



SAMSUNG COMPRESSOR

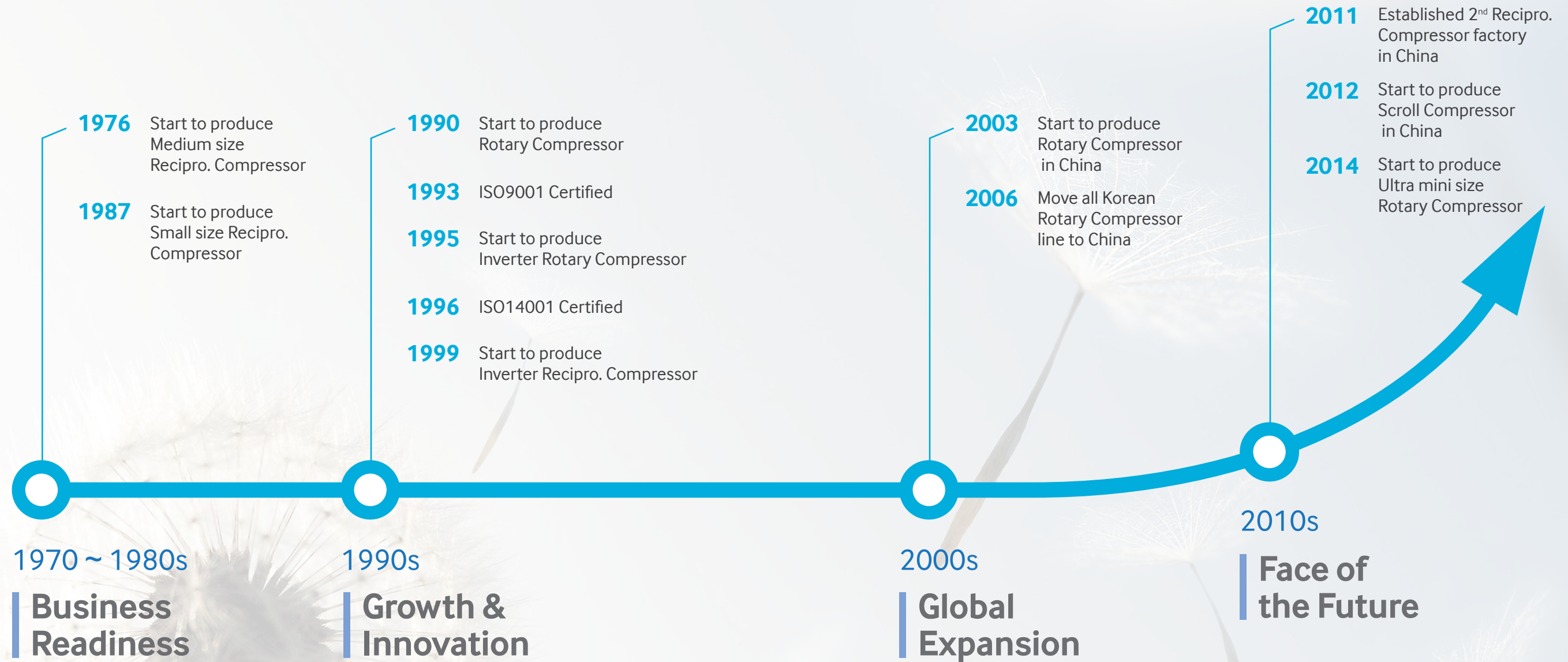
Imagine Sustainable Power



Unparalleled Performance
that's Environmental Friendly

Samsung Compressor

BRIEF HISTORY



Reciprocating Compressor MODEL IDENTIFICATION



Reciprocating Compressor Ver. 01

NAME PLATE



MK 1 62 Q - L 1 U A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1) Compressor model identification

NUMBER	MEANING
①	Series CD, SD, MD, SK, MK, HK, MSS, MSA, MSE, ENV, MKV, MSV
②	Refrigerant 1 : R134a (LBP) 4 : R600a (LBP) 6 : R134a (HBP)
③	Displacement (cc/Rev) x 10 24 : 2.40cc, 30 : 2.93cc, 37 : 3.71cc, 43 : 4.38cc, 50 : 5.21cc, 51 : 5.12cc, 52 : 5.21cc, 60 : 6.16cc, 62 : 6.16cc, 70 : 6.99cc, 72 : 7.21cc, 80 : 8.19cc, 82 : 8.19cc, 83 : 8.19cc, 88 : 8.80cc, 90 : 9.07cc, A1 : 10.68cc, A2 : 12.13cc, A3 : 12.52cc, A5 : 15.32cc
④	Rated voltage and frequency B : 220V ~ 60Hz C : 115V ~ 60Hz D : 115-127V ~ 60Hz E : 100V ~ 50/60Hz G : 220-240V ~ 50Hz, 220V ~ 60Hz H : 200-220V ~ 50Hz, 220V ~ 60Hz K : 200-220V ~ 50Hz P : 127V ~ 60Hz Q : 220-240V ~ 50Hz A : variable for BLDC
⑤	Application L/R/S : Low Back Pressure H : High Back Pressure
⑥	Cooling type 0 : Oil cooling 1 : Static 2 : Fan cooling
⑦	Motor type B/C/X : BLDC S : PTC or Current-CSIR U : PTC-RSCR (Optional RSIR) W : PTC-CSR Y : Current-RSIR Z : PTC-RSIR
⑧	Option

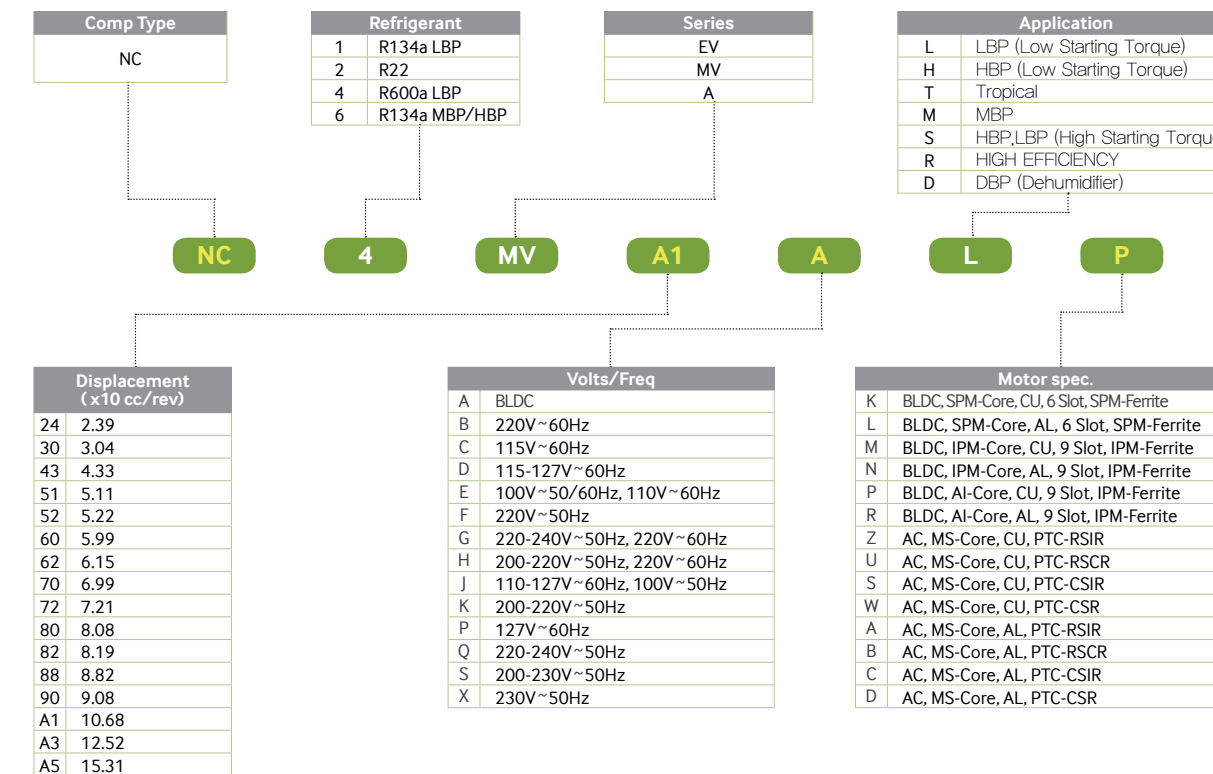
2) Serial number

- ① Model code
- ② Production line
- ③ Year : 05 → Y, 06 → L, 07 → P, 08 → Q, 09 → S, 10 → Z, 11 → B, 12 → C, 13 → D, 14 → F, 15 → G
- ④ Month : 1 → Jan, 2 → Feb, ... A → Oct, B → Nov, C → Dec
- ⑤ Serial number

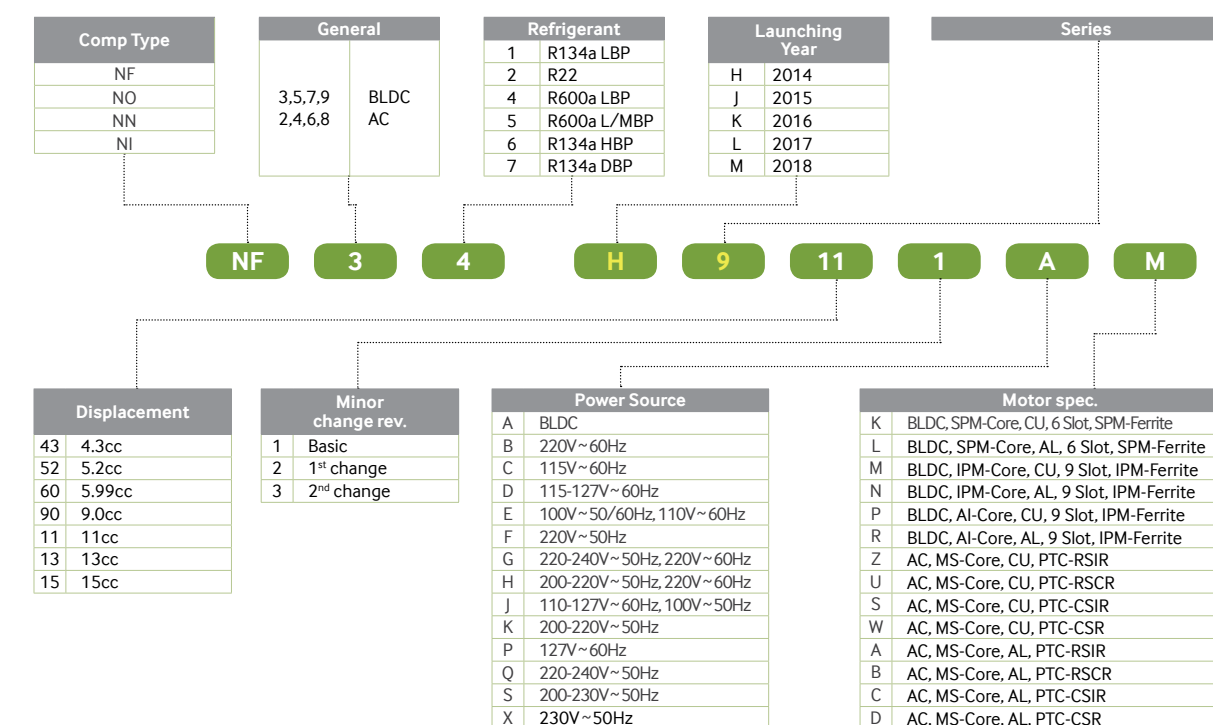
2376CC A S 5 00005

① ② ③ ④ ⑤

Reciprocating Compressor Ver. 02



Reciprocating Compressor Ver. 03



Reciprocating Compressor SPECIFICATIONS

R134a LBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 115V~60Hz	MKV172C-L2J	115-60	1,800	110	128	437	72	1.53	1.78	6.07	FC
			2,200	135	157	536	90	1.50	1.74	5.96	
			2,880	176	205	699	120	1.47	1.71	5.82	
			3,480	212	247	842	151	1.40	1.63	5.57	
			3,600	223	259	885	160	1.39	1.62	5.53	
	MKV190C-L2B	115-60	1,800	146	170	580	89	1.64	1.91	6.51	FC
			2,200	174	202	691	107	1.63	1.89	6.46	
			2,880	227	264	901	145	1.57	1.82	6.22	
			3,480	274	319	1,088	186	1.47	1.71	5.85	
			3,600	294	342	1,167	200	1.47	1.71	5.84	
	MKV190C-L2J	115-60	1,800	146	170	580	93	1.57	1.83	6.23	FC
			2,200	174	202	691	113	1.54	1.79	6.11	
			2,880	227	264	901	152	1.49	1.74	5.93	
			3,480	274	319	1,088	195	1.41	1.63	5.58	
			3,600	294	342	1,167	210	1.40	1.63	5.56	
BLDC 220-240V~50Hz, 220V~60Hz	MKV172G-L2J	220-60	1,800	110	128	437	72	1.53	1.78	6.07	FC
			2,200	135	157	536	90	1.50	1.74	5.96	
			2,880	176	205	699	120	1.47	1.71	5.82	
			3,480	212	247	842	151	1.40	1.63	5.57	
			3,600	223	259	885	160	1.39	1.62	5.53	
	MKV190G-L2B	220-60	1,800	146	170	580	89	1.64	1.91	6.51	FC
			2,200	174	202	691	107	1.63	1.89	6.46	
			2,880	227	264	901	145	1.57	1.82	6.22	
			3,480	274	319	1,088	186	1.47	1.71	5.85	
			3,600	294	342	1,167	200	1.47	1.71	5.84	
	MKV190G-L2J	220-60	1,800	146	170	580	93	1.57	1.83	6.23	FC
			2,200	174	202	691	113	1.54	1.79	6.11	
			2,880	227	264	901	152	1.49	1.74	5.93	
			3,480	274	319	1,088	195	1.41	1.63	5.58	
			3,600	294	342	1,167	210	1.40	1.63	5.56	
BLDC 200-240V~50Hz, 220V~60Hz	*NC1MV43ALP	220-60	1,200	45	52	179	31	1.45	1.69	5.76	ST
			2,000	76	88	302	50	1.52	1.77	6.03	
			3,000	112	130	445	76	1.47	1.71	5.85	
			4,300	146	170	580	110	1.33	1.54	5.27	
	*NC1MV43ALR	220-60	1,200	45	52	179	32	1.41	1.64	5.58	ST
			2,000	76	88	302	51	1.49	1.73	5.92	
			3,000	112	130	445	78	1.44	1.67	5.70	
			4,300	146	170	580	112	1.30	1.52	5.18	
	*NC1MV60ALP	220-60	1,200	65	76	258	41	1.59	1.84	6.29	ST
			2,000	111	129	441	69	1.61	1.87	6.39	
			3,000	158	184	627	102	1.55	1.80	6.15	
			4,300	211	245	838	143	1.48	1.72	5.86	
*NC1MV60ALR	220-60	1,200	65	76	258	42	1.55	1.80	6.14	ST	
		2,000	111	129	441	71	1.56	1.82	6.21		
		3,000	158	184	627	104	1.52	1.77	6.03		
		4,300	211	245	838	145	1.46	1.69	5.78		

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	MSV162A-L1J	220-60	1,400	80	93	318	56	1.43	1.66	5.67	ST
			2,000	105	122	417	70	1.50	1.74	5.96	
			3,000	155	180	615	105	1.48	1.72	5.86	
			4,000	210	244	834	143	1.47	1.71	5.83	
	MSV162A-L1B	220-60	1,200	60	70	238	43	1.40	1.62	5.54	ST
			2,000	105	122	417	68	1.54	1.80	6.13	
			3,000	155	180	615	103	1.50	1.75	5.97	
			4,300	225	262	893	160	1.41	1.64	5.58	
	NC1MV72ALP	220-60	1,200	80	93	318	51	1.57	1.82	6.23	ST
			2,000	137	159	544	84	1.63	1.90	6.47	
			3,000	193	224	766	125	1.54	1.80	6.13	
	*NC1MV72ALR	220-60	1,200	80	93	318	52	1.54	1.79	6.11	ST
			2,000	137	159	544	86	1.59	1.85	6.32	
			3,000	193	224	766	127	1.52	1.77	6.03	
	MSV172A-L1B	220-60	1,200	67	78	266	50	1.34	1.56	5.32	ST
			2,000	123	143	488	79	1.56	1.81	6.18	
			3,000	192	223	762	125	1.54	1.79	6.10	
			4,300	256	298	1,016	188	1.36	1.58	5.41	
			4,300	256	298	1,016	188	1.36	1.58	5.41	
	NC1MV82ALP	220-60	1,200	90	105	357	59	1.53	1.77	6.06	ST
			1,700	135	157	536	83	1.63	1.89	6.46	
			3,000	221	257	877	143	1.55	1.80	6.14	
			4,300	307	357	1,219	209	1.47	1.71	5.83	
	*NC1MV82ALR	220-60	1,200	90	105	357	61	1.48	1.72	5.86	ST
1,700			135	157	536	85	1.59	1.85	6.31		
3,000			221	257	877	146	1.51	1.76	6.01		
4,300			307	357	1,219	213	1.44	1.68	5.72		

Remark: * is under developed model

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE CONDITIONS (LBP)

Evaporating Temp. : -23.3°C (-10°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 32.2°C (90°F)
Liquid sub-cooled to : 32.2°C (90°F)
Ambient Temp. : 32.2°C (90°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

Reciprocating Compressor SPECIFICATIONS

R134a DBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 220V~60Hz	MSV672A-H1P MSV672B-D1P	220-60	2,160	523	608	2,076	186	2.81	3.27	11.16	ST
			2,880	685	797	2,719	258	2.66	3.09	10.54	
			3,600	834	970	3,311	333	2.50	2.91	9.94	
			3,780	870	1,012	3,454	351	2.48	2.88	9.84	
BLDC 220V~60Hz	*MSV572A-H1P	220-60	2,160	523	608	2,076	199	2.63	3.06	10.43	ST
			2,880	685	797	2,719	263	2.60	3.03	10.34	
			3,600	834	970	3,311	353	2.36	2.75	9.38	
			3,780	870	1,012	3,454	379	2.30	2.67	9.11	

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE CONDITIONS (HBP/DBP)

Evaporating Temp. : 7.2°C (45°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 35.0°C (95°F)
Liquid sub-cooled to : 46.1°C (115°F)
Ambient Temp. : 35.0°C (95°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

R600a LBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 115-127V~60Hz	ENV4A5DL2B	115-60	1,650	127	148	504	75	1.69	1.97	6.72	FC
			1,950	150	174	596	88	1.70	1.98	6.77	
			2,800	210	244	834	130	1.62	1.88	6.41	
			3,650	271	315	1,076	182	1.49	1.73	5.91	
BLDC 200-220V~50Hz, 220V~60Hz	ENV4A5H-L2B	220-60	1,650	127	148	504	75	1.69	1.97	6.72	FC
			1,950	150	174	596	88	1.70	1.98	6.77	
			2,800	210	244	834	130	1.62	1.88	6.41	
			3,650	271	315	1,076	182	1.49	1.73	5.91	
BLDC 220-240V~50Hz, 220V~60Hz	ENV4A3G-L2J	220-60	1,650	111	129	441	68	1.63	1.90	6.48	FC
			1,800	119	138	472	73	1.63	1.90	6.47	
			2,800	184	214	730	120	1.53	1.78	6.09	
			3,600	239	278	949	166	1.44	1.67	5.72	
	ENV4A3G-L2B	220-60	1,650	111	129	441	66	1.68	1.96	6.68	FC
			1,800	119	138	472	71.5	1.66	1.94	6.61	
			2,800	184	214	730	115	1.60	1.86	6.35	
			3,600	239	278	949	161	1.48	1.73	5.89	
	ENV4A5G-L2B	220-60	1,650	127	148	504	75	1.69	1.97	6.72	FC
			1,950	150	174	596	88	1.70	1.98	6.77	
			2,800	210	244	834	130	1.62	1.88	6.41	
			3,600	271	315	1,076	182	1.49	1.73	5.91	
ENV4A5G-L2J	220-60	1,650	127	148	504	78	1.63	1.89	6.46	FC	
		1,950	150	174	596	91.5	1.64	1.91	6.51		
		2,800	210	244	834	139	1.51	1.76	6.00		
		3,600	271	315	1,076	193	1.40	1.63	5.57		

R600a LBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	*MSV460A-L1B	220-60	1,200	42	49	167	28	1.50	1.74	5.96	ST
			2,000	55	64	218	40	1.38	1.60	5.46	
			3,000	90	105	357	66	1.36	1.59	5.41	
			4,300	106	123	421	84	1.26	1.47	5.01	
	*MSV460A-L1J	220-60	1,200	42	49	167	29	1.45	1.68	5.75	ST
			2,000	55	64	218	41	1.34	1.56	5.33	
			3,000	90	105	357	68	1.32	1.54	5.25	
			4,300	106	123	421	86	1.23	1.43	4.89	
	*NC4MV60ALP	220-60	1,100	33	38	131	21	1.57	1.83	6.24	ST
			1,400	44	51	175	27	1.63	1.89	6.47	
			3,000	90	105	357	58	1.55	1.80	6.16	
			4,300	120	140	476	82	1.46	1.70	5.81	
	*NC4MV60ALR	220-60	1,100	33	38	131	22	1.50	1.74	5.96	ST
			1,400	44	51	175	28	1.57	1.83	6.24	
			3,000	90	105	357	61	1.48	1.72	5.86	
			4,300	120	140	476	85	1.41	1.64	5.60	
	MSV488A-L1B	220-60	1,200	54	63	214	34	1.59	1.85	6.31	ST
			1,400	62	72	246	40	1.55	1.80	6.15	
			3,000	126	147	500	88	1.43	1.66	5.68	
			4,300	175	203	695	128	1.37	1.59	5.43	
	MSV488A-L1J	220-60	1,200	54	63	214	35	1.54	1.79	6.13	ST
			1,400	62	72	246	41	1.51	1.76	6.00	
			3,000	126	147	500	90	1.40	1.63	5.56	
			4,300	175	203	695	131	1.34	1.55	5.30	
MSV488A-L1P	220-60	1,200	54	63	214	35	1.57	1.82	6.21	ST	
		1,400	62	72	246	41	1.53	1.78	6.08		
		3,000	126	147	500	89	1.42	1.65	5.62		
		4,300	175	203	695	129	1.36	1.58	5.39		
MSV488A-L1R	220-60	1,200	54	63	214	37	1.48	1.72	5.87	ST	
		1,400	62	72	246	42	1.49	1.74	5.93		
		3,000	126	147	500	91	1.38	1.61	5.50		
		4,300	175	203	695	132	1.33	1.54	5.26		
NC4MV88ALP	220-60	1,100	51	59	202	32	1.59	1.85	6.33	ST	
		1,400	65	76	258	40	1.63	1.89	6.45		
		3,000	131	152	520	83	1.58	1.84	6.27		
		4,300	179	208	711	121	1.48	1.72	5.87		
*NC4MV88ALR	220-60	1,100	51	59	202	33	1.55	1.80	6.14	ST	
		1,400	65	76	258	41	1.59	1.84	6.29		
		3,000	131	152	520	85	1.54	1.79	6.12		
		4,300	179	208	711	123	1.46	1.69	5.78		
MSV4A1A-L1B	220-60	1,200	64	74	254	41	1.56	1.82	6.20	ST	
		1,400	80	93	318	51	1.57	1.82	6.23		
		3,000	162	188	643	111	1.46	1.70	5.79		
		4,300	210	244	834	151	1.39	1.62	5.52		

