

SAMSUNG

Compressor Catalogue





Contents





05

Brief History

06

Global Operation

08

**Reciprocating
Compressor**

12 For Refrigerator

34 For Special
Applications

52

**Rotary
Compressor**

56 For Air conditioner

64 For Unitary

68 For Heat Pump

72 For Special Applications

86

**Scroll
Compressor**

90 Inverter Scroll



1970-80

Business Readiness

1976 Reciprocating Compressor
Production in Korea

1990

Growth & Innovation

1990 Rotary Compressor
Production in Korea

1995 Variable Speed Rotary Compressor
Production in Korea

1999 Variable Speed Reciprocating
Compressor Production in Korea

2000

Global Expansion

2003 Rotary Compressor
Production in China

2006 Moved Rotary Compressor
Factory from Korea to China

2007 Launched
World First Aluminum Wire
Reciprocating Compressor

2010~

Face of the Future

2011 Built Reciprocating Compressor
Factory in China

2012 Scroll Compressor Production in
China

2014 Launched Mini Rotary Compressor

2016 Launched R32 Variable Speed Rotary
Compressor

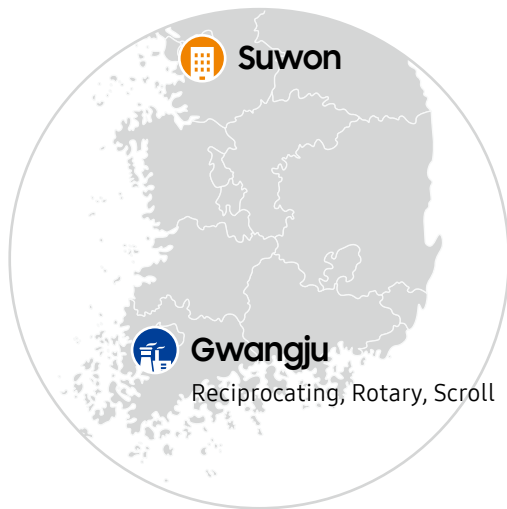
2017 Achieved Accumulated 200 Million
Production of Reciprocating
Compressor

2019 Launched World First Max 180 rps
Variable Speed Scroll Compressor

2022 Built Reciprocating Compressor
Factory in India

2023 Rotary & Scroll Compressor
Production in Korea

Global Operation



KOREA



Gwangju Compressor Plant, KOREA



CHINA



Suzhou Compressor Plant, CHINA



INDIA



USA



Chennai Compressor Plant, INDIA



Compressor Plant



Sales & Service Office

Reciprocating Compressor

A global partner that provides reliable and eco-friendly features for all your cooling needs





Contents

10	Product Range
11	Model Identification

12

Reciprocating Compressor for Refrigerator

13	Key Features
14	Specification

34

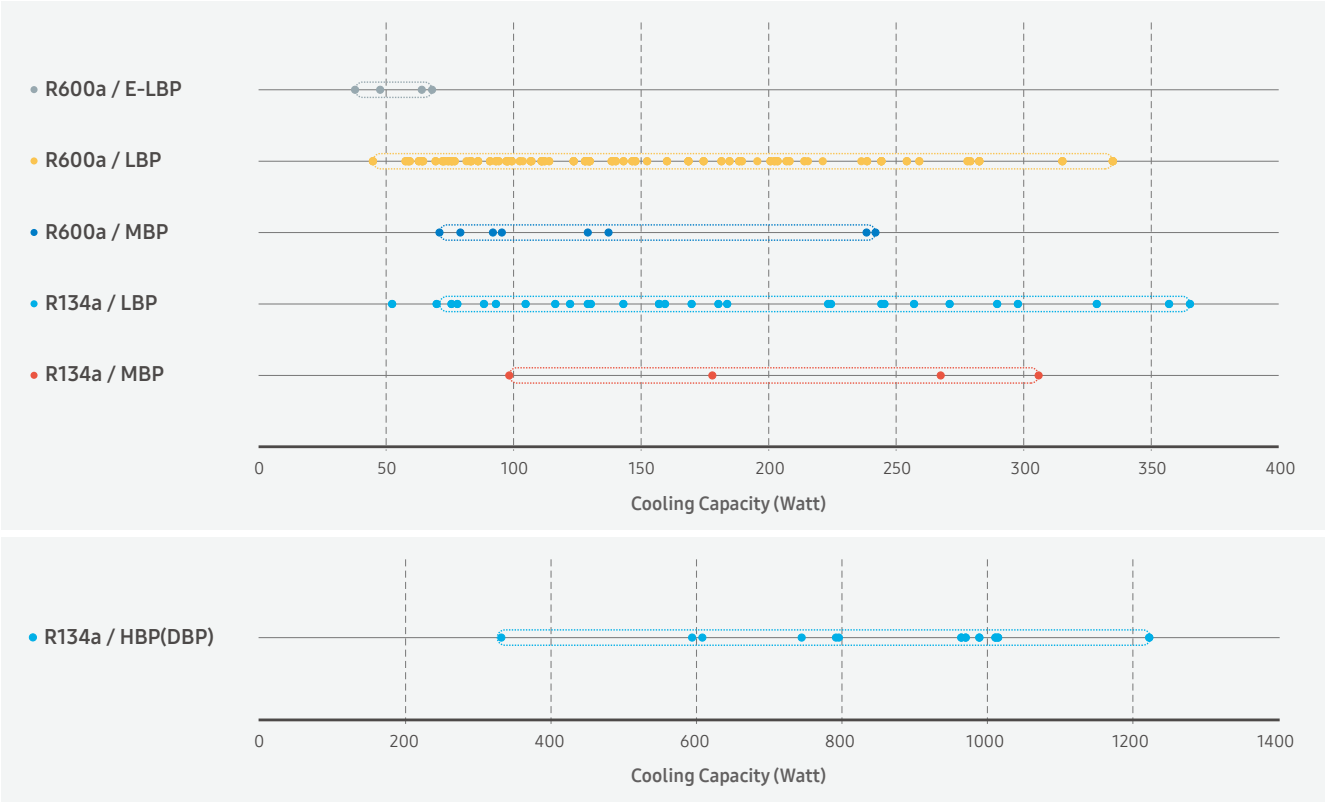
Reciprocating Compressor for Special Applications

35	Key Features
36	Specification

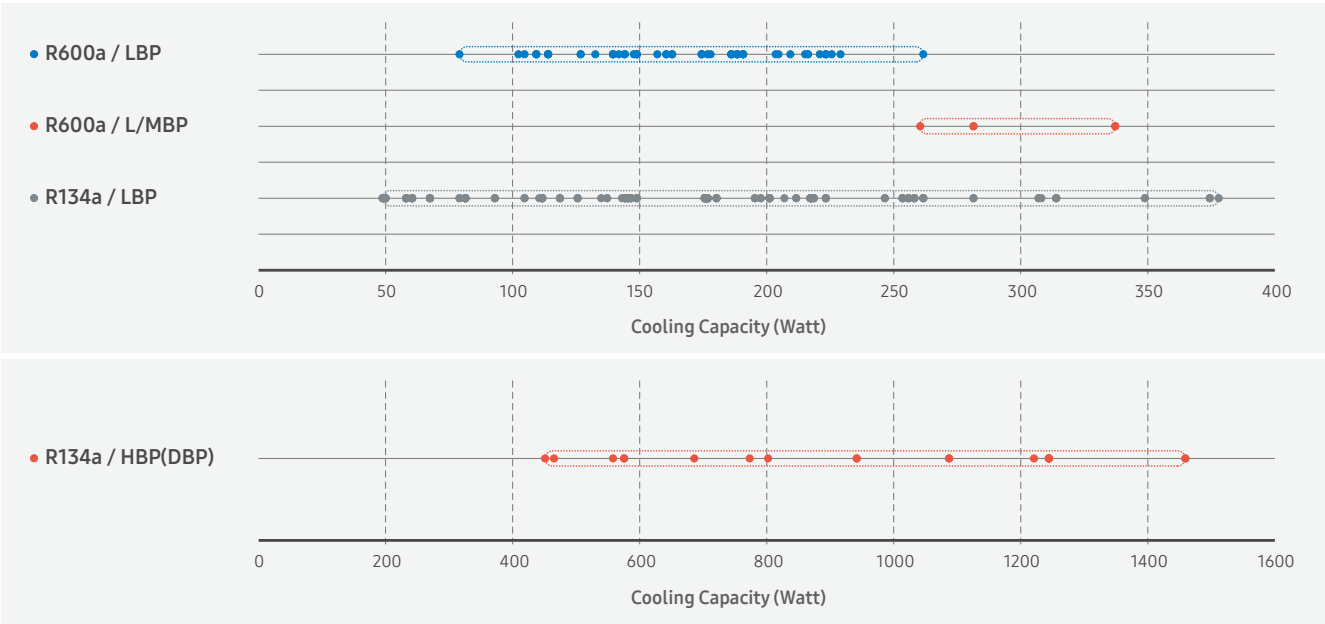
38	Dimension
44	Assembly Diagrams
48	Mounting Accessories
49	Inverter Controller
50	Packing Information
51	Handling Guide

Product Range

Variable Speed

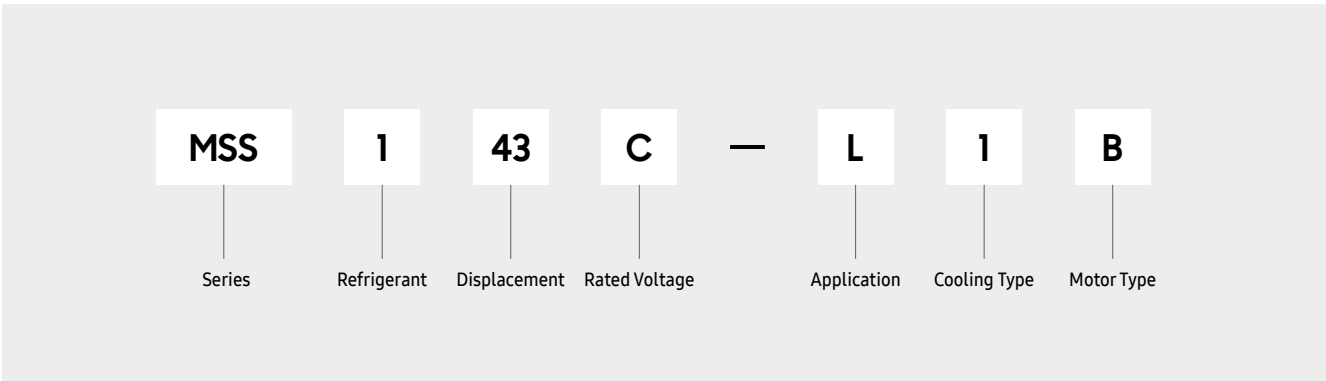


Fixed Speed

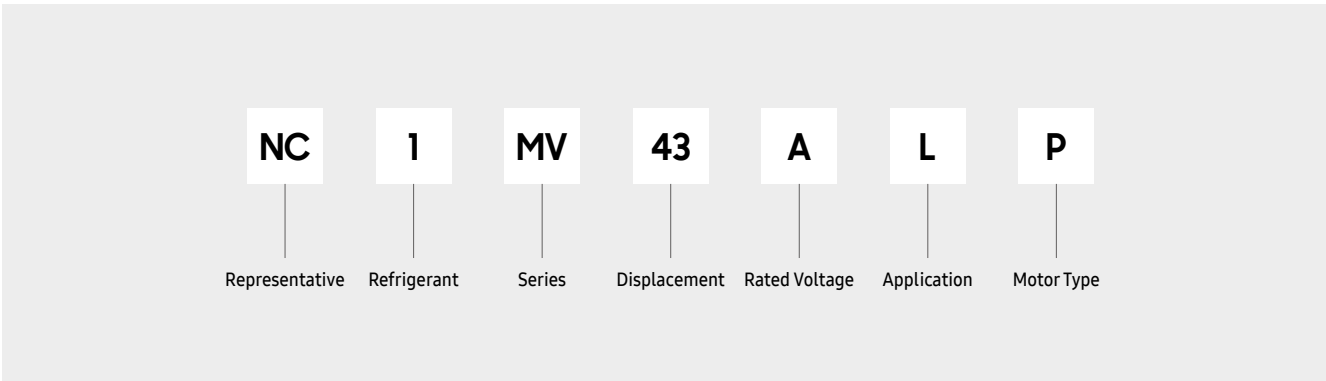


Model Identification

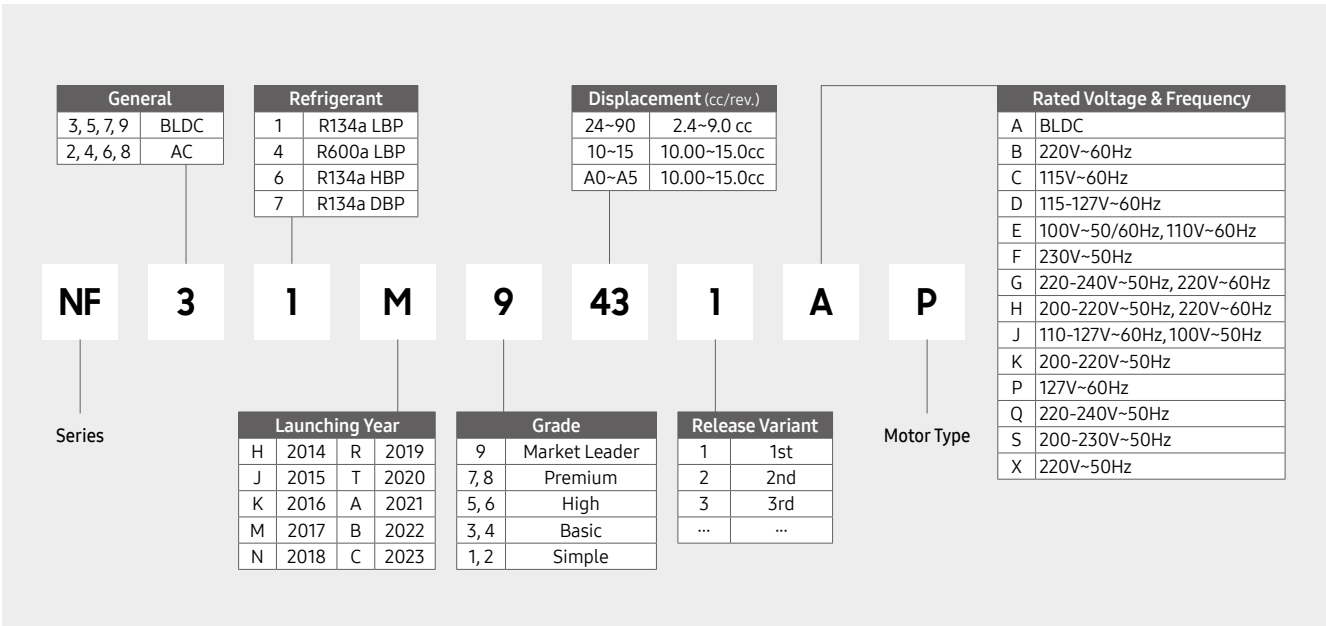
Type 1 (Series : MSS, MSA, MSE, ENV, MSV)



Type 2 (Series : EV, MV, A, AV)



Type 3 (Series : NF, NN, NI)



Reciprocating Compressor for Refrigerator



Key Features for Refrigerator

Drop-In Inverter Solution

By using automatic adjustment RPM technology, it is possible to change inverter refrigerator without any other component changes

SAMSUNG



Fixed Speed Compressor



Just Drop-In



BLDC Compressor
+ Samsung Inverter



20%
Energy Saving



High
Durability



Wide Voltage
Range



High
Productivity



Less Noise



Maintain
Freshness



Low Cost,
High Efficiency

Specification

Variable Speed / R600a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	MSV488A-L1J	8.82	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	8.82	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	8.82	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	8.82	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	8.82	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	11.1	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	
	MSV4A1A-L1J	11.1	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	11.1	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	11.1	1,100	55	64	220	35	1.60	1.86	6.35	ST
			1,600	88	102	350	54	1.65	1.91	6.54	
			3,000	163	189	647	101	1.61	1.88	6.40	
			4,300	223	259	884	156	1.43	1.66	5.68	

Variable Speed / R600a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		[cc/rev.]						Kcal/Hr	Watt	BTU/Hr	
BLDC 200-240V~50Hz, 220V~60Hz	NC4MVA1ALR	11.1	1,100	55	64	220	38	1.45	1.69	5.77	ST
			1,600	88	102	350	58	1.53	1.78	6.07	
			3,000	163	189	647	104	1.57	1.82	6.22	
			4,300	223	259	884	168	1.32	1.54	5.26	
	NC4EVA3ALM	13.07	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	13.07	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	15.31	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	15.31	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	
			3,600	276	321	1,096	184	1.50	1.74	5.96	
	NC4AV80LR	8.0	1,200	48	56	189	35	1.37	1.60	5.43	ST
			1,600	66	77	262	45	1.46	1.70	5.78	
			2,450	99	115	393	71	1.40	1.63	5.55	
			3,650	139	162	552	106	1.32	1.53	5.21	
	NC4AV80LP	8.0	1,200	48	56	189	31	1.52	1.77	6.00	ST
			1,400	56	66	224	36	1.56	1.81	6.17	
			2,450	99	115	393	67	1.49	1.73	5.87	
			3,650	139	162	552	98	1.42	1.65	5.60	
	NN34H9111AP	11.1	1,100	67	78	266	39	1.72	2.00	6.82	ST
			1,600	97	113	385	56	1.73	2.02	6.87	
			3,000	179	208	710	109	1.64	1.91	6.52	
			4,000	219	254	867	141	1.55	1.80	6.13	
	NN34H9112AP	11.1	1,100	65	76	258	38	1.72	2.00	6.82	ST
			1,600	92	107	366	53	1.73	2.01	6.88	
			3,000	174	203	692	107	1.63	1.90	6.48	
			4,000	198	230	784	132	1.50	1.74	5.96	

Specification

Variable Speed / R600a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	NN34M9112AR	11.1	1,100	65	76	258	38	1.70	1.97	6.73	ST
			1,600	92	107	365	54	1.72	2.00	6.81	
			3,000	174	203	690	106	1.64	1.91	6.53	
			4,300	212	246	839	151	1.40	1.63	5.56	
	NN34J9902AP	9.1	1,100	50	58	199	28	1.79	2.08	7.11	ST
			1,400	64	74	254	35	1.80	2.10	7.16	
			3,000	138	160	547	85	1.62	1.89	6.44	
			4,300	183	213	728	131	1.40	1.63	5.55	
	NN34M9902AR	9.1	1,100	50	58	198	29	1.74	2.02	6.89	ST
			1,400	64	74	254	37	1.75	2.04	6.95	
			3,000	138	160	547	87	1.59	1.85	6.31	
			4,300	183	213	728	134	1.37	1.59	5.44	
	NN54N9112AV	11.1	1,100	67	78	268	38	1.80	2.09	7.13	ST
			1,400	85	98	335	46	1.85	2.15	7.34	
			3,000	176	204	697	102	1.73	2.01	6.86	
			3,800	193	224	765	119	1.62	1.89	6.43	
	NN54N9101AX	10.1	1,200	67	77	264	38	1.77	2.06	7.02	ST
			1,600	87	102	347	48	1.82	2.12	7.23	
			3,000	160	186	633	94	1.71	1.98	6.77	
			3,600	181	210	716	108	1.67	1.94	6.63	
	NN54T9902AV	9.1	1,050	50	59	200	27	1.84	2.14	7.30	ST
			1,400	65	75	256	35	1.86	2.16	7.38	
			1,600	77	89	305	42	1.84	2.14	7.29	
			3,600	152	177	603	92	1.64	1.91	6.52	
	NN54T9602AV	6.0	1,050	31	36	124	18	1.79	2.08	7.08	ST
			1,400	41	48	162	23	1.80	2.10	7.16	
			3,000	88	103	351	53	1.68	1.95	6.65	
			3,600	108	126	430	66	1.63	1.90	6.48	
	NI34B3602AD	6.0cc	1,400	33	38	130	25	1.31	1.53	5.22	ST
			1,800	49	57	195	36	1.38	1.61	5.48	
			2,450	68	79	271	48	1.43	1.66	5.66	
			4,000	93	109	371	70	1.34	1.56	5.31	
	NI34B9602AD	6.0cc	1,300	33	38	130	24	1.38	1.61	5.48	ST
			1,800	50	59	200	35	1.44	1.68	5.73	
			3,000	92	106	363	60	1.53	1.77	6.05	
			4,500	113	132	450	87	1.31	1.52	5.19	

