

**MODEL: ATQ420D1UMU**

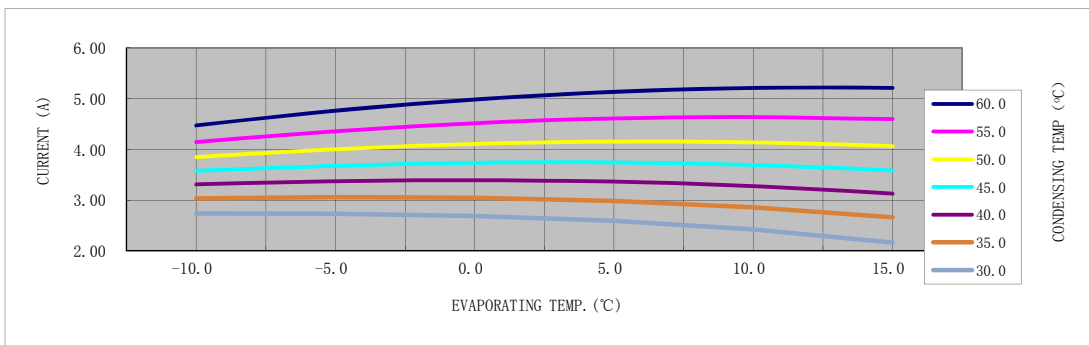
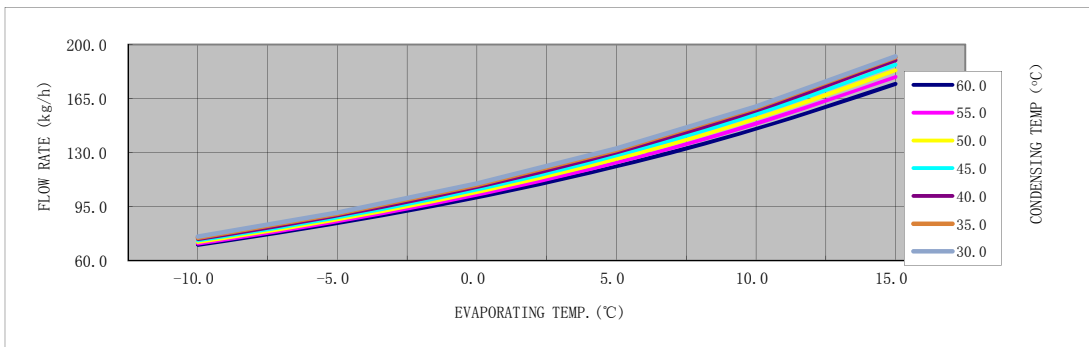
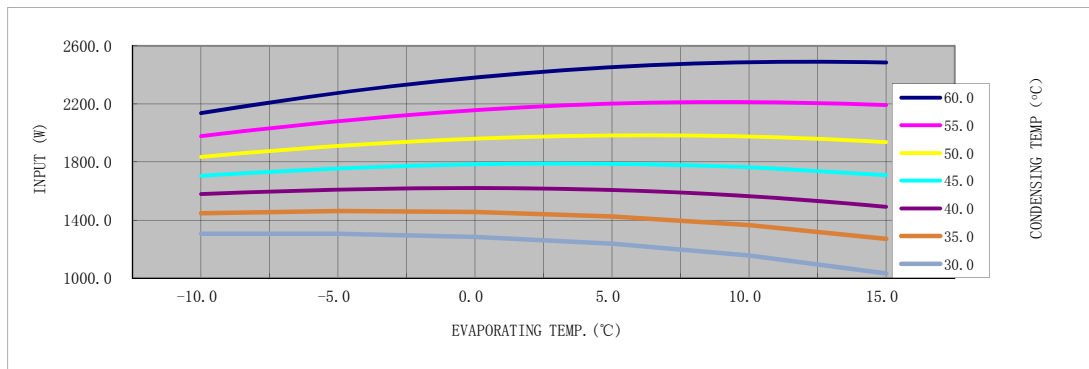
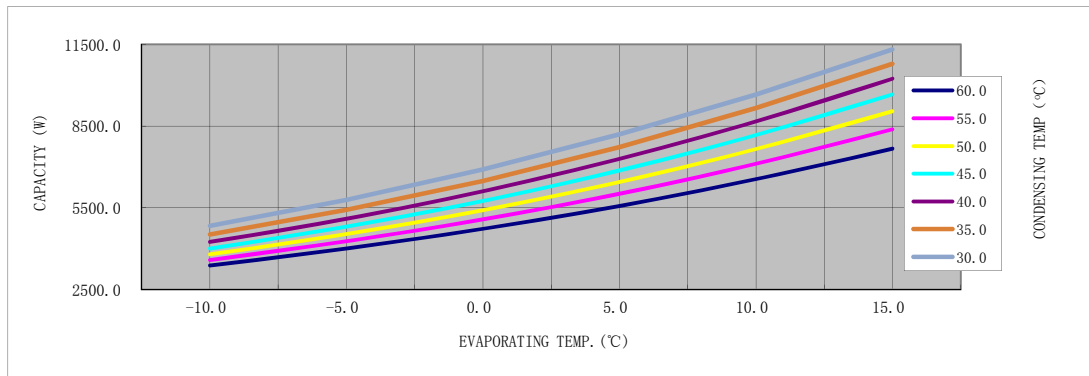
R410A 1Φ — 220 V ~ 30 Hz