Remark : * is under developed model

Reciprocating Compressor SPECIFICATIONS

R600a LBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 200-240V ~ 50Hz, 220V ~ 60Hz	MSV4A1A-L1J	220-60	1,200	64	74	254	42	1.52	1.77	6.05	ST
			1,400	80	93	318	52	1.54	1.79	6.11	
			3,000	162	188	643	113	1.43	1.67	5.69	
			4,300	210	244	834	154	1.36	1.59	5.41	
	MSV4A1A-L1R	220-60	1,200	64	74	254	43	1.51	1.75	5.98	ST
			1,400	80	93	318	53	1.52	1.77	6.05	
			3,000	162	188	643	114	1.42	1.65	5.64	
			4,300	210	244	834	155	1.35	1.58	5.38	
	NC4MVA1ALP	220-60	1,200	64	74	254	40	1.60	1.86	6.35	ST
			1,400	97	113	385	58	1.67	1.94	6.64	
			2,800	166	193	659	106	1.57	1.82	6.22	
	*NC4MVA1ALR	220-60	1,200	64	74	254	41	1.56	1.82	6.20	ST
			1,400	97	113	385	59	1.64	1.91	6.53	
			3,000	166	193	659	108	1.54	1.79	6.10	
			4,300	226	263	897	161	1.40	1.63	5.57	
	NC4EVA3ALM	220-60	1,450	98	114	389	59	1.66	1.93	6.59	ST
			1,650	110	128	437	65	1.69	1.97	6.72	
			2,800	178	207	707	111	1.60	1.86	6.37	
			3,600	240	279	953	151	1.59	1.85	6.31	
	*NC4EVA3ALN	220-60	1,450	98	114	389	60	1.63	1.90	6.48	ST
			1,650	110	128	437	67	1.64	1.91	6.52	
			2,800	178	207	707	113	1.58	1.83	6.25	
			3,600	240	279	953	153	1.57	1.82	6.23	
	NC4EVA5ALM	220-60	1,450	110	128	437	67	1.64	1.91	6.52	ST
			1,950	153	178	607	91	1.68	1.96	6.67	
			2,800	207	241	822	130	1.59	1.85	6.32	
			3,600	276	321	1,096	182	1.52	1.76	6.02	
	NC4EVA5ALN	220-60	1,450	110	128	437	69	1.59	1.85	6.33	ST
1,950			153	178	607	93	1.65	1.91	6.53		
2,800			207	241	822	132	1.57	1.82	6.23		
NC4AV80ALR	220-60	1,200	47	55	187	33	1.42	1.66	5.65	ST	
		1,600	64	74	254	43.5	1.47	1.71	5.84		
		2,450	94	109	373	65	1.45	1.68	5.74		
		4,000	150	174	596	107	1.40	1.63	5.57		
*NF34J9131AM	220-60	1,200	81	94	322	48	1.70	1.98	6.75	ST	
		1,450	95	111	379	55	1.74	2.02	6.90		
		1,650	106	123	422	61	1.74	2.02	6.89		
		3,700	243	283	965	162	1.50	1.74	5.94		
*NF34J9131AN	220-60	1,200	81	94	322	49	1.65	1.92	6.57	ST	
		1,450	95	111	379	56	1.69	1.97	6.73		
		1,650	106	123	422	63	1.69	1.97	6.71		
		3,700	243	283	965	165	1.48	1.72	5.86		

Remark : * is under developed model

R600a LBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
BLDC 200-240V ~ 50Hz, 220V ~ 60Hz	*NF34H9151AM	220-60	1,200	92	107	364	54	1.69	1.96	6.69	ST
			1,450	112	130	443	66	1.70	1.98	6.76	
			1,850	145	168	575	83	1.74	2.02	6.90	
			3,700	288	335	1,143	193	1.49	1.74	5.93	
	*NF34J9151AN	220-60	1,200	92	107	364	57	1.61	1.87	6.40	ST
			1,450	112	130	443	67	1.66	1.93	6.60	
			1,850	145	168	575	86	1.69	1.97	6.72	
			3,700	288	335	1,143	195	1.48	1.72	5.87	

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE CONDITIONS (LBP)

Evaporating Temp. : -23.3°C (-10°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 32.2°C (90°F)
Liquid sub-cooled to : 32.2°C (90°F)
Ambient Temp. : 32.2°C (90°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

R600a MBP

RATED VOLTAGE	MODEL	VOLTAGE [V-Hz]	RUNNING RPM	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT W	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		EFF Kcal/WHr	COP W/W	EER BTU/WHr	
AC 200-240V ~ 50Hz, 220V ~ 60Hz	MSV460A-M1B	220-60	1,200	68	79	270	35	1.94	2.26	7.71	ST
			1,400	82	95	326	39.7	2.07	2.40	8.20	
			2,000	118	137	468	57.5	2.05	2.39	8.15	
			3,650	205	238	814	108	1.90	2.21	7.54	

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE CONDITIONS (MBP)

Evaporating Temp. : -6.7°C (-20°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 35.0°C (95°F)
Liquid sub-cooled to : 46.1°C (115°F)
Ambient Temp. : 35.0°C (95°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

Reciprocating Compressor SPECIFICATIONS

R134a LBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE	
				COOLING CAPACITY			INPUT	EFFICIENCY				
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP		EER
AC 100V~50/60Hz	CD124E-L1ZB	RSIR	100-50	42	49	167	72	0.58	0.68	2.32	ST	
			100-60	50	58	199	68	0.74	0.85	2.92		
	CD130E-L1Z2	RSIR	100-50	58	67	230	76	0.76	0.89	3.03	ST	
			100-60	70	81	278	79	0.89	1.03	3.52		
	NC1A30ELA	RSIR	100-50	68	79	270	69	0.99	1.15	3.91	ST	
			100-60	80	93	318	75	1.07	1.24	4.23		
	SD137E-L1U2	RSCR	100-50	72	84	286	91	0.79	0.92	3.14	ST	
			100-60	87	101	345	99	0.88	1.02	3.49		
	SD152E-L1W2	CSR	100-50	117	136	464	111	1.05	1.23	4.18	ST	
			100-60	135	157	536	121	1.12	1.30	4.43		
	SD162E-L1W2	CSR	100-50	144	167	572	141	1.02	1.19	4.05	ST/OC	
			100-60	170	198	675	147	1.16	1.34	4.59		
	SK170E-L2W	CSR	100-50	168	195	667	149	1.13	1.31	4.48	FC	
			100-60	206	240	818	170	1.21	1.41	4.81		
	SK182E-L2W	CSR	100-50	203	236	806	188	1.08	1.26	4.29	FC/OC	
			100-60	239	278	949	196	1.22	1.42	4.84		
	AC 115V~60Hz	CD124C-L1Z2	RSIR	115-60	52	60	206	65	0.80	0.93	3.18	ST
		CD124C-L1ZA	RSIR	115-60	50	58	199	68	0.74	0.85	2.92	ST
CD124C-S1Z2		RSIR	115-60	52	60	206	57	0.91	1.06	3.62	ST	
CD130C-L1Z2		RSIR	115-60	70	81	278	76	0.92	1.07	3.66	ST	
CD130C-S1Z2		RSIR	115-60	70	81	278	73	0.96	1.12	3.81	ST	
CD130C-S1ZA		RSIR	115-60	70	81	278	82	0.85	0.99	3.39	ST	
SD137C-L1ZB		RSIR	115-60	93	108	369	102	0.91	1.06	3.62	ST	
SD137C-L1UB		RSCR	115-60	93	108	369	96	0.97	1.13	3.85	ST	
MSE140C-L1H		RSCR	115-60	126	147	500	84	1.50	1.74	5.95	ST	
MSE140C-L1U		RSCR	115-60	126	147	500	81.3	1.55	1.80	6.15	ST	
MSE140C-L1G		RSCR	115-60	126	147	500	87	1.45	1.68	5.75	ST	
SD143C-L1U2		RSCR	115-60	114	133	453	114	1.00	1.16	3.97	ST	
MSA143C-S1A		RSIR	115-60	124	144	492	100	1.24	1.44	4.92	ST	
MSA143C-S1B		RSCR	115-60	124	144	492	94	1.32	1.53	5.24	ST	
MSE148C-L1H		RSCR	115-60	155	180	615	103.4	1.50	1.74	5.95	ST	
MSE148C-L1U		RSCR	115-60	155	180	615	100	1.55	1.80	6.15	ST	
MSE148C-L1G		RSCR	115-60	155	180	615	107	1.45	1.68	5.75	ST	
SD152C-L1UA		RSCR	115-60	146	170	580	123	1.19	1.38	4.71	ST	
MD152C-L1UB		RSCR	115-60	147	171	584	115	1.28	1.49	5.07	ST	
MD152C-R1UA		RSCR	115-60	152	177	603	116	1.31	1.52	5.20	ST	
MSS151C-L1U		RSCR	115-60	152	177	603	107	1.42	1.65	5.64	ST	
MSA151C-L1U		RSCR	115-60	152	177	603	113	1.35	1.56	5.34	ST	
MSA151C-L1G		RSCR	115-60	152	177	603	109	1.39	1.62	5.54	ST	
MSA151C-L1B		RSCR	115-60	152	177	603	113	1.35	1.56	5.34	ST	
MSE152C-L1H		RSCR	115-60	168	195	667	110.2	1.52	1.77	6.05	ST	
MSE152C-L1U		RSCR	115-60	168	195	667	106.7	1.58	1.83	6.25	ST	
MSE152C-L1G		RSCR	115-60	168	195	667	114	1.47	1.71	5.85	ST	
MSE156C-L1H		RSCR	115-60	188	219	746	123.3	1.52	1.77	6.05	ST	
MSE156C-L1U		RSCR	115-60	188	219	746	119.4	1.58	1.83	6.25	ST	
MSE156C-L1G		RSCR	115-60	188	219	746	127.5	1.47	1.71	5.85	ST	

R134a LBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE	
				COOLING CAPACITY			INPUT	EFFICIENCY				
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP		EER
AC 115V~60Hz	SD162C-L1U2	RSIR	115-60	170	198	675	157	1.08	1.26	4.30	ST	
		RSCR	115-60	170	198	675	150	1.13	1.32	4.50		
	SD162C-L1UB	RSCR	115-60	170	198	675	155	1.10	1.28	4.35	ST	
	MD162C-S1U2	RSCR	115-60	166	193	659	146	1.14	1.32	4.51	ST	
	MK162C-L1UA	RSCR	115-60	184	214	730	134	1.37	1.60	5.45	ST	
	MSS162C-L1U	RSCR	115-60	182	212	723	129	1.41	1.64	5.60	ST	
	MSA162C-L1U	RSCR	115-60	182	212	723	136	1.34	1.56	5.31	ST	
	MSA162C-L1B	RSCR	115-60	187	217	742	145	1.29	1.50	5.12	ST	
	MSE166C-L1H	RSCR	115-60	225	262	893	150.1	1.50	1.74	5.95	ST	
	MSE166C-L1U	RSCR	115-60	225	262	893	145.2	1.55	1.80	6.15	ST	
	MSE166C-L1G	RSCR	115-60	225	262	893	155.3	1.45	1.68	5.75	ST	
	SK170C-L2W	CSR	115-60	206	240	818	170	1.21	1.41	4.81	FC	
	MK172C-L2UA	RSCR	115-60	224	260	889	159	1.41	1.64	5.59	FC	
	MSS170C-L1U	RSCR	115-60	222	258	881	152	1.46	1.70	5.80	ST	
	MSA170C-L1U	RSCR	115-60	222	258	881	160	1.39	1.61	5.51	ST	
	MSA170C-L1B	RSCR	115-60	222	258	881	160	1.39	1.61	5.51	ST	
	SK182C-L2U	RSCR	115-60	239	278	949	201	1.19	1.38	4.72	FC	
	SK182C-L2W	CSR	115-60	239	278	949	196	1.22	1.42	4.84	FC	
	MK183C-L2U	RSCR	115-60	258	300	1,024	179	1.44	1.68	5.72	FC	
	MK183C-S2U	RSCR	115-60	258	300	1,024	187	1.38	1.60	5.48	FC	
	SK1A1C-L2W	CSR	115-60	303	352	1,203	275	1.10	1.28	4.37	FC	
	SK1A1C-L2WB	CSR	115-60	312	363	1,239	290	1.08	1.25	4.27	FC	
	AC 115-127V~60Hz	NC1A30DLA	RSIR	115-60	80	93	318	79	1.01	1.18	4.02	ST
				127-60	80	93	318	82	0.98	1.13	3.87	
		NC1A37DLB	RSCR	115-60	108	126	429	100	1.08	1.26	4.29	ST
		NC1A43DLB	RSCR	115-60	118	137	468	100	1.18	1.37	4.68	ST
		MSS143D-S1U	RSCR	115-60	116	135	461	85	1.36	1.59	5.42	ST
127-60				116	135	461	92	1.26	1.47	5.01		
MSA151D-L1B		RSCR	115-60	152	177	603	113	1.35	1.56	5.34	ST	
			127-60	152	177	603	120	1.27	1.47	5.03		
MSS162D-S1U		RSCR	115-60	187	217	742	135	1.39	1.61	5.50	ST	
			127-60	187	217	742	142	1.32	1.53	5.23		
MSA162D-L1B		RSCR	115-60	187	217	742	145	1.29	1.50	5.12	ST	
			127-60	187	217	742	150	1.25	1.45	4.95		
MK162D-L1U		RSCR	115-60	184	214	730	124	1.48	1.73	5.89	ST	
			127-60	184	214	730	126	1.46	1.70	5.80		
MK162D-S2UB		RSCR	115-60	184	214	730	135	1.36	1.58	5.41	FC	
			127-60	184	214	730	142	1.30	1.51	5.14		
MK172D-R2U		RSCR	115-60	224	260	889	149	1.50	1.75	5.97	FC	
			127-60	224	260	889	152	1.47	1.71	5.85		
MK183D-L2U	RSCR	115-60	258	300	1,024	179	1.44	1.68	5.72	FC		
		127-60	258	300	1,024	182	1.42	1.65	5.63			
MK183D-L2UB	RSCR	115-60	258	300	1,024	185	1.39	1.62	5.54	FC		
		127-60	258	300	1,024	194	1.33	1.55	5.28			

Reciprocating Compressor SPECIFICATIONS

R134a LBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP	
AC 127V~60Hz	CD124P-L1Z2	RSIR	127-60	52	60	206	68	0.76	0.89	3.04	ST
	CD124P-S1ZB	RSIR	127-60	52	60	206	74	0.70	0.82	2.79	ST
	CD130P-L1Z2	RSIR	127-60	70	81	278	76	0.92	1.07	3.66	ST
	CD130P-S1ZB	RSIR	127-60	70	81	278	76	0.92	1.07	3.66	ST
	SD152P-L1W2	CSR	127-60	135	157	536	122	1.11	1.29	4.39	ST
	MK152P-S1U	RSCR	127-60	148	172	588	108	1.37	1.59	5.44	ST
	SD162P-L1U2	RSCR	127-60	170	198	675	147	1.16	1.34	4.59	ST
	MD162P-S1U2	RSCR	127-60	187	217	742	144	1.30	1.51	5.16	ST
	MSA162P-S1B	RSCR	127-60	187	217	742	147	1.27	1.48	5.05	ST
	MK162P-S1UA	RSCR	127-60	184	214	730	134	1.37	1.60	5.45	ST
	MK172P-L2U	RSCR	127-60	224	260	889	159	1.41	1.64	5.59	FC
	SK182P-L2U	RSCR	127-60	239	278	949	201	1.19	1.38	4.72	FC
	MK183P-S2U	RSCR	127-60	263	306	1,044	190	1.38	1.61	5.50	FC
AC 200-220V~50Hz, 220V~60Hz	CD124H-L1Z2	RSIR	220-50	43	50	171	63	0.68	0.79	2.71	ST
			220-60	52	60	206	64	0.81	0.94	3.23	
	CD124H-L1ZA	RSIR	220-50	42	49	167	71	0.59	0.69	2.35	ST
			220-60	50	58	199	71	0.70	0.82	2.80	
	CD130H-L1Z2	RSIR	220-50	58	67	230	73	0.79	0.92	3.15	ST
			220-60	70	81	278	76	0.92	1.07	3.66	
	SD137H-L1ZB	RSIR	220-50	75	87	298	93	0.81	0.94	3.20	ST
			220-60	93	108	369	98	0.95	1.10	3.77	
	SD137H-L1UB	RSCR	220-50	75	87	298	87	0.86	1.00	3.42	ST
			220-60	93	108	369	92	1.01	1.18	4.01	
	NC1A37HLB	RSCR	220-50	90	105	357	84	1.07	1.25	4.25	ST
			220-60	108	126	429	97	1.11	1.29	4.42	
	SD143H-L1UA	RSCR	220-50	98	114	389	109	0.90	1.05	3.57	ST
			220-60	118	137	468	114	1.04	1.20	4.11	
	NC1A43HLB	RSCR	220-50	102	119	405	91	1.12	1.30	4.45	ST
			220-60	118	137	468	100	1.18	1.37	4.68	
	SD152H-S1UB	RSCR	220-50	120	140	476	113	1.06	1.23	4.21	ST
			220-60	146	170	580	122	1.20	1.39	4.75	
	SD162H-L1UB	RSCR	220-50	146	170	580	139	1.05	1.22	4.17	ST
			220-60	182	212	723	152	1.20	1.39	4.75	
	SK170H-L1UB	RSCR	220-50	168	195	667	153	1.10	1.28	4.36	ST
			220-60	206	240	818	164	1.26	1.46	4.99	
	MSA170H-L1B	RSCR	220-50	173	201	687	141	1.23	1.43	4.87	ST
			220-60	220	256	873	163	1.35	1.57	5.36	
MK172H-L1U	RSCR	220-50	176	205	699	131	1.34	1.56	5.33	ST/OC	
		220-60	224	260	889	159	1.41	1.64	5.59		
MK172H-L1UA	RSCR	220-50	176	205	699	135	1.30	1.52	5.18	ST/OC	
		220-60	224	260	889	159	1.41	1.64	5.59		
SK182H-L2UA	RSCR	220-50	203	236	806	182	1.12	1.30	4.43	FC/OC	
		220-60	239	278	949	191	1.25	1.46	4.97		

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RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE	
				COOLING CAPACITY			INPUT	EFFICIENCY				
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP		EER
AC 200-220V~50Hz, 220V~60Hz	MK183H-L2UB	RSCR	220-50	203	236	806	154	1.32	1.53	5.23	FC	
			220-60	258	300	1024	179	1.44	1.68	5.72		
	SK190H-S2U	RSCR	220-50	227	264	901	233	0.97	1.13	3.87	FC/OC	
			220-60	264	307	1,048	229	1.15	1.34	4.58		
	SK190H-L2UA	RSCR	220-50	227	264	901	208	1.09	1.27	4.33	FC/OC	
			220-60	264	307	1,048	211	1.25	1.45	4.97		
MK190H-L2U	RSCR	220-50	225	262	893	168	1.34	1.56	5.32	FC		
		220-60	285	331	1,131	200	1.43	1.66	5.66			
AC 220V~60Hz	CD124B-L1ZA	RSIR	220-60	50	58	199	72	0.69	0.81	2.76	ST	
	CD130B-S1ZA	RSIR	220-60	70	81	278	82	0.85	0.99	3.39	ST	
	CD130B-S1ZB	RSIR	220-60	70	81	278	82	0.85	0.99	3.39	ST	
	NC1A37BLA	RSIR	220-60	108	126	429	103	1.05	1.22	4.16	ST	
	MSE148B-L1U	PTC-RSCR	220-60	155	180	615	100	1.55	1.80	6.15	ST	
	MD152B-L1UA	RSCR	220-60	148	172	588	122	1.21	1.41	4.82	ST	
	MD152B-L1UB	RSCR	220-60	131	152	520	117	1.12	1.30	4.45	ST	
	MSE156B-L1U	PTC-RSCR	220-60	188	219	746	121	1.55	1.80	6.15	ST	
	MD162B-L1U2	RSCR	220-60	160	186	635	136	1.18	1.37	4.67	ST	
	MSE166B-L1U	PTC-RSCR	220-60	225	262	893	145	1.55	1.80	6.15	ST	
	SK162B-L1UA	RSCR	220-60	170	198	675	141	1.21	1.40	4.79	ST	
	MK162B-L1UB	RSCR	220-60	184	214	730	134	1.37	1.60	5.45	ST	
	SK170B-L2W	CSR	220-60	206	240	818	165	1.25	1.45	4.96	FC	
	MK172B-L2UA	RSCR	220-60	224	260	889	159	1.41	1.64	5.59	FC	
	MK172B-L2UB	RSCR	220-60	224	260	889	159	1.41	1.64	5.59	FC	
	SK182B-L2W	CSR	220-60	239	278	949	186	1.28	1.49	5.10	FC	
	MK183B-L2U	RSCR	220-60	258	300	1,024	179	1.44	1.68	5.72	FC	
	SK190B-L2W	CSR	220-60	264	307	1,048	206	1.28	1.49	5.09	FC	
	MK190B-S2W	CSR	220-60	285	331	1,131	200	1.43	1.66	5.66	FC	
	DK1A3B-L2WA	CSR	220-60	385	448	1,528	335	1.15	1.34	4.56	FC	
	SK1A1B-L2W	CSR	220-60	303	352	1,203	263	1.15	1.34	4.57	FC	
	SK1A1B-L2WB	CSR	220-60	330	384	1,310	283	1.17	1.36	4.63	FC	
	AC 220-240V~50Hz, 220V~60Hz	NC1A30GLA	RSIR	220-50	68	79	270	71	0.96	1.11	3.80	ST
				220-60	80	93	318	77	1.04	1.21	4.12	
MSS151G-L1U		RSCR	220-50	125	145	496	90	1.39	1.61	5.51	ST	
			220-60	152	177	603	107	1.42	1.65	5.64		
MSA151G-L1B		RSCR	220-50	125	145	496	96	1.30	1.51	5.17	ST	
			220-60	152	177	603	114	1.33	1.55	5.29		
MSA162G-L1B		RSCR	220-50	151	176	599	119	1.27	1.48	5.04	ST	
			220-60	187	217	742	140	1.34	1.55	5.30		
MSS170G-L1U		RSCR	220-50	178	207	707	124	1.44	1.67	5.70	ST	
			220-60	222	258	881	151	1.47	1.71	5.84		
MK183G-L2U		RSCR	220-50	203	236	806	149	1.36	1.58	5.41	FC	
			220-60	258	300	1,024	179	1.44	1.68	5.72		
MK190G-L2U	RSCR	220-50	225	262	893	168	1.34	1.56	5.32	FC		
		220-60	285	331	1,131	200	1.43	1.66	5.66			