Variable Speed / R600a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		[cc/rev.]						Kcal/Hr	Watt	BTU/Hr	
BLDC 200-240V~50Hz, 220V~60Hz	NI34B9601AD	6.0cc	1,300	33	38	129	22	1.50	1.75	5.97	ST
			1,800	50	59	200	32	1.58	1.84	6.26	
			3,000	91	106	362	57	1.61	1.88	6.40	
			4,500	113	132	450	75	1.51	1.75	5.98	
	NI34B9601AB	6.0cc	1,300	33	38	130	21	1.53	1.78	6.09	ST
			1,800	50	59	200	31	1.64	1.91	6.50	
			3,000	90	104	356	53	1.68	1.95	6.65	
			4,500	113	132	450	81	1.40	1.62	5.54	
	NI34B3802AD	8.0cc	1,400	56	65	222	43	1.30	1.51	5.15	ST
			1,800	75	87	297	52	1.43	1.66	5.66	
			2,450	92	106	363	66	1.40	1.63	5.55	
			4,000	145	168	574	110	1.31	1.53	5.21	
	NI34B9802AD	8.0cc	1,300	48	56	191	36	1.33	1.55	5.30	ST
			1,800	70	81	278	47	1.49	1.74	5.92	
			3,000	117	136	465	82	1.42	1.66	5.65	
			4,300	151	176	600	113	1.33	1.55	5.29	
	NI34B9801AD	8.0cc	1,300	47	54	185	30	1.55	1.80	6.14	ST
			1,800	70	81	278	42	1.67	1.94	6.62	
			3,000	125	145	495	79	1.58	1.84	6.27	
			4,300	147	171	585	104	1.42	1.65	5.62	
	NI34B9801AB	8.0cc	1,300	47	54	185	30	1.58	1.83	6.26	ST
			1,800	70	81	278	40	1.76	2.05	6.98	
			3,000	125	145	495	76	1.64	1.90	6.50	
			4,300	147	171	585	100	1.47	1.71	5.84	
	NI34T9102AD	10.0	1,300	69	80	273	49	1.41	1.63	5.56	ST
			1,600	84	98	335	59	1.43	1.66	5.64	
			2,000	106	123	419	71	1.48	1.72	5.86	
			3,000	156	181	619	110	1.42	1.65	5.62	
			4,500	201	233	796	157	1.28	1.49	5.06	
	NI34T9101AD	10.0	1,300	69	80	273	43	1.62	1.88	6.40	ST
			1,600	84	98	335	51	1.65	1.91	6.51	
			2,000	106	123	419	63	1.66	1.94	6.58	
			3,000	156	181	619	98	1.60	1.86	6.31	
			4,500	201	233	796	139	1.44	1.68	5.71	
			2,450	92	106	363	66	1.40	1.63	5.55	
			4,000	145	168	574	110	1.31	1.53	5.21	

Specification

Variable Speed / R600a / LBP

Rated Voltage	Model	Displace- ment	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200~240V~50Hz, 220V~60Hz	NI34T9101AB	10.0	1,300	69	80	273	42	1.65	1.92	6.52	ST
			1,600	84	98	335	49	1.72	2.00	6.80	
			2,000	106	123	419	62	1.69	1.97	6.68	
			3,000	156	181	619	97	1.61	1.88	6.38	
			4,500	201	233	796	134	1.50	1.74	5.93	
	* NI54C9601AB	6.0cc	1,300	43	50	171	25	1.76	2.04	6.96	ST
			1,800	59	69	234	32	1.84	2.14	7.32	
			2,000	72	84	286	41	1.78	2.07	7.05	
			3,000	96	112	381	57	1.68	1.96	6.68	
			4,500	124	144	492	80	1.55	1.80	6.15	
	* NI54C9801AB	8.0cc	1,300	59	69	234	34	1.74	2.02	6.89	ST
			1,800	80	93	317	44	1.82	2.11	7.21	
			2,000	95	110	377	54	1.76	2.04	6.98	
			3,000	128	149	508	78	1.64	1.91	6.51	
			4,300	166	193	659	107	1.55	1.80	6.16	
	* NI54C9101AB	10.0cc	1,300	69	80	273	40	1.74	2.03	6.92	ST
			1,800	85	99	337	47	1.81	2.10	7.18	
			2,000	106	123	419	60	1.76	2.04	6.98	
			3,000	156	181	619	95	1.64	1.91	6.52	
			4,500	201	233	796	130	1.54	1.79	6.13	
	NF34J9131AM	13.07	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	13.07	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	
	NF34H9151AM	15.31	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	1143	193	1.49	1.74	5.93	
	NF34J9151AN	15.31	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	1143	195	1.48	1.72	5.87	

※ Remark : * is under development

Variable Speed / R600a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	NF54M5131AR	13.07	1,100	74	86	294	46	1.61	1.87	6.39	ST
			1,450	95	111	379	57	1.67	1.95	6.64	
			1,650	106	123	422	64	1.67	1.94	6.64	
			3,700	243	283	965	160	1.52	1.77	6.03	
	NF54M7131AN	13.07	1,100	74	86	294	43	1.72	2.00	6.83	ST
			1,450	95	111	379	55	1.74	2.02	6.90	
			1,650	106	123	422	61	1.74	2.02	6.90	
			3,700	243	283	965	160	1.52	1.77	6.03	
	NF54M9131AM	13.07	1,100	74	86	294	43	1.72	2.01	6.85	ST
			1,450	95	111	379	53	1.79	2.08	7.10	
			1,650	106	123	422	59	1.79	2.08	7.10	
			3,700	243	283	965	161	1.51	1.76	6.00	
	NF54M5151AR	15.31	1,100	84	98	333	56	1.51	1.76	6.01	ST
			1,450	112	130	443	69	1.61	1.88	6.40	
			1,850	145	168	575	87	1.68	1.95	6.65	
			3,700	288	335	1143	191	1.51	1.76	6.00	
	NF54M7151AN	15.31	1,100	84	98	333	52	1.63	1.89	6.46	ST
			1,450	112	130	443	66	1.70	1.98	6.74	
			1,850	145	168	575	84	1.73	2.01	6.85	
			3,700	288	335	1,143	191	1.51	1.76	6.00	
	NF54K9151AM	15.31	1,100	84	98	333	50	1.69	1.96	6.70	ST
			1,450	112	130	443	63	1.77	2.06	7.03	
			1,850	145	168	575	81	1.79	2.08	7.10	
			3,700	288	335	1,143	191	1.51	1.76	6.00	
	NF94T9131AT	13.07	950	65	76	259	37	1.76	2.05	6.98	ST
			1,450	95	111	379	51	1.86	2.16	7.36	
			1,650	106	123	421	57	1.85	2.16	7.36	
			3,700	243	283	964	162	1.50	1.74	5.95	
	NF94R9151AT	15.31	900	72	83	285	43	1.68	1.96	6.67	ST
			1,100	81	94	319	47	1.70	1.97	6.73	
			1,450	114	133	453	62	1.85	2.16	7.36	
			1,850	145	168	575	79	1.83	2.13	7.27	
3,700			279	324	1,107	185	1.51	1.75	5.98		
NF94T9151AF	15.31	950	76	89	302	46	1.67	1.94	6.61	ST	
		1,450	114	133	453	64	1.79	2.08	7.10		
		1,650	149	174	593	82	1.83	2.12	7.24		
		3,700	279	324	1,107	189	1.47	1.71	5.84		

* Remark : * is under development

Specification

Variable Speed / R600a / LBP

Rated Voltage	Model	Displace- ment	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 200-240V~50Hz, 220V~60Hz	NF94B9111AT	11.1	950	58	67	229	32	1.78	2.07	7.08	ST
			1,250	73	85	289	39	1.85	2.15	7.33	
			1,450	82	95	325	44	1.84	2.14	7.31	
			3,700	212	246	839	137	1.55	1.80	6.14	
	NO14B9111AK	11.1	950	58	67	230	32	1.81	2.11	7.20	ST
			1,100	62	72	247	34	1.83	2.13	7.28	
			1,450	82	95	325	44	1.85	2.16	7.36	
			3,700	212	247	841	142	1.49	1.74	5.92	
	NO14B9131AK	13.07	950	66	77	262	36	1.81	2.11	7.20	ST
			1,100	74	86	294	40	1.83	2.13	7.28	
			1,450	96	112	381	52	1.85	2.16	7.36	
			3,700	244	284	968	164	1.49	1.73	5.90	
	NO14B9151AK	15.31	950	76	88	302	42	1.81	2.11	7.20	ST
			1,100	82	95	325	45	1.83	2.13	7.28	
			1,450	114	133	452	61	1.85	2.16	7.36	
			3,700	280	326	1111	188	1.49	1.73	5.91	

Cooling Type

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE Conditions (LBP)

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

Variable Speed / R600a / MBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 200-240V~50Hz, 220V~60Hz	MSV460A-M1B	5.99	1,200	68	79	270	35.0	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	108.0	1.90	2.21	7.54	
	NN35J9602AP	5.99	1,200	61	71	242	28.6	2.13	2.48	8.46	ST
			1,400	79	92	314	35.9	2.20	2.56	8.73	
			2,000	111	129	441	50.7	2.19	2.55	8.70	
			3,650	208	242	826	101.3	2.05	2.39	8.15	
	NN55A9602AV	5.99	1,050	56	65	222	26	2.17	2.53	8.62	ST
			1,400	79	92	313	34	2.32	2.70	9.20	
			2,000	114	133	452	50	2.29	2.67	9.10	
			3,600	212	247	841	95	2.24	2.61	8.90	

Cooling Type

FC : Fan cooling
OC : Oil cooling
ST : Static

ASHRAE Conditions (MBP)

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

Specification

Variable Speed / R134a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	NC1MV43ALP	4.33	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	4.33	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	5.99	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	5.99	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	
	MSV162A-L1J	6.16	1,200	60	70	238	44	1.36	1.59	5.41	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	6.16	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	
			4,000	210	244	834	141	1.49	1.73	5.91	
	MSV172A-L2J	7.21	1,200	67	78	266	53	1.26	1.47	5.02	FC
			2,000	123	143	488	82	1.50	1.74	5.96	
			3,000	192	223	762	129	1.49	1.73	5.91	
			4,300	256	298	1,016	200	1.28	1.49	5.08	
	MSV172A-L1B	7.21	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	
	NC1MV72ALP	7.21	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	
			4,000	249	290	989	178	1.40	1.63	5.55	

Variable Speed / R134a / LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	NC1MV72ASR	7.21	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	
			4,000	249	290	989	175	1.42	1.65	5.65	
	NC1MV82ALP	8.19	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	8.19	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	1219	213	1.44	1.68	5.72	
	NC1MV90ALP	9.08	1,200	100	116	397	66	1.52	1.76	6.02	ST
			1,600	135	157	536	83	1.63	1.89	6.46	
			2,800	233	271	925	152	1.53	1.78	6.09	
			3,800	283	329	1,122	202	1.40	1.63	5.57	
			4,000	297	345	1,178	213	1.39	1.62	5.53	
	NC1MV90ASR	9.08	1,200	100	116	397	69	1.45	1.69	5.75	ST
			1,600	135	157	536	87	1.55	1.80	6.16	
			2,800	233	271	925	160	1.46	1.69	5.78	
3,800			283	329	1,122	207	1.37	1.59	5.42		
4,000			297	365	1,247	218	1.36	1.58	5.41		

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

Specification

Variable Speed / R134a / MBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	NC1MV43AMP	4.33	1,200	85	98	335	43	1.97	2.29	7.80	ST
			2,000	153	178	607	74	2.07	2.40	8.21	
			3,000	230	267	913	114	2.02	2.35	8.01	
			3,650	263	306	1,044	137	1.92	2.23	7.62	

Variable Speed / R134a / HBP(DBP)

Rated Voltage	Model	Displace- ment	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
BLDC 200-240V~50Hz, 220V~60Hz	MSV572A-D1R	7.21	1,200	283	329	1,123	109	2.60	3.02	10.30	ST
			2,160	512	596	2,032	191	2.68	3.12	10.64	
			2,880	682	794	2,706	266	2.56	2.98	10.17	
			3,600	829	965	3,290	344	2.41	2.80	9.56	
			3,780	871	1,014	3,456	372	2.34	2.73	9.29	
	MSV672A-H1P	7.21	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	MSV672B-D1P	7.21	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	
	NC6MV90ADP	9.08	1,740	510	594	2,024	190	2.68	3.12	10.65	ST
			2,160	640	745	2,540	240	2.67	3.10	10.58	
			2,880	850	989	3,373	335	2.54	2.95	10.07	
			4,080	1050	1,222	4,167	540	1.94	2.26	7.72	
	NC6MV90ADR	9.08	1,740	530	616	2,103	207	2.56	2.98	10.16	ST
			2,160	660	767	2,619	259	2.55	2.96	10.11	
			2,880	870	1,012	3,452	355	2.45	2.85	9.72	
			4,080	1070	1,244	4,246	620	1.73	2.01	6.85	

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)

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

Fixed Speed / R600a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 110V~60Hz	NN24N4821TH	RSCR	110-60	152	177	603	92.8	1.64	1.90	6.50	ST
	NN24N4101TH	RSCR	110-60	190	221	754	118.7	1.60	1.86	6.35	ST
AC 115V~60Hz	MSE482C-S1H	RSCR	115-60	150	174	596	98	1.54	1.79	6.10	ST
	MSE482C-L1H	RSCR	115-60	150	174	596	96	1.56	1.82	6.20	ST
	MSA488C-S1B	RSCR	115-60	160	186	635	124	1.29	1.49	5.10	ST
	MSE4A0C-S1H	RSCR	115-60	186	216	738	125	1.49	1.73	5.90	ST
	MSE4A0C-L1H	RSCR	115-60	186	216	738	123	1.51	1.76	6.00	ST
	MSA4A1C-S1B	RSCR	115-60	197	229	782	156	1.26	1.47	5.00	ST
AC 115-127V~60Hz	MSE4A2DL1H	RSCR	115-60	225	262	893	156	1.44	1.68	5.75	ST
AC 220-240V~50Hz	NC4A51QLA	RSIR	220-50	68	79	270	71	0.96	1.11	3.80	ST
	MSE466Q-L1G	RSCR	220-50	94	109	373	61.7	1.52	1.77	6.05	ST
	MSE466Q-L1U	RSCR	220-50	94	109	373	57	1.65	1.92	6.55	ST
	NN24N4661QH	RSCR	220-50	94	109	373	58.3	1.61	1.88	6.40	ST
	MSA471Q-L1A	RSIR	220-50	98	114	389	79	1.24	1.44	4.92	ST
	MSA471Q-L1B	RSCR	220-50	98	114	389	76	1.29	1.50	5.12	ST
	MSS470Q-L1U	RSCR	220-50	98	114	389	67	1.46	1.70	5.81	ST
	MSA477Q-L1B	RSCR	220-50	109	127	433	78	1.40	1.62	5.55	ST
	MSE482Q-L1G	RSCR	220-50	128	149	508	82	1.55	1.80	6.15	ST
	MSE482Q-L1H	RSCR	220-50	128	149	508	79	1.61	1.88	6.40	ST
	MSE482Q-L1U	RSCR	220-50	128	149	508	77	1.66	1.93	6.60	ST
	MSA488Q-L1B	RSCR	220-50	120	140	476	90	1.33	1.55	5.29	ST
	MSS488Q-L1U	RSCR	220-50	120	140	476	82	1.46	1.70	5.81	ST
	MSE490Q-L1G	RSCR	220-50	138	160	548	91	1.51	1.76	6.00	ST
	MSE490Q-L1H	RSCR	220-50	140	163	556	88.2	1.59	1.85	6.30	ST
	MSE490Q-L1U	RSCR	220-50	140	163	556	85.5	1.64	1.90	6.50	ST
	MSE4A0Q-L1G	RSCR	220-50	162	188	643	107	1.51	1.76	6.00	ST
	MSE4A0Q-L1H	RSCR	220-50	162	188	643	104	1.56	1.82	6.20	ST
	MSE4A0Q-L1U	RSCR	220-50	162	188	643	100.5	1.61	1.88	6.40	ST
	NN24N4101QH	RSCR	220-50	160	186	635	96.9	1.65	1.92	6.55	ST
	MSA4A1Q-L1B	RSCR	220-50	164	191	651	115	1.43	1.66	5.66	ST
	MSS4A1Q-L1U	RSCR	220-50	164	191	651	109	1.50	1.75	5.97	ST
	MSE4A1Q-L1G	RSCR	220-50	175	203	695	118	1.49	1.73	5.90	ST
	MSE4A1Q-L1U	RSCR	220-50	176	205	699	111	1.59	1.85	6.30	ST
	MSA4A2Q-L1B	RSCR	220-50	185	215	734	135	1.37	1.59	5.44	ST
	MSS4A2Q-R1U	RSCR	220-50	180	209	715	120	1.50	1.74	5.96	ST

Specification

Fixed Speed / R600a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 220~240V~50Hz	MSE4A2Q-L1H	RSCR	220-50	192	223	762	127	1.51	1.76	6.00	ST
	MSE4A2Q-L1U	RSCR	220-50	192	223	762	123	1.56	1.82	6.20	ST
AC 220V~60Hz	NN24N4661BG	RSCR	220-60	114	133	452	75.4	1.51	1.76	6.00	ST
AC 200~220V~50Hz, 220V~60Hz	MSA471H-L1B	RSCR	220-50	98	114	389	76	1.29	1.50	5.12	ST
			220-60	122	142	484	89	1.37	1.59	5.44	
	MSA477H-L1B	RSCR	220-50	109	127	433	78	1.40	1.62	5.55	ST
			220-60	124	144	492	90	1.38	1.60	5.47	
	MSA488H-L1A	RSCR	220-50	135	157	536	119	1.13	1.32	4.60	ST
			220-60	160	186	635	127	1.26	1.46	5.00	
	MSA488H-L1B	RSCR	220-50	120	140	476	90	1.33	1.55	5.29	ST
			220-60	153	178	607	110	1.39	1.62	5.52	
	MSE482H-L1G	RSCR	220-50	127	148	504	84.4	1.50	1.75	5.97	ST
			220-60	150	174	595	101.4	1.48	1.72	5.87	
	MSA4A1H-L1A	RSCR	220-50	164	191	651	148	1.11	1.29	4.40	ST
			220-60	194	226	770	159	1.22	1.42	4.85	
AC 200~220V~50Hz	NC4A62KLB	RSCR	220-50	88	102	349	65	1.35	1.57	5.37	ST
	MSA462K-S1B	RSCR	220-50	90	105	357	65	1.38	1.61	5.50	ST
	NN24R4829KH	RSCR	220-50	124	144	492	80.0	1.55	1.80	6.15	ST
	MSE490K-L1G	RSCR	220-50	138	160	548	105.3	1.31	1.52	5.20	ST
	NN24R6101KA	RSIR	220-60	160	186	635	119.8	1.34	1.55	5.30	ST
	MSE4A0K-L1G	RSCR	220-50	162	188	643	125.6	1.29	1.50	5.12	ST
	MSE4A2K-L1G	RSCR	220-50	192	223	762	143.7	1.34	1.55	5.30	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

Fixed Speed / R600a / L/MBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 200~220V~50Hz, 220V~60Hz	MSE482H-M1H	RSCR	220-50	242	281	961	121.6	1.99	2.32	7.90	ST
			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
			220-60	290	337	1,151	140.3	2.07	2.40	8.20	
AC 220V~60Hz	MSE466B-M1H	RSCR	220-60	224	260	889	110.0	2.04	2.37	8.10	ST