RETURN GAS TEMP. — 35 °C

SUBCOOLING — 8.3 °C

AMBIENT TEMP. — 35 °C

**PERFORMANCE CURVE**



## 1、Rated condition data

Model	Displacement	Frequency	Power supply	Capacity	Input power	Flow rate	Current
	cc	Hz	V	W	W	kg/h	A
ATQ420D1UMU	42	30	220	6551.0	2173.0	133.6	4.55

## 2、Data under different condition

Capacity(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	3389.8	4008.2	4730.1	5574.3	6550.7	7676.0
	55.0	3589.5	4273.7	5077.1	6018.6	7117.4	8382.5
	50.0	3793.8	4538.3	5415.9	6449.8	7657.2	9047.5
	45.0	4012.3	4810.6	5757.7	6873.9	8173.9	9666.9
	40.0	4250.2	5100.6	6112.7	7298.3	8672.1	10243.2
	35.0	4521.8	5425.7	6491.7	7734.4	9164.7	10788.2
	30.0	4844.6	5799.1	6912.5	8197.1	9662.3	11310.7

Input Power(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	2135.7	2275.7	2380.1	2451.9	2487.3	2484.5
	55.0	1977.2	2080.7	2155.9	2200.9	2212.4	2191.5
	50.0	1834.9	1910.1	1959.8	1982.8	1975.3	1936.2
	45.0	1704.4	1754.9	1783.0	1786.4	1762.8	1708.5
	40.0	1578.2	1609.4	1619.4	1605.7	1564.6	1491.3
	35.0	1447.1	1461.6	1455.2	1424.5	1364.9	1268.9
	30.0	1306.3	1305.9	1284.1	1236.4	1155.7	1031.1

Flow Rate(kg/h)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	70.2	84.2	100.9	121.1	145.3	174.4
	55.0	71.0	85.4	102.7	123.5	148.7	179.0
	50.0	71.9	86.6	104.4	125.9	151.9	183.2
	45.0	72.9	87.9	106.1	128.2	154.8	186.9
	40.0	73.9	89.1	107.7	130.1	157.2	189.8
	35.0	74.8	90.2	109.0	131.6	158.9	191.7
	30.0	75.5	91.1	109.9	132.5	159.7	192.3

Current(A)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	4.47	4.76	4.98	5.13	5.21	5.21
	55.0	4.14	4.36	4.52	4.61	4.64	4.60
	50.0	3.85	4.00	4.10	4.15	4.14	4.06
	45.0	3.57	3.68	3.73	3.74	3.69	3.58
	40.0	3.31	3.37	3.39	3.36	3.28	3.13
	35.0	3.03	3.06	3.05	2.98	2.86	2.66
	30.0	2.73	2.73	2.69	2.59	2.42	2.16

## 3、Ten coefficient method

$$Z = p1 + p2 * x + p3 * y + p4 * x^2 + p5 * x * y + p6 * y^2 + p7 * x^3 + p8 * x^2 * y + p9 * x * y^2 + p10 * y^3$$

x—Evaporating Temp.(°C); y—Condensing Temp.(°C)

