.69	7.44	6.99	-
110	-	7.84	7.87	8.00	8.20	8.46	8.47	8.19	-
130	-	-	-	9.69	9.86	10.22	10.60	10.62	-

### Mass flow in lbs/h

45	129	167	212	264	326	439	-	-	-
60	126	164	208	261	322	435	629	-	-
70	123	161	206	258	320	432	626	745	-
90	118	156	200	253	314	426	619	737	-
100	-	153	197	249	311	422	615	732	-
110	-	149	194	246	307	419	611	728	-
130	-	-	-	238	299	410	602	718	-

### Energy Efficiency Ratio (E.E.R.)

45	8.89	11.16	14.19	18.58	25.61	50.87	-	-	-
60	7.07	8.90	11.12	13.98	17.95	28.30	79.45	-	-
70	6.03	7.67	9.57	11.89	14.89	21.85	45.04	83.66	-
90	4.21	5.57	7.06	8.75	10.73	14.66	23.84	32.50	-
100	-	4.65	5.99	7.47	9.15	12.32	18.99	24.53	-
110	-	3.83	5.01	6.31	7.77	10.40	15.51	19.39	-
130	-	-	-	4.33	5.43	7.34	10.67	12.91	-

### Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	37 142	Btu/h	Current consumption	10.54	A
Power input	3 820	W	Mass flow	549	lbs/h
E.E.R.	9.72				

### Pressure switch settings

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

### Sound power data

Sound power level	dB(A)
With acoustic hood	dB(A)

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# Datasheet, performance data

# Danfoss scroll compressor. VZH028CJ

## Performance data at 80 Hz, ARI rating conditions

## R410A

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

### Cooling capacity in Btu/h

45	13 137	17 013	21 770	27 528	34 406	47 086	-	-	-
60	12 006	15 731	20 263	25 720	32 224	44 202	64 952	-	-
70	11 257	14 871	19 241	24 488	30 730	42 224	62 155	74 363	-
90	9 751	13 116	17 137	21 935	27 630	38 116	56 354	67 567	-
100	-	12 211	16 045	20 606	26 013	35 975	53 341	64 043	-
110	-	11 283	14 920	19 234	24 346	33 771	50 246	60 429	-
130	-	-	-	16 347	20 841	29 152	43 794	52 912	-

### Power input in W

45	1 496	1 547	1 559	1 508	1 374	967	-	-	-
60	1 713	1 789	1 847	1 866	1 823	1 596	872	-	-
70	1 879	1 957	2 033	2 085	2 090	1 963	1 425	949	-
90	2 312	2 364	2 445	2 530	2 599	2 624	2 394	2 117	-
100	-	2 627	2 693	2 779	2 865	2 942	2 834	2 640	-
110	-	2 943	2 985	3 062	3 152	3 266	3 259	3 138	-
130	-	-	-	3 772	3 842	3 980	4 111	4 104	-

### Current consumption in A

45	4.60	4.66	4.65	4.50	4.16	3.15	-	-	-
60	5.29	5.41	5.50	5.51	5.39	4.81	3.01	-	-
70	5.76	5.88	6.01	6.11	6.10	5.77	4.42	3.22	-
90	6.86	6.92	7.07	7.26	7.41	7.46	6.88	6.18	-
100	-	7.57	7.69	7.88	8.08	8.27	8.00	7.52	-
110	-	8.35	8.41	8.59	8.81	9.10	9.10	8.80	-
130	-	-	-	10.39	10.58	10.97	11.36	11.37	-

### Mass flow in lbs/h

45	138	178	226	281	347	467	-	-	-
60	134	175	222	278	344	463	670	-	-
70	132	172	220	275	341	461	667	793	-
90	126	166	214	270	335	454	660	786	-
100	-	163	211	267	332	451	656	781	-
110	-	159	207	263	328	447	652	777	-
130	-	-	-	255	320	439	643	768	-

### Energy Efficiency Ratio (E.E.R.)

45	8.78	11.00	13.97	18.25	25.04	48.70	-	-	-
60	7.01	8.79	10.97	13.79	17.68	27.70	74.49	-	-
70	5.99	7.60	9.46	11.74	14.70	21.51	43.62	78.39	-
90	4.22	5.55	7.01	8.67	10.63	14.53	23.54	31.92	-
100	-	4.65	5.96	7.41	9.08	12.23	18.82	24.26	-
110	-	3.83	5.00	6.28	7.72	10.34	15.42	19.26	-
130	-	-	-	4.33	5.42	7.32	10.65	12.89	-

### Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	39 707	Btu/h	Current consumption	11.30	A
Power input	4 092	W	Mass flow	587	lbs/h
E.E.R.	9.70				

### Pressure switch settings

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

### Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

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**Performance data at 85 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	13 963	18 075	23 117	29 217	36 502	49 929	-	-	-
60	12 768	16 724	21 532	27 320	34 214	46 907	68 888	-	-
70	11 974	15 815	20 456	26 024	32 645	44 831	65 954	78 891	-
90	10 371	13 954	18 232	23 332	29 381	40 512	59 861	71 753	-
100	-	12 990	17 073	21 925	27 674	38 257	56 691	68 047	-
110	-	11 997	15 876	20 471	25 910	35 930	53 431	64 242	-
130	-	-	-	17 397	22 189	31 043	46 622	56 315	-

**Power input in W**

45	1 612	1 670	1 683	1 631	1 492	1 071	-	-	-
60	1 839	1 925	1 990	2 011	1 967	1 731	986	-	-
70	2 011	2 103	2 188	2 244	2 250	2 117	1 562	1 073	-
90	2 457	2 528	2 622	2 717	2 792	2 817	2 577	2 290	-
100	-	2 799	2 882	2 980	3 073	3 154	3 039	2 837	-
110	-	3 125	3 186	3 277	3 377	3 497	3 487	3 360	-
130	-	-	-	4 018	4 102	4 253	4 387	4 377	-

**Current consumption in A**

45	4.84	4.94	4.95	4.80	4.44	3.37	-	-	-
60	5.55	5.72	5.85	5.88	5.76	5.14	3.22	-	-
70	6.05	6.22	6.40	6.52	6.52	6.17	4.73	3.46	-
90	7.23	7.35	7.54	7.76	7.94	8.00	7.38	6.63	-
100	-	8.04	8.21	8.44	8.66	8.87	8.58	8.06	-
110	-	8.87	8.98	9.20	9.45	9.76	9.75	9.43	-
130	-	-	-	11.11	11.33	11.75	12.15	12.15	-

**Mass flow in lbs/h**

45	147	189	240	299	368	496	-	-	-
60	143	186	236	295	365	492	711	-	-
70	140	183	234	293	362	489	708	841	-
90	134	177	228	287	356	483	701	834	-
100	-	174	224	284	353	480	697	830	-
110	-	169	220	280	349	476	693	826	-
130	-	-	-	271	341	467	685	817	-

**Energy Efficiency Ratio (E.E.R.)**

45	8.66	10.83	13.73	17.91	24.47	46.60	-	-	-
60	6.94	8.69	10.82	13.59	17.40	27.10	69.88	-	-
70	5.95	7.52	9.35	11.60	14.51	21.17	42.23	73.51	-
90	4.22	5.52	6.95	8.59	10.52	14.38	23.23	31.34	-
100	-	4.64	5.92	7.36	9.01	12.13	18.66	23.98	-
110	-	3.84	4.98	6.25	7.67	10.27	15.32	19.12	-
130	-	-	-	4.33	5.41	7.30	10.63	12.87	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	42 275	Btu/h	Current consumption	12.09	A
Power input	4 369	W	Mass flow	625	lbs/h
E.E.R.	9.68				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 90 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	14 788	19 133	24 458	30 897	38 584	52 748	-	-	-
60	13 528	17 715	22 799	28 914	36 196	49 596	72 796	-	-
70	12 688	16 758	21 669	27 557	34 555	47 428	69 733	83 390	-
90	10 984	14 788	19 325	24 727	31 130	42 905	63 359	75 926	-
100	-	13 764	18 098	23 243	29 334	40 537	60 036	72 043	-
110	-	12 704	16 826	21 704	27 473	38 090	56 615	68 053	-
130	-	-	-	18 439	23 534	32 934	49 452	59 722	-

**Power input in W**

45	1 732	1 796	1 812	1 759	1 615	1 183	-	-	-
60	1 969	2 067	2 138	2 161	2 115	1 871	1 109	-	-
70	2 146	2 253	2 347	2 408	2 415	2 277	1 706	1 208	-
90	2 601	2 694	2 804	2 909	2 989	3 015	2 764	2 469	-
100	-	2 973	3 074	3 186	3 287	3 371	3 248	3 039	-
110	-	3 306	3 389	3 497	3 608	3 734	3 719	3 585	-
130	-	-	-	4 267	4 367	4 531	4 667	4 653	-