Reciprocating Compressor SPECIFICATIONS

R134a LBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP	
AC 220-240V~50Hz	CD124Q-L1Z2	RSIR	220-50	43	50	171	57	0.75	0.88	2.99	ST
	CD130Q-L1Z2	RSIR	220-50	58	67	230	65	0.89	1.04	3.54	ST
	CD130Q-S1ZA	RSIR	220-50	58	67	230	74	0.78	0.91	3.11	ST
	SD137Q-L1ZB	RSIR	220-50	75	87	298	86	0.87	1.01	3.46	ST
	SD137Q-L1UB	RSCR	220-50	75	87	298	80	0.94	1.09	3.72	ST
	NC1A37QLB	RSCR	220-50	90	105	357	80	1.13	1.31	4.47	ST
	SD143Q-L1U2	RSCR	220-50	95	110	377	99	0.96	1.12	3.81	ST
	MSA143Q-S1Z	RSIR	220-50	96	112	381	83	1.16	1.34	4.59	ST
	SD152Q-L1UB	RSCR	220-50	120	140	476	104	1.15	1.34	4.58	ST
	MD152Q-L1U2	RSCR	220-50	118	137	468	98	1.20	1.40	4.78	ST
	SD162Q-L1UB	RSCR	220-50	146	170	580	125	1.17	1.36	4.64	ST
	MK162Q-L1UA	RSCR	220-50	145	169	576	105	1.38	1.61	5.48	ST
	MSS162Q-L1U	RSCR	220-50	151	176	599	105	1.44	1.67	5.71	ST
	MSA162Q-L1G	RSCR	220-50	151	176	599	111	1.36	1.58	5.40	ST
	SK170Q-L1U	RSCR	220-50	168	195	667	141	1.19	1.39	4.73	ST/OC
	MSA170Q-L1B	RSCR	220-50	173	201	687	129	1.34	1.56	5.32	ST
	MSA170Q-L1G	RSCR	220-50	173	201	687	126	1.37	1.60	5.45	ST
	MK172Q-L2UB	RSCR	220-50	176	205	699	129	1.36	1.59	5.42	FC
	SK182Q-L2U	RSCR	220-50	203	236	806	164	1.24	1.44	4.91	FC/OC
	MK183Q-L2UB	RSCR	220-50	203	236	806	142	1.43	1.66	5.68	FC
SK190Q-L2U	RSCR	220-50	227	264	901	180	1.26	1.47	5.01	FC/OC	
MK190Q-L2U	RSCR	220-50	225	262	893	157	1.43	1.67	5.69	FC	
SK1A1Q-L2UB	RSCR	220-50	275	320	1,092	229	1.20	1.40	4.77	FC	
AC 200-220V~50Hz	CD124K-S1ZA	RSIR	220-50	42	49	167	71	0.59	0.69	2.35	ST
	CD130K-S1ZA	RSIR	220-50	58	67	230	79	0.73	0.85	2.91	ST
	MSA143K-S1B	RSCR	220-50	96	112	381	77	1.25	1.45	4.95	ST
	NC1A43KLB	RSCR	220-50	102	119	405	90	1.13	1.32	4.50	ST
	NC1A43KLA	RSIR	220-50	102	119	405	94	1.09	1.26	4.31	ST
	SK170K-T1UA	RSCR	220-50	168	195	667	137	1.23	1.43	4.87	ST
	SK170K-S1UB	RSCR	220-50	168	195	667	137	1.23	1.43	4.87	ST
	MSA170K-S1G	RSCR	220-50	173	201	687	135	1.28	1.49	5.09	ST
	MK172K-S1U	RSCR	220-50	176	205	699	124	1.42	1.65	5.63	ST

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

MOTOR TYPE

RSIR : Resistance Start Induction Run
RSCR : Resistance Start Capacitor Run
CSIR : Capacitor Start Induction Run
CSR : Capacitor Start Capacitor Run

ASHRAE CONDITIONS (LBP)

Evaporating Temp. : -23.3°C (-10°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 32.2°C (90°F)
Liquid sub-cooled to : 32.2°C (90°F)
Ambient Temp. : 32.2°C (90°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

R600a LBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP	
AC 115V~60Hz	MSE482C-L1H	RSCR	115-60	150	174	596	96	1.56	1.82	6.20	ST
	MSE482C-S1H	RSCR	115-60	150	174	596	97.6	1.54	1.79	6.10	ST
	MSA488C-S1B	RSCR	115-60	160	186	635	124.5	1.29	1.49	5.10	ST
	MSE4A0C-L1H	RSCR	115-60	186	216	738	123	1.51	1.76	6.00	ST
	MSE4A0C-S1H	RSCR	115-60	186	216	738	125.1	1.49	1.73	5.90	ST
	MSA4A1C-S1B	RSCR	115-60	197	229	782	156.3	1.26	1.47	5.00	ST
	MK490B-L1UA	RSCR	220-60	152	177	603	114	1.33	1.55	5.29	ST
AC 220-240V~50Hz	MD462Q-L1UA	RSCR	220-50	78	91	310	68	1.15	1.33	4.55	ST
	MSS470Q-L1U	RSCR	220-50	98	114	389	67	1.46	1.70	5.81	ST
	MSE482Q-L1U	RSCR	220-50	128	149	508	77	1.66	1.93	6.60	ST
	MSE482Q-L1G	RSCR	220-50	128	149	508	82.6	1.55	1.80	6.15	ST
	MSE482Q-L1H	RSCR	220-50	128	149	508	79.4	1.61	1.88	6.40	ST
	MSS488Q-L1U	RSCR	220-50	120	140	476	82	1.46	1.70	5.81	ST
	MSA488Q-L1B	RSCR	220-50	120	140	476	90	1.33	1.55	5.29	ST
	MSE490Q-L1U	RSCR	220-50	140	163	556	85.5	1.64	1.90	6.50	ST
	MSE490Q-L1G	RSCR	220-50	138	160	548	91.3	1.51	1.76	6.00	ST
	MSE4A0Q-L1U	RSCR	220-50	158	184	627	98	1.61	1.88	6.40	ST
	MSE4A0Q-L1G	RSCR	220-50	162	188	643	107.1	1.51	1.76	6.00	ST
	MSE4A0Q-L1H	RSCR	220-50	162	188	643	103.7	1.56	1.82	6.20	ST
	MSS4A1Q-L1U	RSCR	220-50	164	191	651	109	1.50	1.75	5.97	ST
	MSA4A1Q-L1B	RSCR	220-50	164	191	651	115	1.43	1.66	5.66	ST
	MSE4A1Q-L1U	RSCR	220-50	176	205	699	110.9	1.59	1.85	6.30	ST
	MSE4A1Q-L1G	RSCR	220-50	175	203	695	117.7	1.49	1.73	5.90	ST
	MSS4A2Q-R1U	RSCR	220-50	180	209	715	120	1.50	1.74	5.96	ST
	MSE4A2Q-L1U	RSCR	220-50	192	223	762	122.9	1.56	1.82	6.20	ST
	MSE4A2Q-L1H	RSCR	220-50	192	223	762	127	1.51	1.76	6.00	ST
	MK4A3Q-L1UA	RSCR	220-50	179	208	711	132	1.36	1.58	5.38	ST
MK4A5Q-L1U	RSCR	220-50	222	258	881	162	1.37	1.59	5.44	ST	
MK4A5Q-R1U	RSCR	220-50	230	267	913	160	1.44	1.67	5.71	ST	
AC 200-220V~50Hz, 220V~60Hz	MSE482H-L1G	RSCR	220-60	150	174	596	102	1.47	1.71	5.84	ST
		RSCR	220-50	130	151	516	87	1.49	1.74	5.93	
	MSE482H-L1H	RSCR	220-50	124	144	492	82	1.51	1.76	6.00	ST
		RSCR	220-60	143	166	568	93	1.54	1.79	6.10	
	MSA488H-L1B	RSCR	220-60	153	178	607	110	1.39	1.62	5.52	ST
RSCR		220-50	120	140	476	90	1.33	1.55	5.29		

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

MOTOR TYPE

RSIR : Resistance Start Induction Run
RSCR : Resistance Start Capacitor Run
CSIR : Capacitor Start Induction Run
CSR : Capacitor Start Capacitor Run

ASHRAE CONDITIONS (LBP)

Evaporating Temp. : -23.3°C (-10°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 32.2°C (90°F)
Liquid sub-cooled to : 32.2°C (90°F)
Ambient Temp. : 32.2°C (90°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

Reciprocating Compressor SPECIFICATIONS

R600a L/MBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP	
AC 200-220V~50Hz, 220V~60Hz	MSE482H-M1H	RSCR	220-50	242	281	961	121.6	1.99	2.32	7.90	ST
		RSCR	220-60	290	337	1,151	142.1	2.04	2.37	8.10	
	MSE482H-M1U	RSCR	220-50	242	281	961	115.7	2.09	2.43	8.30	ST
		RSCR	220-60	290	337	1,151	140.3	2.07	2.40	8.20	

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

MOTOR TYPE

RSIR : Resistance Start Induction Run
RSCR : Resistance Start Capacitor Run
CSIR : Capacitor Start Induction Run
CSR : Capacitor Start Capacitor Run

ASHRAE CONDITIONS (MBP)

Evaporating Temp. : -6.7°C (-20°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 35.0°C (95°F)
Liquid sub-cooled to : 46.1°C (115°F)
Ambient Temp. : 35.0°C (95°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

R134a DBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE
				COOLING CAPACITY			INPUT	EFFICIENCY			
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP	
AC 220V~60Hz	MSA670B-D1B	RSCR	220-60	810	942	3,216	361.1	2.24	2.61	8.90	ST
AC 220-240V~50Hz	MSA670Q-D1B	RSCR	220-50	665	773	2,640	277.8	2.39	2.78	9.50	ST

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

MOTOR TYPE

RSIR : Resistance Start Induction Run
RSCR : Resistance Start Capacitor Run
CSIR : Capacitor Start Induction Run
CSR : Capacitor Start Capacitor Run

ASHRAE CONDITIONS (HBP/DBP)

Evaporating Temp. : 7.2°C (45°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 35.0°C (95°F)
Liquid sub-cooled to : 46.1°C (115°F)
Ambient Temp. : 35.0°C (95°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

R134a HBP

RATED VOLTAGE	MODEL	MOTOR TYPE	VOLTAGE [V-Hz]	ASHRAE							COOLING TYPE	
				COOLING CAPACITY			INPUT	EFFICIENCY				
				Kcal/Hr	Watt	BTU/Hr		W	EFF	COP		EER
AC 100V~50/60Hz	SD652E-S2W2	CSR	100-50	450	523	1,787	230	1.96	2.28	7.77	FC	
			100-60	550	640	2,184	262	2.10	2.44	8.33		
	HK690E2W	CSR	100-50	780	907	3,097	390	2.00	2.33	7.94	FC	
			100-60	950	1,105	3,772	445	2.13	2.48	8.48		
AC 115V~60Hz	HK6A3E2W	CSR	100-50	1,050	1,221	4,169	577	1.82	2.12	7.22	FC	
			100-60	1,250	1,453	4,963	644	1.94	2.26	7.71		
	AC 115V~60Hz	SD643C-H2U2	RSCR	115-60	450	523	1,787	220	2.05	2.38	8.12	FC
		SD652C-H2U2	RSCR	115-60	550	640	2,184	262	2.10	2.44	8.33	FC
SK670C-H2Y		RSIR	115-60	720	837	2,858	390	1.85	2.15	7.33	FC	
SK682C-H2Y		RSIR	115-60	830	965	3,295	460	1.80	2.10	7.16	FC	
SK6A1C-H2Y		RSIR	115-60	1,080	1,256	4,288	630	1.71	1.99	6.81	FC	
HK672C2Z		RSIR	115-60	750	872	2,978	370	2.03	2.36	8.05	FC	
HK680C2Z		RSIR	115-60	850	988	3,375	430	1.98	2.30	7.85	FC	
HK690C2Z		RSIR	115-60	950	1,105	3,772	490	1.94	2.25	7.70	FC	
HK6A1C2U		RSCR	115-60	1,090	1,267	4,327	545	2.00	2.33	7.94	FC	
HK6A3C2W		CSR	115-60	1,250	1,453	4,963	690	1.81	2.11	7.19	FC	
AC 220V~60Hz	SD643B-H2U2	RSCR	220-60	450	523	1,787	220	2.05	2.38	8.12	FC	
	SD643B-H2UB	RSCR	220-60	480	558	1,906	238	2.02	2.35	8.01	FC	
	SD652B-S2W2	CSR	220-60	550	640	2,184	255	2.16	2.51	8.56	FC	
	SD652B-H2UB	RSCR	220-60	570	663	2,263	270	2.11	2.45	8.38	FC	
	SK670B-H2U	RSCR	220-60	720	837	2,858	330	2.18	2.54	8.66	FC	
	SK682B-H2U	RSCR	220-60	830	965	3,295	405	2.05	2.38	8.14	FC	
	SK6A1B-S2W	CSR	220-60	1,080	1,256	4,288	560	1.93	2.24	7.66	FC	
	HK672B2Z	RSIR	220-60	750	872	2,978	370	2.03	2.36	8.05	FC	
	HK680B2Z	RSIR	220-60	850	988	3,375	430	1.98	2.30	7.85	FC	
	HK690B2Z	RSIR	220-60	950	1,105	3,772	490	1.94	2.25	7.70	FC	
AC 220V~60Hz	HK6A1B2W	CSR	220-60	1,090	1,267	4,327	520	2.10	2.44	8.32	FC	
	HK6A3B2W	CSR	220-60	1,250	1,453	4,963	650	1.92	2.24	7.63	FC	
	AC 220-240V~50Hz	SD643Q-H2Z2	RSIR	230-50	370	430	1,469	197	1.88	2.18	7.46	FC
		SD652Q-H2Z2	RSIR	230-50	450	523	1,787	220	2.05	2.38	8.12	FC
		SK670Q-H2S	CSIR	230-50	600	698	2,382	310	1.94	2.25	7.68	FC
		SK670Q-H2Z	RSIR	230-50	595	692	2,362	310	1.92	2.23	7.62	FC
		SK682Q-H2Z	RSIR	230-50	700	814	2,779	365	1.92	2.23	7.61	FC
		SK6A1Q-S2S	CSIR	230-50	900	1,047	3,573	480	1.88	2.18	7.44	FC
		HK672Q2Z	RSIR	220-50	610	709	2,422	305	2.00	2.33	7.94	FC
		HK680Q2Z	RSIR	220-50	700	814	2,779	350	2.00	2.33	7.94	FC
HK690Q2Z		RSIR	220-50	780	907	3,097	380	2.05	2.39	8.15	FC	
HK6A1Q2Z		RSIR	220-50	910	1,058	3,613	465	1.96	2.28	7.77	FC	
HK6A3Q2U	RSCR	220-50	1,050	1,221	4,169	535	1.96	2.28	7.79	FC		

COOLING TYPE

FC : Fan cooling
OC : Oil cooling
ST : Static

MOTOR TYPE

RSIR : Resistance Start Induction Run
RSCR : Resistance Start Capacitor Run
CSIR : Capacitor Start Induction Run
CSR : Capacitor Start Capacitor Run

ASHRAE CONDITIONS (HBP)

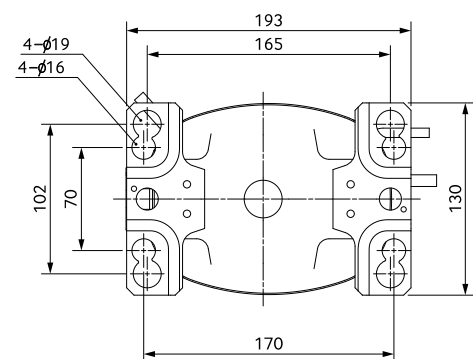
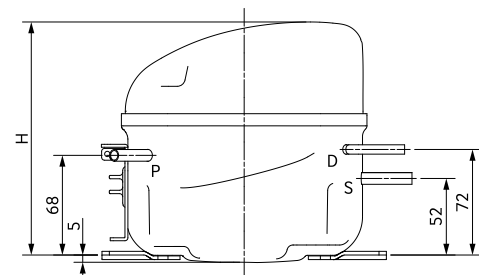
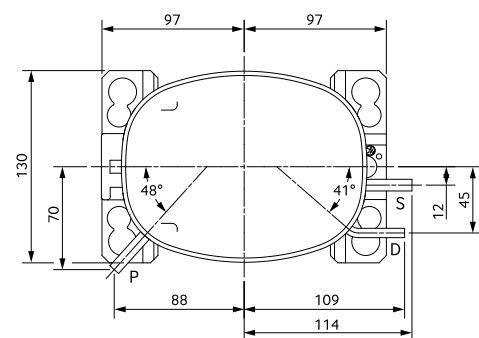
Evaporating Temp. : 7.2°C (45°F)
Condensing Temp. : 54.4°C (130°F)
Gas Superheated to : 35.0°C (95°F)
Liquid sub-cooled to : 46.1°C (115°F)
Ambient Temp. : 35.0°C (95°F)

UNIT CONVERSION TABLE

1 watt = 3.41 Btu/Hr
1 watt = 0.86 Kcal/Hr
1 Kcal/Hr = 3.97 Btu/Hr

DIMENSION

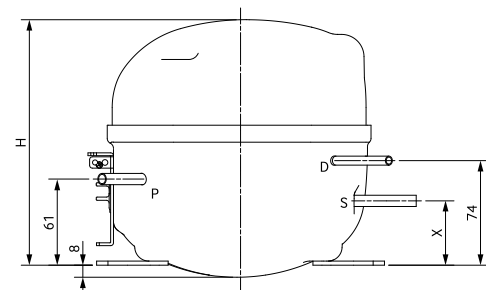
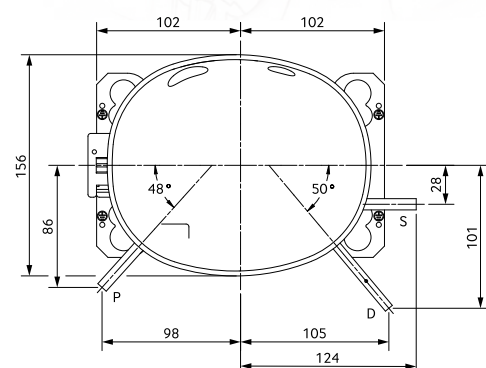
CD Series (Universal Type)



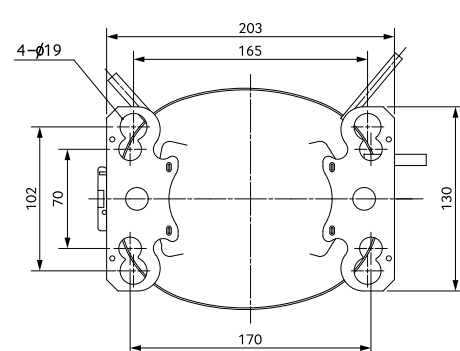
Height [mm]		
Grade	Cooling Type	H
24/30GR	Static	157
37GR		162

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

MS Series (Universal Type)



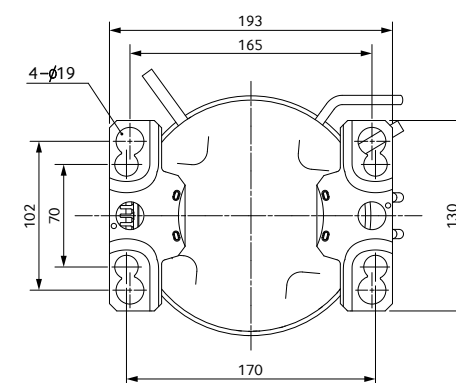
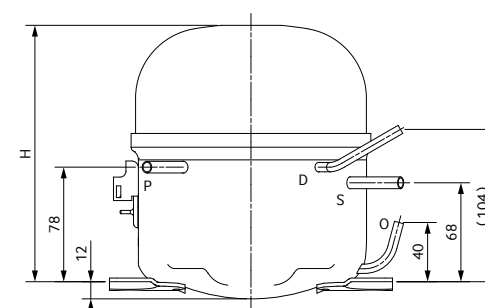
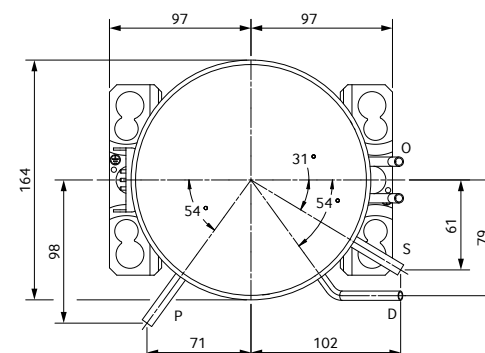
MODEL	X(mm)
MSS, MSA	45
MSE	61



Height [mm]		
Grade	Cooling Type	H
43/S1GR	Static	169
62/70/A2GR		173

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

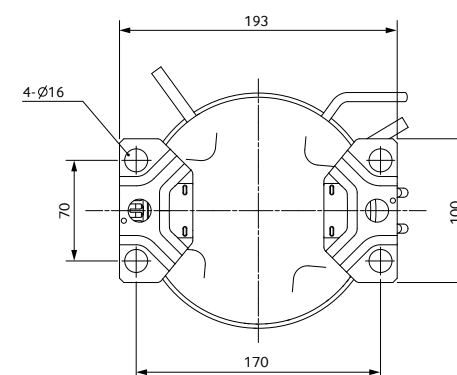
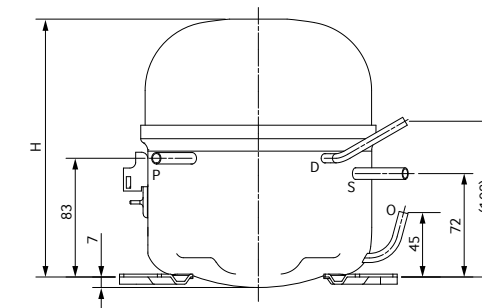
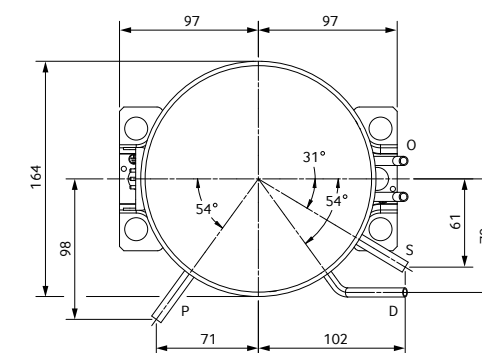
SD, MD Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
30GR	Static	157
37/43GR		166
52GR		171
62GR	Oil Cooling	175
62GR		178

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35/6.50
(S) Suction		7.94/7.60
(P) Process		7.94/7.60
(O) Oil Cooler	Steel	6.35

SD, MD Series (European Type)

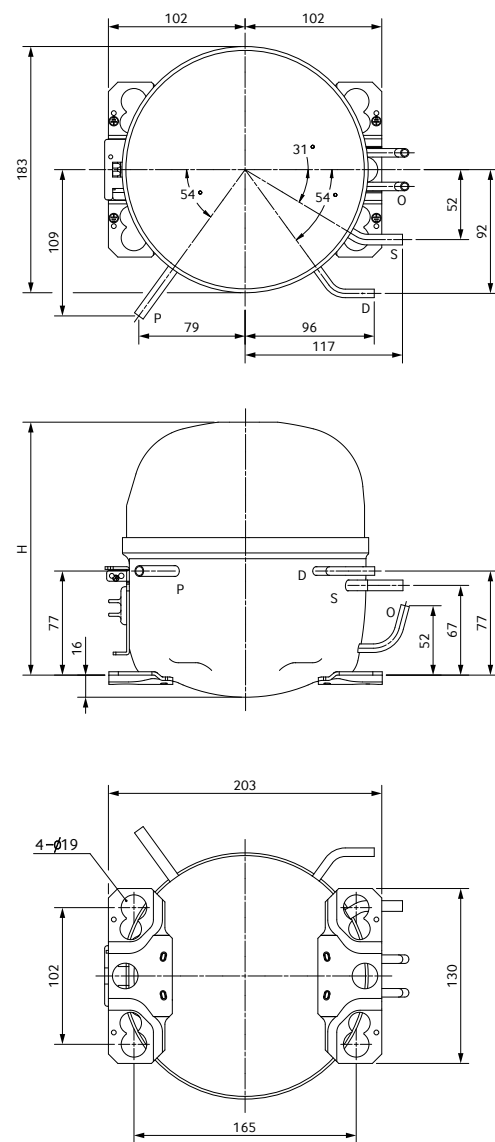


Height [mm]		
Grade	Cooling Type	H
30GR	Static	161
37/43GR		170
52GR		175
62GR	Oil Cooling	179
62GR		182