	Capacity	Input Power	Flow Rate	Current
P1	1.04116088E+04	-5.97228367E+02	9.56340139E+01	-1.21075510E+00
P2	2.32944209E+02	-2.08813448E+01	3.45894133E+00	-4.08566421E-02
P3	-1.63132916E+02	1.00184977E+02	1.17563868E+00	2.06288889E-01
P4	4.61019983E+00	-3.91837302E-01	9.02729591E-02	-8.65164399E-04
P5	1.62856582E+00	2.68692855E-01	4.00484692E-02	4.29030612E-04
P6	1.92495578E+00	-1.66333515E+00	-2.90510200E-02	-3.38750567E-03
P7	1.77301587E-02	-4.61693121E-03	9.80952380E-04	-9.10052914E-06
P8	-3.27188775E-02	-3.55408163E-03	-3.28061222E-04	-5.96938774E-06
P9	-4.88489796E-02	6.15945581E-03	-6.17687072E-04	1.43673469E-05
P10	-1.31444444E-02	1.36592593E-02	1.81481478E-04	2.77777778E-05

**MODEL: ATQ420D1UMU**

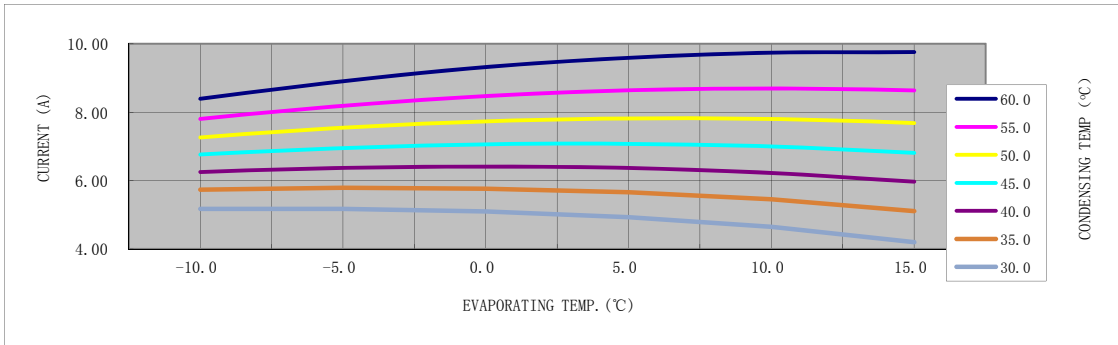
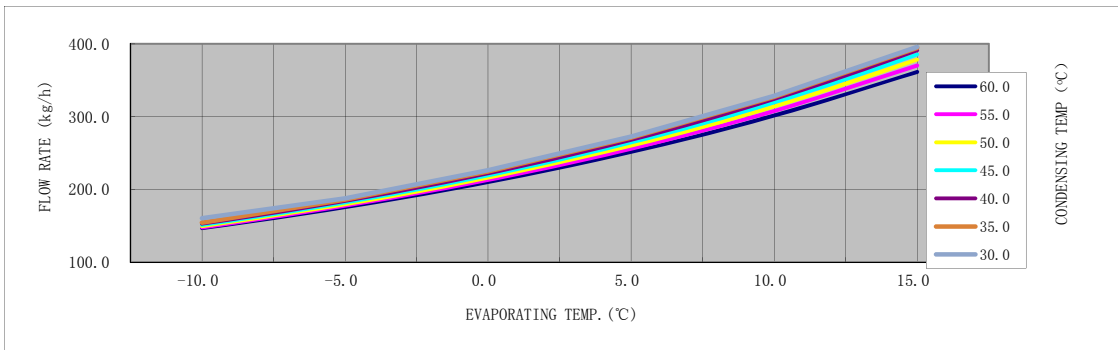
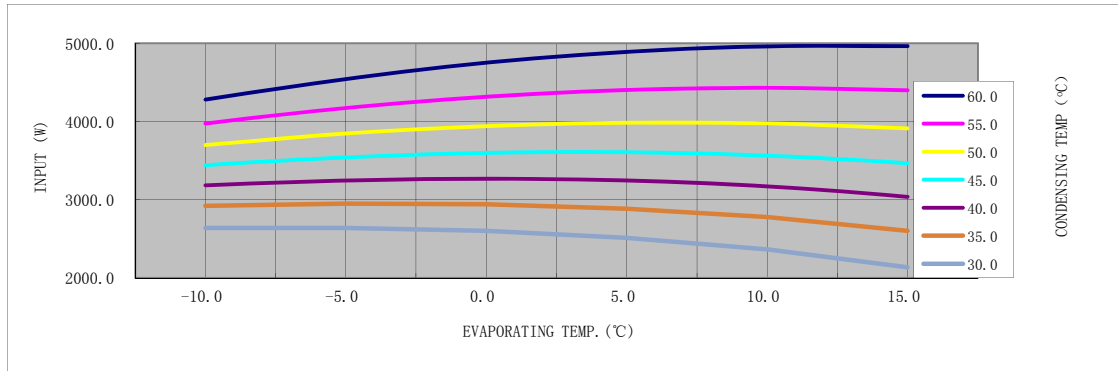
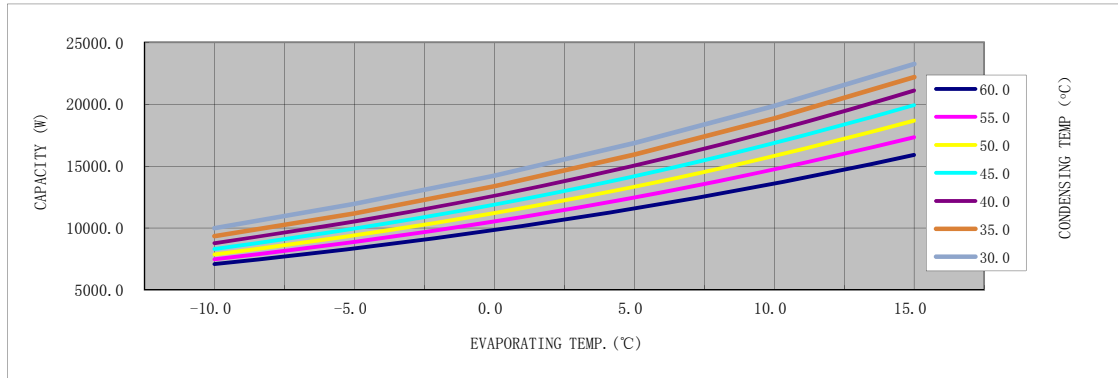
R410A 1Φ — 220 V ~ 60 Hz