**Current consumption in A**

45	5.08	5.23	5.26	5.12	4.74	3.59	-	-	-
60	5.82	6.04	6.21	6.26	6.14	5.49	3.44	-	-
70	6.33	6.57	6.80	6.94	6.96	6.59	5.06	3.71	-
90	7.59	7.78	8.03	8.28	8.49	8.56	7.89	7.10	-
100	-	8.52	8.74	9.01	9.27	9.49	9.18	8.62	-
110	-	9.40	9.57	9.83	10.11	10.45	10.43	10.08	-
130	-	-	-	11.85	12.11	12.55	12.96	12.94	-

**Mass flow in lbs/h**

45	155	200	253	316	389	524	-	-	-
60	152	197	250	313	386	520	751	-	-
70	149	194	247	310	383	517	748	889	-
90	142	188	241	304	378	512	742	883	-
100	-	184	238	301	374	508	738	879	-
110	-	179	234	297	371	505	735	875	-
130	-	-	-	287	362	496	726	867	-

**Energy Efficiency Ratio (E.E.R.)**

45	8.54	10.65	13.50	17.57	23.89	44.58	-	-	-
60	6.87	8.57	10.67	13.38	17.11	26.51	65.63	-	-
70	5.91	7.44	9.23	11.44	14.31	20.83	40.87	69.03	-
90	4.22	5.49	6.89	8.50	10.42	14.23	22.92	30.75	-
100	-	4.63	5.89	7.30	8.93	12.03	18.48	23.71	-
110	-	3.84	4.96	6.21	7.62	10.20	15.22	18.98	-
130	-	-	-	4.32	5.39	7.27	10.60	12.84	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	44 846	Btu/h	Current consumption	12.90	A
Power input	4 650	W	Mass flow	663	lbs/h
E.E.R.	9.64				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	dB(A)
With acoustic hood	dB(A)

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# Datasheet, performance data

# Danfoss scroll compressor. VZH028CJ

## Performance data at 95 Hz, ARI rating conditions

## R410A

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

### Cooling capacity in Btu/h

45	15 610	20 188	25 793	32 567	40 652	55 544	-	-	-
60	14 286	18 704	24 063	30 504	38 170	52 271	76 676	-	-
70	13 400	17 698	22 880	29 087	36 460	50 015	73 490	87 860	-
90	11 592	15 619	20 415	26 121	32 878	45 294	66 848	80 084	-
100	-	14 532	19 119	24 559	30 993	42 816	63 377	76 031	-
110	-	13 403	17 771	22 935	29 035	40 249	59 798	71 859	-
130	-	-	-	19 474	24 875	34 825	52 286	63 131	-

### Power input in W

45	1 855	1 927	1 946	1 891	1 743	1 302	-	-	-
60	2 101	2 212	2 290	2 315	2 268	2 017	1 242	-	-
70	2 284	2 407	2 511	2 577	2 584	2 441	1 858	1 353	-
90	2 745	2 863	2 990	3 106	3 191	3 217	2 956	2 654	-
100	-	3 148	3 271	3 397	3 505	3 592	3 462	3 246	-
110	-	3 487	3 595	3 721	3 843	3 976	3 955	3 815	-
130	-	-	-	4 517	4 635	4 814	4 951	4 931	-

### Current consumption in A

45	5.32	5.52	5.58	5.44	5.04	3.83	-	-	-
60	6.08	6.36	6.57	6.65	6.53	5.84	3.68	-	-
70	6.62	6.93	7.20	7.38	7.41	7.02	5.40	3.97	-
90	7.96	8.21	8.52	8.82	9.05	9.13	8.42	7.58	-
100	-	9.01	9.29	9.61	9.89	10.14	9.80	9.20	-
110	-	9.95	10.17	10.48	10.79	11.16	11.13	10.75	-
130	-	-	-	12.63	12.91	13.38	13.79	13.76	-

### Mass flow in lbs/h

45	164	211	267	333	410	551	-	-	-
60	160	208	264	330	407	548	791	-	-
70	157	205	261	327	405	546	788	937	-
90	150	198	255	321	399	540	783	931	-
100	-	194	251	318	396	537	780	928	-
110	-	189	247	314	392	533	776	924	-
130	-	-	-	303	382	524	768	916	-