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

Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 100V~50/60Hz	NI21B1251EZ	RSIR	100-50	53	62	210	75	0.71	0.82	2.80	ST
			100-60	62	72	246	68	0.91	1.06	3.61	
	MSA150E-L1A	RSIR	100-50	125	145	496	112	1.12	1.30	4.43	ST
			100-60	152	177	603	124	1.23	1.43	4.86	
	MSA151EL1A	RSIR	100-50	128	149	508	109	1.17	1.37	4.66	ST
			100-60	152	177	603	121	1.26	1.46	4.98	
	MSA160E-L1A	RSIR	100-50	151	176	599	139	1.09	1.26	4.31	ST
			100-60	187	217	742	156	1.20	1.39	4.76	
AC 115V~60Hz	MSE140C-L1G	RSCR	115-60	126	147	500	87	1.45	1.68	5.75	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
	MSA141C-S1A	RSIR	115-60	124	144	492	101	1.23	1.43	4.87	ST
	MSA141C-S1B	RSCR	115-60	124	144	492	96	1.29	1.50	5.13	ST

Specification

Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 115V~60Hz	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	5.23	ST
	MSA150C-L1A	RSIR	115-60	152	177	603	123	1.24	1.44	4.90	ST
	MSA151C-L1U	RSCR	115-60	152	177	603	116	1.31	1.52	5.20	ST
	MSA151C-L1B	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
	MSS151C-L1U	RSCR	115-60	152	177	603	107	1.42	1.65	5.64	ST
	MSA152C-L1G	RSCR	115-60	152	177	603	105	1.45	1.68	5.74	ST
	MSE148C-L1G	RSCR	115-60	155	180	615	107	1.45	1.68	5.75	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
	MSE152C-L1G	RSCR	115-60	168	195	667	114	1.47	1.71	5.85	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
	MSA160C-L1A	RSIR	115-60	187	217	742	155	1.21	1.40	4.79	ST
	MSA161C-L1A	RSIR	115-60	187	217	742	152	1.23	1.43	4.88	ST
	MSA162C-L1B	RSCR	115-60	187	217	742	145	1.29	1.50	5.12	ST
	MSA162C-L1U	RSCR	115-60	182	212	723	136	1.34	1.56	5.31	ST
	MSS162C-L1U	RSCR	115-60	182	212	723	129	1.41	1.64	5.60	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
	MSA171C-L1B	RSCR	115-60	220	256	873	162	1.36	1.58	5.39	ST
	MSA170C-L1B	RSCR	115-60	222	258	881	160	1.39	1.61	5.51	ST
	MSA170C-L1U	RSCR	115-60	222	258	881	160	1.39	1.61	5.51	ST
	MSS170C-L1U	RSCR	115-60	222	258	881	152	1.46	1.70	5.80	ST
	MSE166C-L1G	RSCR	115-60	225	262	893	155.3	1.45	1.68	5.75	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
	NF21K5111CW	CSR	115-60	322	374	1,278	304	1.06	1.23	4.21	FC
	AC 115-127V~60Hz	MSS143D-S1U	RSCR	115-60	116	135	461	85	1.36	1.59	5.42
MSA151D-L1A		RSIR	115-60	152	177	603	121	1.26	1.46	5.00	ST
MSA151D-L1B		RSCR	115-60	152	177	603	113	1.35	1.56	5.34	ST
MSA162D-L1B		RSCR	115-60	187	217	742	145	1.29	1.50	5.12	ST
MSS162D-S1U		RSCR	115-60	187	217	742	135	1.39	1.61	5.50	ST
MSA162D-S1G		RSCR	115-60	187	217	742	133	1.41	1.63	5.58	ST
MSA162D-L1A		RSIR	115-60	192	223	762	153	1.25	1.46	5.00	ST

Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 115-127V~60Hz	MSA162D-L1H	RSCR	115-60	192	223	762	132	1.45	1.69	5.80	ST
	MSA170D-L1H	RSCR	115-60	218	253	865	155	1.41	1.64	5.60	ST
	MSA182D-L2H	RSCR	115-60	270	314	1,072	193	1.40	1.63	5.55	ST
	MSA182D-L2G	RSCR	115-60	270	314	1,072	201	1.34	1.56	5.35	ST
	MSS182D-L2U	RSCR	115-60	264	307	1,048	181	1.46	1.70	5.80	ST
AC 127V~60Hz	MSA162P-S1B	RSCR	127-60	187	217	742	137	1.36	1.59	5.42	ST
AC 200-220V~50Hz, 220V~60Hz	NI21B1251HZ	RSIR	220-50	53	62	210	75	0.71	0.82	2.80	ST
			220-60	62	72	246	67	0.93	1.08	3.67	
	NI21B1301HZ	RSIR	220-50	65	75	257	76	0.85	0.99	3.37	ST
			220-60	77	90	306	78	0.99	1.15	3.94	
	MSA141H-L1A	RSIR	220-50	96	112	381	83	1.16	1.34	4.59	ST
			220-60	124	144	492	103	1.20	1.40	4.78	
	MSA143H-L1A	RSIR	220-50	95	110	377	85	1.12	1.30	4.43	ST
			220-60	128	149	508	102	1.25	1.46	5.00	
	MSA150H-L1A	RSIR	220-50	125	145	496	110	1.14	1.32	4.51	ST
			220-60	152	177	603	123	1.24	1.44	4.90	
	MSA151H-L1A	RSIR	220-50	128	149	508	107	1.20	1.39	4.75	ST
			220-60	152	177	603	121	1.26	1.46	5.00	
	MSA160H-L1A	RSIR	220-50	151	176	599	136	1.11	1.29	4.41	ST
			220-60	187	217	742	150	1.25	1.45	4.95	
	MSA161H-L1A	RSIR	220-50	151	176	599	135	1.12	1.30	4.44	ST
			220-60	187	217	742	149	1.26	1.46	4.98	
	MSA162H-L1A	RSIR	220-50	152	177	603	141	1.08	1.25	4.28	ST
			220-60	192	223	762	153	1.25	1.46	5.00	
	MSA162H-L1H	RSCR	220-50	152	177	603	110	1.38	1.61	5.50	ST
			220-60	192	223	762	134	1.43	1.67	5.70	
	MSA171H-L1B	RSCR	220-50	173	201	687	142	1.22	1.42	4.83	ST
			220-60	220	256	873	161	1.37	1.59	5.42	
	MSA170H-L1B	RSCR	220-50	173	201	686	141	1.23	1.43	4.87	ST
			220-60	220	256	873	163	1.35	1.57	5.36	
	MSA170H-L1G	RSCR	220-50	173	201	686	131	1.32	1.54	5.24	ST
			220-60	220	256	873	157	1.40	1.63	5.56	
	MSA170H-L1H	RSCR	220-50	170	198	675	130	1.31	1.52	5.20	ST
			220-60	218	253	865	155	1.41	1.64	5.60	
	MSA182H-L2G	RSCR	220-50	218	253	865	188	1.16	1.35	4.60	ST
			220-60	270	314	1,071	201	1.34	1.56	5.35	

Specification

Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 200-220V~50Hz, 220V~60Hz	MSA182H-L2H	RSCR	220-50	218	253	865	173	1.26	1.47	5.00	ST
			220-60	270	314	1,071	193	1.40	1.63	5.55	
	MSS182H-L2U	RSCR	220-50	212	247	841	165	1.28	1.49	5.10	ST
			220-60	264	307	1,048	181	1.46	1.70	5.80	
	MSA190H-L2G	RSCR	220-50	242	281	960	216	1.12	1.30	4.45	ST
			220-60	300	349	1,190	225	1.33	1.55	5.30	
	MSA190H-L2H	RSCR	220-50	242	281	960	200	1.21	1.41	4.80	ST
			220-60	300	349	1,190	215	1.40	1.62	5.55	
AC 220V~60Hz	MSE140B-L1U	RSCR	220-60	126	147	500	81	1.55	1.80	6.15	ST
	MSE148B-L1U	RSCR	220-60	155	180	615	100	1.55	1.80	6.15	ST
	MSE156B-L1U	RSCR	220-60	188	219	746	121	1.55	1.81	6.17	ST
	MSA162B-L1G	RSCR	220-60	187	217	742	130	1.44	1.67	5.71	ST
	MSE166B-L1U	RSCR	220-60	225	262	893	146	1.54	1.79	6.15	ST
	NF21K5111BW	CSR	220-60	322	374	1,278	284	1.13	1.32	4.50	FC
	NF21K5131BW	CSR	220-60	385	448	1,528	322	1.20	1.39	4.75	FC
AC 220-240V~50Hz, 220V~60Hz	MSA151G-L1B	RSCR	220-50	123	143	488	94	1.31	1.52	5.19	ST
			220-60	152	177	603	110	1.38	1.61	5.48	
	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	
	MSA162G-L1B	RSCR	220-50	151	176	599	115	1.31	1.53	5.21	ST
			220-60	187	217	742	135	1.39	1.61	5.50	
	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	
AC 220-240V~50Hz	MSA141Q-S1A	RSIR	220-50	96	112	381	83	1.16	1.34	4.59	ST
	MSA143Q-S1Z	RSIR	220-50	96	112	381	83	1.16	1.34	4.59	ST
	MSA153Q-L1A	RSIR	220-50	125	145	496	111	1.13	1.31	4.47	ST
	MSA150Q-L1A	RSIR	220-50	125	145	496	104	1.20	1.40	4.77	ST
	MSA151Q-L1A	RSIR	220-50	128	149	508	102	1.25	1.46	5.00	ST
	MSA163Q-L1A	RSIR	220-50	151	176	599	134	1.13	1.31	4.47	ST
	MSA161Q-L1A	RSIR	220-50	151	176	599	126	1.20	1.39	4.76	ST
	MSA161Q-L1B	RSCR	220-50	151	176	599	116	1.30	1.51	5.17	ST
	MSA162Q-L1G	RSCR	220-50	151	176	599	106	1.42	1.66	5.65	ST
	MSS162Q-L1U	RSCR	220-50	151	176	599	105	1.44	1.67	5.71	ST
	MSA171Q-L1B	RSCR	220-50	173	201	687	131	1.32	1.54	5.24	ST

Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 220-240V~50Hz	MSA170QL1B	RSCR	220-50	173	201	687	129	1.34	1.56	5.32	ST
	MSA170QL1G	RSCR	220-50	173	201	687	126	1.37	1.60	5.45	ST
	MSA170QL1H	RSCR	220-50	170	198	675	123	1.38	1.61	5.50	ST
	MSA182QL2H	RSCR	220-50	218	253	865	153	1.42	1.66	5.65	ST
	MSS182QL2U	RSCR	220-50	212	247	842	145	1.46	1.70	5.80	ST
AC 200-220V~50Hz	MSA141K-L1A	RSIR	220-50	96	112	381	86	1.12	1.30	4.43	ST
	MSA141K-S1A	RSIR	220-50	96	112	381	83	1.16	1.34	4.59	ST
	MSA141K-S1B	RSCR	220-50	96	112	381	79	1.22	1.41	4.82	ST
	MSA143KS1B	RSCR	220-50	96	112	381	77	1.25	1.45	4.95	ST
	MSA151K-S1G	RSCR	220-50	125	145	496	102	1.23	1.42	4.86	ST
	MSA162K-S1G	RSCR	220-50	151	176	599	117	1.29	1.50	5.12	ST
	MSA170K-S1G	RSCR	220-50	173	201	687	132	1.31	1.52	5.20	ST
AC 230V~50Hz	NF21K5111FU	RSCR	230-50	265	308	1,052	228	1.16	1.35	4.61	FC
	NF21K5131FU	RSCR	230-50	325	378	1,290	275	1.18	1.37	4.69	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 (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

Specification

Fixed Speed / R134a / DBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 220V~60Hz	MSA662BD1B	RSCR	220-60	690	802	2,739	285	2.42	2.82	9.60	ST
	MSA670BD1B	RSCR	220-60	810	942	3,216	360	2.25	2.62	8.90	ST
	MSS670BD1U	RSCR	220-60	810	942	3,216	305	2.66	3.09	10.54	ST
AC 220-240V~50Hz	MSA670QD1B	RSCR	220-50	665	773	2,640	278	2.39	2.78	9.50	ST

Fixed Speed / R134a / HBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 115V~60Hz	MSA643C-H1G	RSCR	115-60	495	576	1,965	191	2.59	3.01	10.29	ST
	NF26K5111CW	CSR	115-60	1,070	1,244	4,248	602	1.78	2.07	7.06	FC
	NF26K5111CB	RSCR	115-60	1,070	1,244	4,248	545	1.96	2.28	7.79	FC
	NF26K5131CW	CSR	115-60	1,255	1,459	4,982	682	1.84	2.14	7.31	FC
AC 220V~60Hz	MSA635C-H1A	RSCR	220-50	388	451	1,540	156	2.49	2.89	9.87	ST
	MSA643B-H1G	RSCR	220-60	495	576	1,965	191	2.59	3.01	10.28	ST
	MSA651B-H1G	RSCR	220-60	590	686	2,342	230	2.57	2.98	10.18	ST
	NF26K5111BS	CSIR	220-60	1,070	1,244	4,248	669	1.60	1.86	6.35	FC
	NF26K5111BW	CSR	220-60	1,070	1,244	4,248	540	1.98	2.30	7.87	FC
	NF26K5131BS	CSIR	220-60	1,255	1,459	4,982	776	1.62	1.88	6.42	FC
AC 230V~50Hz	NF26K5111FZ	RSIR	230-50	935	1,087	3,712	562	1.66	1.93	6.60	FC
	NF26K5131FZ	RSIR	230-50	1,050	1,221	4,169	631	1.66	1.93	6.61	FC
AC 220-240V~50Hz	MSA643Q-H1G	RSCR	220-50	400	465	1,588	154	2.60	3.02	10.30	FC
	MSA651Q-H1G	RSCR	220-50	480	558	1,906	185	2.59	3.02	10.30	FC
	NF26K5111QZ	RSIR	220-50	935	1,087	3,712	510	1.83	2.13	7.28	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 (Dbp/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

Fixed Speed / R290 / L/MBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 115-127V~60Hz	NN2AT3621DU (LBP/MBP)	RSCR	115-60	292	340	1,159	200	1.46	1.70	5.80	ST
	NN2AA3761DE (MBP)	RSCR	115-60	485	564	1,925	266	1.82	2.12	7.23	

Cooling Type	Motor Type	ASHRAE Conditions (LBP)	(MBP)	Unit Conversion Table
FC : Fan cooling	RSIR : Resistance Start Induction Run	Evaporating Temp. : -23.3°C (-10°F)	-6.7°C (20°F)	1 watt = 3.41 Btu/Hr
OC : Oil cooling	RSCR : Resistance Start Capacitor Run	Condensing Temp. : 54.4°C (130°F)	54.4°C (130°F)	1 watt = 0.86 Kcal/Hr
ST : Static	CSIR : Capacitor Start Induction Run	Gas Superheated to : 32.2°C (90°F)	35.0°C (95°F)	1 Kcal/Hr = 3.97 Btu/Hr
	CSR : Capacitor Start Capacitor Run	Liquid sub-cooled to : 32.2°C (90°F)	46.1°C (115°F)	
		Ambient Temp. : 32.2°C (90°F)	35.0°C (95°F)	

Reciprocating for Special Applications



Key Features for Special Applications

Ultra Micro Compressor

By using automatic moving RPM technology, it is possible to change inverter refrigerator without any other component changes



Conventional Motor Design
(Inner Rotor)



New
(Outer Rotor)

Wine Cooler



Water Purifier



Ice Cream Maker



Under-counter Refrigerator



Specification

Variable Speed / R600a / Expanded LBP

Rated Voltage	Model	Displacement	Running RPM	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
		EFF						COP	EER		
		[cc/rev.]		Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 200-240V~50Hz, 220V~60Hz	NI14T7341AQ	3.4	2200	33	38	129	26	1.25	1.45	4.96	ST
			2700	41	48	163	32	1.28	1.49	5.08	
			3600	55	64	218	42	1.31	1.52	5.20	
			4000	59	68	232	46	1.29	1.50	5.10	

Cooling Type	ASHRAE Conditions (E-LBP)	Unit Conversion Table
FC : Fan cooling OC : Oil cooling ST : Static	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)	1 watt = 3.41 Btu/Hr 1 watt = 0.86 Kcal/Hr 1 Kcal/Hr = 3.97 Btu/Hr

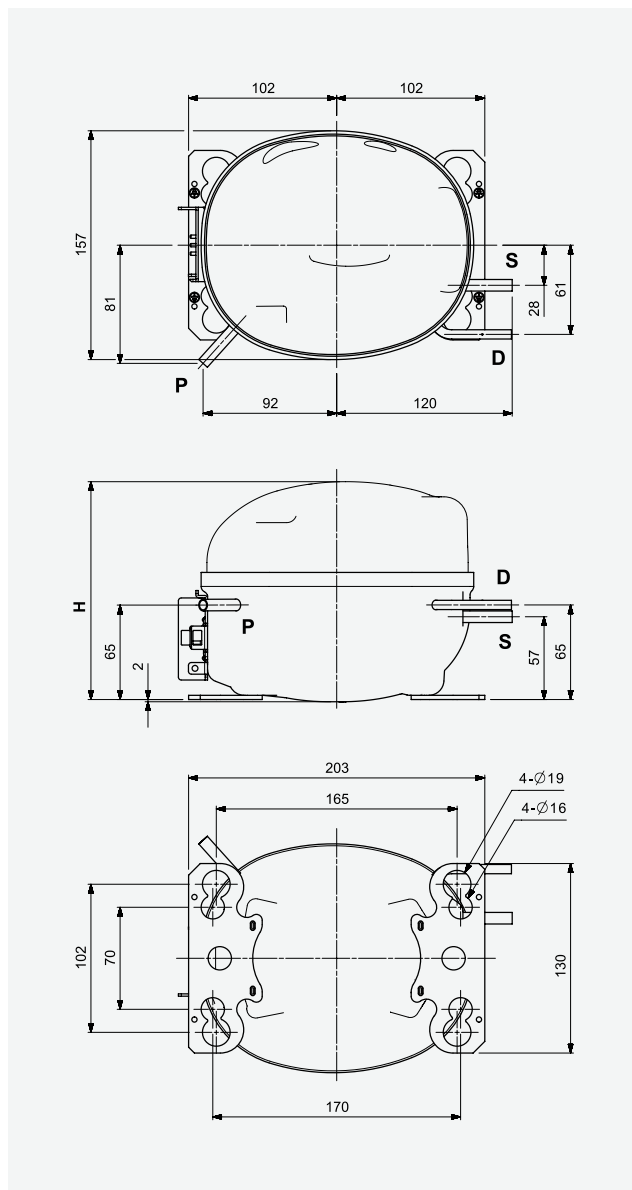
Fixed Speed / R134a / LBP

Rated Voltage	Model	Motor Type	Voltage [V-Hz]	ASHRAE							Cooling Type
				Cooling Capacity			Power Input	Efficiency			
								EFF	COP	EER	
				Kcal/Hr	Watt	BTU/Hr	W	Kcal/WHr	W/W	BTU/WHr	
AC 100V~50/60Hz	NI21B1251EZ	RSIR	100-50	53	62	210	75	0.71	0.82	2.80	ST
			100-60	62	72	246	68	0.91	1.06	3.61	
AC 200-220V~50Hz, 220V~60Hz	NI21B1251HZ	RSIR	220-50	53	62	210	75	0.71	0.82	2.80	ST
			220-60	62	72	246	67	0.93	1.08	3.67	
	NI21B1301HZ	RSIR	220-50	65	75	257	76	0.85	0.99	3.37	ST
			220-60	77	90	306	78	0.99	1.15	3.94	