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35/6.50
(S) Suction		7.94/7.60
(P) Process		7.94/7.60
(O) Oil Cooler	Steel	6.35

DIMENSION

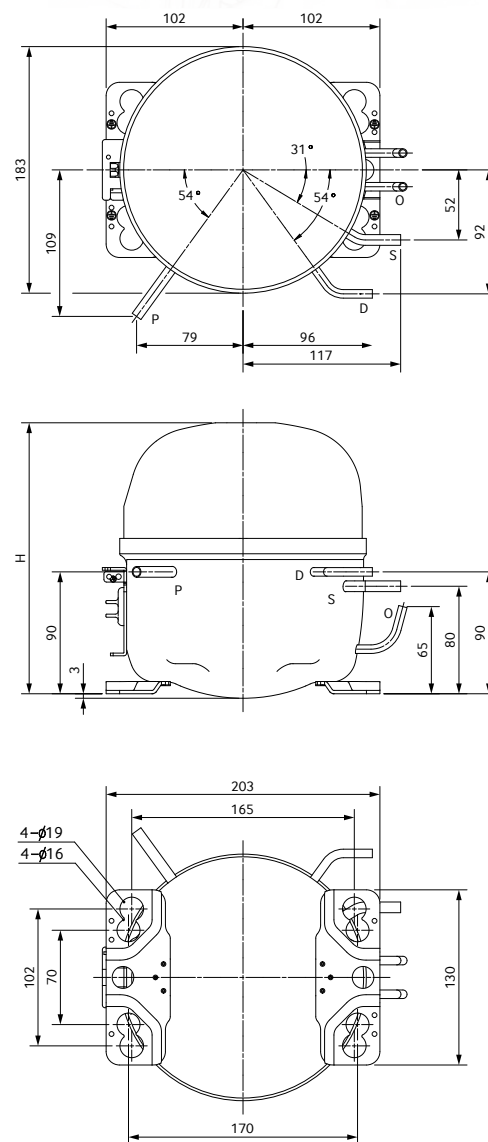
SK, MK, MKV Series (Universal Type I)



Height [mm]		
Grade	Cooling Type	H
62/70/82/90GR A1/A3/A5GR	Static/ Fan Cooling	189
62/70/82/90GR A1/A3/A5GR	Oil Cooling	196

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35/6.50
(S) Suction		7.94/7.60
(P) Process		7.94/7.60
(O) Oil Cooler	Steel	6.35

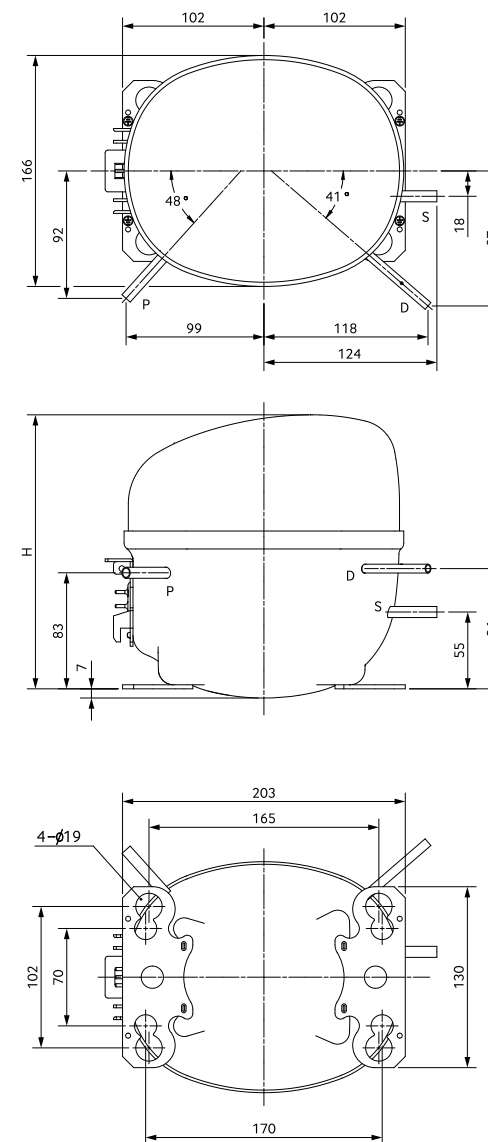
SK, MK, MKV Series (Universal Type II)



Height [mm]		
Grade	Cooling Type	H
62/70/82/90GR A1/A3/A5GR	Static/ Fan Cooling	202
62/70/82/90GR A1/A3/A5GR	Oil Cooling	208

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35/6.50
(S) Suction		7.94/7.60
(P) Process		7.94/7.60
(O) Oil Cooler	Steel	6.35

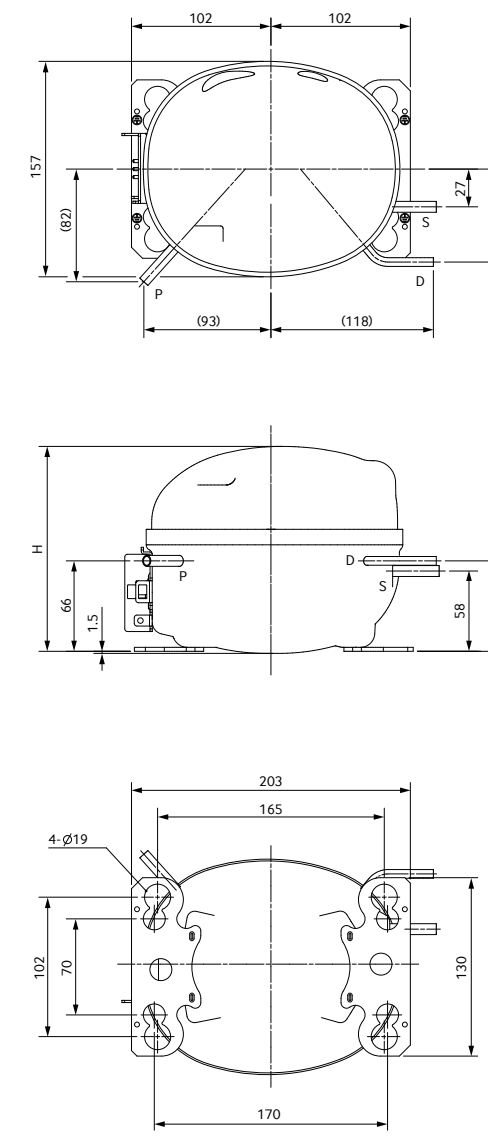
ENV Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
A3/A5GR	Fan Cooling Static	183

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

MSV Series (Universal Type)



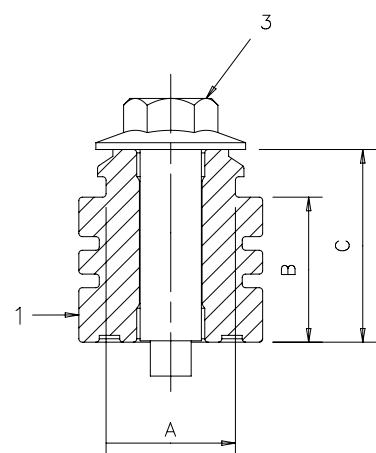
Height [mm]		
Grade	Cooling Type	H
62/72/88/A1GR	Static	149

Tube Connection [mm]		
Tubing	Material	OD [T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

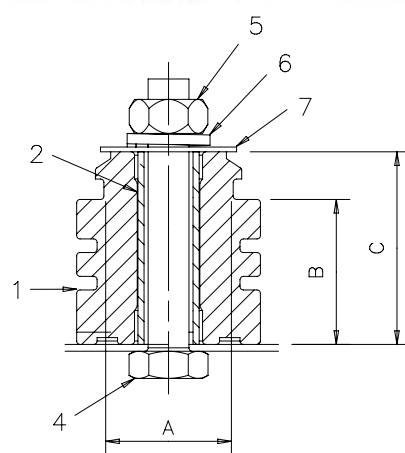
MOUNTING ACCESSORIES

BLDC Model

BOLT-HEX (Type I)

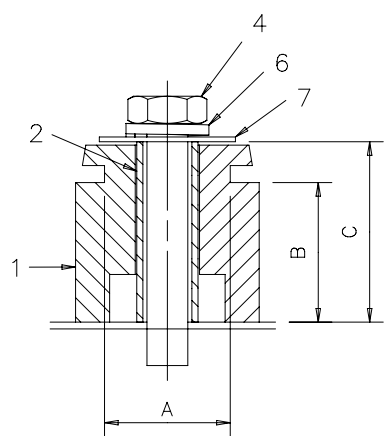


NUT-HEX (Type I)

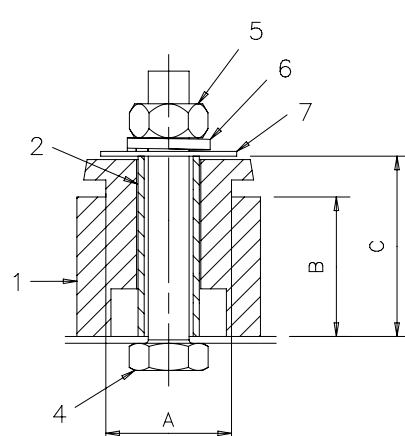


AC Model

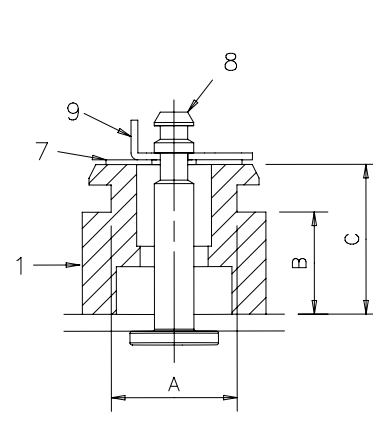
BOLT-HEX (Type II)



NUT-HEX (Type II)



SNAP-ON

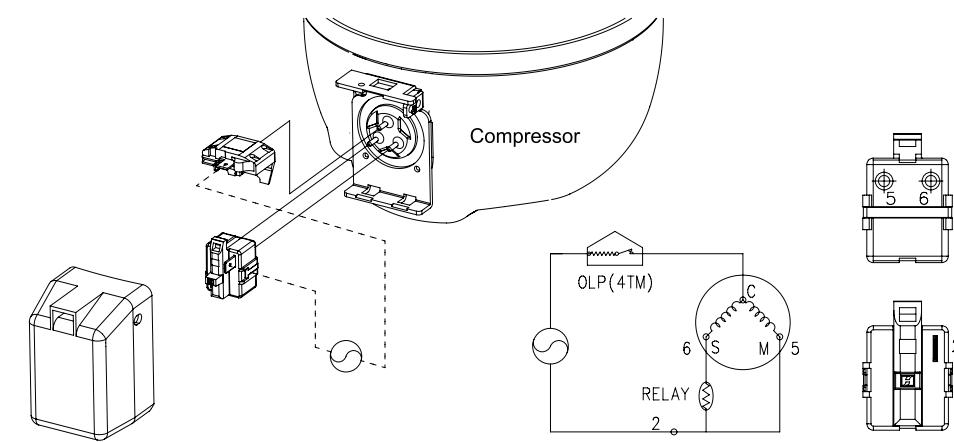


1. Grommet 2. Sleeve 3. Bolt-comp(M6) 4. Bolt-hex(M6) 5. Nut-hex(M6) 6. Washer spring
7. Washer plain 8. Bolt-stud 9. Retainer

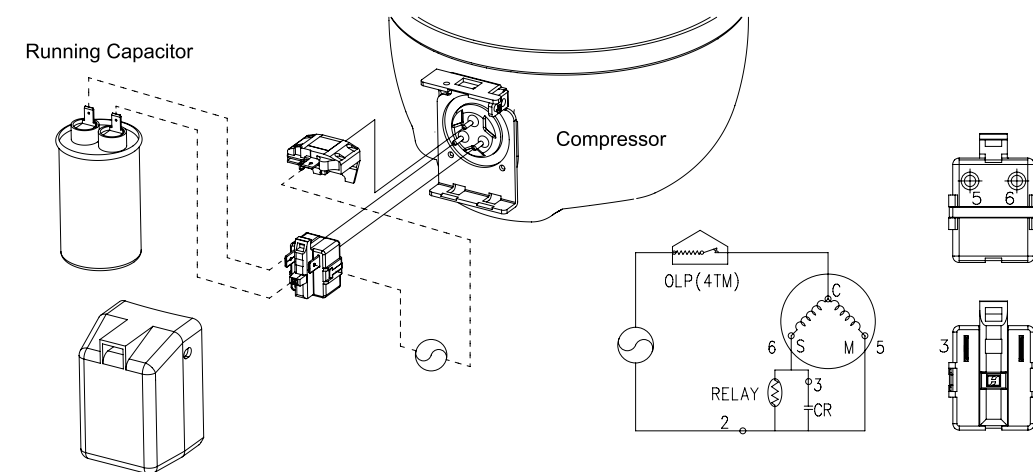
MOUNTING TYPE	BOLT-HEX TYPE II						
	NUT-HEX TYPE						
	BOLT-HEX TYPE I		SNAP-ON TYPE				
Series	ENV, MKV, MSV	CD, SD, MD			SK, MK, HK, MS		
Mounting Bracket	Universal	Universal	European	Universal	European		
Hole Size	Ø19	Ø19	Ø16	Ø16	Ø19	Ø16	
DIMENSION[mm]	A	18.5	18.5	15.5	15.5	18.5	15.5
	B	21.3	15.0	15.0	9.0	20.5	9.0
	C	28.0	23.0	22.5	16.0	26.0	16.0

ASSEMBLY DIAGRAMS

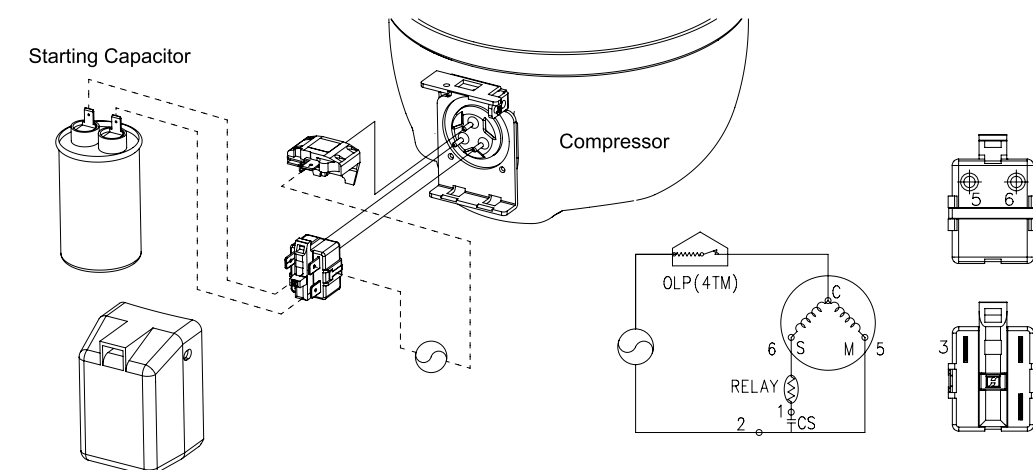
Assembly of OLP and PTC Relay in RSIR Motor (with S-HOOK Cover Type)



Assembly of OLP and PTC Relay in RSCR Motor (with S-HOOK Cover Type)

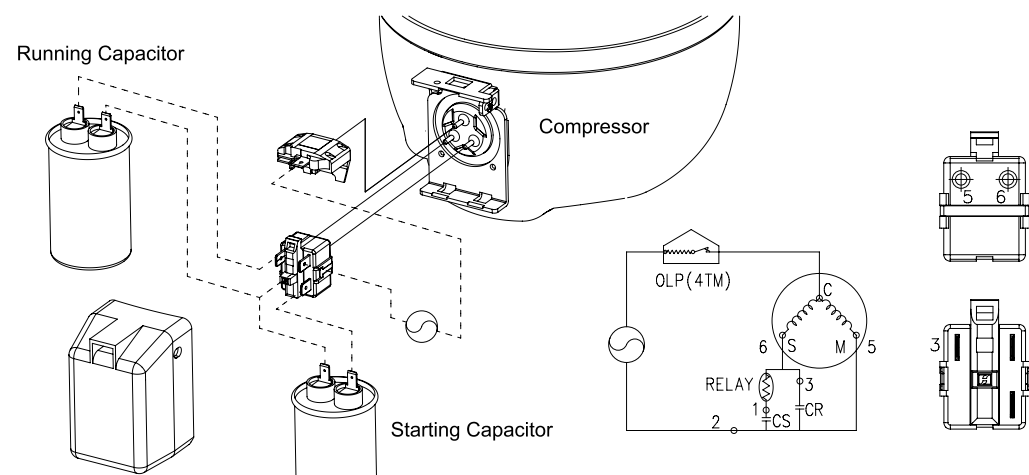


Assembly of OLP and PTC Relay in CSIR Motor (with S-HOOK Cover Type)



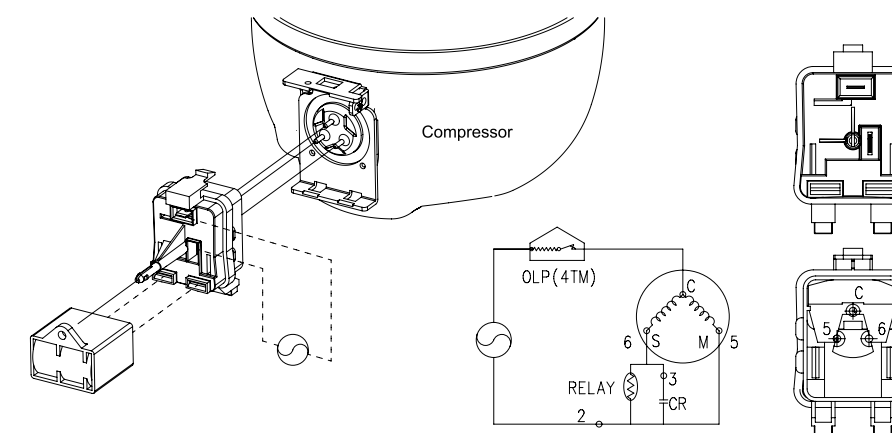
ASSEMBLY DIAGRAMS

Assembly of OLP and PTC Relay in CSR Motor (with S-HOOK Cover Type)

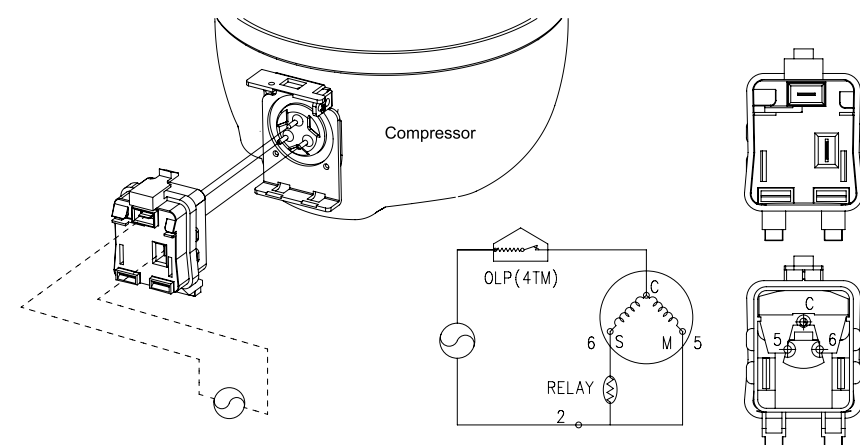


ASSEMBLY DIAGRAMS

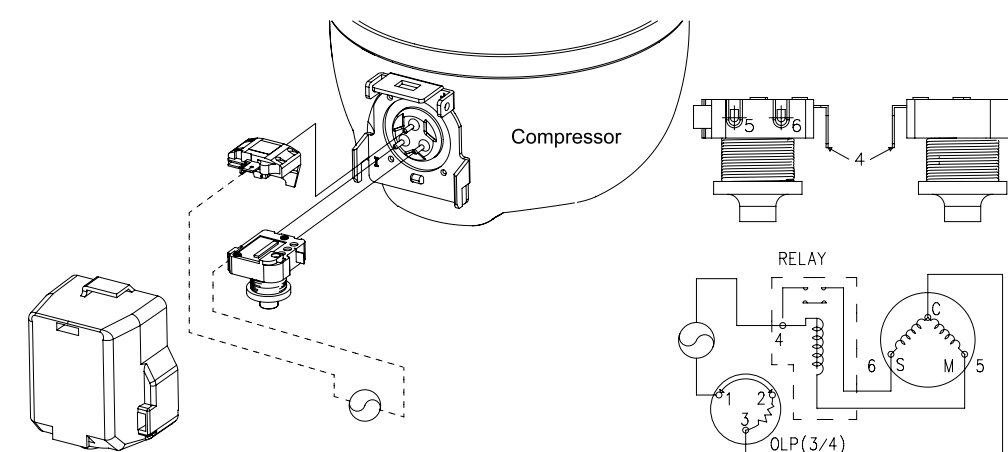
Assembly of Assy Combo in RSCR Motor (with Combo Type)



Assembly of Assy Combo in RSIR Motor (with Combo Type)

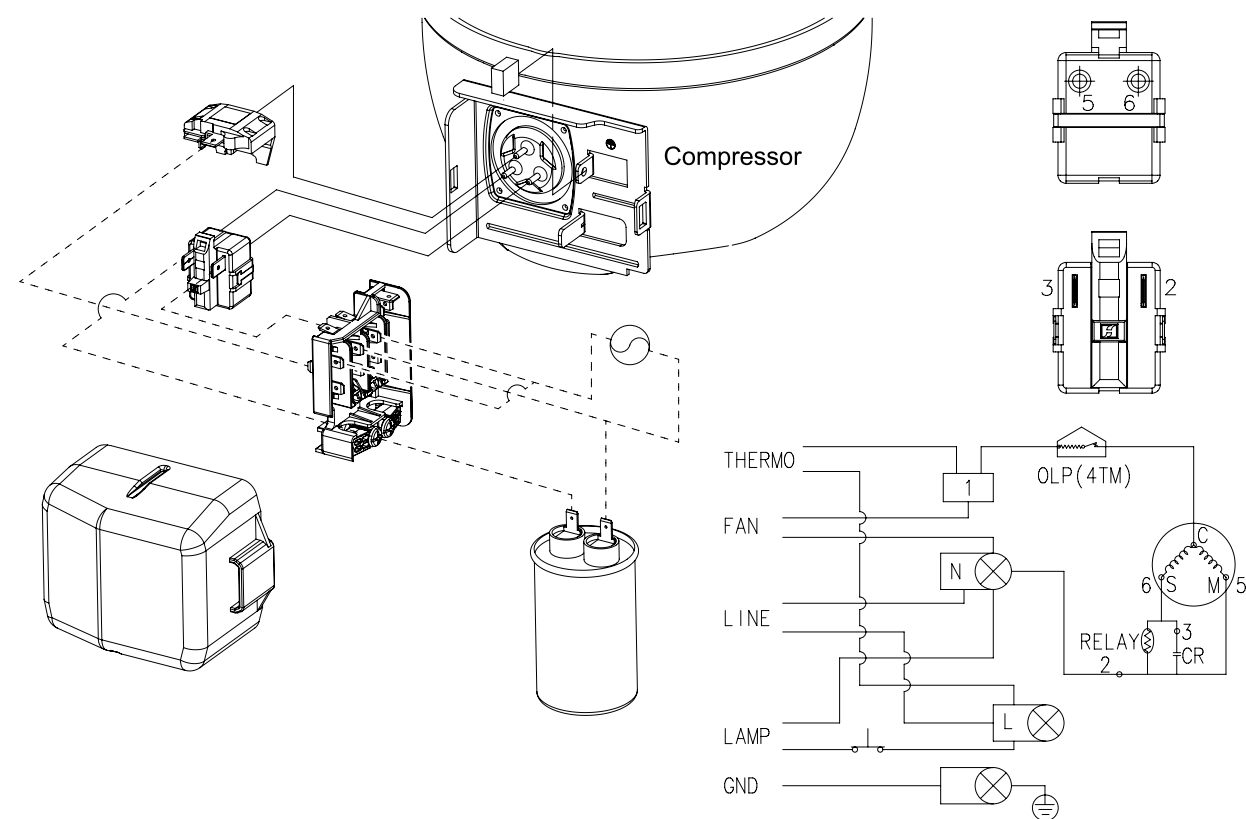


Assembly of OLP and Current Relay in RSIR Motor (with HOOK Cover Type)