RETURN GAS TEMP. — 35 °C

SUBCOOLING — 8.3 °C

AMBIENT TEMP. — 35 °C

**PERFORMANCE CURVE**



## 1、Rated condition data

Model	Displacement	Frequency	Power supply	Capacity	Input power	Flow rate	Current
	cc	Hz	V	W	W	kg/h	A
ATQ420D1UMU	42	60	220	13559.0	4348.0	283.7	8.53

## 2、Data under different condition

Capacity(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	7078.4	8350.1	9837.6	11575.8	13587.4	15902.5
	55.0	7466.9	8873.8	10529.1	12469.7	14728.4	17334.1
	50.0	7866.8	9399.9	11207.9	13334.6	15815.1	18677.7
	45.0	8303.9	9946.1	11891.1	14186.6	16856.5	19931.5
	40.0	8780.1	10530.6	12607.0	15044.0	17864.8	21101.5
	35.0	9330.2	11186.0	13374.6	15925.3	18862.7	22202.3
	30.0	9987.5	11942.1	14225.3	16864.2	19873.6	23259.1

Input Power(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	4280.1	4543.3	4752.3	4889.8	4960.5	4963.4
	55.0	3974.3	4173.7	4316.6	4402.1	4429.6	4397.3
	50.0	3697.9	3845.9	3940.4	3984.5	3976.3	3910.9
	45.0	3440.9	3541.9	3597.2	3605.9	3565.4	3467.8
	40.0	3184.6	3247.4	3268.5	3245.6	3171.8	3038.7
	35.0	2920.7	2950.3	2940.6	2886.2	2777.6	2602.3
	30.0	2638.2	2638.8	2601.3	2514.9	2366.9	2137.0