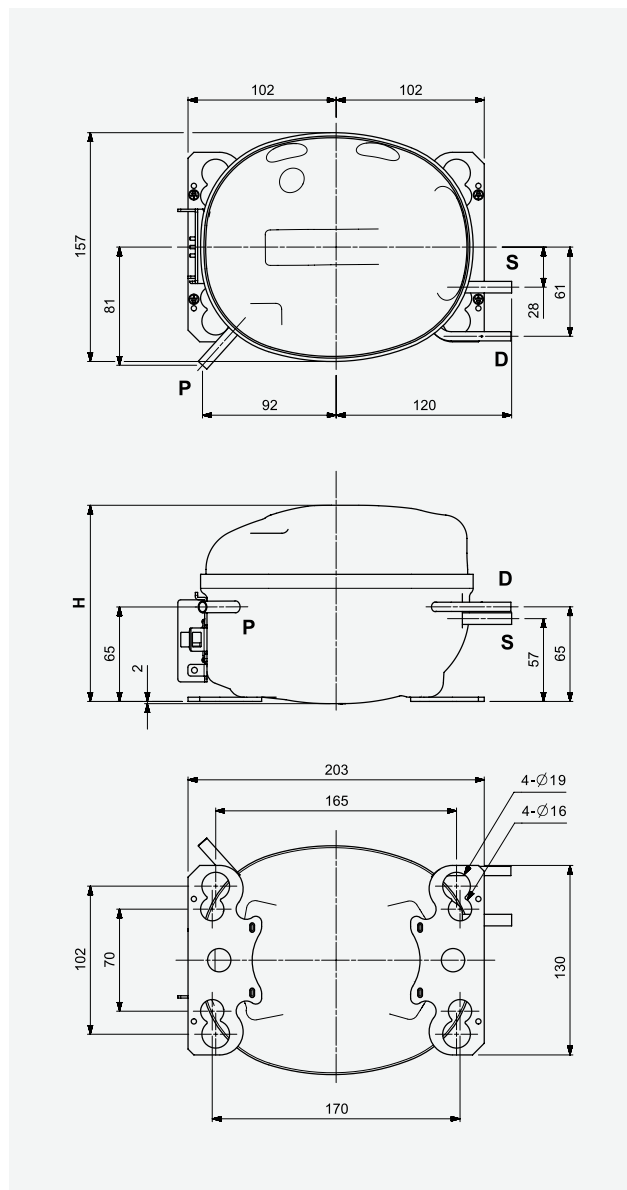
Cooling Type	Motor Type	ASHRAE Conditions (LBP)	Unit Conversion Table
FC : Fan cooling OC : Oil cooling ST : Static	RSIR : Resistance Start Induction Run RSCR : Resistance Start Capacitor Run CSIR : Capacitor Start Induction Run CSR : Capacitor Start Capacitor Run	Evaporating Temp. : -23.3°C (-10°F) 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)	1 watt = 3.41 Btu/Hr 1 watt = 0.86 Kcal/Hr 1 Kcal/Hr = 3.97 Btu/Hr

Dimension / Variable Speed

MSV, MV Series (Universal Type)



NN Series (Universal Type)



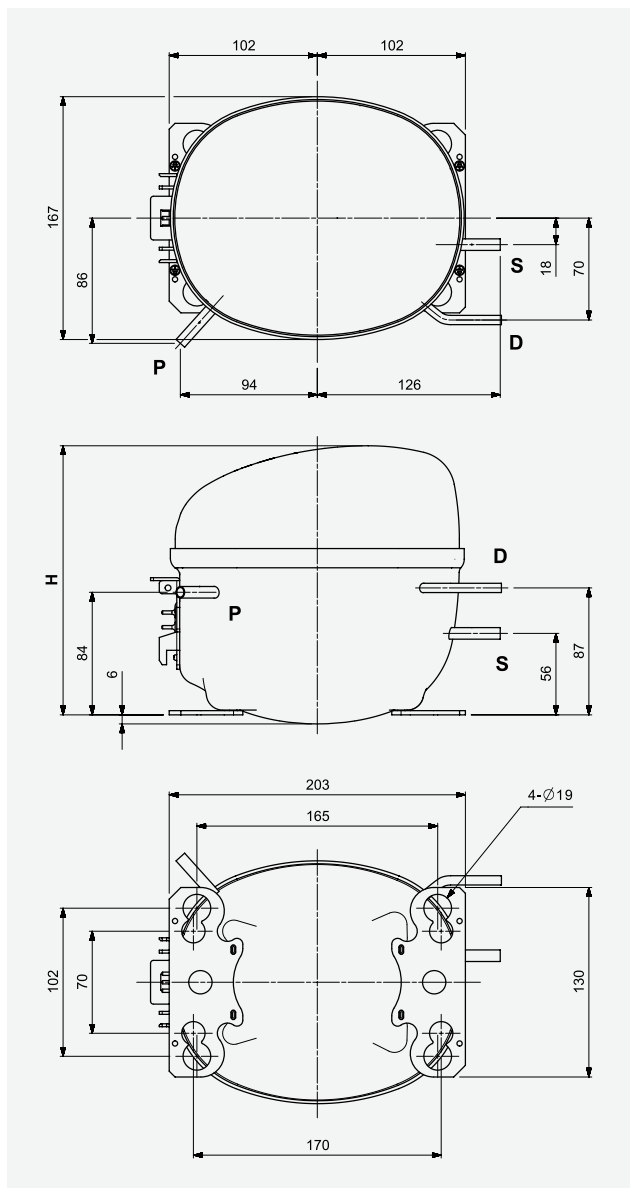
Height [mm]		
Grade	Cooling Type	H
62/72/88/90/A1 GR	Static	149

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

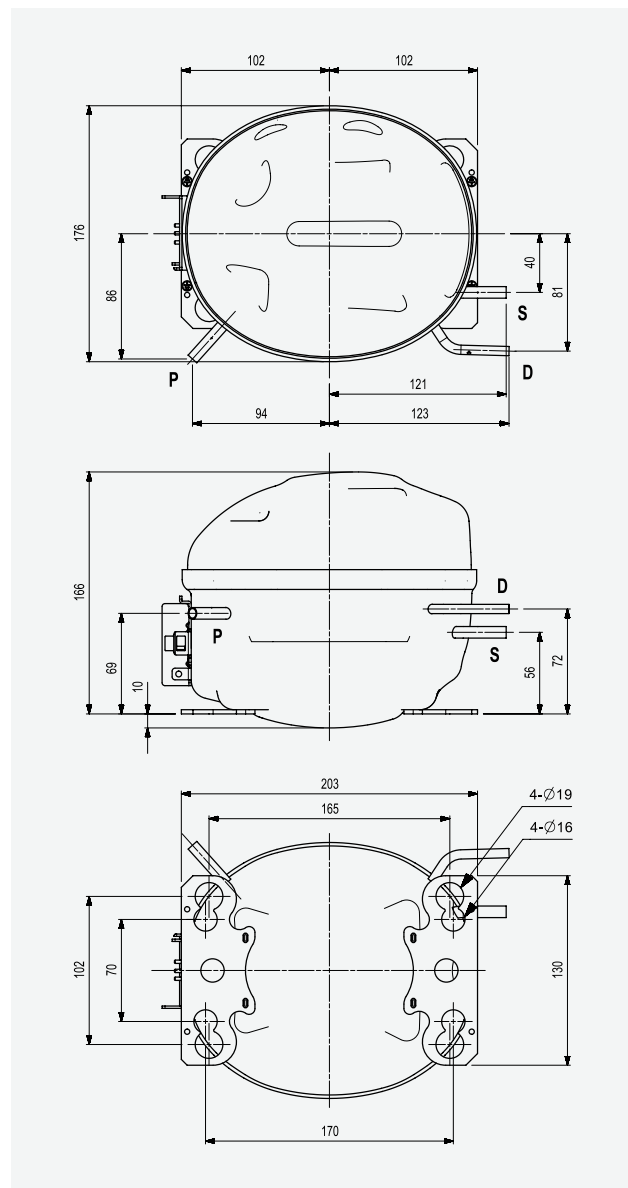
Height [mm]		
Grade	Cooling Type	H
60/90/11 GR	Static	129

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

ENV, EV Series (Universal Type)



NF3, NF5 Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
A3/A5 GR	Fan	183

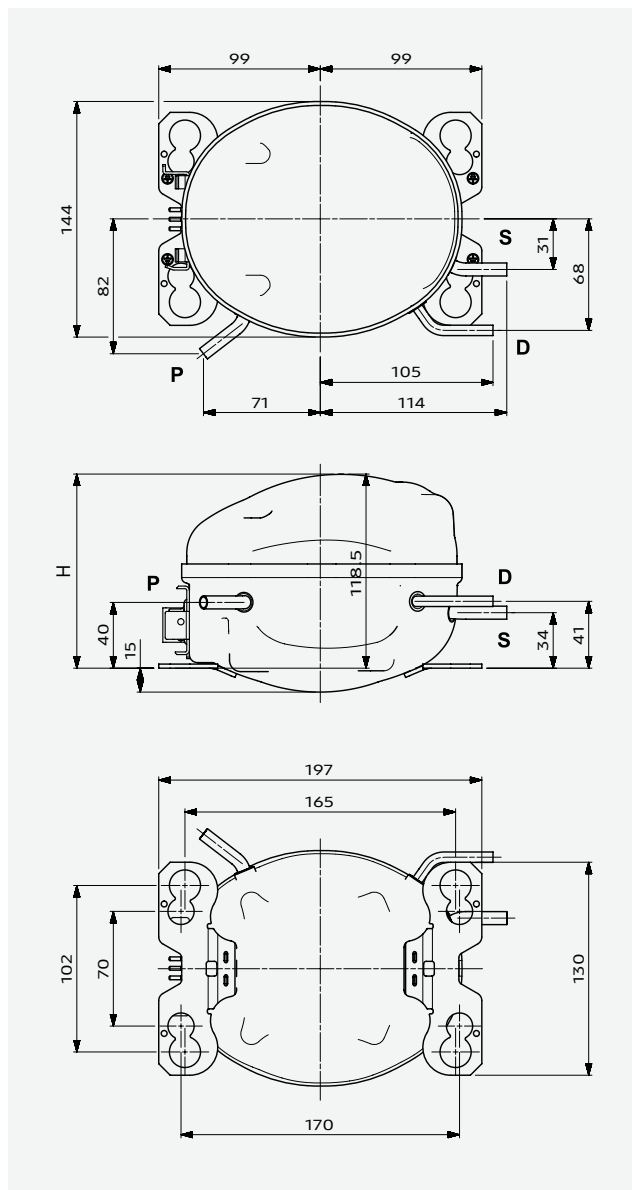
Tube Connection [mm]		
Tube	Material	OD[T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

Height [mm]		
Grade	Cooling Type	H
13/15 GR	Fan	167

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

Dimension / Variable Speed

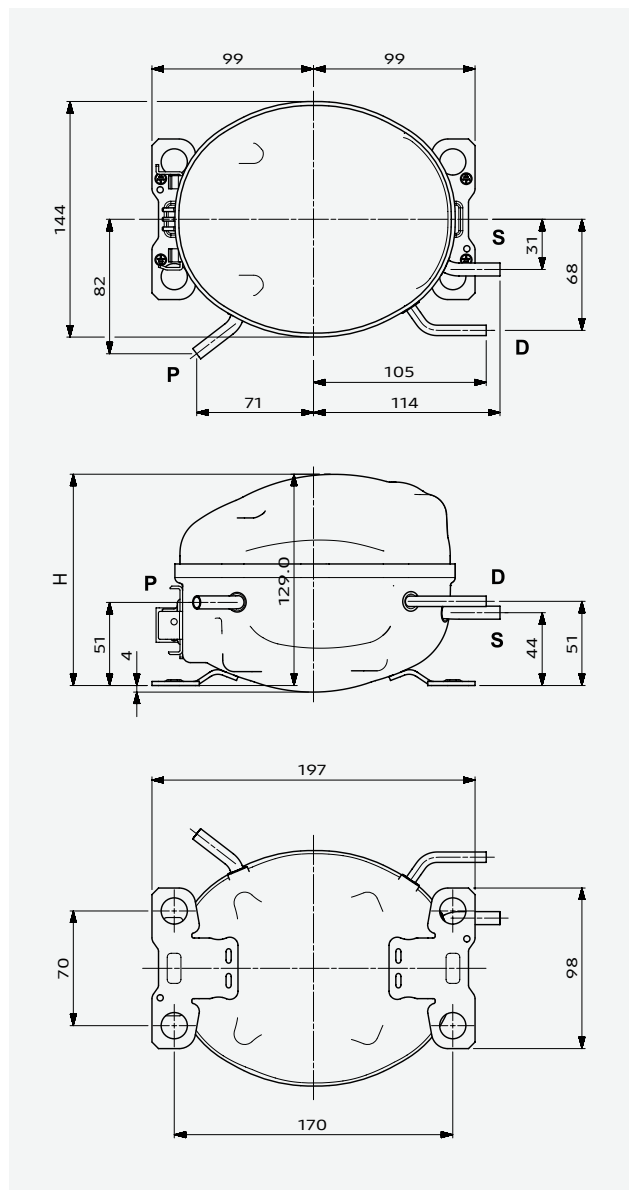
NI3 Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
60/80/10 GR	Static	122

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

NI3 Series (European Type)

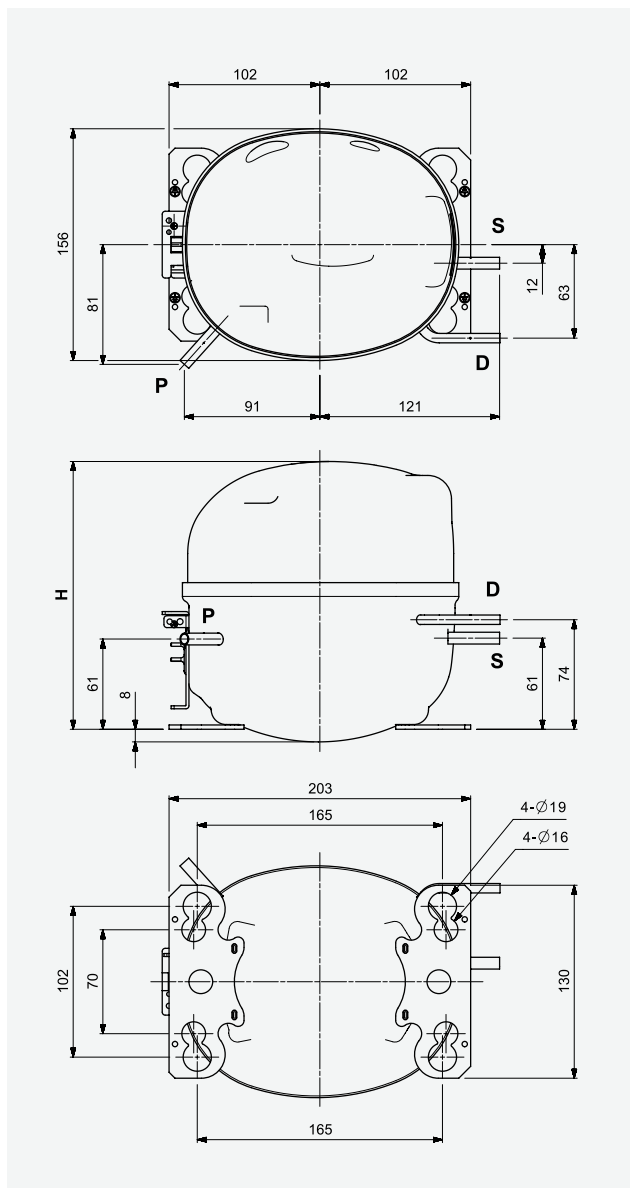


Height [mm]		
Grade	Cooling Type	H
60/80/10 GR	Static	133

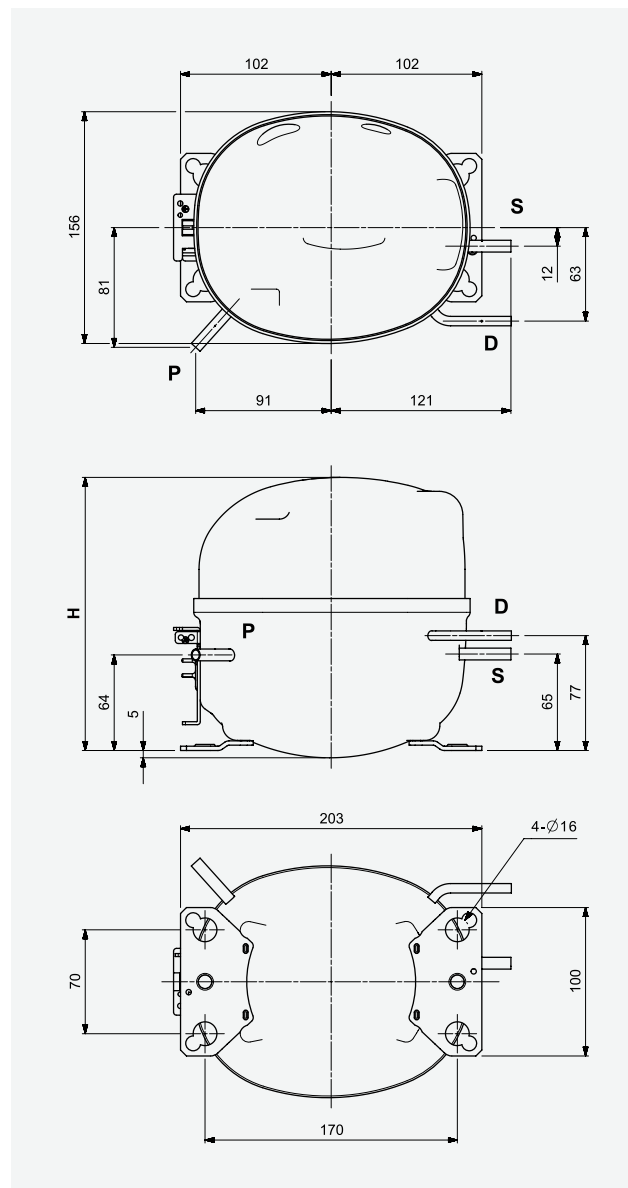
Tube Connection [mm]		
Tube	Material	OD[T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

Dimension / Fixed Speed

MS Series (Universal Type)



MS Series (European Type)



Height [mm]		
Grade	Cooling Type	H
43/51 GR	Static	169
62/70/A2 GR		173

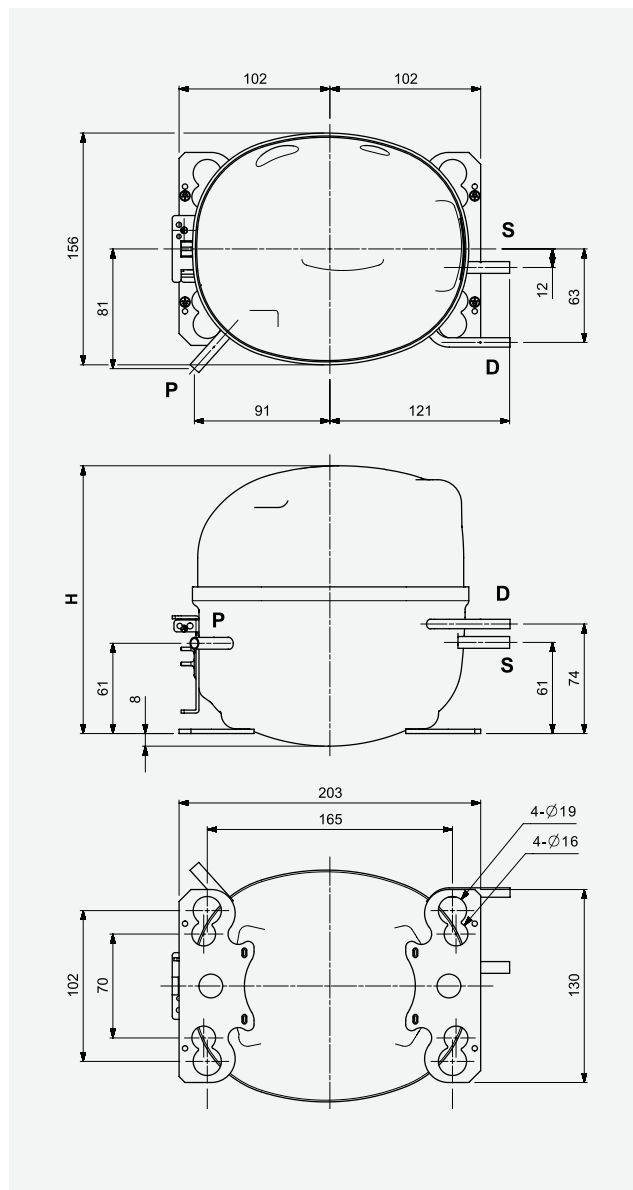
Tube Connection [mm]		
Tube	Material	OD[T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