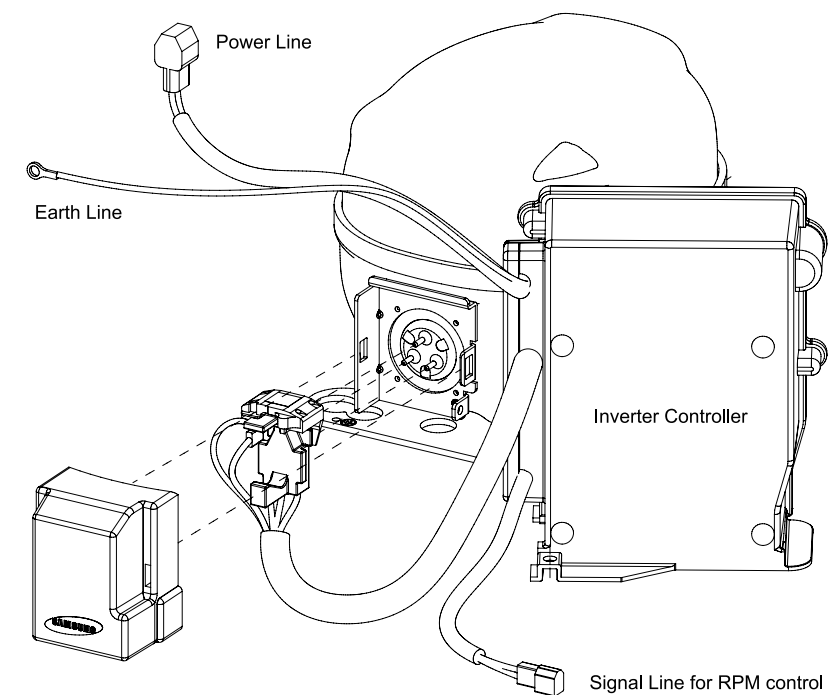
ASSEMBLY DIAGRAMS

Assembly of OLP and PTC Relay in RSCR Motor (with T/B Cover Type)

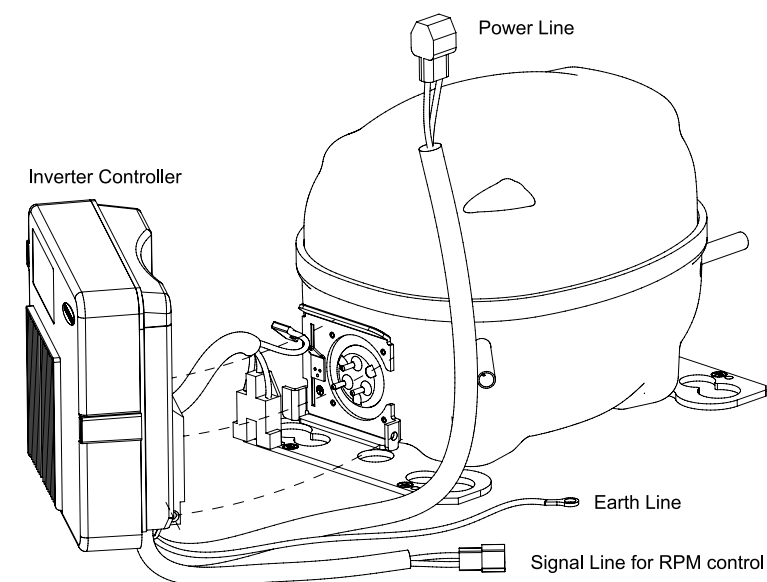


ASSEMBLY DIAGRAMS

Assembly of Inverter Controller in BLDC Motor (with Separation Type)



Assembly of Inverter Controller in BLDC Motor (with Built-in Type)



APPLICATION GUIDE



Compressors under improper application can not achieve good performance and long-life reliability. This application guide provides the recommended handling techniques and requirements for application of SAMSUNG reciprocating compressor in order to help achieving good performance and long-life reliability.

1. Usable Refrigerant

REFRIGERANT	LBP(Low Back Pressure)		HBP(High Back Pressure)
	R134a	R600a	R134a
	Purity of 99.95% Min.	Purity of 99.5% Min.	Purity of 99.95% Min.

2. Starting condition

The LBP type compressors start at 85% of the nominal voltage.

- Equalized pressure up to 70psig(4.9kgf/cm²) for R134a LBP compressors.
- Equalized pressure up to 40psig(2.8kgf/cm²) for R600a LBP compressors.

The HBP type compressors start at 90% of the nominal voltage.

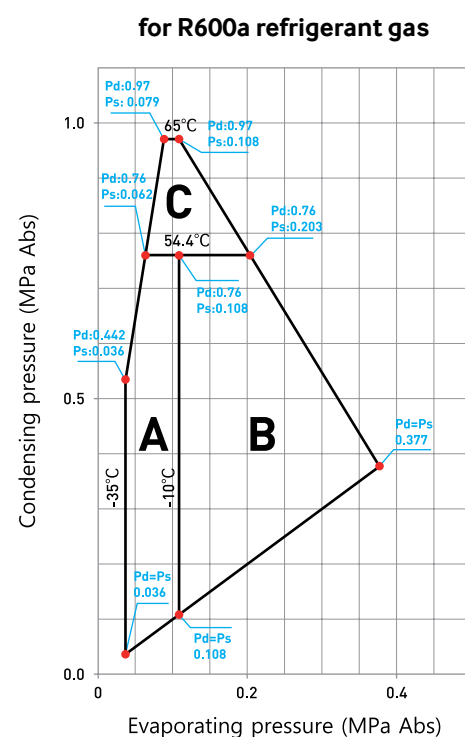
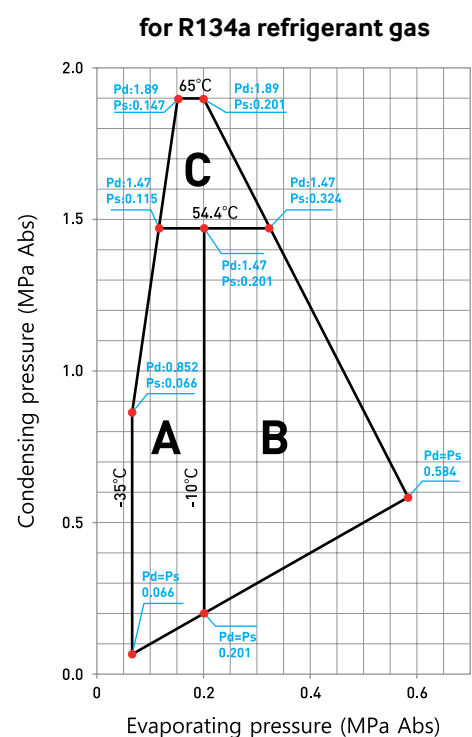
- Equalized pressure up to 90psig(6.3kgf/cm²) for R134a HBP compressors.

Depending on the operating condition and system characteristics, compressors can be started at lower voltages.

3. Temperature and Pressure of cycle

The refrigerant system must be used within the temperature and pressure range as below table.

In case of LBP refrigerant system with R134a and R600a refrigerant gas

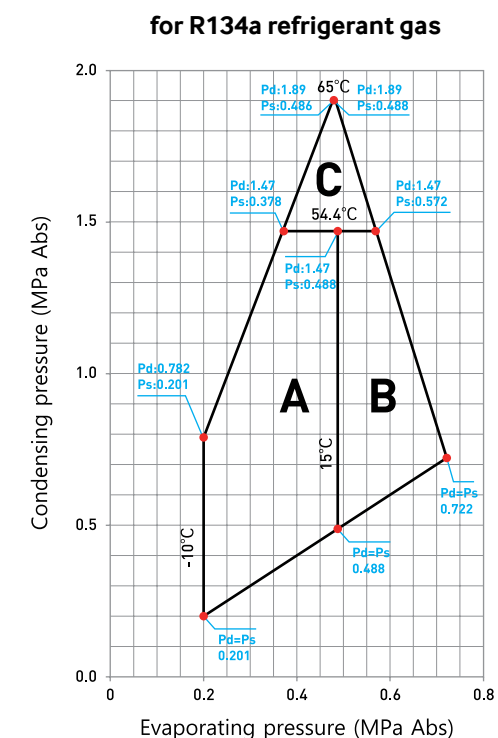


* Remarks

1. "A" area on chart : Stabilized running condition before stopping.
2. "B" area on chart : Transient running condition just after starting.
3. "C" area on chart : Compressor initial pull-down and restarting after defrost.

APPLICATION GUIDE

In case of HBP refrigerant system with R134a refrigerant gas



* Remarks

1. "A" area on chart : Stabilized running condition before stopping.
2. "B" area on chart : Transient running condition just after starting.
3. "C" area on chart : Compressor initial pull-down and restarting after defrost.

4. Motor Winding Temperature

In case of LBP refrigerant system

The motor winding temperature should not exceed 120°C(248°F) in the continuous operation and 130°C (266°F) in the Pull-Down operation at the expected ambient temperature(43°C)

In case of HBP refrigerant system

The motor winding temperature should not exceed 120°C(248°F) in the continuous operation and 130°C(266°F) in the Pull-Down operation at the expected ambient temperature(26.7°C, 81°F)
The limit motor winding temperature should not exceed 130°C(266°F) at the expected maximum ambient temperature(32.2°C, 90°F).

If the temperature exceeds, the motor is overloaded, then it shortens the motor life. The winding temperature of the motor can be calculated by below equation.

$$T2 = (R2-R1)/R1*(K+T1)+T1$$

- T1 : The room temperature at the beginning of the test
- T2 : The winding temperature(unknown) at the end of the test
- R1 : The resistance at the beginning of the test
- R2 : The resistance at the end of the test
- K : Temperature coefficient of resistance (Copper wire : 234.5, Aluminum wire : 225.0)

APPLICATION GUIDE



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5. Other Temperatures

Below temperatures should not be exceeded the refrigerant system to be operated normally.
If the test temperature is not indicated, it is measured at the ambient temperature.

Application	Refrigerant	Suction Gas Temp	Discharge Gas Temp	Compressor Upper Surface Temp
LBP	R134a	Than the ambient temperature -2°C(28°F) ~ +1°C(34°F), to prevent dew formation.	Max. 100°C(212°F) Peak 115°C(239°F)	Max. 100°C(212°F) in the hot side Min. 5°C(41°F) in the low side at 43°C(109°F) ambient temp.
	R600a			
HBP	R134a		Max. 100°C(212°F) at 26.7°C(80°F) ambient temperature Peak 115°C(239°F) at 32.3°C(90°F) ambient temperature	Max. 100°C(212°F) in the hot side Min. 5°C(41°F) in the low side at 32.2°C(90°F) ambient temp.

✳ Measurement location

Suction Gas Temperature is measured at the distance 15cm of the insulated surface suction pipe from welded case. Discharge Gas Temperature is measured at the distance 5cm of the insulated surface discharge pipe from welded case.

6. Refrigerant Charging

For each refrigerant system, the optimal refrigerant Charging amount should be determined in an appropriate test laboratory in order to obtain the best working condition.

If the refrigerant amount exceeds or lacks compared to the proper amount range, it'll be caused loss of cooling capacity, lowering of efficiency and damage of compressor life.

The refrigerant charge of the refrigerant system must not exceed above No.2 start condition as suction and discharge pressure.

7. Operating condition

The refrigerant system should be maintained as below table.

Application	Refrigerant	Compression Ratio	Operated Ratio	Ambient Temperature	Refrigeration Oil	On/Off Cycle Time
LBP	R134a	Max. 12.7	Max. 65% Based on Ref. Normal-Normal Condition	Max. 5°C ~ 43°C (Max. 41°F ~ 109°F)	TAN 0.01mgKOH/ g max. Moisture 10ppm max.	Restarting time limit must be longer than 5 minutes
	R600a	Max. 12.4				
HBP	R134a	Max. 3.9	Max. 65% Based on Normal-Normal Condition at 26.7°C ambient Temp.		TAN 0.01mgKOH/ g max. Moisture 20ppm max.	Max. 6 times/ hours

8. Evacuation of cycle

Prevent non-condensable gases, such as air, from permeating into the cycle.

Air or non-condensable gases in the refrigerant cause a decline in cooling capacity and a rise in input wattage due to high discharge pressure.

In particular, air(Oxygen) cause the generation of sludge and shortening of compressor life. Therefore, the non-condensable gas in R134a system must not exceed 1%(vol.)

The recommendable vacuum level is under 0.08 Torr(mmHg), and the evacuation time must be 40 minutes or more with the capacity of vacuum pump of 300 LT/min or more.

The vacuum pump should be used exclusively, and it is better to vacuum simultaneously in high and low pressure sides with a pump per system.

It is not allowed that putting electric power into the compressor with a vacuum condition, then electric spark will be occurred in the compressor and compressor can be damaged critically. (Vacuum Discharge)

9. Filter dryer

The filter dryer must be chosen with the molecular sieve suitable to the refrigerant type as below.

	R134a	R600a
FILTER DRYER	XH-7 or XH-9	XH-5

✳ If a filter dryer of the refrigerant system is not chosen properly, it can be a source of the indicated causes as below table.

Problems	Appearances
Ice build-up	The moisture in the capillary tube is frozen, then it reduces the cross-sectional area of capillary tube and finally obstruct the capillary tube.
Acid build-up	The moisture reacts with refrigeration oil and then creates acid. Acid is caused as bellow chemical typical marks and consequences. - Copper plating of valve plate, valve reeds, crankshaft, bearing, block, frame etc. - Etching of electric motor insulation with burning of motor winding. - Destruction of the filter with disintegration of molecular sieve and build-up of "dusts"
Oil contamination	The moisture causes acidification and reduction of the lube capability of the refrigeration oil with change of oil color as brown. It can cause build-up of sludge with subsequent poor lube of compressor.

10. Notice in handling, storage and transportation of compressor

10-1. Compressor with the removal of rubber cap from tube should be assembled with the cycle as soon as possible. It is not allowed that the compressor without rubber-cap is left in the air more than 15 minutes.

10-2. Compressor might be affected by the environmental condition which it is stored.
So, compressor that is charged with nitrogen and sealed should be used within recommendation period.

	R134a	R600a
Storage	8 months	10 months

After recommendation period, compressor can be used after validating the moisture level of compressor inside.

10-3. The finished product(compressor adopted to application) should be positioned upright during transportation. If the other transportation condition is needed, the discussion with SAMSUNG must be done in advance.

APPLICATION GUIDE

PACKING INFORMATION

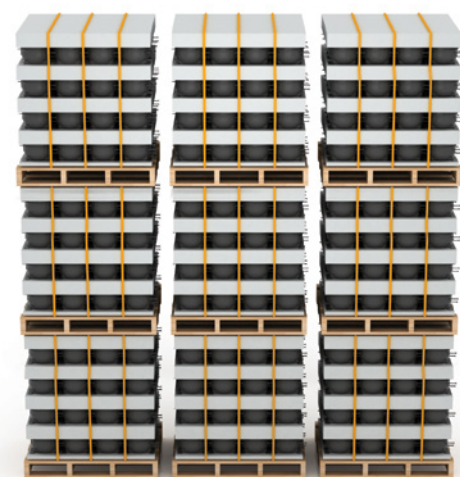
11. Handling



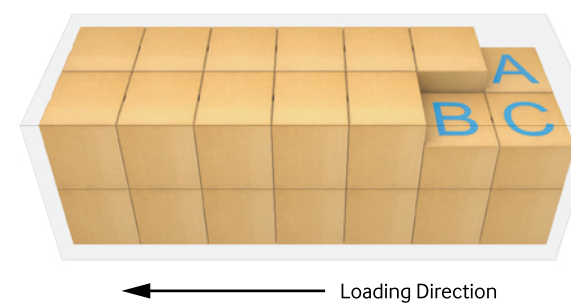
Handle with care



Max 3 Carton

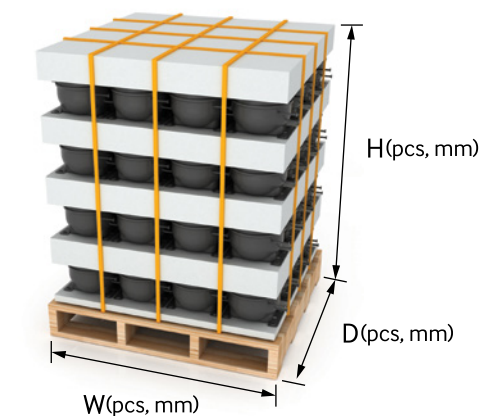


Container Packing Method



※ A, B, C : Accessory Packing Box

Pallet Packing Method



※ Pallet Size
 CD, SD, MD : 1,090(W) * 946(D)
 SK, MK, HK, MS, ENV, MSV : 1,110(W) * 766(D)

SERIES	GRADE	Weight	Array	Pallet Height	Comp Q'ty/ Pallet	Pallet Q'ty/ CNTR	Loading Q'ty/ CNTR
		(kg)	(WxDxH)	(mm)	(pcs)	(pcs)	(pcs)
CD	24GR	6.3	7 x 4 x 5	1,114	140	20	2,800
	30GR	6.4	7 x 4 x 5	1,114	140	19	2,660
	37GR	6.6	7 x 4 x 5	1,114	140	18	2,520
SD,MD	37GR	7.4	6 x 4 x 4	955	96	9	2,304
			6 x 4 x 5	1,140	120	12	
	43GR	7.8	6 x 4 x 4	955	96	12	2,232
			6 x 4 x 5	1,140	120	9	
	52GR	8.0	6 x 4 x 4	985	96	15	2,160
	62GR	8.5	6 x 4 x 4	1,012	96	21	2,016
90GR	8.1	6 x 4 x 4	1,040	96	21	2,016	
SK, HK, MK	A1GR	8.5	6 x 4 x 4	1,040	96	21	2,016
	52GR	10.1	5 x 3 x 4	1,020	60	25	1,500
	62GR	10.2	5 x 3 x 4	1,046	60	25	1,500
	70GR	10.5	5 x 3 x 4	1,046	60	25	1,500
	82GR, 90GR	10.8	5 x 3 x 4	1,046	60	25	1,500
	A1GR, A3GR	10.6	5 x 3 x 4	1,046	60	25	1,500
MSS / MSA	A5GR	10.9	5 x 3 x 4	1,046	60	25	1,500
	43GR	8.3	6 x 3 x 4	990	72	11	2,052
	51GR	8.3	6 x 3 x 4	990	72	25	
	62GR	8.6	6 x 3 x 4	1,006	72	25	1,800
	70GR, 88GR	8.8	6 x 3 x 4	1,006	72	25	1,800
MSE	A1GR, A2GR	9.1	6 x 3 x 4	1,006	72	25	1,800
	82GR, 90GR, A0GR, A1GR, A2GR	9.6	6 x 3 x 4	1,006	72	25	1,800
MSV	62GR, 88GR	7.1	6 x 3 x 5	1,010	90	25	2,250
	A1GR	7.4	6 x 3 x 5	1,010	90	25	2,250
ENV	A3GR	9.6	5 x 3 x 4	1,038	60	25	1,500
	A5GR	9.6	5 x 3 x 4	1,038	60	25	1,500

Rotary Compressor MODEL IDENTIFICATION



Rotary Compressor Ver. 01

Comp Type	Frame	Cooling Capacity (x100 Btu/h)	Miscellaneous Change	Foot Position	
UR R22	0 20 Frame	Ex.) 080 : 8,000 Btu/h	OLD	Tri-angle foot	
UG R410A	9 39 Frame		A : Basic	E 30°	M 15°
UB R32	4 44 Frame		B : 1st changed	J 90° (-30°)	F 45°
UX R134a	8 48 Frame		C : 2nd changed	K 105° (-15°)	H 60°
UF R407C	5 55 Frame				L 75°
	3 63 Frame				

UR 4 A 080 H U A E B

Major Change (Pump Ass'y)	
A	Basic
B	Taller
C	Shorter
T	Twin
D	Improved Efficiency
V	Capacity Modulation

Power Source	
H	1φ 115V, 60Hz
I	1φ 208-230V, 60Hz
M	1φ 200-220V, 50Hz
J	1φ 220-240V, 50Hz
D	1φ 220V, 50Hz
G	1φ 127V, 60Hz
K	1φ 100V, 50/60Hz
Y	1φ 265V, 60Hz
A	3φ 380V, 60Hz
B	3φ 380-420V, 50Hz
C	3φ 220V, 60Hz
F	3φ BLDC(Nd)
L	3φ BLDC(Ferrite)
Z	3φ BLDC, DC24V

Model Type	
OLD	
V, S	High EER
U, X	Super EER
T	Tropical

Accumulator				
	Out dia.(mm) x Height(mm)	Effective(cc)	Remark	
20F	S φ31.8 x 87.0	20		
39F	A φ31.8 x 172.8	50		
44F	B φ41.3 x 190.3	87		
44F	F φ47.6 x 204.5	160		
48F	L φ58.4 x 237.0	340		
48F	H φ77.4 x 260.0	620		
	W φ77.0 x 271.5	600	Twin	
48F	U φ77.0 x 282.0	580	Twin	
	M φ77.4 x 290.0	750	Split type A/C	
55F	N φ77.4 x 264.0	620	Package type A/C	
	S φ77.4 x 260.0	620		
55F	K φ77.4 x 295.8	650	Twin	
	X φ90.0 x 303.8	890	Twin	
55F	2 φ90.0 x 270.9	855	Split type A/C	
	3 φ77.0 x 350.8	900	Twin	
G4F	P φ58.4 x 223.0	300		
	R φ77.4 x 217.0	500	G4C BLDC	
G4F	Q φ77.0 x 260.6	570	G4T BLDC	
	4 φ77.0 x 273.5	600	Twin	
G4F	6 φ77.0 x 260.6	570	G4T HI-EER	
	V φ90.0 x 351.0	1100	R22	
63F	Y φ90.0 x 344.8	1100	R410A/R22	
	44F Z φ15.9 x 190.0	-	Tandem	
48F Z φ15.9 x 225.0	-	Tandem		
55F Z φ19.1 x 260.0	-	Tandem		

Rotary Compressor Ver. 02

Comp Type	Frame	Launching Year	Cooling Capacity (x100 Btu/h)	Foot Position	
UR R22	0 20 Frame	H 2014 J 2015 K 2016 L 2017 M 2018	Ex.) 080 : 8,000 Btu/h	Tri-angle foot	
UG R410A	9 39 Frame			E 30°	M 15°
UB R32	4 44 Frame			J 90° (-30°)	F 45°
UX R134a	8 48 Frame			K 105° (-15°)	H 60°
UF R407C	5 55 Frame			L 75° (-45°)	L 75°
	3 63 Frame				