Flow Rate(kg/h)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	146.5	175.3	209.9	251.5	301.4	361.4
	55.0	147.6	177.3	212.9	255.9	307.7	370.1
	50.0	149.1	179.5	216.0	260.3	313.8	378.3
	45.0	150.9	181.7	219.1	264.5	319.3	385.4
	40.0	152.6	183.9	222.0	268.2	323.8	390.9
	35.0	154.3	186.0	224.5	271.0	327.0	394.5
	30.0	160.4	187.6	226.2	272.6	328.5	395.5

Current(A)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15.0
Condensing Temp.(°C)	60.0	8.39	8.91	9.32	9.59	9.74	9.76
	55.0	7.80	8.19	8.47	8.64	8.70	8.64
	50.0	7.26	7.55	7.73	7.82	7.81	7.68
	45.0	6.76	6.95	7.06	7.08	7.00	6.81
	40.0	6.26	6.37	6.41	6.37	6.23	5.97
	35.0	5.73	5.79	5.77	5.66	5.45	5.11
	30.0	5.18	5.18	5.10	4.94	4.65	4.20

## 3、Ten coefficient method

$$Z = p_1 + p_2 * x + p_3 * y + p_4 * x^2 + p_5 * x * y + p_6 * y^2 + p_7 * x^3 + p_8 * x^2 * y + p_9 * x * y^2 + p_{10} * y^3$$

x—Evaporating Temp.(°C); y—Condensing Temp.(°C)

	Capacity	Input Power	Flow Rate	Current
P1	2.13587844E+04	-1.06729628E+03	2.16952052E+02	-2.00019392E+00
P2	4.74531933E+02	-3.75797958E+01	6.24544000E+00	-6.92388686E-02
P3	-3.32933478E+02	1.92379236E+02	1.08977551E+00	3.70288891E-01
P4	9.51241159E+00	-7.38822842E-01	2.06762188E-01	-1.43837869E-03
P5	3.48801019E+00	4.40067855E-01	1.16051531E-01	6.43571367E-04
P6	3.92844324E+00	-3.09764784E+00	-3.21682539E-02	-5.90015878E-03
P7	3.75111116E-02	-7.32804217E-03	1.78306878E-03	-1.57671963E-05
P8	-6.79693879E-02	-6.62908175E-03	-1.04540816E-03	-1.21428571E-05
P9	-1.01412245E-01	1.24337415E-02	-1.57714286E-03	2.70476198E-05
P10	-2.64777773E-02	2.50777777E-02	1.99999999E-04	4.7777782E-05