Height [mm]		
Grade	Cooling Type	H
43/51 GR	Static	172
62/70/A2 GR		177

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

Dimension / Fixed Speed

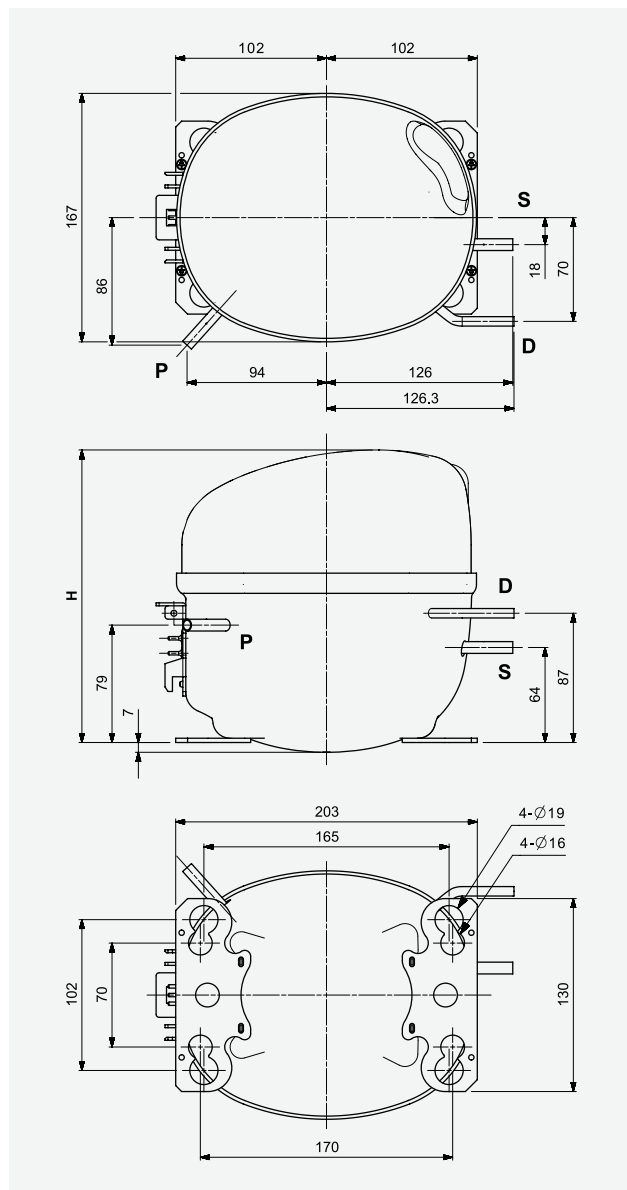
NN Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
66/82/10 GR	Static	169

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

NF2 Series (Universal Type)

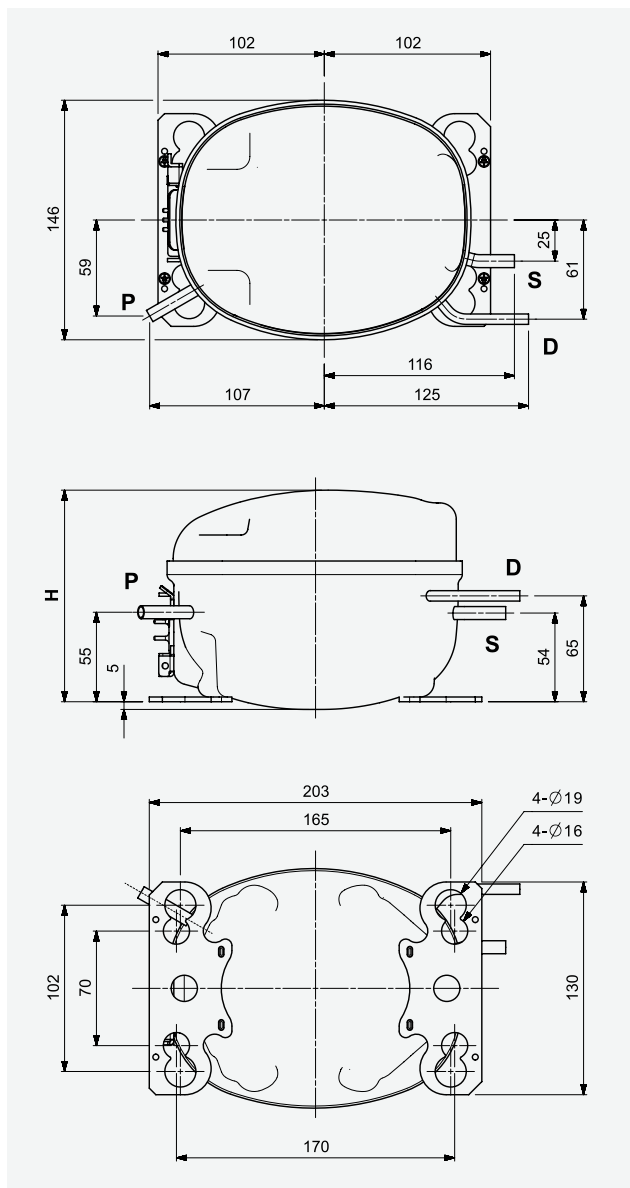


Height [mm]		
Grade	Cooling Type	H
11/13 GR	Static	191

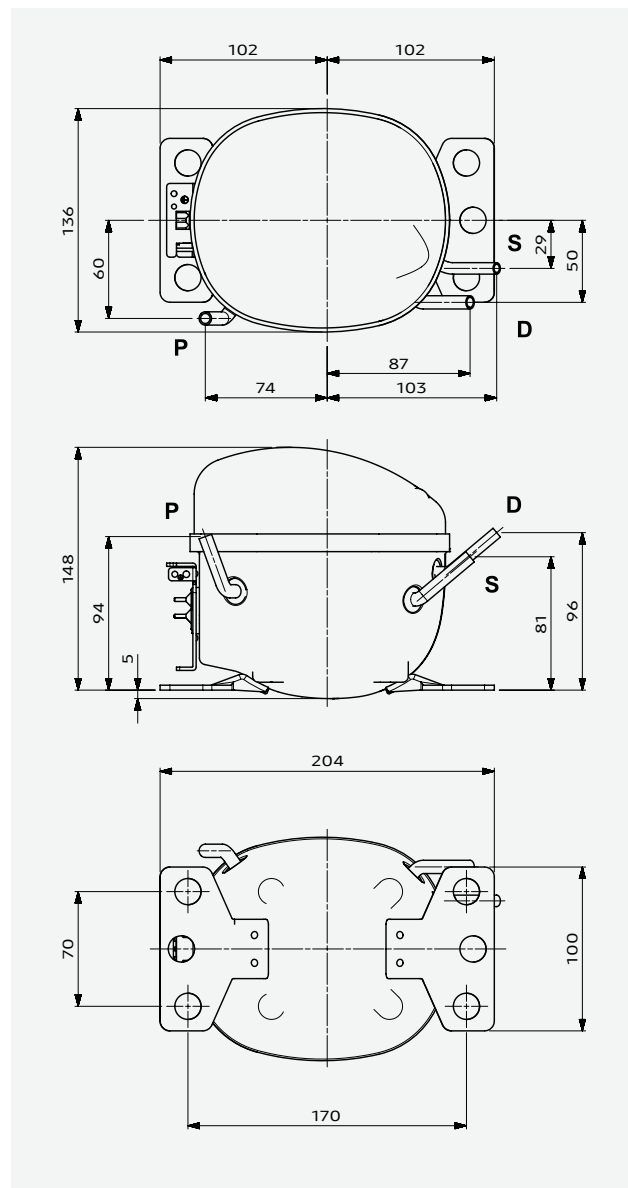
Tube Connection [mm]		
Tube	Material	OD[T:0.7]
(D) Discharge	Copper	6.35
(S) Suction		7.94
(P) Process		7.94

Dimension / Variable Speed

AV Series (Universal Type)



NI2 Series (Universal Type)



Height [mm]		
Grade	Cooling Type	H
66/82/10 GR	Static	169

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

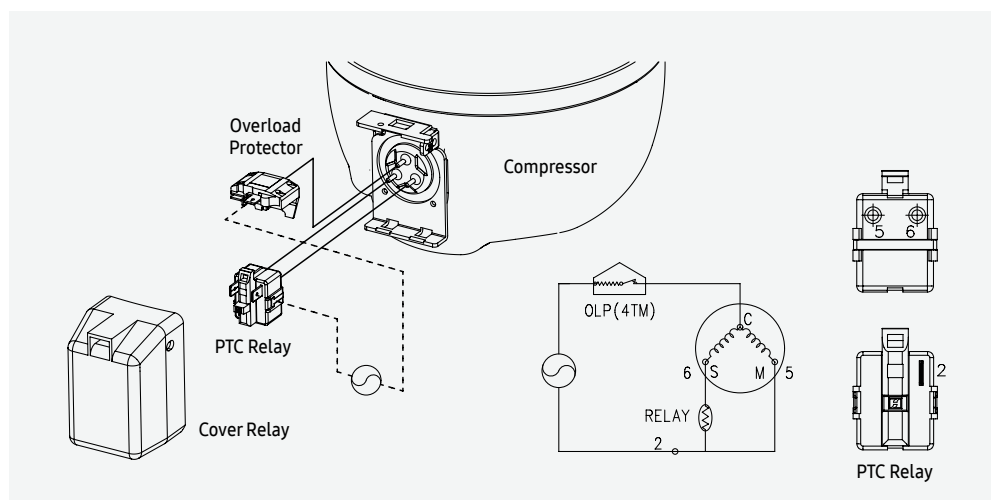
Height [mm]		
Grade	Cooling Type	H
25/30 GR	Static	147

Tube Connection [mm]		
Tube	Material	OD[T:0.7]
(D) Discharge	Copper	7.2
(S) Suction		8.6
(P) Process		8.6

Assembly Diagrams

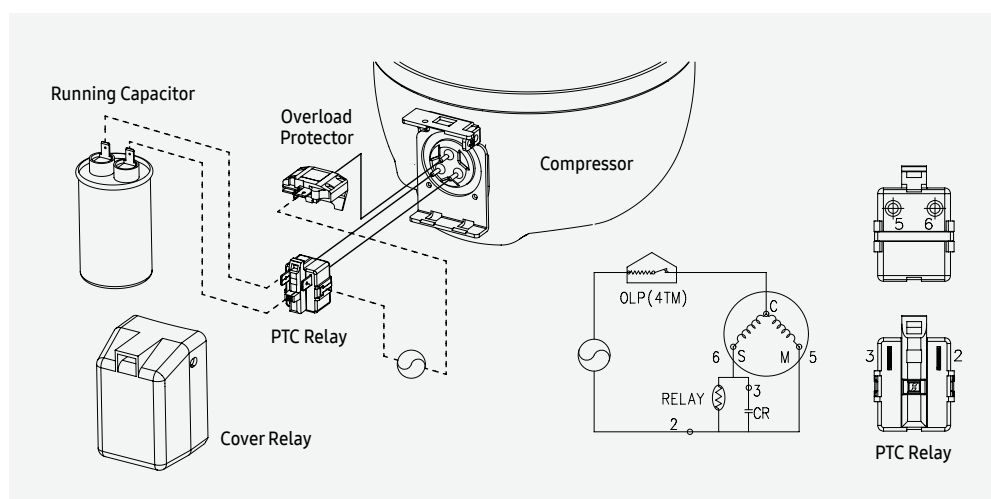
Assembly of OLP and PTC Relay in RSIR Motor

(with S-HOOK Cover
Type)



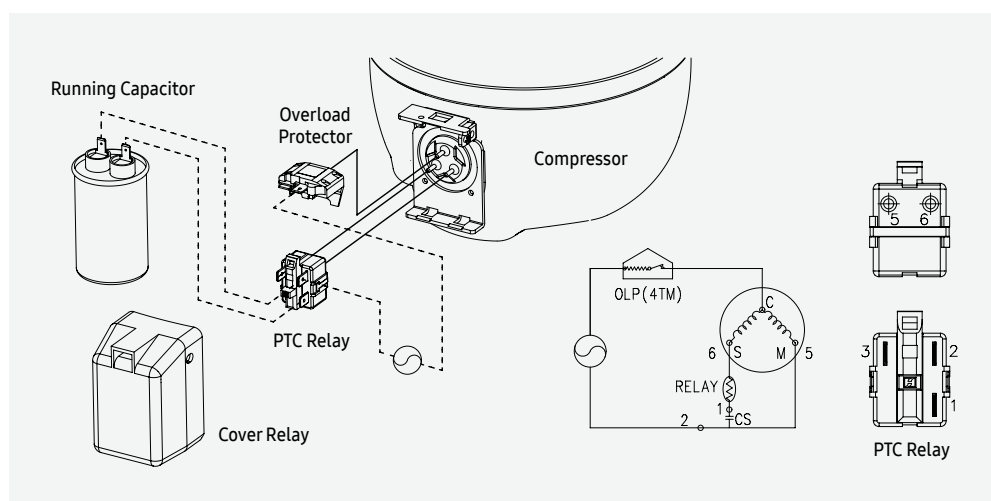
Assembly of OLP and PTC Relay in RSCR Motor

(with S-HOOK Cover
Type)

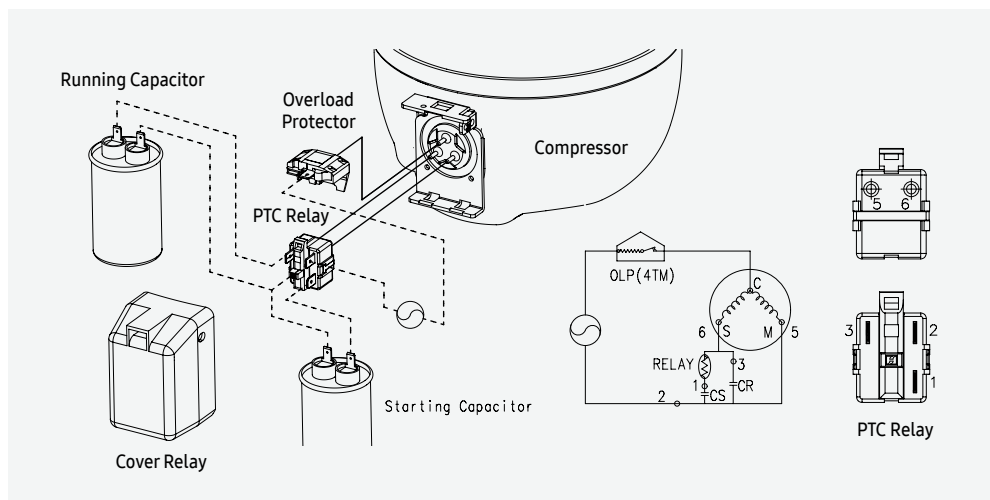


Assembly of OLP and PTC Relay in CSIR Motor

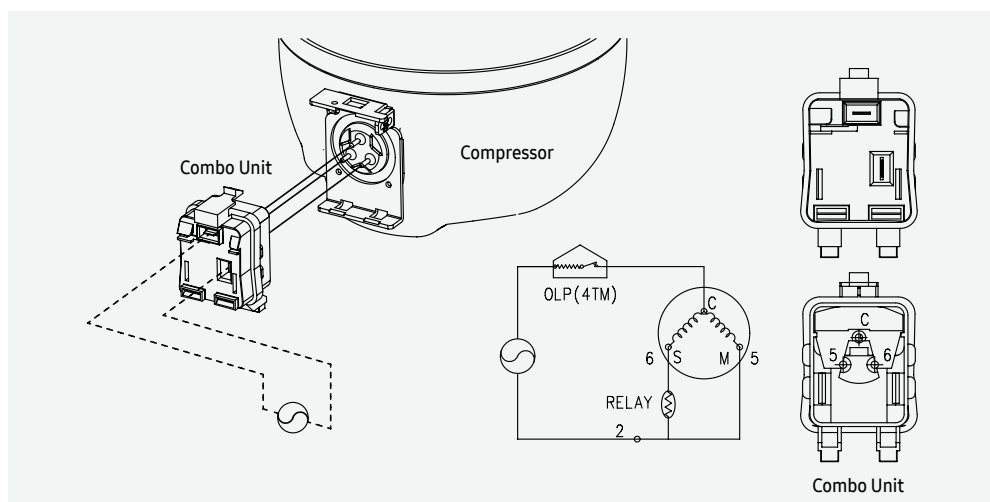
(with S-HOOK Cover
Type)



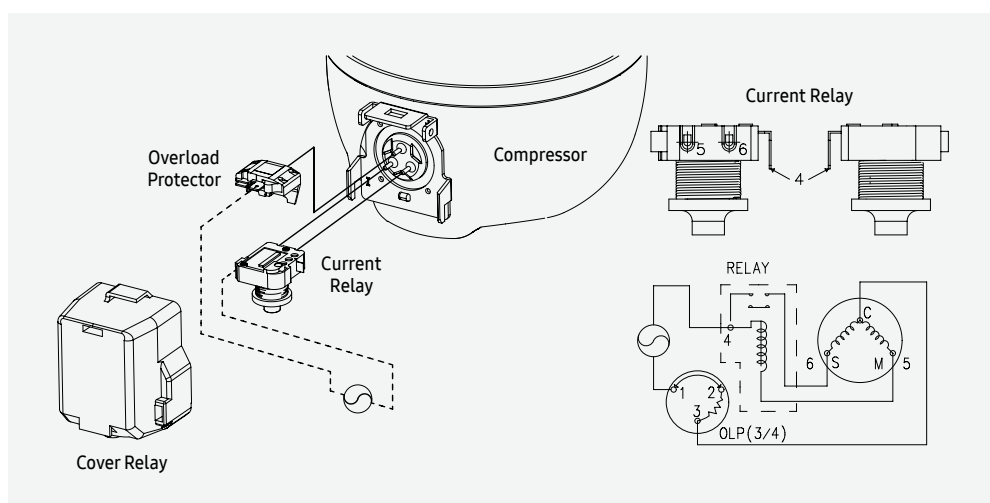
Assembly of OLP and PTC Relay in CRS Motor (with S-HOOK Cover Type)



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

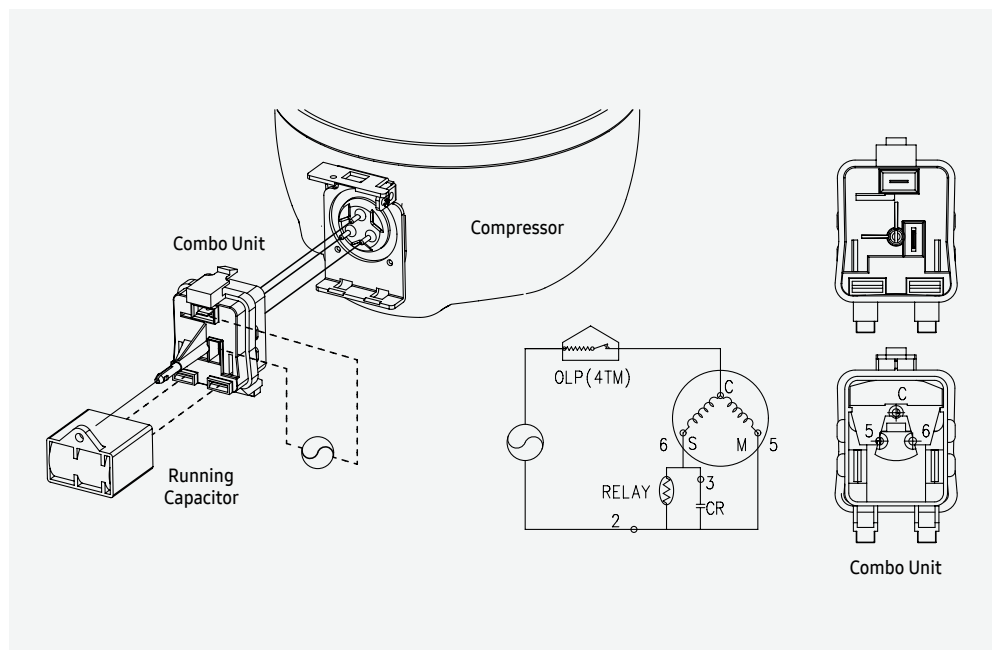


Assembly of Current Relay in RSIR Motor (with HOOK Cover Type)