UR 4 A H 5 080 H E B

Major Change (Pump Ass'y)	
A	Basic
B	Taller
C	Shorter
T	Twin
D	Improved Efficiency
V	Capacity Modulation

Series

Power Source	
H	1φ 115V, 60Hz
I	1φ 208-230V, 60Hz
M	1φ 200-220V, 50Hz
J	1φ 220-240V, 50Hz
D	1φ 220V, 50Hz
G	1φ 127V, 60Hz
K	1φ 100V, 50/60Hz
Y	1φ 265V, 60Hz
A	3φ 380V, 60Hz
B	3φ 380-420V, 50Hz
C	3φ 220V, 60Hz
F	3φ BLDC(Nd)
L	3φ BLDC(Ferrite)
Z	3φ BLDC, DC24V
Q	3φ BLDC (AC100V)

Accumulator				
	Out dia.(mm) x Height(mm)	Effective(cc)	Remark	
20F	S φ31.8 x 87.0	20		
39F	9 φ31.8 x 172.8	50		
	A φ31.8 x 172.8	50		
44F	B φ41.3 x 190.3	87		
	7 φ31.8 x 114.7	24	R134a	
44F	F φ47.6 x 204.5	160		
	L φ58.4 x 237.0	340		
48F	P φ58.4 x 223.0	300		
	8 φ58.4 x 221.0	300		
48F	H φ77.4 x 260.0	620		
	W φ77.0 x 271.5	600	Twin	
48F	U φ77.0 x 282.0	580	Twin	
	M φ77.4 x 290.0	750	Split type A/C	
55F	N φ77.4 x 264.0	620	Package type A/C	
	S φ77.4 x 260.0	620		
55F	K φ77.4 x 295.8	650	Twin	
	X φ90.0 x 303.8	890	Twin	
55F	2 φ90.0 x 270.9	855	Split type A/C	
	3 φ77.0 x 350.8	900	Twin	
G4F	R φ77.4 x 217.0	500	G4C BLDC	
	Q φ77.0 x 260.6	570	G4T BLDC	
G4F	4 φ77.0 x 273.5	600	Twin	
	6 φ77.0 x 260.6	570	G4T HI-EER	
63F	V φ90.0 x 351.0	1100	R22	
	Y φ90.0 x 344.8	1100	R22, R410A	
44F Z φ15.9 x 190.0	-	Tandem		
48F Z φ15.9 x 225.0	-	Tandem		
55F Z φ19.1 x 260.0	-	Tandem		

Rotary Compressor SPECIFICATIONS

R410A 60Hz

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R410A	60Hz	1φ, 115V	UG9C050HS	4.9	5,000	1,465	10.1	2.96	495	210	7.6	9
			UG9C052HS	5.0	5,200	1,524	10.1	2.96	515	210	7.5	9
			UG9C060HS	5.8	6,000	1,758	10.1	2.96	594	210	7.5	9
			UG9C067HS	6.6	6,750	1,978	10.1	2.96	668	270	8.1	10
			UG9C076HS	7.3	7,600	2,227	10.0	2.93	760	210	7.9	11
			UG9C080HS	7.6	8,000	2,345	10.0	2.93	800	210	7.9	11
			UG4A098HU	9.7	10,000	2,931	10.2	2.99	980	300	11.1	9
			UG4A110HU	10.9	11,500	3,370	10.5	3.08	1,095	300	11.7	6
			UG9C060IS	5.8	6,000	1,758	10.0	2.93	600	270	7.8	12
		UG9C067IS	6.6	6,750	1,978	10.2	3.00	660	210	7.9	11	
		UG9C076IS	7.3	7,600	2,227	10.1	2.97	750	210	7.9	11	
		UG9C080IS	7.6	7,800	2,286	10.1	2.97	770	210	7.9	11	
		UG4C085IU	8.0	8,340	2,444	10.4	3.04	803	260	10.5	10	
		UG4C090IU	8.9	9,000	2,638	10.3	3.02	874	260	10.5	11	
		UG4A098IU	9.7	9,900	2,901	10.2	2.99	971	300	11.0	9	
		UG4A102IU	10.3	10,900	3,194	10.4	3.05	1,048	300	11.2	9	
		UG4A110IU	10.9	11,600	3,400	10.6	3.10	1,095	300	11.2	12	
		UG4AH5110I	10.9	11,400	3,341	10.6	3.11	1,075	340	12.4	14	
	UG4A124IU	11.5	12,050	3,532	10.2	2.99	1,180	300	11.3	9		
	UG4B135IX	13.2	13,780	4,039	10.1	2.96	1,365	340	12.5	13		
	UG4B147IX	13.9	14,850	4,352	10.1	2.96	1,470	340	12.2	13		
	UG8C155IU	15.2	16,300	4,777	10.6	3.11	1,538	540	15.5	6,7		
	UG8C155IN	15.2	16,100	4,718	10.6	3.11	1,519	1,220	17.1	7		
	UG8C180IU	17.0	18,100	5,305	10.6	3.11	1,708	540	15.5	6		
	UG8CH5180I	17.0	18,100	5,305	10.8	3.17	1,676	540	16.8	8		
	UG8C185IU	17.6	18,500	5,422	10.4	3.05	1,779	540	15.5	6		
	UG8C200IN	19.0	20,400	5,979	10.6	3.11	1,925	540	15.4	6		
	UG5C200IN	19.3	20,000	5,861	10.6	3.11	1,886	1,220	23.0	8		
	UG5CH5200I	19.3	20,400	5,979	10.5	3.08	1,943	800	21.7	8		
	UG5CH5240I	23.4	24,500	7,180	10.7	3.14	2,290	800	21.5	9		
	UG5A240IU	23.4	24,500	7,180	10.1	2.96	2,425	750	21.2	10		
	UG5C250IN	23.9	25,300	7,415	10.7	3.14	2,365	1,220	23.9	9		
	UG5C260IN	24.7	26,250	7,693	10.5	3.08	2,500	1,220	24.7	9		
	UG5A260IU	25.4	26,300	7,708	10.1	2.96	2,600	750	21.2	9		
	UG5A280IU	27.2	28,600	8,382	10.2	2.97	2,820	750	21.3	10		
	UG5A290IN	27.9	29,500	8,646	10.6	3.11	2,783	1,220	24.5	11		
	UG5A300IU	29.3	30,600	8,968	10.0	2.93	3,060	750	21.3	10		
	UG9C060YS	5.8	6,000	1,758	10.0	2.93	600	270	7.8	12		
	UG9C067YS	6.6	6,750	1,978	9.9	2.89	685	210	7.5	9		
	UG9C076YS	7.3	7,600	2,227	10.2	2.99	745	270	8.1	11		
	UG4C085YU	8.0	8,100	2,374	10.2	2.99	794	320	10.7	10		
	UG4A102YU	10.3	10,850	3,180	10.5	3.08	1,033	340	11.3	12		
UG4A110YU	10.9	11,450	3,356	10.5	3.08	1,090	340	11.3	12			
UG4A124YU	11.5	12,050	3,532	10.5	3.08	1,145	300	11.3	9			
UG4B147YX	13.9	14,800	4,337	10.3	3.02	1,435	340	12.5	13			

R410A 50Hz

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R410A	50Hz	1φ, 220-240V	UG4C065JN	8.0	6,800	1,993	9.9	2.90	687	260	10.5	15
			UG4B124JX	14.1	12,000	3,517	9.5	2.78	1,263	340	12.2	5
			UG8C124JU	15.2	12,900	3,781	10.2	2.99	1,265	540	15.4	9
		UG9CH8037D	4.4	3,730	1,093	10.0	2.93	373	210	8.4	13	
		UG4AH8080D	9.7	8,200	2,403	10.4	3.05	788	300	12.2	4	
		UG4A091DN	10.9	9,300	2,726	10.0	2.93	930	300	11.6	4	
	1φ, 220V	UG8CH8180D	21.0	18,500	5,422	10.5	3.08	1,762	540	16.8	8	
		UG8D185DN	21.7	18,950	5,554	10.2	2.99	1,860	550	16.6	3	
		UG5CH8215D	24.7	21,400	6,272	10.6	3.10	2,020	800	22.1	12	
		UG5A240DN	27.9	24,100	7,063	9.9	2.90	2,435	750	21.7	2	

<Rotary Compressor>



Rotary Compressor SPECIFICATIONS

BLDC (Single & Twin)

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R410A	BLDC (Single Pump,Ferrite)	UG9A090LNA	9.0	9,300	2,726	10.8	3.17	861	320	7.8	18	
	BLDC (Single Pump,Nd)	UG9C072FUA	7.3	7,550	2,213	11.2	3.28	674	270	7.3	15	
		UG9CJ3072F	7.3	7,550	2,213	11.1	3.25	680	270	7.0	26	
		UG9CJ5072F	7.3	7,550	2,213	11.3	3.31	668	270	7.4	15	
		UG9A090FUA	9.0	9,300	2,726	11.1	3.25	837	320	7.5	16	
		UG9AJ1090F	9.0	9,300	2,726	10.8	3.17	861	320	6.5	22	
		UG9AJ3090F	9.0	9,300	2,726	11.1	3.25	838	320	7.1	23	
		UG9AJ5090F	9.0	9,300	2,726	11.3	3.31	823	350	7.5	16	
		UG9A090FUB	9.0	9,300	2,726	10.8	3.17	861	320	7.3	17	
		UG9A090FUC	9.0	9,300	2,726	10.8	3.17	861	320	6.9	18	
		UG9BJ3102F	10.2	10,350	3,033	10.9	3.19	950	340	7.2	24	
		UG9BJ5102F	10.2	10,350	3,033	11.1	3.25	932	340	7.6	25	
		BLDC (Twin Pump,Nd)	UG9T115FUA	11.6	11,800	3,458	11.2	3.31	1,054	380	9.0	14
			UG9TJ8115F	11.6	11,800	3,458	11.5	3.37	1,026	380	8.6	14
			UG4T135FUA	13.1	13,200	3,869	11.1	3.25	1,189	500	10.4	18
			UG4T150FUA	15.0	15,200	4,455	11.1	3.25	1,369	500	10.4	18
			UG4T150FUC	15.0	15,200	4,455	11.0	3.22	1,380	500	10.4	18
			UG4T150FUD	15.0	15,200	4,455	11.1	3.25	1,369	650	10.5	18
			UG4T200FUA	19.5	20,200	5,920	11.3	3.31	1,788	650	11.2	19
	UG4TH8200F		19.5	20,500	6,008	11.6	3.40	1,767	650	11.5	20	
	UG8T260FUA		25.2	26,500	7,766	11.1	3.25	2,387	700	14.0	13	
	UG8T265FUA		25.2	26,500	7,766	11.3	3.31	2,345	700	14.5	14	
	UG8T265FNF		25.2	26,700	7,825	11.5	3.37	2,322	700	15.6	15	
	UG8TH8265F		25.2	26,700	7,825	11.7	3.43	2,282	700	15.1	15	
	UG8T300FUA		30.0	31,300	9,173	11.1	3.25	2,820	750	14.6	16	
	UG8T300FUB		30.0	31,300	9,173	11.1	3.25	2,820	1,200	16.5	17	
	UG8T300FUC		30.0	31,300	9,173	11.1	3.25	2,820	1,200	16.5	17	
	UG5T360FUA		35.1	37,500	10,990	11.0	3.22	3,409	1,100	20.0	17	
	UG5T360FUE		35.1	37,500	10,990	11.0	3.22	3,409	1,700	21.6	18	
	UG5T450FUA		43.0	46,500	13,628	11.3	3.31	4,115	1,100	21.3	19	
	UG5T450FUE		43.0	46,500	13,628	11.3	3.31	4,115	1,700	23.0	20	
	UG5T450FUF		43.0	46,500	13,628	11.3	3.31	4,115	1,700	23.0	20	
	UG5T450FXA		43.0	46,500	13,628	11.6	3.40	4,009	1,700	23.8	21	
	UG5TH5450F		43.0	46,500	13,628	11.5	3.37	4,043	1,700	20.5	22	
	UG5TH8450F		43.0	46,500	13,628	11.8	3.46	3,941	1,700	22.5	20	
	UG5T520FUB		49.4	54,000	15,826	11.3	3.31	4,779	1,700	23.8	21	
	UG5TH5520F	49.4	54,000	15,826	11.4	3.34	4,736	1,700	20.5	22		
	UG5TH8520F	49.4	54,000	15,826	11.7	3.43	4,615	1,700	22.5	20		
	BLDC (Twin Pump,Ferrite)	UG4T150LNB	15.0	15,200	4,455	10.9	3.19	1,395	500	11.3	21	
		UG4T200LNE	19.5	20,500	6,008	11.2	3.28	1,830	650	12.4	22	
		UG4T200LNF	19.5	20,500	6,008	11.2	3.28	1,830	700	12.4	22	
		UG8T300LNB	30.0	31,300	9,173	11.0	3.22	2,845	1,200	16.6	18	
	R32	BLDC (Twin Pump,Nd)	UB9TJ5120F	11.6	12,250	3,590	11.0	3.31	1,114	380	9.0	14
	R134a	BLDC (Twin Pump,Nd)	UX8TH5140F	30.0	14,500	4,250	12.0	3.51	1,210	1,200	16.5	17
			UX5T210FUA	43.0	21,500	6,301	11.6	3.40	1,853	1,100	21.6	19
			UX5T250FNB	49.4	24,800	7,268	12.1	3.55	2,050	1,700	23.8	21

R22 60Hz

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R22	60Hz	1φ, 115V	UR9C052HS	7.6	5,300	1,553	10.8	3.16	491	210	7.3	1
			UR9B072HS	10.2	7,050	2,066	10.6	3.11	665	230	8.1	2
			UR9B080HS	11.3	8,000	2,345	10.6	3.11	755	230	8.3	3
			UR4A092HU	13.2	9,350	2,740	10.7	3.14	874	300	10.2	1
			UR4B117HX	16.6	11,900	3,488	10.7	3.14	1,112	340	11.9	2
		1φ, 208-230V	UR9A052IS	7.6	5,300	1,553	10.6	3.11	500	210	7.5	4
			UR9B068IS	9.6	6,700	1,964	10.7	3.14	626	230	8.4	5
			UR9B072IS	10.2	7,100	2,081	10.5	3.07	677	230	8.4	6
			UR9B080IS	11.3	8,000	2,345	10.7	3.13	748	230	8.4	3
			UR4AH5092I	13.2	9,400	2,755	10.6	3.11	886	300	11.1	3
			UR4A098IN	14.1	10,260	3,007	10.8	3.17	950	300	11.1	4
			UR4B110IX	16.1	11,500	3,370	10.7	3.14	1,075	340	12.1	5
	UR4B124IX		17.6	12,650	3,707	10.6	3.11	1,193	300	12.1	5	
	UR4B135IX		18.7	13,400	3,927	10.5	3.08	1,276	340	11.8	2	
	UR8C155IU		21.7	15,800	4,631	10.9	3.19	1,450	540	15.1	1	
	UR8C172IN		24.0	17,500	5,129	10.9	3.19	1,606	540	15.6	2	
	UR8D185IN		25.8	18,700	5,480	10.7	3.14	1,748	550	16.2	3	
	UR5A220IN		30.6	22,500	6,594	10.9	3.19	2,065	500	21.1	1	
	UR5A240IN		33.4	25,000	7,327	10.9	3.20	2,293	750	21.6	1,2	
	UR5A260IU		36.2	26,700	7,825	11.0	3.22	2,430	750	20.1	3	
	UR5A280IU		39.0	29,500	8,646	11.0	3.23	2,680	800	21.9	4	
	UR5A300IU		41.8	31,500	9,232	10.9	3.19	2,890	800	21.8	4	

R22 50Hz

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R22	50Hz	1φ, 220-240V	UR9A052JS	9.0	5,200	1,524	10.2	2.99	510	210	7.7	7
			UR5A250JN	41.8	25,600	7,503	10.6	3.11	2,415	800	22.5	5
	1φ, 220V	UR9C037DS	6.6	3,700	1,084	10.1	2.97	365	210	7.7	8	
		UR9B066DS	11.3	6,400	1,876	9.9	2.91	645	230	8.1	5	
		UR4A080DN	14.1	8,300	2,432	11.0	3.22	755	300	11.5	4	
		UR4A085DU	15.0	8,900	2,608	10.3	3.02	864	300	10.8	6	
		UR4B098DX	16.6	9,700	2,843	10.3	3.02	940	340	11.9	5	
		UR4D115DN	19.8	11,400	3,341	10.6	3.11	1,075	380	12.7	7	
		UR4D124DX	21.0	12,200	3,575	10.5	3.08	1,161	450	12.8	8	
		UR8C110DN	19.0	11,350	3,326	11.0	3.22	1,032	540	15.5	4	
		UR8C129DN	21.7	12,900	3,781	10.8	3.17	1,194	540	15.5	4	
		UR8B170DN	28.8	17,200	5,041	10.8	3.16	1,593	550	16.8	5	
		UR8B180DU	30.4	18,100	5,305	10.5	3.08	1,724	550	16.8	5	
		UR8B200DU	32.5	19,400	5,686	10.6	3.11	1,830	550	16.7	5	
		UR5A215DN	36.2	21,800	6,389	11.2	3.28	1,945	750	22.0	6	
		UR5A260DN	44.6	27,000	7,913	10.4	3.04	2,600	800	22.6	7	

Rotary Compressor SPECIFICATIONS

Tropical (UTR-Ultra Tropical Rotary)

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT		TYPE
			CC/REV	BTU/H	W	BTU/WH					W/W	W	
R22	60Hz	1φ, 208-230V	UR4B124IT	17.6	12,650	3,707	10.3	3.02	1,228	320	11.8	2	
			UR4B135IT	18.7	13,500	3,956	10.3	3.02	1,310	340	11.8	13	
			UR8D190IH	26.6	19,500	5,715	10.5	3.08	1,858	550	16.0	3	
			UR8D200IH	27.8	20,700	6,067	10.4	3.05	1,990	550	16.0	3	
			UR5A240IH	33.4	25,000	7,327	11.1	3.25	2,252	500/750	21.6/22.0	2	
			UR5A260IH	36.2	27,600	8,089	10.4	3.05	2,654	750	21.6	2	
	50Hz	1φ, 220-240V	UR4B092JT	16.1	9,300	2,726	10.0	2.93	930	340	11.8	2	
			UR4D124JH	21.0	12,400	3,634	9.7	2.84	1,278	380	12.7	7	
			UR4D129JT	21.7	12,800	3,751	9.6	2.81	1,333	380	12.7	16	
			UR8B180JH	30.4	18,400	5,393	9.4	2.76	1,957	550	16.4	10	
			UR8B200JT	32.5	19,500	5,715	9.3	2.73	2,097	550	16.5	11	
			UR8D165JH	27.8	16,500	4,836	10.2	2.99	1,618	550	16.5	12	
R134a	60Hz	1φ, 115V	UX9BJ6056H	11.3	5,780	1,694	10.8	3.17	535	230	8.3	11	
	50Hz	1φ, 220-240V	UX9B042JH	10.2	4,260	1,248	10.4	3.05	410	250	8.4	3	

Large Volume (TTR-Turbo Twin Rotary)

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT		TYPE
			CC/REV	BTU/H	W	BTU/WH					W/W	W	
R22	60Hz	1φ, 208-230V	UR5T360IU	49.4	36,500	10,697	10.9	3.19	3,349	900	23.9	13	
			UR5T360AU	49.4	36,000	10,551	10.9	3.19	3,303	1,000	23.8	14	
		3φ, 380V	UR3T480AU	65.8	49,850	14,610	11.2	3.28	4,450	1,700	33.5	1	
			UR3T550AT	72.6	55,500	16,265	11.0	3.23	5,040	1,700	34.3	2	
			UR3T480CT	65.8	49,850	14,610	10.8	3.17	4,615	1,700	33.5	1	
	50Hz	1φ, 220-240V	UR3T550CT	72.6	55,500	16,265	11.0	3.23	5,040	1,700	34.0	2	
			UR5T300JT	49.4	29,650	8,690	9.8	2.87	3,025	950	24.0	13	
		3φ, 380-420V	UR3T480BU	78.6	48,500	14,214	10.9	3.19	4,450	1,700	34.1	2	
			UR3T510BU	83.6	51,500	15,093	10.9	3.19	4,725	1,700	34.0	2	
			UR3T510BT	83.6	51,900	15,210	10.9	3.20	4,760	1,900	34.2	2	
R410A	60Hz	1φ, 208-230V	UG5T320IU	30.6	32,500	9,525	10.3	3.02	3,155	1,500	26.8	15	
			UG5T360IN	35.1	37,000	10,844	9.8	2.87	3,776	1,500	25.9	16	
		3φ, 380V	UG3T480AN	46.3	49,600	14,536	10.2	2.99	4,865	1,700	35.3	3	
			UG3T650AN	61.5	66,500	19,489	10.1	2.96	6,585	1,700	35.3	3	
			UG3T480CN	46.3	49,300	14,448	10.1	2.96	4,880	1,700	35.2	3	
			UG3T650CN	61.5	65,350	19,152	9.9	2.90	6,600	1,700	34.8	3	

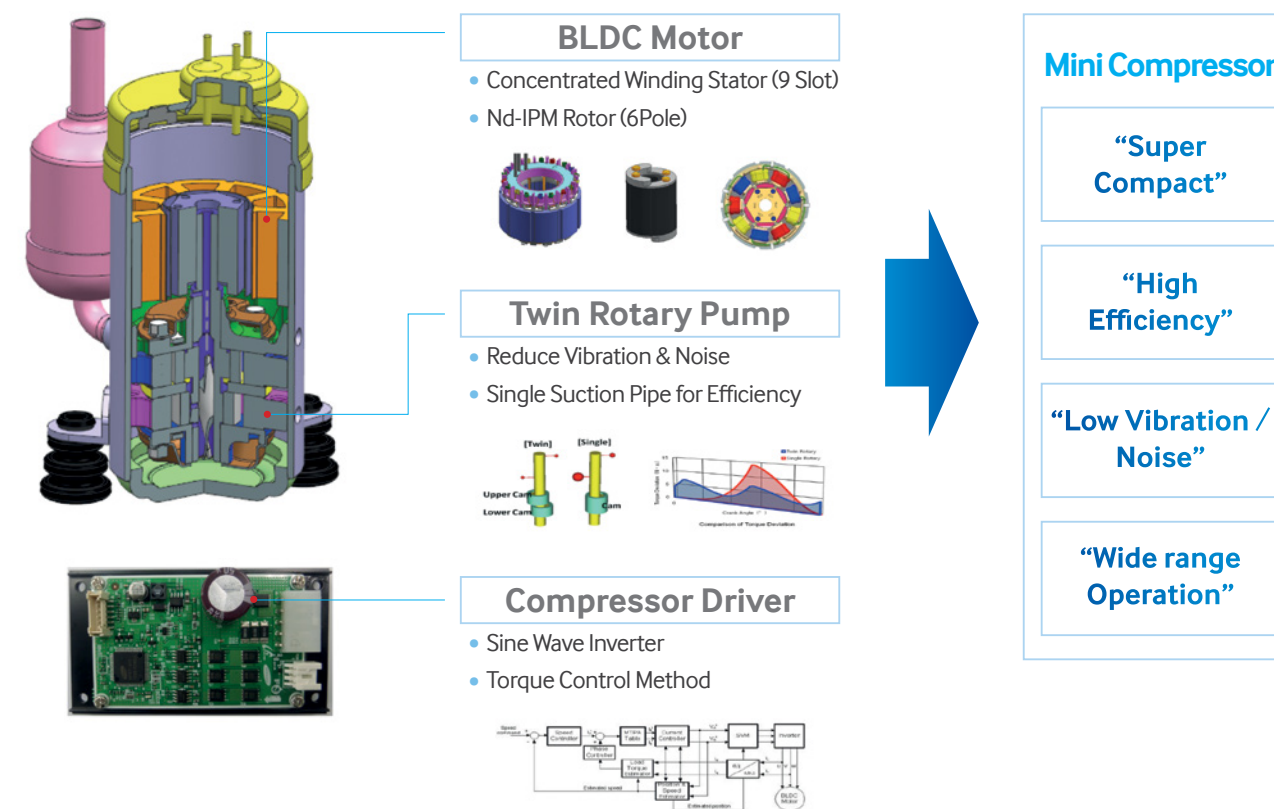
Mini Rotary Compressor SPECIFICATIONS

BLDC (Single)