**MODEL: ATQ420D1UMU**

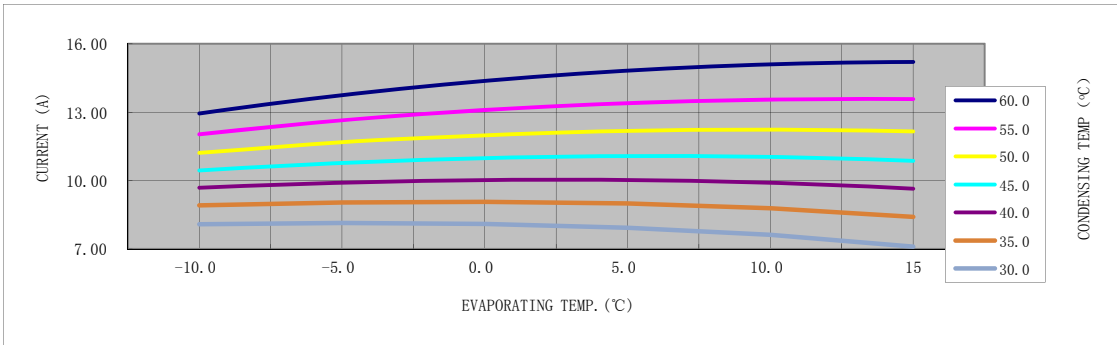
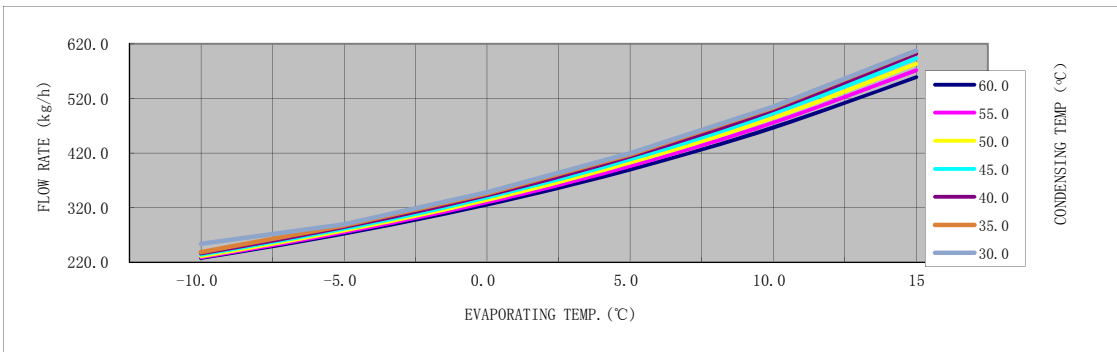
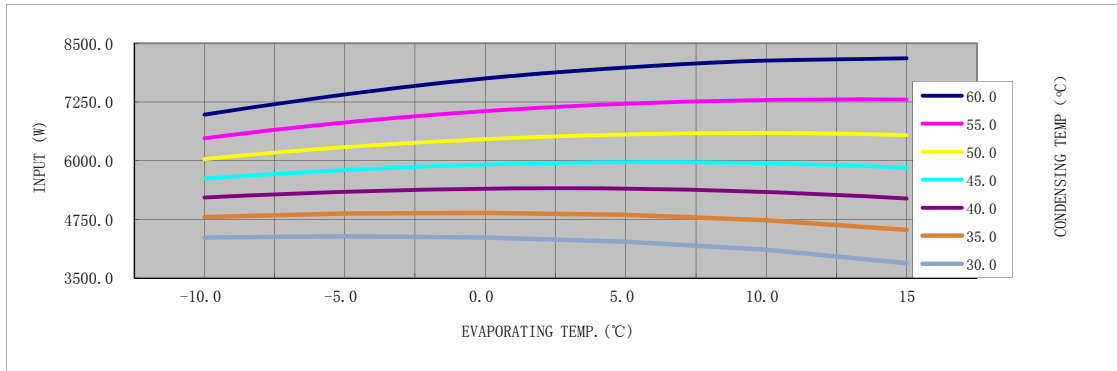
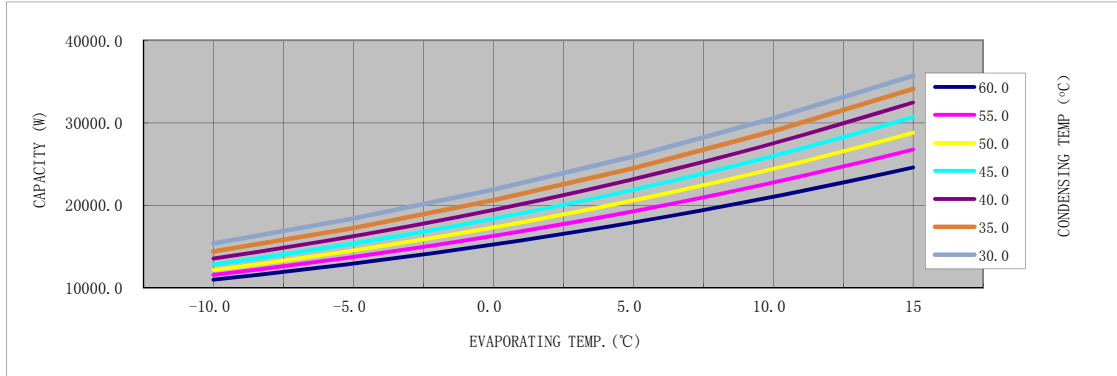
R410A 1Φ — 220 V ~ 90 Hz

RETURN GAS TEMP. — 35 °C

SUBCOOLING — 8.3 °C

AMBIENT TEMP. — 35 °C

**PERFORMANCE CURVE**



## 1、Rated condition data

Model	Displacement	Frequency	Power supply	Capacity	Input power	Flow rate	Current
	cc	Hz	V	W	W	kg/h	A
ATQ420D1UMU	42	90	220	20959.0	7149.0	448.2	13.27