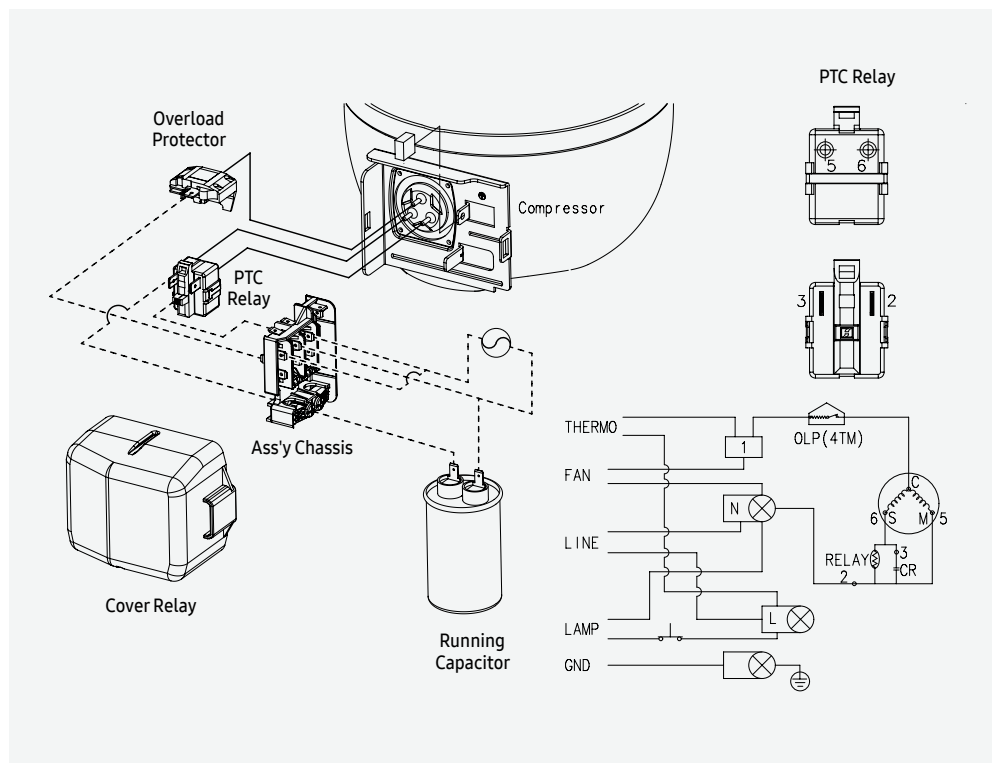


Assembly Diagrams

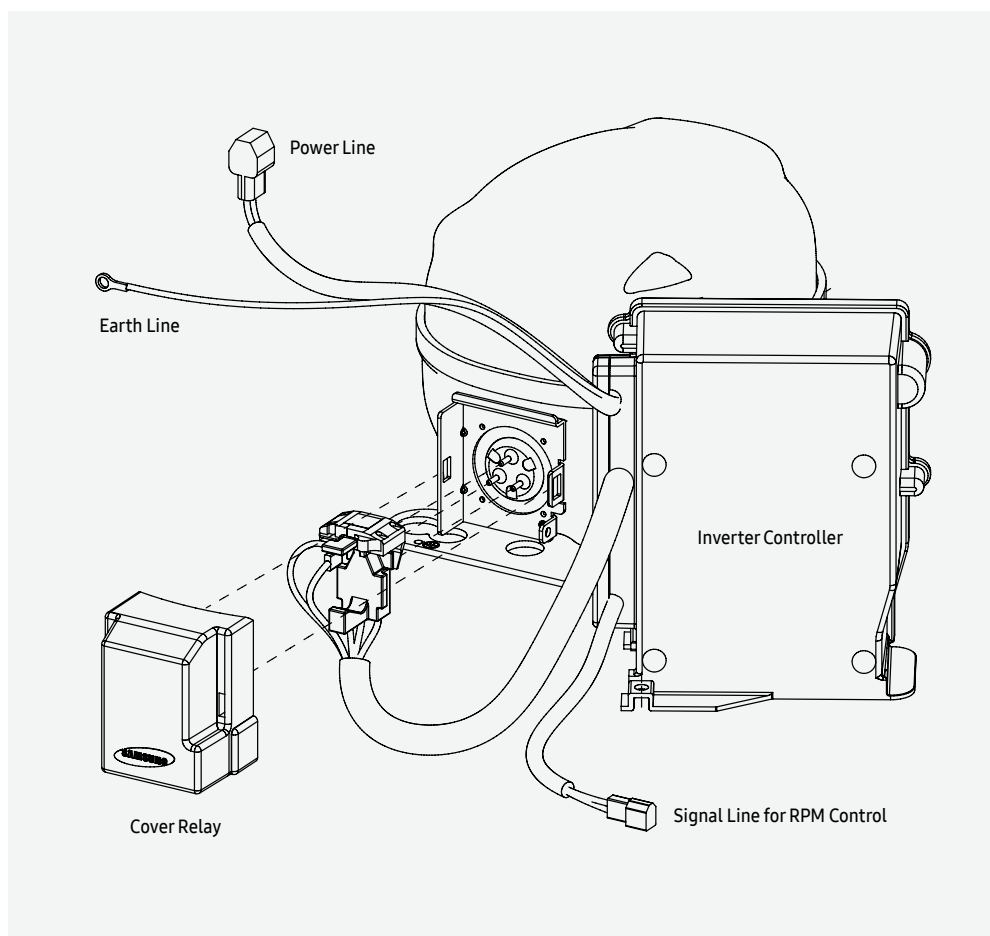
Assembly of Assy Combo in RSCR Motor (with Combo Type)



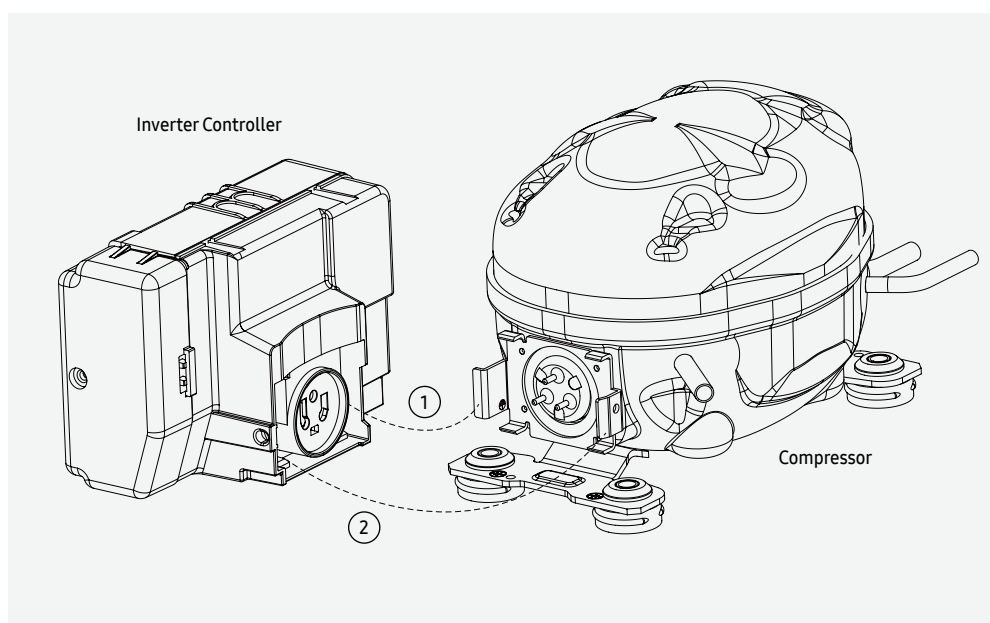
Assembly of OLP and PTC Relay in RSCR Motor (with T/B Cover Type)



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

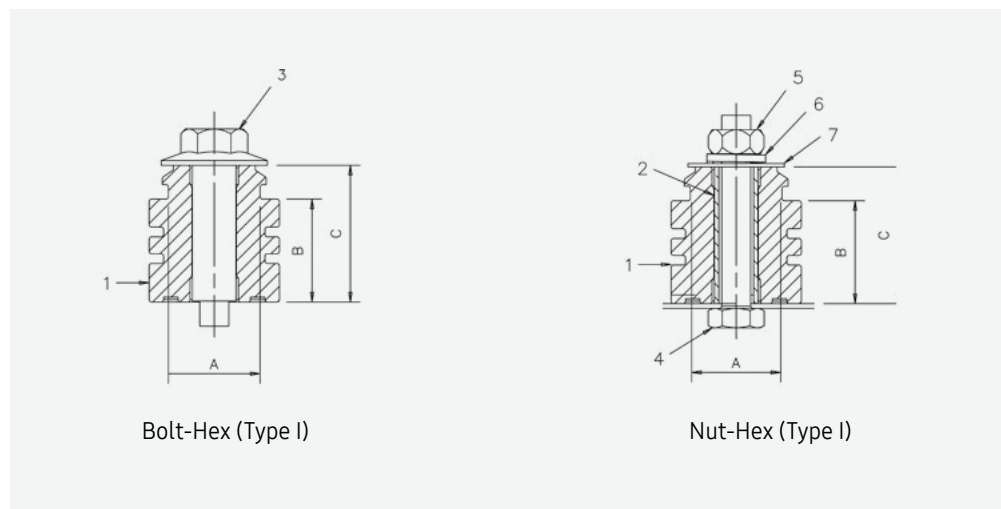


Assembly of Inverter Controller in BLDC Motor (with Built-in Type)

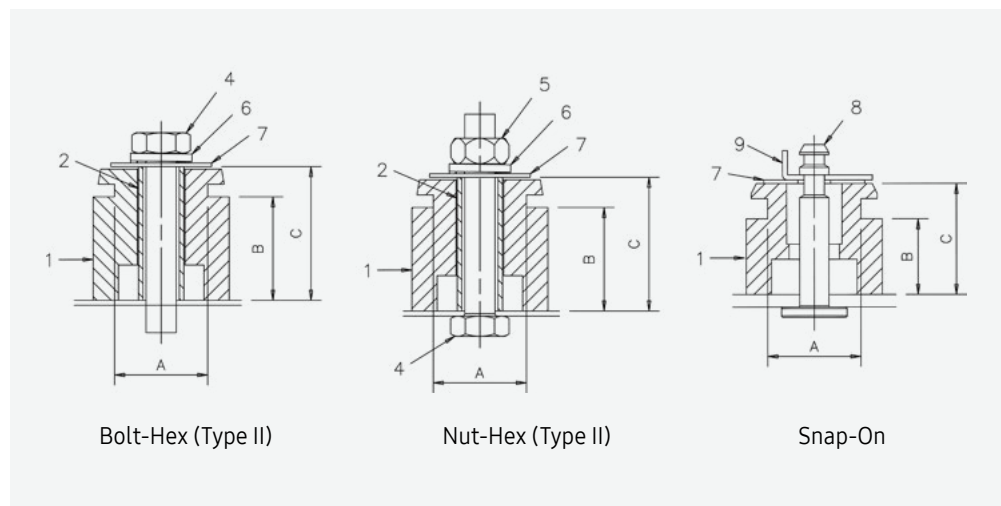


Mounting Accessories

Variable Speed Model



Fixed Speed Model



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, EV, NF(BLDC), MSV, MV, NN(BLDC), AV	NF	MS, A, NN	
Mounting Bracket		Universal	Universal	Universal	European
Hole Size		Ø19	Ø19	Ø19	Ø16
Dimension[mm]	A	18.5	18.5	18.5	15.5
	B	21.3	20.5	15.0	15.0
	C	28.0	26.0	23.0	22.5

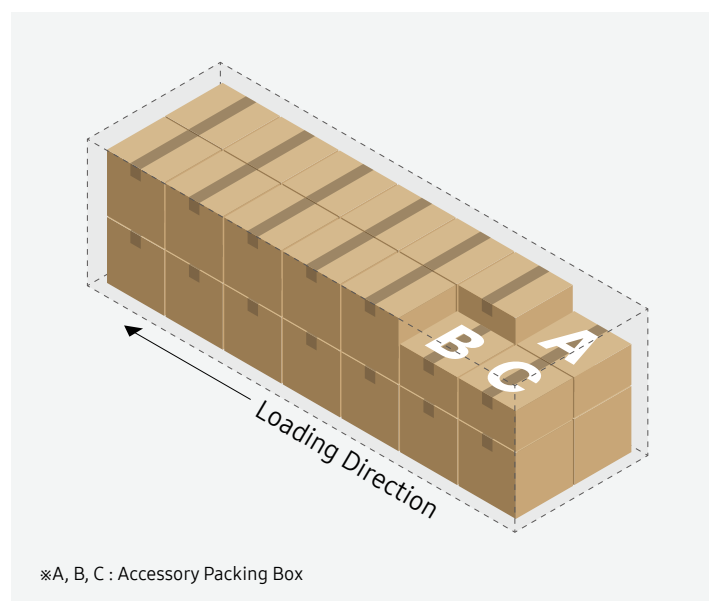
Inverter Controller

Series		SBC (for Re comp)						
		SBC2		SBC3				SBC4
		-V1	-V3	-V1	-V1 (Feedback)	-V5	-V6	-V1 / -V2
Compressor		LBP All Model	R-600a 15cc↓ R-134a 7.2cc↓	R-600a 15cc↓ R-134a 7.2cc↓	R-600a 15cc↓ R-134a 7.2cc↓	R-600a 11cc↓	R-600a 10cc↓	LBP All Model
Image								
Power Supply	Rated Voltage	220V / 110V	220V / *110V	220V / 110V				220V / 110V
	Frequency	50/60HZ		50/60HZ				50/60HZ
	Max Input Arms	5A	4A	4A		2A	1A	5A
	Max Input Power	310W	250W	250W		150W	100W	310W
Interface	Type	Frequency input		Frequency input	Frequency input /Feedback	Frequency input /AMR	AMR	Frequency input
Structure	PBA or CASE	PBA		Case (Bulit in)				Case (Seperated)
	Size	140*96*32		137.7*121.5*72		143.75*100.5*54.6		161.3*142.1*54.2
	Cooling	Static		Static				Static
Environ ment	Ambient Temp.	-5~43℃		-5~43℃				-5~43℃
	Storage Temp.	-25~85℃		-25~85℃				-25~85℃
	Max. Storage Relative Humidity	85%		85%				85%
Protection		Voltage /Current	Voltage /Current /Temp.	Voltage /Current		Voltage /Current /Temp.		Voltage /Current

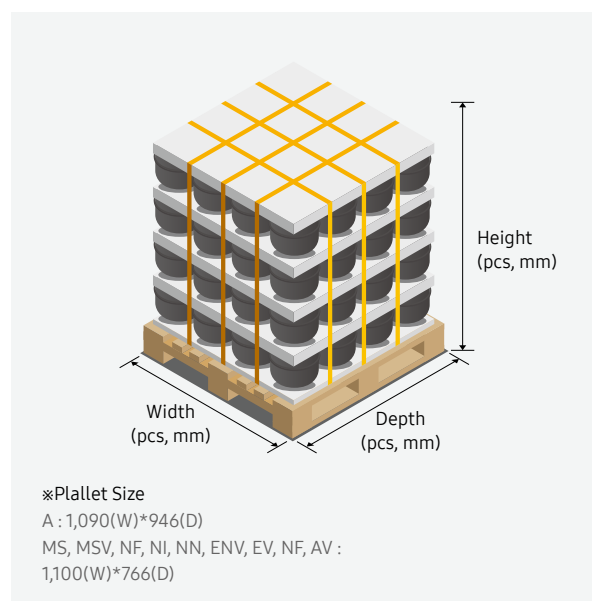
Packing Information

Type	Seires	Grade	Weight	Layout	Pallet Height	Compressor Q'ty pallet	Pallet Q'ty CNTR	Loading Q'ty CNTR
			(kg)	(WxDxH)	(mm)	(pcs)	(pcs)	(pcs)
Fixed Speed	A	24GR	5.6	7x4x5	1,114	140	20	2,800
	MSS, MSA, MSE	43GR	8.3	6x3x4	990	72	11	2,052
				6x3x5	1,190	90	14	
		51GR	8.6	6x3x4	990	72	25	1,800
		62GR	8.8	6x3x4	1,006	72	25	1,800
		70GR, 88GR	9.1	6x3x4	1,006	72	25	1,800
		A1GR, A2GR	9.6	6x3x4	1,006	72	25	1,800
	NN	66GR, 82GR, 10GR	8.4	6x3x4	1,006	72	25	1,800
	NF	11GR, 13GR	10	5x3x4	1,009	60	23	1,380
Variable Speed	MSV, MV	62GR, 88GR	7.1	6x3x5	1,010	90	25	2,250
		A1GR	7.4	6x3x5	1,010	90	25	2,250
	NN	60GR, 90GR, 11GR	6.6	6x3x5	982	90	25	2,250
	ENV, EV	A3GR, A5GR	9.6	5x3x4	1,038	60	25	1,500
	NF	13GR, 15GR	8.6	5x3x5	1,115	75	25	1,875
	AV	60GR, 80GR	5.7	6x3x6	1,042	108	25	2,700
	NI	34GR	1.8	7X4X8	1,022	224	25	5,600
		60GR, 80GR	4.3	6x3x6	1,121	108	25	2,700
		90GR, 10GR, 11GR	4.4	6x3x6	1,121	108	25	2,700

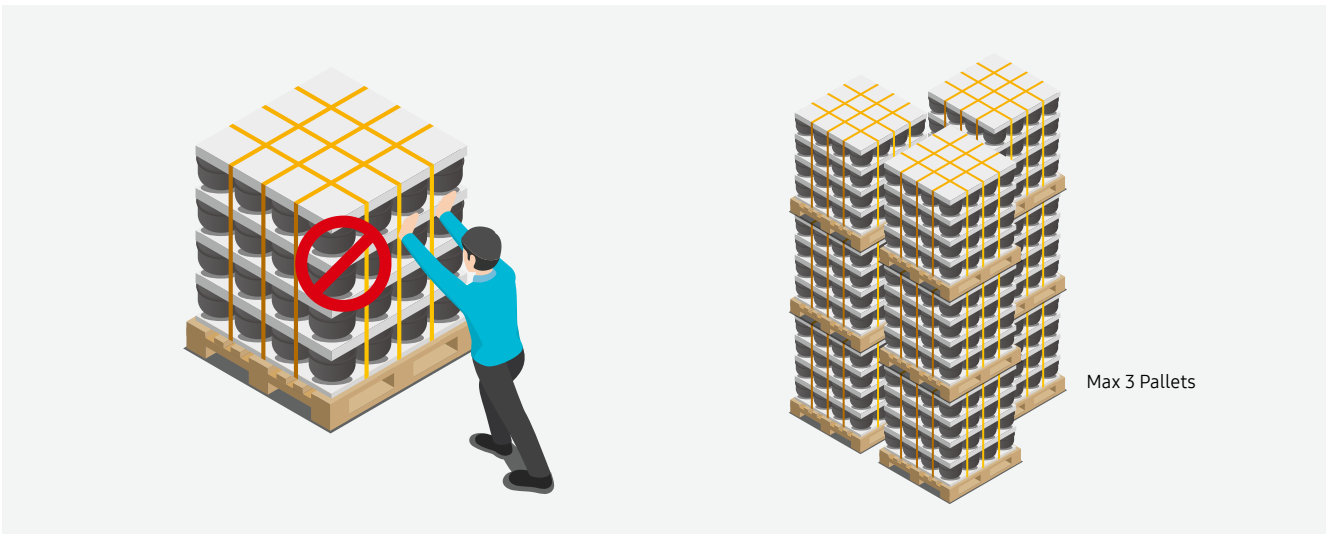
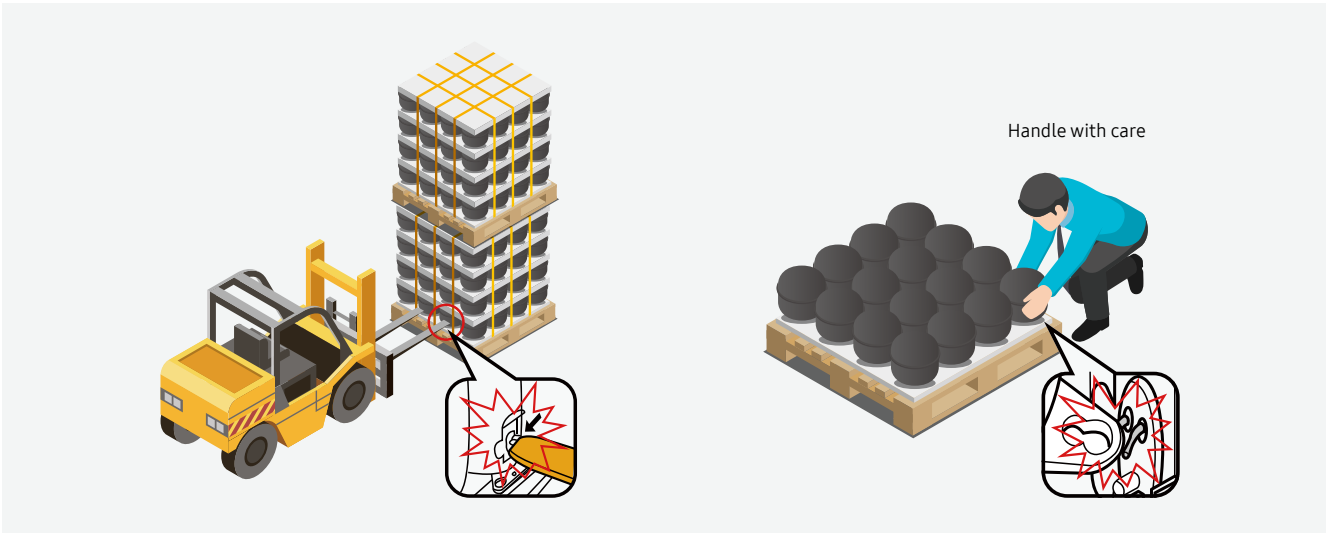
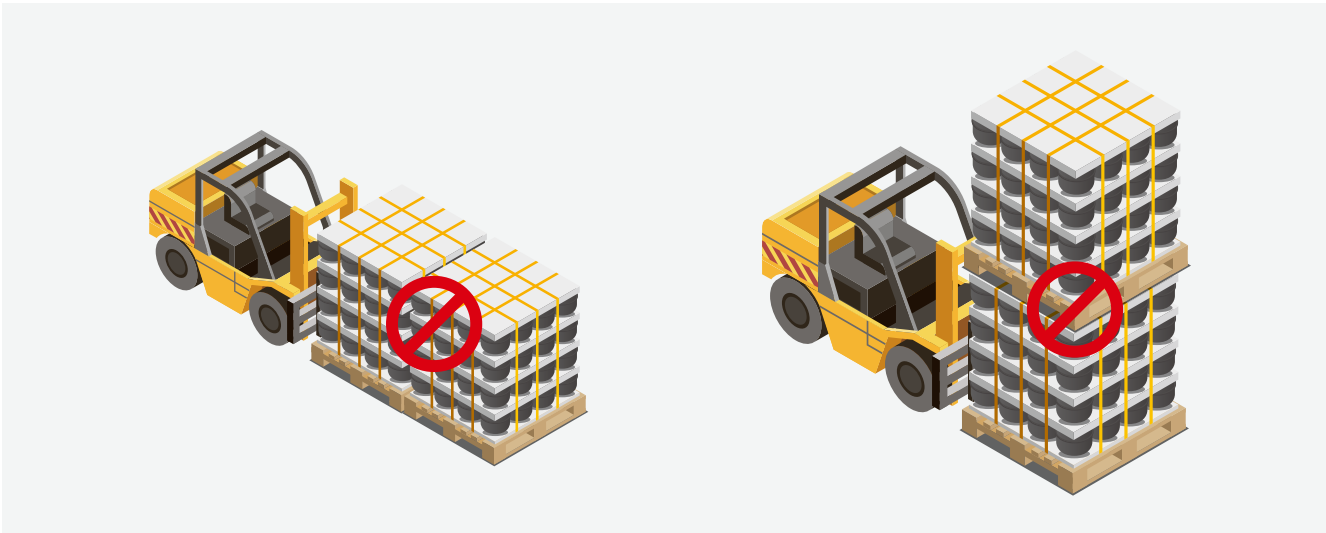
Container Packing Method