REF.	POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT		TYPE
			CC/REV	BTU/H	W	BTU/WH					W/W	W	
R134a	BLDC (Single Pump, Nd)	UX9CJ5034F	7.3	3,480	1,020	12.0	3.52	290	270	5.3	21		
		UX0T011ZNA	2.4	1,100	322	9.7	2.85	113	50	1.2	1		
		UX0T011FNA	2.4	1,100	322	10.0	2.93	110	50	1.2	1		
		UX0T011QNA	2.4	1,100	322	10.0	2.93	110	50	1.2	1		
		UX0T011QNA	2.4	1,100	322	10.0	2.93	110	50	1.2	1		

BASIC STRUCTURE

Mini Compressor is Compact and provide the Outstanding Performance



APPLICATIONS

Portable Refrigerator

- Car Refrigerator
- Marine Refrigerator
- Water Purifier
- Wine Cellar

Personal Cooler

- Personal A/C
- Toilet A/C
- Desk Top Cooler
- Kitchen Cooler

Dryer/Washer

- Front Load Washer
- Top Load Washer
- Wardrobe Dehumidifier
- Dehumidifier

Wearable Cooler

- Cooling Jacket
- Cooling Military Uniform
- Medical Cooler

DIMENSION

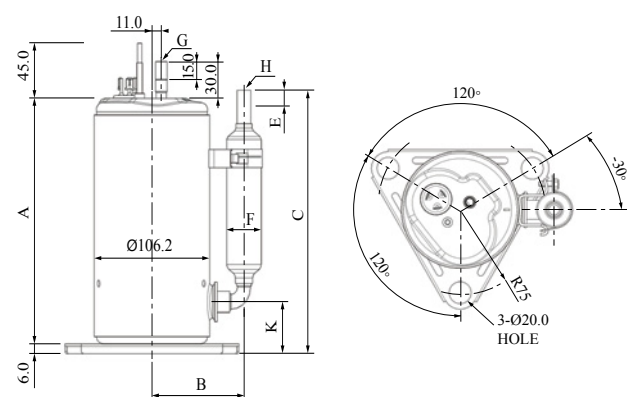
39 Frame

(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	190.3	84.6	201.6	10.0	31.8	8.15	9.64	28.8
2	206.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
3	212.9	84.6	209.8	10.0	31.8	8.15	9.64	37.0
4	193.3	86.5	220.6	15.0	41.3	8.15	9.64	30.3
5	212.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
6	218.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
7	197.3	84.6	203.1	10.0	31.8	8.15	9.64	30.3
8	200.3	86.5	219.1	15.0	41.3	8.15	9.64	28.8
9	194.3	84.6	201.6	10.0	31.8	8.15	9.64	28.8
10	207.8	86.5	226.6	15.0	41.3	8.15	9.64	36.3
11	200.3	84.6	201.6	10.0	31.8	8.15	9.64	28.8
12	201.8	86.5	226.6	15.0	41.3	8.15	9.64	36.3
13	206.3	86.5	219.1	15.0	41.3	8.15	9.64	28.8
14	283.7	97.2	303.1	15.0	77.4	8.15	12.85	42.5
15	237.3	97.2	253.3	15.0	77.4	8.15	12.85	36.3
16	246.5	97.2	261.0	15.0	77.4	8.15	12.85	44.0
17	261.5	87.9	267.0	15.0	58.4	8.15	12.85	44.0
18	236.5	87.9	267.0	15.0	58.4	8.15	12.85	44.0
19	245.9	97.2	267.7	15.0	77.4	8.15	12.85	50.7
20	223.7	87.9	259.3	15.0	58.4	8.15	12.85	36.3
21	174.3	84.6	151.0	10.0	31.8	8.15	9.64	36.3
22	226.5	97.2	261.0	15.0	77.4	8.15	12.85	44.0
23	236.5	97.2	261.0	15.0	77.4	8.15	12.85	44.0
24	246.5	97.2	267.7	15.0	77.4	8.15	12.85	50.7
25	256.5	97.2	267.7	15.0	77.4	8.15	12.85	50.7
26	227.3	97.2	253.3	15.0	77.4	8.15	12.85	36.3

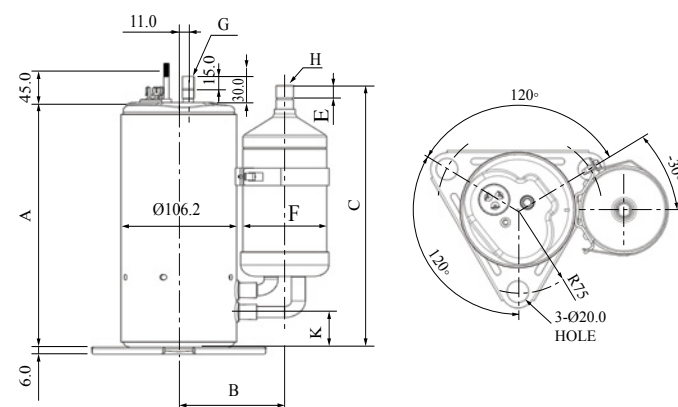
44 Frame

(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	215.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
2	240.7	93.7	274.0	15.0	58.4	8.15	12.85	37.0
3	240.1	93.7	249.8	15.0	58.4	8.15	9.64	28.6
4	240.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
5	252.7	93.7	274.0	15.0	58.4	8.15	12.85	37.0
6	235.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
7	257.4	93.7	276.2	15.0	58.4	8.15	12.85	39.2
8	270.8	93.7	289.6	15.0	58.4	8.15	12.85	52.6
9	226.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
10	222.8	93.7	257.3	15.0	58.4	8.15	12.85	34.3
11	215.1	95.9	231.1	15.0	47.6	8.15	12.85	26.6
12	233.2	93.7	258.7	15.0	58.4	8.15	12.85	35.7
13	247.7	93.7	274.0	15.0	58.4	8.15	12.85	37.0
14	247.2	102.6	252.7	15.0	77.4	8.15	12.85	35.7
15	222.1	92.1	216.9	15.0	41.3	8.15	9.64	26.6
16	252.4	93.7	276.2	15.0	58.4	8.15	12.85	39.2
17	243.2	102.6	294.9	15.0	77.0	8.15	12.85	34.3
18	246.5	102.6	308.2	15.0	77.0	8.15	12.85	47.6
19	259.5	102.6	322.2	15.0	77.0	8.15	12.85	49.0
20	264.5	102.6	322.2	15.0	77.0	8.15	12.85	49.0
21	263.5	102.6	308.2	15.0	77.0	8.15	12.85	47.6
22	281.0	102.6	322.2	15.0	77.0	8.15	12.85	49.0

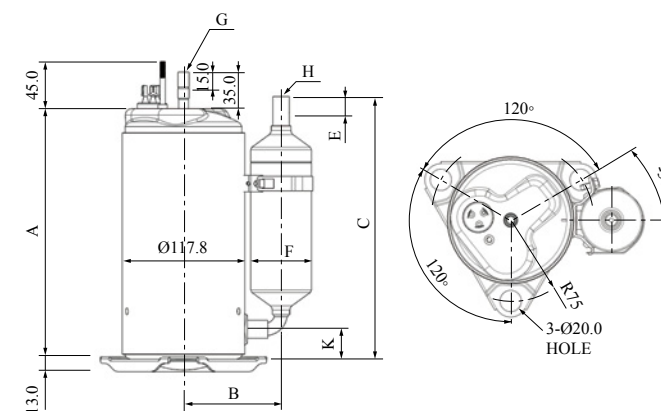
< 39 Frame Single >



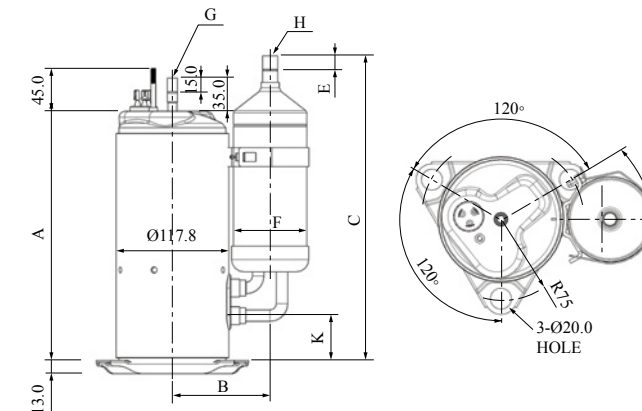
< 39 Frame Twin >



< 44 Frame Single >



< 44 Frame Twin >

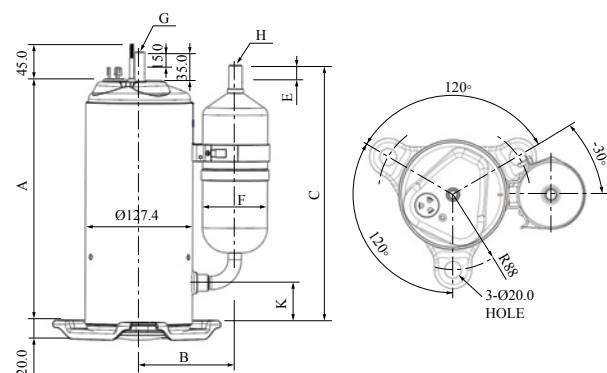


DIMENSION

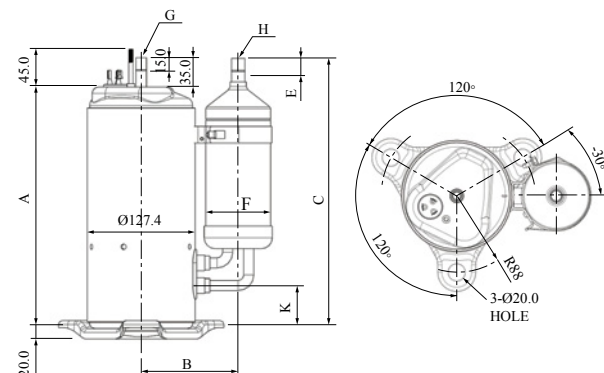
48 Frame

(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	285.8	98.0	285.4	15.0	58.4	9.70	12.85	48.4
2	285.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
3	300.3	114.5	310.6	15.0	77.4	9.70	12.85	50.6
4	295.8	98.0	285.4	15.0	58.4	9.70	12.85	48.4
5	301.3	114.5	310.6	15.0	77.4	9.70	12.85	50.2
6	275.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
7	342.0	114.5	369.6	15.0	77.4	9.70	12.85	109.6
8	290.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
9	275.8	98.0	285.4	15.0	58.4	9.70	12.85	48.4
10	306.3	114.5	310.6	15.0	77.4	9.70	12.85	50.2
11	291.3	114.5	310.6	15.0	77.4	9.70	12.85	50.2
12	295.3	114.5	310.6	15.0	77.4	9.70	12.85	50.6
13	266.1	115.2	316.0	15.0	77.0	9.70	12.85	44.5
14	271.1	115.2	316.0	15.0	77.0	9.70	12.85	44.5
15	281.1	115.2	316.0	15.0	77.0	9.70	12.85	44.5
16	286.1	115.2	329.9	15.0	77.0	9.70	12.85	47.8
17	325.0	115.2	368.8	15.0	77.0	9.70	12.85	86.8
18	332.5	115.2	368.8	15.0	77.0	9.70	12.85	86.8

< 48 Frame Single >

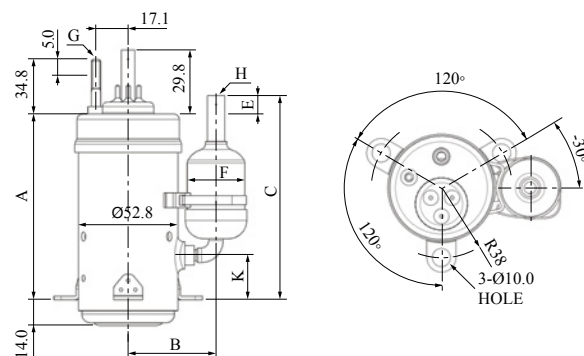


< 48 Frame Twin >



20 Frame

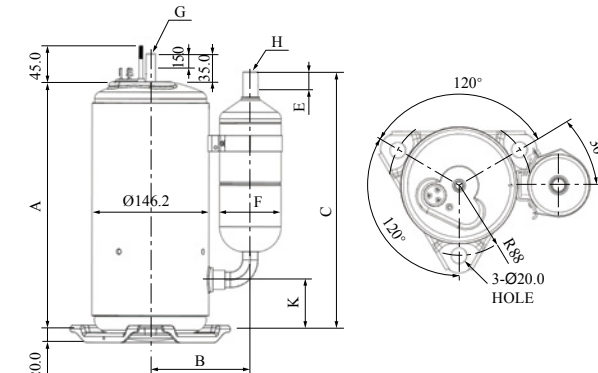
(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	101.3	48.4	111.3	5.0	31.8	4.95	6.54	24.3



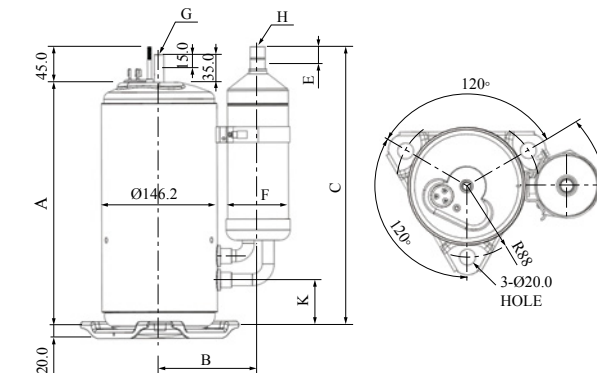
55 Frame

(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	294.4	124.8	306.7	15.0	77.4	9.70	16.03	42.7
2	311.4	124.8	349.7	15.0	77.4	9.70	16.03	59.7
3	286.4	124.8	349.7	15.0	77.4	9.70	16.03	59.7
4	303.7	124.8	349.7	15.0	77.4	9.70	16.03	59.7
5	318.7	124.8	349.7	15.0	77.4	9.70	16.03	59.7
6	301.4	124.8	349.7	15.0	77.4	9.70	16.03	59.7
7	323.8	124.8	349.7	15.0	77.4	9.70	16.03	59.7
8	345.9	132.4	358.7	15.0	90.0	9.70	19.20	87.8
9	370.8	132.4	370.0	15.0	90.0	9.70	19.20	99.1
10	296.4	124.8	349.7	15.0	77.4	9.70	16.03	59.7
11	360.9	132.4	360.1	15.0	90.0	9.70	19.20	89.2
12	306.4	124.8	348.3	15.0	77.4	9.70	16.03	58.3
13	323.4	132.4	362.2	15.0	90.0	9.70	19.20	58.3
14	341.2	132.4	361.0	15.0	90.0	9.70	19.20	57.2
15	395.8	125.5	455.4	15.0	77.0	9.70	16.03	104.6
16	386.0	125.5	445.6	15.0	77.0	9.70	16.03	94.8
17	311.5	125.5	351.0	15.0	77.0	9.70	16.03	55.2
18	371.0	125.5	390.5	15.0	77.0	9.70	16.03	94.8
19	323.5	132.4	362.1	15.0	90.0	9.70	19.20	58.3
20	383.0	132.4	401.6	15.0	90.0	9.70	19.20	97.8
21	393.0	132.4	401.6	15.0	90.0	9.70	19.20	97.8
22	363.0	132.4	401.6	15.0	90.0	9.70	19.20	97.8

< 55 Frame Single >

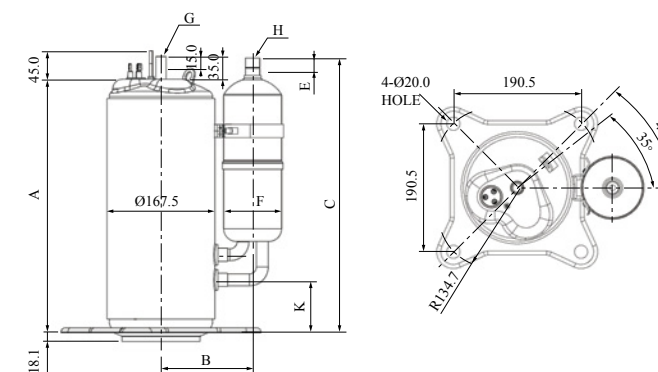


< 55 Frame Twin >



63 Frame

(UNIT:mm)								
Type	A	B	C	E	F	G	H	K
1	379.8	142.2	422.5	15.0	90.0	12.90	19.20	77.7
2	392.7	142.2	432.5	15.0	90.0	12.90	19.20	81.5
3	389.8	142.2	455.5	15.0	90.0	12.90	19.20	77.7



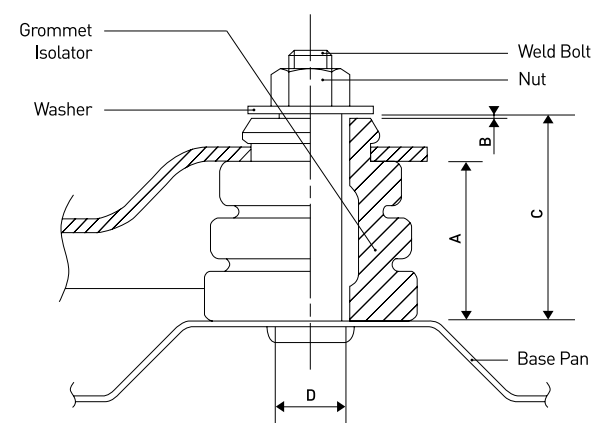
MOUNTING SYSTEM & WIRING DIAGRAM

MOUNTING SYSTEM

Remark

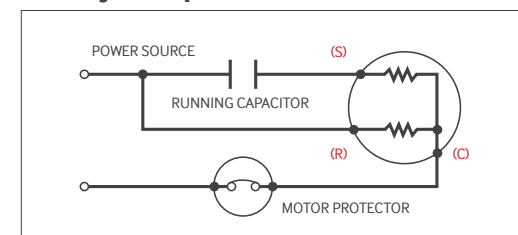
Keep the Clearance between Washer and Grommet Isolator by 0.5-2.0mm

FRAME / PARTS	A	B	C	D
20F	18.0	0.5~2.0	23.7	6.6
39F	14.0	0.5~2.0	21.0	10.5
44, 48, 55, 63F	25.5	0.5~2.0	33.5	11.5

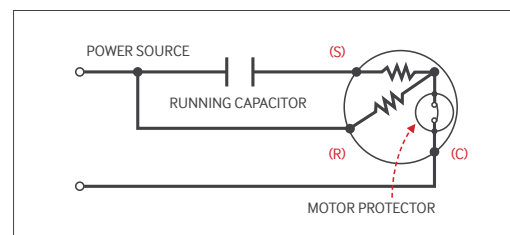


WIRING DIAGRAM

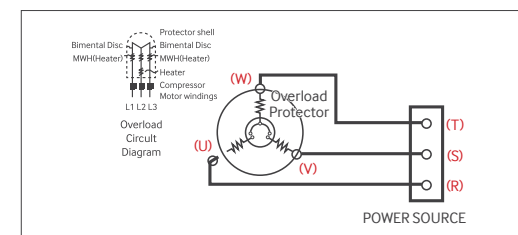
Rotary compressor



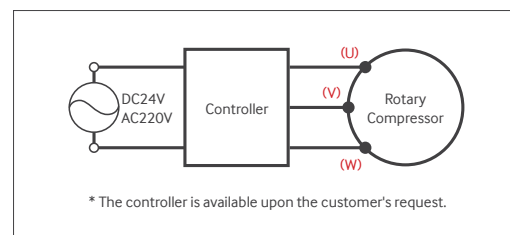
External OLP Type



Internal OLP Type



3 Phase Internal OLP Type



Miniature Rotary Compressor

* The controller is available upon the customer's request.

TEST CONDITION

REFRIGERANT	ROTARY COMP	
	R22/R407C/R410A/R134A	
Condensing Temp.(°C)	54.4	
Evaporating Temp.(°C)	7.2	
Ambient Temp.(°C)	35.0	
Return Gas Temp.(°C)	35.0	
Liquid Temp.(°C)	46.1	

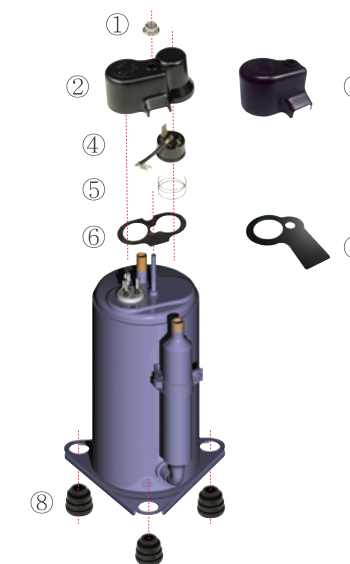
APPLICATION ENVELOPES

REFRIGERANT	ROTARY COMP		MINI ROTARY COMP
	NORMAL	TROPICAL	TROPICAL
Condensing Temp.(°C)	28.0~65.0	28.0~74.5	8.6~74.5
Evaporating Temp.(°C)	-25.0~12.7		-25.0~20.0
Discharge Temp.(°C)	Max. 115.0		Max. 120

ACCESSORY & PACKING

STANDARD ACCESSORY PARTS

ITEMS	APPLICATION				QUANTITY (PCS)
	COMP. WITH EXTERNAL OLP	COMP. WITH INTERNAL OLP	BLDC COMPRESSOR		
			TYPE 1	TYPE 2	
Nut		①			1
Cover Terminal	②	③	②	③	1
Overload Protector	④	-	-	-	1
Spring etc OLP	⑤	-	-	-	1
Gasket	⑥	⑦	⑥	⑦	1
Grommet Isolator		⑧			3 (63F 4Pcs)



STANDARD EXPORT PACKING & LOADING QUANTITY (20FT CONTAINER)

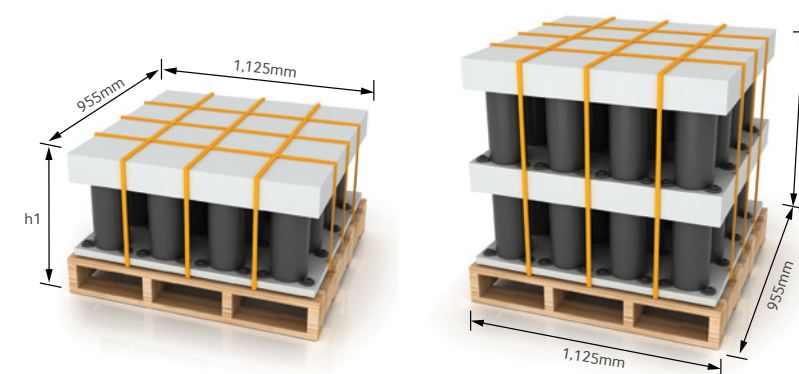
FRAME	COMPRESSOR QUANTITY/CARTON(PCS)		CARTON QUANTITY (CARTON)		ACCESSORY BOX (E)	LOADING QUANTITY (T) (PCS)	PACKING HEIGHT	
	TYPE 1 (A)	TYPE 2 (B)	TYPE 1 (C)	TYPE 2 (D)			TYPE 1 (H1)	TYPE 2 (H2)
20F	182	364	6	12	42	5,460	418	630
39F	36	72	2	24	6	1,800	477	788
39 BLDC	35	70	2	22	5	1,610	562	962
44F Ex(In) OLP	36	72	4	16	6(5)	1,296	521	880
44 BLDC	30	60	5	19	4	1,290	559	956
48F Ex(In) OLP	30	60	4	14	4(3)	960	611	1,059
55F	20	40	4	16	2	720	671	1,180
55F(4Foot)	12	24	12	12	2	432	681	1,200
63F	12	24	12	12	2	432	676	1,190

ex.) Compressor Total Quantity of 44Frame Model : (a)X(c)+(b)X(d)= (t) / 1,296 pcs

ex.) Carton Total Quantity of 44Frame Model : (c)+(d)+(e)= 26 / (25) Cartons

* 20 Frame is 1 type of 2 stacks. (Packed in boxes)

* Korean sale is exception in upside standard.