### Energy Efficiency Ratio (E.E.R.)

45	8.41	10.47	13.26	17.22	23.32	42.65	-	-	-
60	6.80	8.46	10.51	13.18	16.83	25.92	61.73	-	-
70	5.87	7.35	9.11	11.29	14.11	20.49	39.55	64.91	-
90	4.22	5.46	6.83	8.41	10.30	14.08	22.62	30.18	-
100	-	4.62	5.85	7.23	8.84	11.92	18.31	23.43	-
110	-	3.84	4.94	6.16	7.56	10.12	15.12	18.84	-
130	-	-	-	4.31	5.37	7.23	10.56	12.80	-

### Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	47 418	Btu/h	Current consumption	13.74	A
Power input	4 935	W	Mass flow	701	lbs/h
E.E.R.	9.61				

### Pressure switch settings

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

### Sound power data

Sound power level	dB(A)
With acoustic hood	dB(A)

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**Performance data at 100 Hz, ARI rating conditions**
**R410A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-25	-15	-5	5	15	30	50	60	70

**Cooling capacity in Btu/h**

45	16 430	21 239	27 123	34 229	42 706	58 317	-	-	-
60	15 042	19 691	25 323	32 089	40 136	54 932	80 527	-	-
70	14 110	18 637	24 089	30 614	38 360	52 592	77 227	92 302	-
90	12 194	16 447	21 503	27 513	34 625	47 681	70 327	84 229	-
100	-	15 294	20 137	25 873	32 650	45 094	66 713	80 011	-
110	-	14 094	18 712	24 163	30 595	42 409	62 979	75 663	-
130	-	-	-	20 501	26 211	36 716	55 122	66 545	-

**Power input in W**

45	1 983	2 063	2 084	2 028	1 876	1 428	-	-	-
60	2 238	2 361	2 446	2 474	2 425	2 168	1 385	-	-
70	2 424	2 565	2 680	2 750	2 758	2 610	2 017	1 509	-
90	2 888	3 034	3 180	3 308	3 398	3 423	3 152	2 845	-
100	-	3 324	3 471	3 612	3 729	3 819	3 679	3 457	-
110	-	3 667	3 804	3 949	4 083	4 222	4 195	4 048	-
130	-	-	-	4 770	4 908	5 102	5 239	5 213	-

**Current consumption in A**

45	5.56	5.81	5.90	5.77	5.36	4.07	-	-	-
60	6.34	6.69	6.95	7.05	6.93	6.21	3.92	-	-
70	6.91	7.29	7.62	7.83	7.87	7.47	5.75	4.25	-
90	8.32	8.66	9.03	9.38	9.64	9.73	8.97	8.08	-
100	-	9.51	9.86	10.22	10.54	10.81	10.44	9.80	-
110	-	10.51	10.80	11.15	11.50	11.90	11.85	11.44	-
130	-	-	-	13.42	13.74	14.25	14.65	14.60	-

**Mass flow in lbs/h**

45	173	222	281	350	431	579	-	-	-
60	169	219	278	347	428	576	831	-	-
70	165	216	275	344	426	574	828	984	-
90	157	209	269	338	420	568	823	979	-
100	-	204	264	335	417	565	821	976	-
110	-	199	260	330	413	562	817	973	-
130	-	-	-	319	403	553	809	966	-

**Energy Efficiency Ratio (E.E.R.)**

45	8.28	10.30	13.02	16.88	22.76	40.83	-	-	-
60	6.72	8.34	10.35	12.97	16.55	25.34	58.16	-	-
70	5.82	7.27	8.99	11.13	13.91	20.15	38.29	61.16	-
90	4.22	5.42	6.76	8.32	10.19	13.93	22.31	29.61	-
100	-	4.60	5.80	7.16	8.76	11.81	18.13	23.14	-
110	-	3.84	4.92	6.12	7.49	10.04	15.01	18.69	-
130	-	-	-	4.30	5.34	7.20	10.52	12.76	-

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	49 994	Btu/h	Current consumption	14.60	A
Power input	5 225	W	Mass flow	739	lbs/h
E.E.R.	9.57				

**Pressure switch settings**

Maximum HP switch setting	635	psi(g)
Minimum LP switch setting	15	psi(g)
LP pump down setting	17	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	79	dB(A)

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