Pallet Packing Method



Handling Guide



Rotary Compressor

With world class performance this environmentally friendly rotary compressor comes with great efficiency and less noise





Contents

- 54 Product Range
- 55 Model Identification

56

Rotary Compressor for Air conditioner

- 57 Key Features
- 58 Specification

64

Rotary Compressor for Unitary

- 65 Key Features
- 66 Product Range
- 67 Specification

68

Rotary Compressor for Heat Pump

- 69 Key Features
- 70 Product Range
- 71 Specification

72

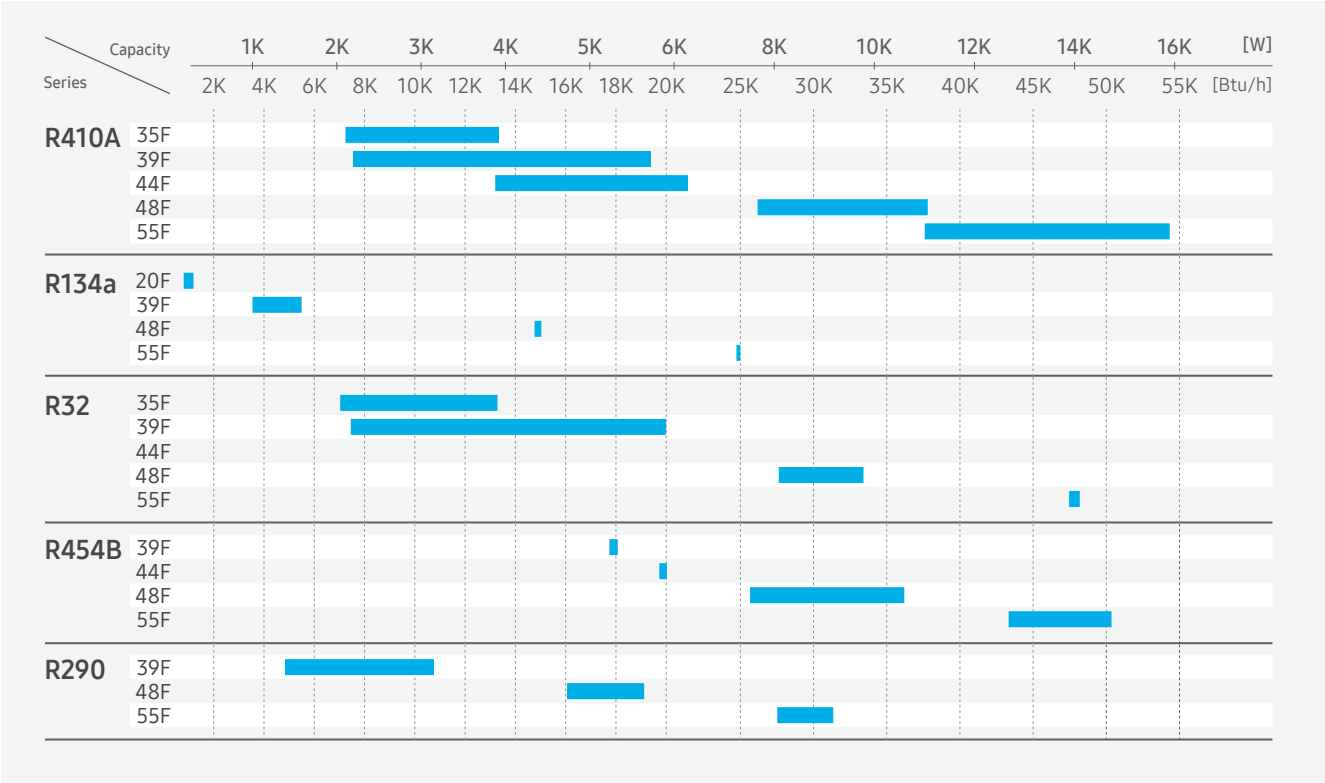
Rotary Compressor for Special Applications

- 73 Key Features
- 74 Various
Application Fields
- 75 Specification

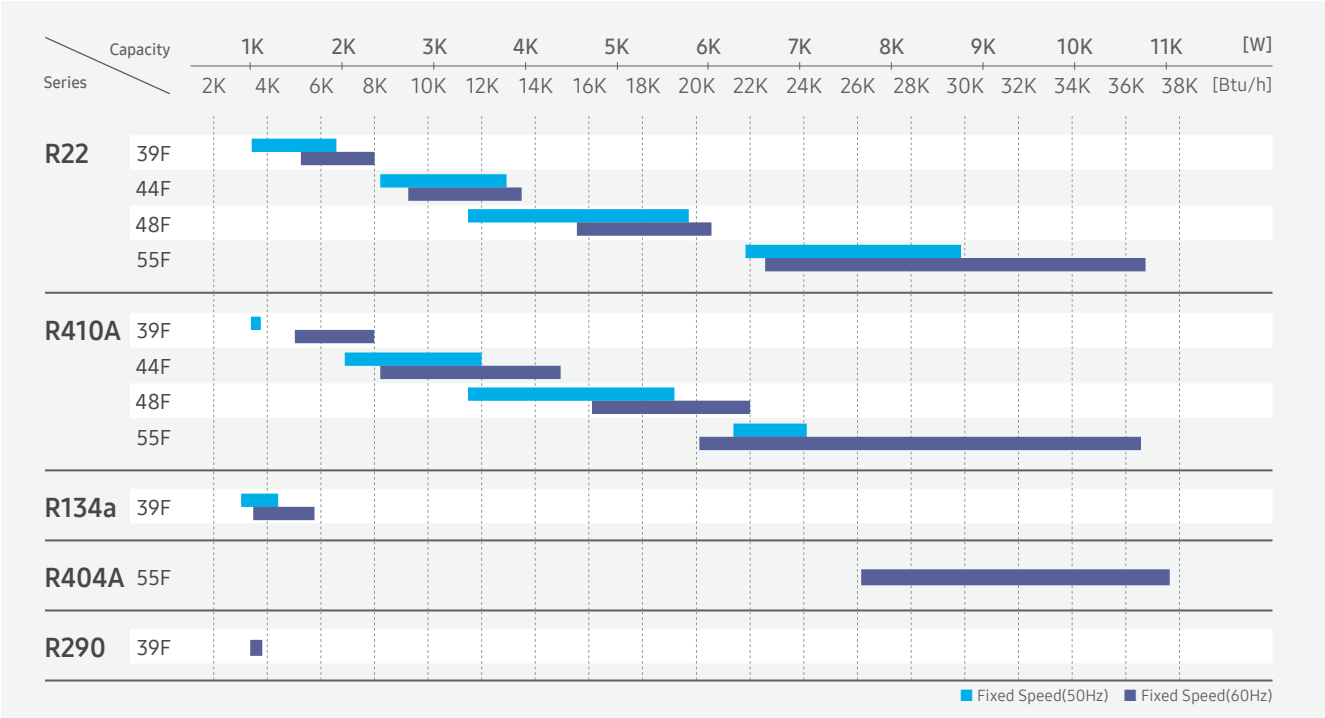
-
- 76 Dimension
 - 82 Assembly Diagrams
 - 84 Mounting Accessories
 - 84 Inverter Controller
 - 85 Packing Information
 - 85 Handling Guide

Product Range

Variable Speed

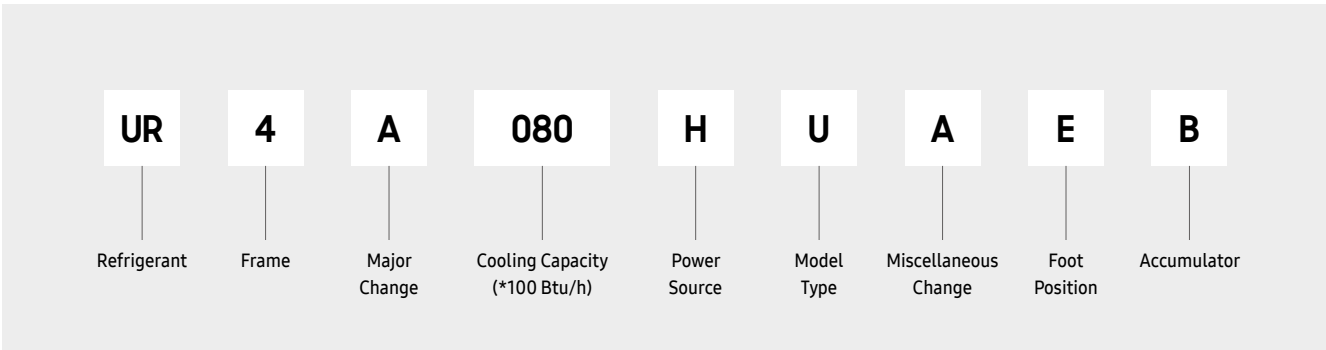


Fixed Speed

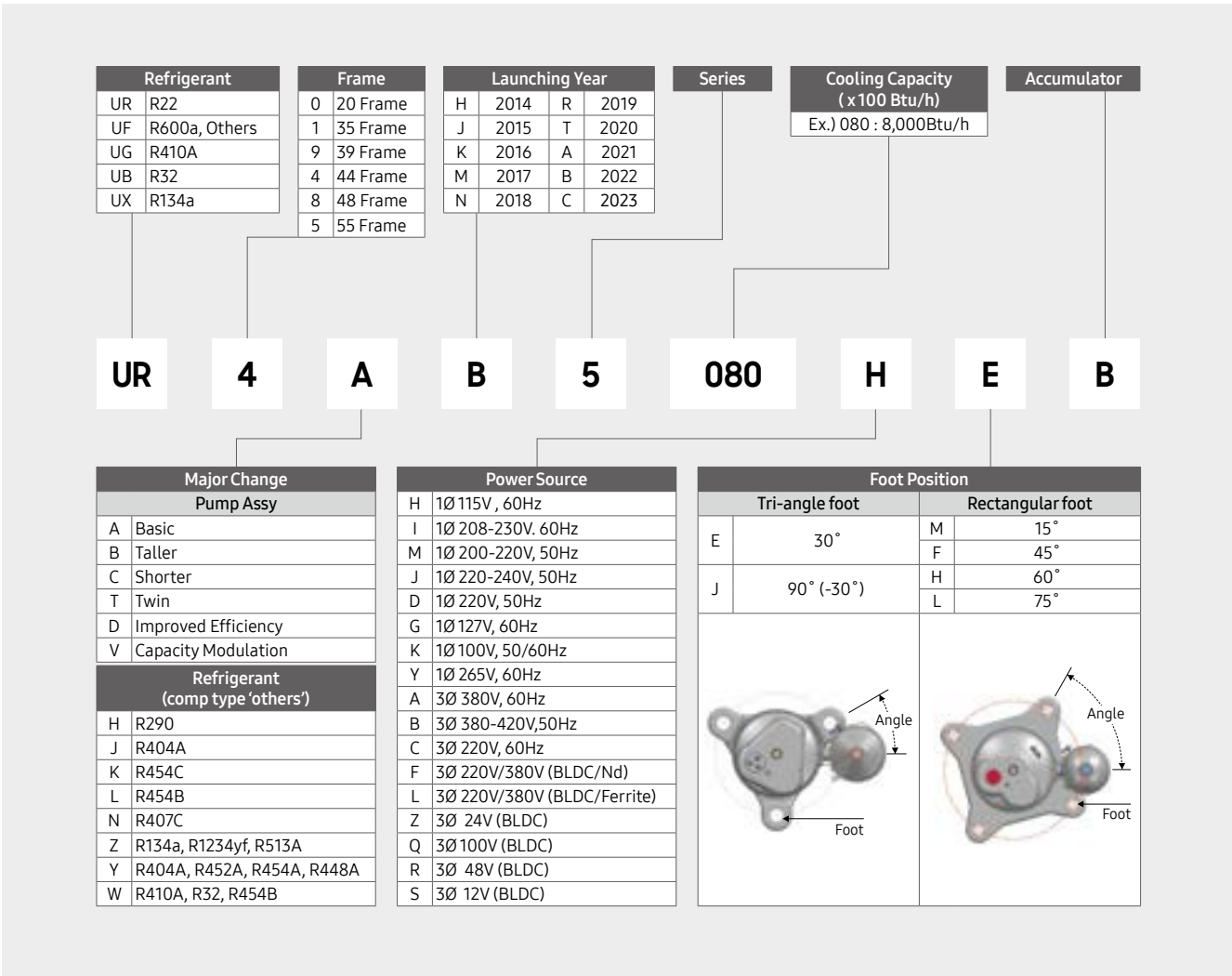


Model Identification

Type 1



Type 2





Rotary for Air conditioner



Key Features for Air Conditioner

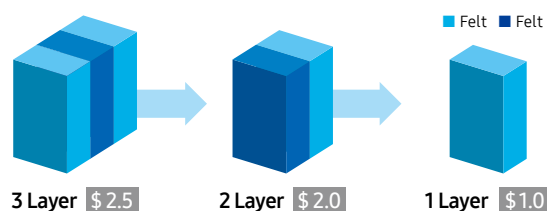
Provide a Solution that Reduces Noise and Vibration

Noise comparison



15% noise reduction compared to competitors

Use less acoustic insulator materials → Lower costs



Avoid U-Traps
Lower costs
and more space

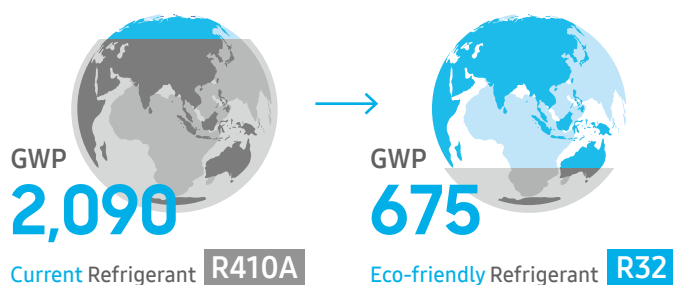


Environmental Regulations

(Eco-friendly Refrigerant)

Dual refrigerant compressor
- Choose between regular and eco-friendly refrigerants

Solution for Global Warming Potential (GWP)



Specification

R410A / Variable Speed

Ref.	Power Source	Piston	Frame	Model	Displace- ment	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R410A	DC Inverter	Twin	39	UG9TK2150F	15.1	15,600	4,572	11.1	3.25	1,406	25
				UG9TK3150F	15.1	15,600	4,572	10.9	3.20	1,431	26
			44	UG4T200FUA	19.5	20,200	5,920	11.3	3.31	1,788	19
				UG4TH8200F	19.5	20,500	6,008	11.6	3.40	1,767	20
			48	UG8TH8265F	25.2	26,700	7,825	11.7	3.43	2,282	15
				UG8T300FUB	30.0	31,300	9,173	11.1	3.25	2,820	17
				UG8T300FUC	30.0	31,300	9,173	11.1	3.25	2,820	17
				UG8TK8300F	30.0	31,300	9,173	11.6	3.40	2,698	19
				UG8TT3360F	36.0	39,000	11,430	11.3	3.31	3,450	21
			55	UG5TK1450F	43.0	45,500	13,335	11.1	3.25	4,099	22
				UG5TK5450F	43.0	45,500	13,335	11.3	3.31	4,027	22
				UG5TJ8450F	43.0	46,000	13,481	11.6	3.40	3,966	20
				UG5TM5520F	49.4	52,700	15,445	11.2	3.28	4,705	23
				UG5TK8520F	49.4	52,800	15,474	11.4	3.34	4,632	20

* R410A Test condition : ASHRAE

R32 & R410A / Variable Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Spec criteria	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)		
R32	DC Inverter	Twin	39	UB9TK2150F	15.1	16,000	4,689	11.0	3.16	1,455		25
				UB9TK3150F	15.1	16,000	4,689	10.8	3.11	1,481		26
			44	UB4TN8200F	19.5	21,000	6,154	11.0	3.22	1,909		25
			48	UB8TA8265F	25.2	28,800	8,440	11.3	3.31	2,548		25
				UB8TN8300F	30.0	32,880	9,636	11.3	3.31	2,911		19
			55	UB5TN5450F	43.0	47,600	13,950	11.2	3.28	4,250		20
R32 / R410A		Single	35	UB1AR1090F	9.0	9,720	2,849	10.5	3.08	926	R32	2
						9,550	2,799	10.9	3.19	876	R410A	
				UB1AR5090F	9.0	9,720	2,849	10.8	3.17	900	R32	1
						9,550	2,799	11.3	3.31	845	R410A	
			UB1BB5120F	12.0	13,439	3,939	10.9	3.19	1,235	R32	4	
					13,200	3,869	11.3	3.31	1,168	R410A		
		Twin	35	UB1TA5070F	7.0	7,140	2,093	10.2	2.99	700	R32	3
						7,050	2,066	10.5	3.08	671	R410A	
			39	UB9TA8150F	15.0	16,900	4,953	11.3	3.31	1,496	R32	36
						16,400	4,807	11.6	3.40	1,414	R410A	
				UB9TT5180F	17.6	19,900	5,832	11.0	3.22	1,809	R32	34
						19,300	5,657	11.3	3.31	1,708	R410A	
			UB9TA8180F	17.6	19,900	5,832	11.3	3.31	1,761	R32	35	
					19,300	5,657	11.6	3.4	1,664	R410A		
			UB9TA9180F	17.6	19,900	5,832	11.2	3.28	1,777	R32	41	
					19,300	5,657	11.5	3.37	1,678	R410A		