TYPE 1 PACKING

TYPE 2 PACKING

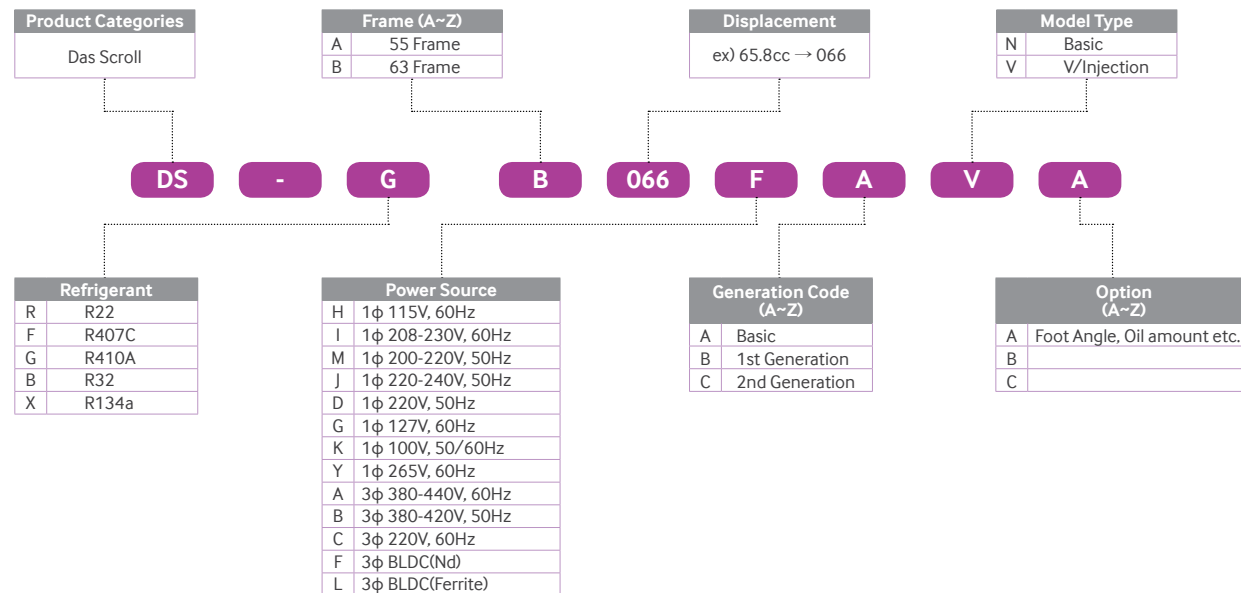
WARNING / DANGER

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS PERSONAL INJURY.

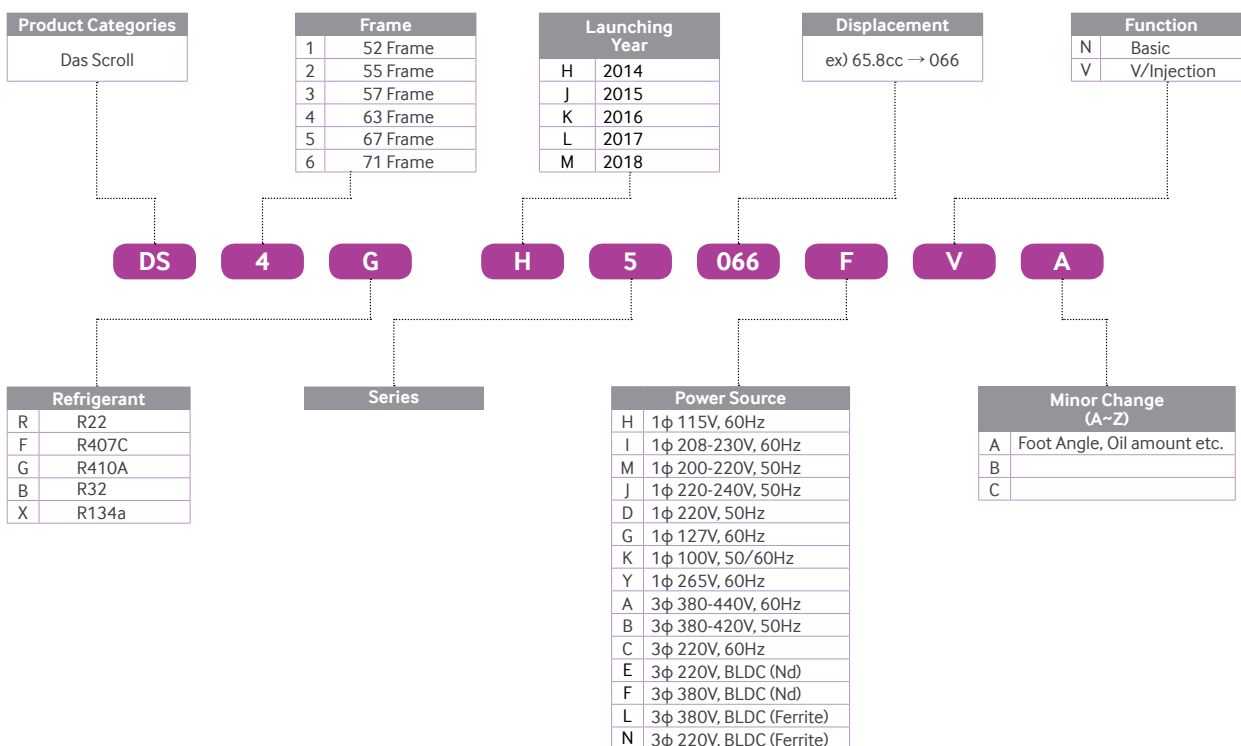
1. Ground the equipment securely.
2. Turn off power before servicing.
3. Mount the terminal cover in place whenever Power is applied to this compressor.
4. Wear protective goggles when servicing.
5. Before brazing, remove pressure from both High and low side.
6. Do not use this compressor to compress air.
7. Use only approved refrigerants and lubricants.
8. Do not touch with bare hands during running Or after stopping instantly.

Scroll Compressor MODEL IDENTIFICATION

Scroll Compressor Ver. 01



Scroll Compressor Ver. 02



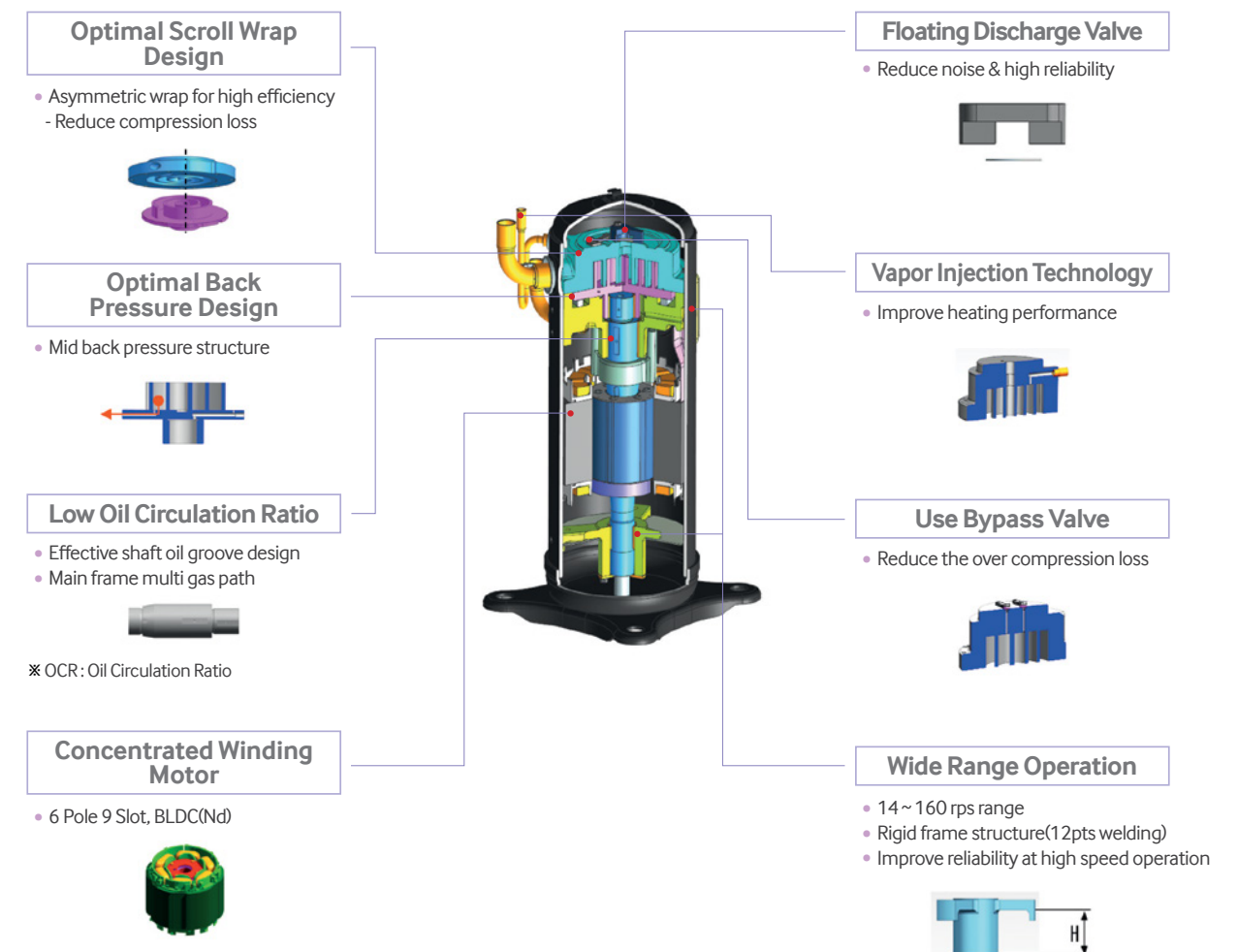
Scroll Compressor SPECIFICATIONS

BLDC

REF.	DRIVER INPUT POWER SOURCE	MODEL	DISPLACEMENT		COOLING CAPACITY		EER	COP	INPUT	OIL	NET WEIGHT	TYPE
			CC/REV	BTU/H	W	BTU/WH	W/W	W	CC	KG		
R410A	50/60Hz	3φ 380~460V	DS-GB052FAVB	52.0	58,500	17,145	11.2	3.28	5,223	1,100	31.8	2
			DS-GB066FAVB	65.8	73,500	21,541	11.5	3.37	6,390	1,100	35.4	1
			DS-GB070FAVA	70.0	77,700	22,772	11.5	3.37	6,757	1,100	36.7	1
		3φ 208~460V	DS-GA046FAVA	45.7	50,500	14,800	11.5	3.37	4,390	900	24.3	3
			DS-GB052FBVA	52.0	58,500	17,145	11.5	3.37	5,087	1,100	31.6	2
			DS4GJ5066EVA	65.8	73,500	21,541	11.3	3.31	6,504	1,100	35.4	1

KEY FEATURE

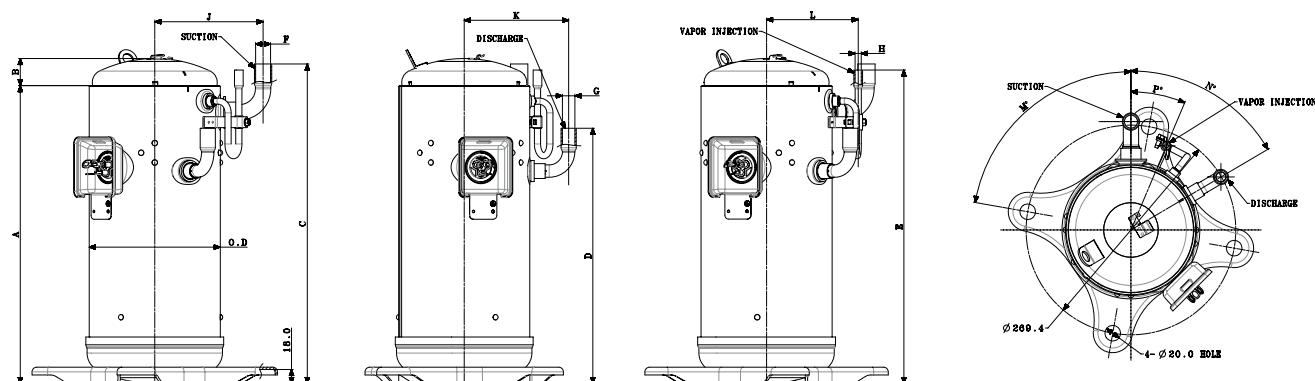
: SSC(Samsung Scroll Compressor) is innovative, has a robust structure and provides unparalleled performances



DIMENSION

Scroll

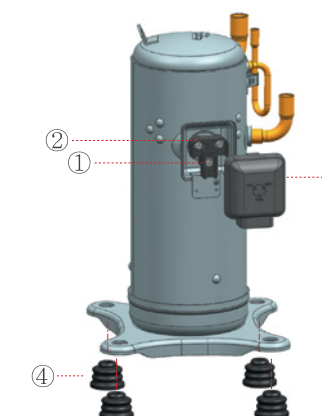
(UNIT:mm)															
Type	O.D	A	B	C	D	E	F	G	H	J	K	L	M	N	P
1	Φ168.4	419.8	34.8	441.4	358.8	439.8	19.20	16.05	8.15	139.2	134.2	116.8	80°	59.5°	22.8°
2	Φ168.4	382.8	34.8	410.6	328.0	402.8	19.20	16.05	8.15	139.2	134.2	116.8	80°	59.5°	22.8°
3	Φ146.2	379.8	29.1	406.5	327.8	399.8	19.20	16.05	8.15	127.9	123.6	106.8	80°	59.5°	21.4°



ACCESSORY & PACKING

STANDARD ACCESSORY PARTS

ITEMS	APPLICATION		QUANTITY (PCS)
	ALL SCROLL COMPRESSOR MODEL		
Terminal Block Connector	①	Attached to Compressor	1
Screw-Hex	②		3
Cover Terminal	③		1
Grommet Isolator	④		Supplied in accessory boxes



STANDARD EXPORT PACKING & LOADING QUANTITY (20FT CONTAINER)

MODEL	COMPRESSOR QUANTITY/CARTON(PCS)		CARTON QUANTITY (CARTON)		ACCESSORY BOX (E)	LOADING QUANTITY(T) (PCS)	PACKING HEIGHT	
	TYPE 1 (A)	TYPE 2 (B)	TYPE 1 (C)	TYPE 1 (D)			TYPE 1 (H1)	TYPE 2 (H2)
DS-GB052FAVB	12	24	4	20	5	528	631	1,094
DS-GB052FBVA								
DS-GB066FAVB	12	24	11	12	4	420	672	1,169
DS4GJ5066EVA								
DS-GA046FAVA	12	24	1	23	5	564	628	1,090

ex.) Compressor Total Quantity of 'DS-GB052FAVB' Model : (a)X(c)+(b)X(d)= (t) / 528 pcs

ex.) Carton Total Quantity of 'DS-GB052FAVB' Model : (c)+(d)+(e)= 29 Cartons

* Korean sale is exception in upside standard.

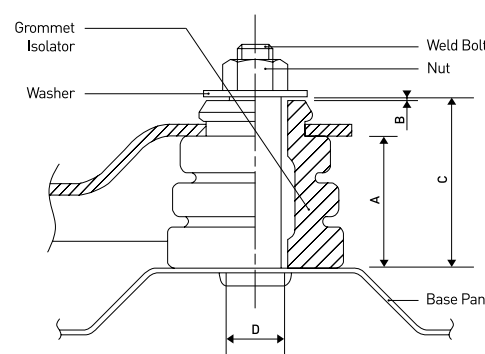
MOUNTING SYSTEM & WIRING DIAGRAM

MOUNTING SYSTEM

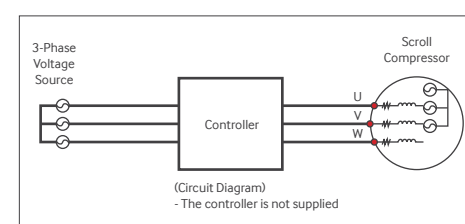
Remark

Keep the Clearance between Washer and Grommet Isolator by 0.5-2.0mm

FRAME / PARTS	A	B	C	D
55, 63F	25.5	0.5~2.0	33.5	11.5



WIRING DIAGRAM

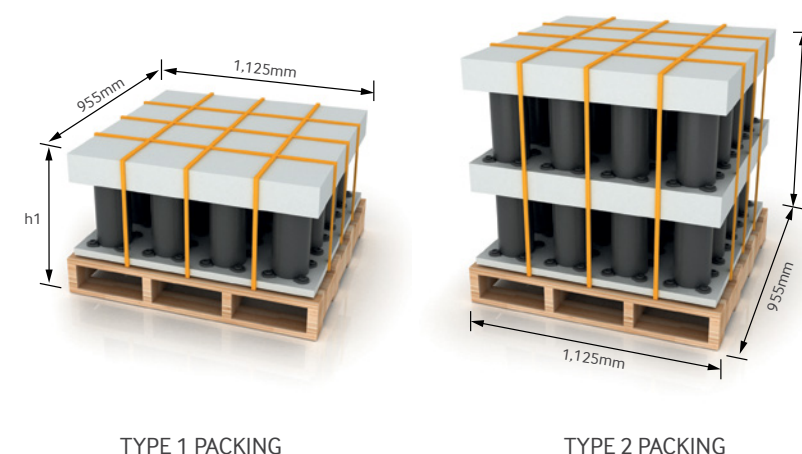


TEST CONDITION

REFRIGERANT	SCROLL COMP R410A
Condensing Temp.(°C)	54.4
Evaporating Temp.(°C)	7.2
Ambient Temp.(°C)	35.0
Return Gas Temp.(°C)	18.3
Liquid Temp.(°C)	46.1

APPLICATION ENVELOPES

REFRIGERANT	SCROLL COMP NORMAL
Condensing Temp.(°C)	10.0~65.0
Evaporating Temp.(°C)	-35.0~23.5
Discharge Temp.(°C)	Max. 120

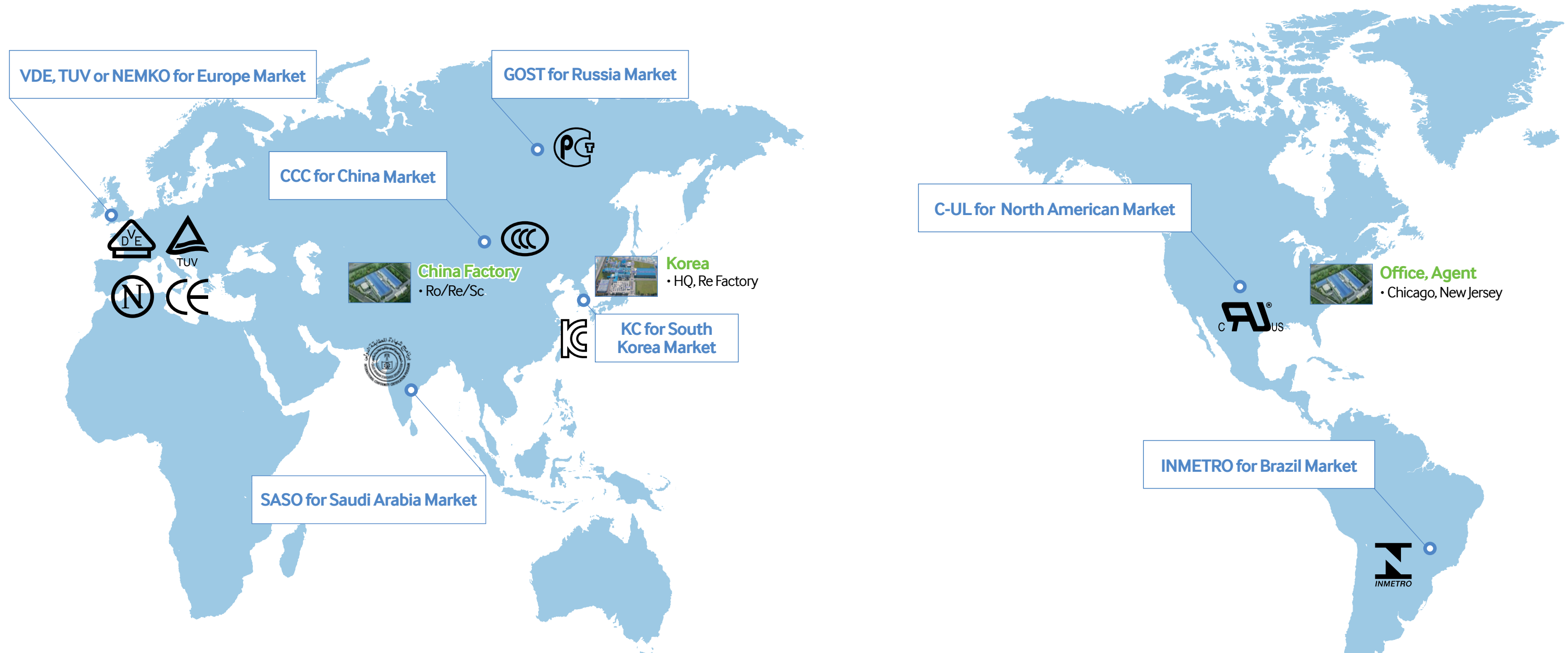


WARNING / DANGER

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS PERSONAL INJURY.

1. Ground the equipment securely.
2. Turn off power before servicing.
3. Mount the terminal cover in place whenever Power is applied to this compressor.
4. Wear protective goggles when servicing.
5. Before brazing, remove pressure from both High and low side.
6. Do not use this compressor to compress air.
7. Use only approved refrigerants and lubricants.
8. Do not touch with bare hands during running Or after stopping instantly.

APPROVED LICENSES



SEC Suwon / Gwangju City Korea



Head Office (Suwon)

- Marketing, R&D, Quality, Global Manufacturing Technology

Factory (Gwangju)

- Equipment Status
- Processing Line 8, Assembly Line 6, Motor Line 5

SSEC Suzhou City, China



Factory (Rotary & Scroll Comp)

- Marketing, R&D, Quality, Global Manufacturing Technology

Equipment Status

- Processing Line 8, Assembly Line 6, Motor Line 5



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