## 2、Data under different condition

Capacity(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15
Condensing Temp.(°C)	60.0	10988.6	12950.9	15247.4	17928.6	21030.6	24590.9
	55.0	11572.9	13744.3	16296.2	19286.2	22761.2	26765.0
	50.0	12177.2	14540.8	17326.7	20597.3	24409.0	28801.7
	45.0	12836.3	15366.5	18364.3	21885.9	25983.8	30699.9
	40.0	13559.4	16254.4	19444.3	23179.9	27508.8	32467.4
	35.0	14396.2	17245.7	20604.2	24512.4	29011.8	34128.2
	30.0	15394.0	18390.8	21890.3	25930.2	30534.7	35714.7

Input Power(W)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15
Condensing Temp.(°C)	60.0	6978.5	7412.1	7747.2	7983.5	8130.0	8178.1
	55.0	6476.8	6813.3	7054.2	7212.7	7296.0	7301.6
	50.0	6033.8	6289.2	6455.6	6559.0	6588.4	6540.6
	45.0	5618.2	5802.5	5916.9	5965.6	5947.9	5850.5
	40.0	5215.8	5335.8	5402.0	5401.8	5335.4	5192.2
	35.0	4798.2	4873.0	4889.3	4847.2	4728.5	4523.1
	30.0	4358.8	4386.0	4361.8	4273.1	4101.2	3818.2

Flow Rate(kg/h)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15
Condensing Temp.(°C)	60.0	227.5	272.0	325.3	389.5	466.4	558.9
	55.0	228.9	274.6	329.5	395.8	475.5	571.5
	50.0	230.8	277.6	334.0	402.1	484.3	583.3
	45.0	233.3	280.8	338.4	408.0	492.1	593.6
	40.0	235.7	283.9	342.4	413.2	498.6	601.5
	35.0	238.1	286.7	345.8	417.1	503.0	606.4
	30.0	253.4	289.0	348.0	419.2	504.7	607.3

Current(A)		Evaporating Temp.(°C)					
		-10.0	-5.0	0.0	5.0	10.0	15
Condensing Temp.(°C)	60.0	12.95	13.75	14.38	14.82	15.11	15.21
	55.0	12.03	12.65	13.10	13.39	13.56	13.58
	50.0	11.22	11.68	11.99	12.18	12.24	12.16
	45.0	10.44	10.78	10.99	11.08	11.05	10.87
	40.0	9.69	9.91	10.03	10.03	9.91	9.65
	35.0	8.91	9.05	9.08	9.00	8.78	8.41
	30.0	8.09	8.14	8.10	7.93	7.62	7.11

## 3、Ten coefficient method

$$Z = p_1 + p_2 * x + p_3 * y + p_4 * x^2 + p_5 * x * y + p_6 * y^2 + p_7 * x^3 + p_8 * x^2 * y + p_9 * x * y^2 + p_{10} * y^3$$

x—Evaporating Temp.(°C); y—Condensing Temp.(°C)

	Capacity	Input Power	Flow Rate	Current
P1	3.26646069E+04	-1.23857353E+03	3.56720750E+02	-2.19222222E+00
P2	7.19524131E+02	-4.83526546E+01	8.39235686E+00	-8.05010393E-02
P3	-5.02924549E+02	2.93312616E+02	1.38541066E-01	5.35746410E-01
P4	1.44634736E+01	-8.96473640E-01	3.41437925E-01	-1.67114513E-03
P5	5.64887092E+00	6.21880108E-01	2.24594388E-01	7.08673467E-04
P6	5.93883332E+00	-4.73336237E+00	-1.65965957E-02	-8.55673470E-03
P7	5.71650794E-02	-5.83174612E-03	2.41269841E-03	-9.62962946E-06
P8	-1.02472959E-01	-1.28862245E-02	-2.02908163E-03	-2.25510204E-05
P9	-1.57390476E-01	1.87131972E-02	-2.83755102E-03	3.98367347E-05
P10	-4.01296295E-02	3.89407408E-02	9.25925710E-05	7.03703704E-05