* R32 Test condition : ARI
 * R410A Test condition : ASHRAE

Specification

R410A / 60Hz / Fixed Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension	
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)		
R410A	1Ø, 115V	Single	39	UG9C052HS	5.0	5,200	1,524	10.1	2.96	515	9	
				UG9C060HS	5.8	6,000	1,758	10.1	2.96	594	9	
				UG9C067HS	6.6	6,750	1,978	10.1	2.96	668	10	
				UG9C076HS	7.3	7,600	2,227	10.0	2.93	760	11	
				UG9C080HS	7.6	8,000	2,345	10.0	2.93	800	11	
			44	UG4A098HU	9.7	10,000	2,931	10.2	2.99	980	9	
				UG4A110HU	10.9	11,500	3,370	10.5	3.08	1,095	6	
			1Ø, 208-230V	39	UG9C060IS	5.8	6,000	1,758	10.0	2.93	600	12
					UG9C067IS	6.6	6,750	1,978	10.2	3.00	660	11
					UG9C076IS	7.3	7,600	2,227	10.1	2.97	750	11
					UG9C080IS	7.6	7,800	2,286	10.1	2.97	770	11
	44			UG4C085IU	8.0	8,340	2,444	10.4	3.04	803	10	
				UG4C090IU	8.9	9,000	2,638	10.3	3.02	874	11	
				UG4A098IU	9.7	9,900	2,901	10.2	2.99	971	9	
				UG4A102IU	10.3	10,900	3,194	10.4	3.05	1,048	9	
				UG4AH5110I	10.9	11,400	3,341	10.6	3.11	1,075	14	
				UG4A124IU	11.5	12,050	3,532	10.2	2.99	1,180	9	
				UG4B135IX	13.1	13,780	4,039	10.1	2.96	1,365	13	
				UG4BK8147I	13.9	14,200	4,162	10.0	2.93	1,420	5	
				48	UG8CH5155I	15.2	16,100	4,718	10.7	3.14	1,505	8
					UG8CH5180I	17.0	18,100	5,305	10.8	3.17	1,676	8
					UG8C200IN	19.0	20,400	5,979	10.6	3.11	1,925	6
					UG8CK8215I	21.0	22,000	6,448	10.2	2.99	2,157	8
				55	UG5CH5200I	19.3	20,400	5,979	10.5	3.08	1,943	8
					UG5A240IU	23.4	24,500	7,180	10.1	2.96	2,425	10
	UG5C250IN				23.9	25,300	7,415	10.7	3.14	2,365	9	
	UG5A280IU				27.2	28,600	8,382	10.2	2.97	2,820	10	
	UG5A290IN				27.9	29,800	8,734	10.6	3.11	2,783	11	
	UG5DN8300I				28.1	29,400	8,616	10.8	3.15	2,735	11	
	UG5A300IU				29.3	30,600	8,968	10.0	2.93	3,060	10	
	1Ø, 208-230V	Twin		55	UG5T320IU	30.6	32,500	9,525	10.3	3.02	3,155	15
					UG5T360IN	35.1	37,000	10,844	9.8	2.87	3,776	16

* R410A Test condition : ASHRAE

R410A / 50Hz / Fixed Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R410A	1Ø, 220-240V	Single	44	UG4C065JN	8.0	6,800	1,993	9.9	2.90	687	15
				UG4B124JX	14.1	12,200	3,576	9.8	2.87	1,245	5
			48	UG8C124JU	15.2	12,900	3,781	10.2	2.99	1,265	9
	1Ø, 220V		39	UG9CH8037D	4.4	3,730	1,093	10.0	2.93	373	13
			44	UG4AH8080D	9.7	8,200	2,403	10.4	3.05	788	4
				UG4A091DN	10.9	9,300	2,726	10.0	2.93	930	4
			48	UG8CH8110D	13.3	11,500	3,370	10.5	3.08	1,095	4
				UG8CH8165D	19.0	16,600	4,865	10.4	3.05	1,596	8
				UG8CH8180D	21.0	18,500	5,422	10.5	3.08	1,762	8
				UG8D185DN	21.7	18,950	5,554	10.2	2.99	1,860	3
			55	UG5CH8215D	24.7	21,400	6,272	10.6	3.11	2,020	12
				UG5A240DN	27.9	24,100	7,063	9.9	2.90	2,435	2

* R410A Test condition : ASHRAE

R404A / 60Hz / Fixed Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R404A	1Ø, 208-230V	Single	55	UF5JA5260I	33.4	26,800	7,854	10.0	2.93	2,680	2
		Twin		UF5JA5380I	49.4	38,500	11,283	9.2	2.70	4,185	13

* R404A Test condition : ASHRAE

Specification

R22 / 60Hz / Fixed Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R22	1Ø, 208-230V	Single	39	UR9A052IS	7.6	5,300	1,553	10.6	3.11	500	4
				UR9B068IS	9.6	6,700	1,964	10.7	3.14	626	5
				UR9B072IS	10.2	7,100	2,081	10.5	3.08	677	6
				UR9B080IS	11.3	8,000	2,345	10.7	3.13	748	3
			44	UR4AH5092I	13.2	9,400	2,755	10.6	3.11	886	3
				UR4A098IN	14.1	10,260	3,007	10.8	3.17	950	4
				UR4B110IX	16.1	11,500	3,370	10.7	3.14	1,075	5
				UR4BJ5117I	16.6	11,800	3,458	10.6	3.11	1,113	5
				UR4B124IX	17.6	12,650	3,707	10.6	3.11	1,193	5
				UR4B135IX	18.7	13,400	3,927	10.5	3.08	1,276	2
			48	UR8C155IU	21.7	15,800	4,631	10.9	3.19	1,450	1
				UR8C172IN	24.0	17,500	5,129	10.9	3.19	1,606	2
				UR8D185IN	25.8	18,700	5,480	10.7	3.14	1,748	3
			55	UR5A220IN	30.6	22,500	6,594	10.9	3.19	2,065	1
				UR5A240IN	33.4	25,000	7,327	10.9	3.20	2,293	1,2
				UR5A260IU	36.2	26,700	7,825	11.0	3.22	2,430	3
				UR5A280IU	39.0	29,500	8,646	11.0	3.23	2,680	4
				UR5A300IU	41.8	31,500	9,232	10.9	3.19	2,890	4
	1Ø, 208-230V	Twin	55	UR5T360IU	49.4	36,500	10,697	10.9	3.19	3,349	13

* R22 Test condition : ASHRAE

Special Application for Tropical / R22 / Fixed Speed

Ref.	Frequency	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
						(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R22	60Hz	1Ø, 208-230V	Single	44	UR4B124IT	17.6	12,650	3,707	10.3	3.02	1,228	2
					UR4B135IT	18.7	13,500	3,956	10.3	3.02	1,310	13
				48	UR8D190IH	26.6	19,500	5,715	10.5	3.08	1,858	3
					UR8D200IH	27.8	20,700	6,067	10.4	3.05	1,990	3
				55	UR5A240IH	33.4	25,000	7,327	11.1	3.25	2,252	2
					UR5A260IH	36.2	27,600	8,089	10.4	3.05	2,654	2
	50Hz	1Ø, 220-240V		44	UR4B092JT	16.1	9,300	2,726	10.0	2.93	930	2
					UR4D124JH	21.0	12,400	3,634	9.7	2.84	1,278	7
					UR4D129JT	21.7	12,800	3,751	9.6	2.81	1,333	16
				48	UR8D165JH	27.8	16,500	4,836	10.2	2.99	1,618	12
					UR8B180JH	30.4	18,400	5,393	9.4	2.76	1,957	10
					UR8B200JT	32.5	19,500	5,715	9.3	2.75	2,097	11
				55	UR5A250JH	41.8	25,300	7,415	10.1	2.96	2,500	5
			Twin	55	UR5T300JT	49.4	29,650	8,690	9.8	2.87	3,025	13

* R22 Test condition : ASHRAE

R22 / 50Hz / Fixed Speed

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R22	1Ø, 220V	Single	39	UR9CJ1037D	6.6	3,640	1,067	9.3	2.73	391	29
				UR9C037DS	6.6	3,700	1,084	10.1	2.97	365	8
				UR9BJ1066D	11.3	6,350	1,861	8.5	2.49	747	2
				UR9B066DS	11.3	6,400	1,876	9.9	2.91	645	5
			44	UR4A080DN	14.1	8,300	2,432	11.0	3.22	755	4
				UR4A085DU	15.0	8,900	2,608	10.3	3.02	864	6
				UR4B098DX	16.6	9,700	2,843	10.3	3.02	940	5
				UR4D115DN	19.8	11,400	3,341	10.6	3.11	1,075	7
				UR4D124DX	21.0	12,200	3,575	10.5	3.08	1,161	8
			48	UR8C110DN	19.0	11,350	3,326	11.0	3.22	1,032	4
				UR8C129DN	21.7	12,900	3,781	10.8	3.17	1,194	4
				UR8BK5170D	28.8	17,200	5,041	11.0	3.23	1,564	10
				UR8B180DU	30.4	18,100	5,305	10.5	3.08	1,724	5
				UR8B200DU	32.5	19,400	5,686	10.6	3.11	1,830	5
			55	UR5A215DN	36.2	21,800	6,389	11.2	3.28	1,945	6
				UR5A260DN	44.6	27,000	7,913	10.4	3.05	2,600	7

* R22 Test condition : ASHRAE

Special Application for Tropical / R134a / Fixed Speed

Ref.	Frequency	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
						(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R134a	60Hz	1Ø, 115V	Single	39	UX9BJ6056H	11.3	5,780	1,694	10.8	3.17	535	3
		1Ø, 208-230V			UX9AK2040I	8.1	4,000	1,172	10.4	3.05	385	30
	50Hz	1Ø, 220-240V			UX9AK2037J	9.0	3,650	1,070	10.1	2.96	360	30
					UX9BJ2042J	10.2	4,260	1,248	10.2	2.99	418	3

* R134a Test condition : ASHRAE

Rotary Compressor for Unitary



Key Features for Unitary

High Efficiency at Partial Load Operation

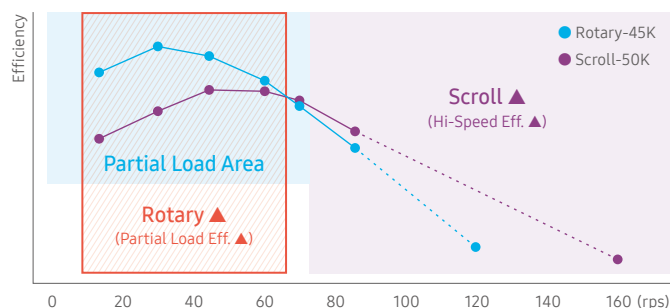
Currently supplying products to top-tier customers in the United States

Achieved 26 SEER system efficiency

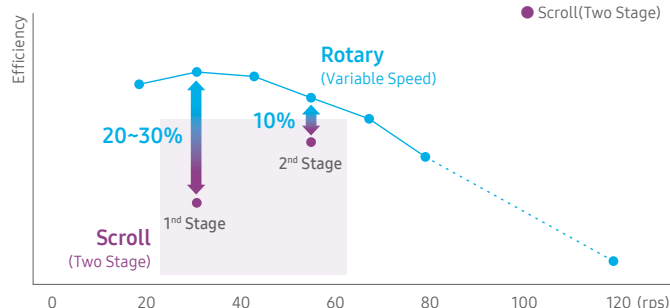
Acquired UL certification

Verified reliability in cold weather, desert condition and long line-set

Rotary Compressor vs. Scroll Compressor



Rotary Compressor vs. 2-Stage Scroll



Samsung Variable Frequency Driver

Inverter Driver



Saves Energy(26 SEER)
Uses high-efficiency
PFC control and power saver



Re-programmable with
Wi-Fi, easy maintenance



Acquired UL certification

Environmental Regulations

(Eco-friendly Refrigerant)

Solution for Global Warming Potential (GWP)



GWP
2,090
Current
Refrigerant
R410A

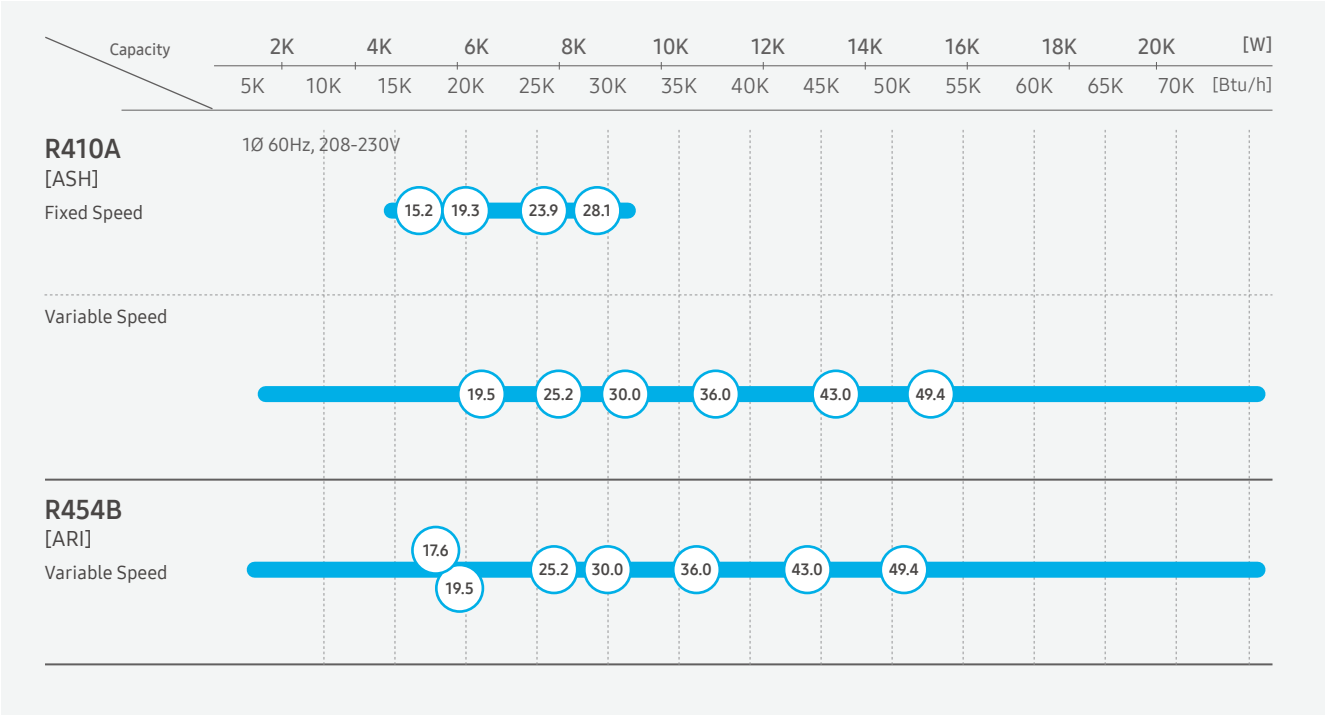


GWP
466
Eco-friendly
Refrigerant
R454B



Product Range

Rotary Unitary



Specification

Variable Speed for Unitary

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R410A	DC Inverter	Twin	44	UG4TN3200F	19.5	20,500	6,008	11.4	3.34	1,798	24
			48	UG8TN3265F	25.2	26,800	7,854	11.5	3.37	2,330	24
				UG8TT3300F	30.0	32,500	9,525	11.3	3.31	2,776	19
				UG8TT3360F	36.0	39,000	11,430	11.3	3.31	3,450	19
			55	UG5TN3450F	43.0	46,000	13,481	11.4	3.34	4,035	20
				UG5TK8520F	49.4	52,800	15,474	11.4	3.34	4,632	20

* R410A Test condition : ASHRAE

Fixed Speed for Unitary

Ref.	Frequency	Power Source	Piston	Frame	Model	Displace- ment	Cooling Capacity		EER	COP	Input	Dimension
						(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R410A	60Hz	1Ø,	Single	48	UG8C155IN	15.2	16,100	4,718	10.6	3.11	1,519	7
		208-230V		55	UG5C200IN	19.3	20,000	5,861	10.3	3.02	1,942	8
					UG5C250IN	23.9	25,300	7,415	10.7	3.14	2,365	9
					UG5DN8300I	28.1	29,400	8,616	10.8	3.15	2,735	11

* R410A Test condition : ASHRAE

Variable Speed for Unitary

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R454B	DC Inverter	Twin	39	UF9BL3180F	17.6	17,700	5,188	11.1	3.25	1,595	34
			44	UF8LB3200F	19.5	19,600	5,744	11.1	3.25	1,766	24
			48	UF8LB3265F	25.2	25,700	7,532	11.0	3.22	2,336	24
				UF8LB3300F	30.0	30,000	8,792	11.0	3.22	2,727	19
				UF8LB3360F	36.0	36,400	10,668	11.0	3.22	3,309	19
			55	UF5LB3450F	43.0	43,700	12,807	11.1	3.25	3,937	20
				UF5LB3520F	49.4	50,200	14,712	11.1	3.25	4,523	20

* R454B Test condition : ARI

Rotary Compressor for Heat Pump

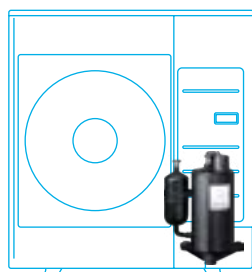
(Water Heater / Dryer)



Key Features for Heat Pump (Water Heater / Dryer)

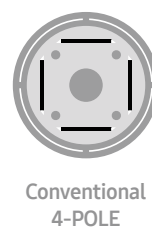
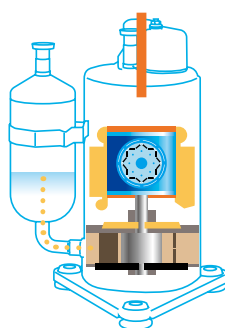
Compact Size

More space with optimal size



High Efficiency

Improves 5% efficiency compared to conventional motor



Environmental Regulations

(Eco-friendly Refrigerant)

Solution for Global Warming Potential (GWP)



Current Refrigerant **R410A**



Eco-friendly Refrigerant **R290**

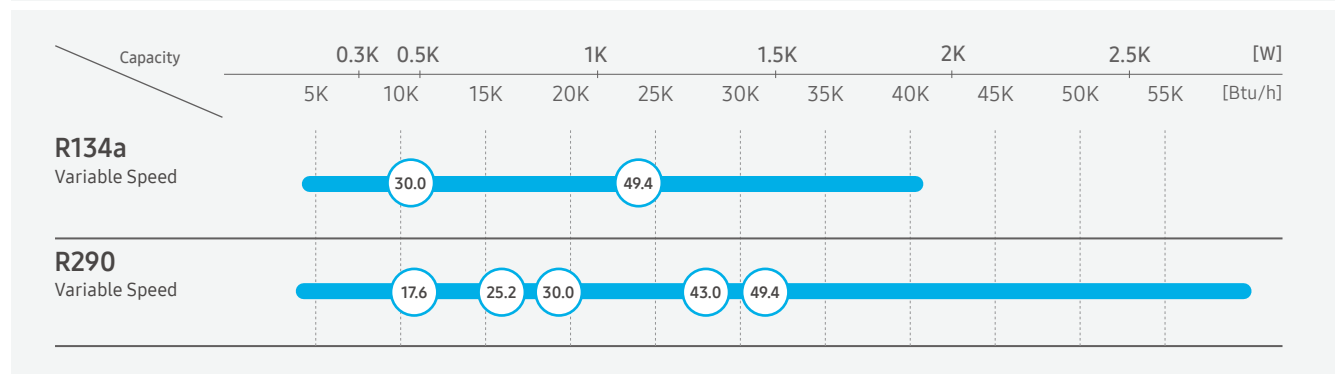
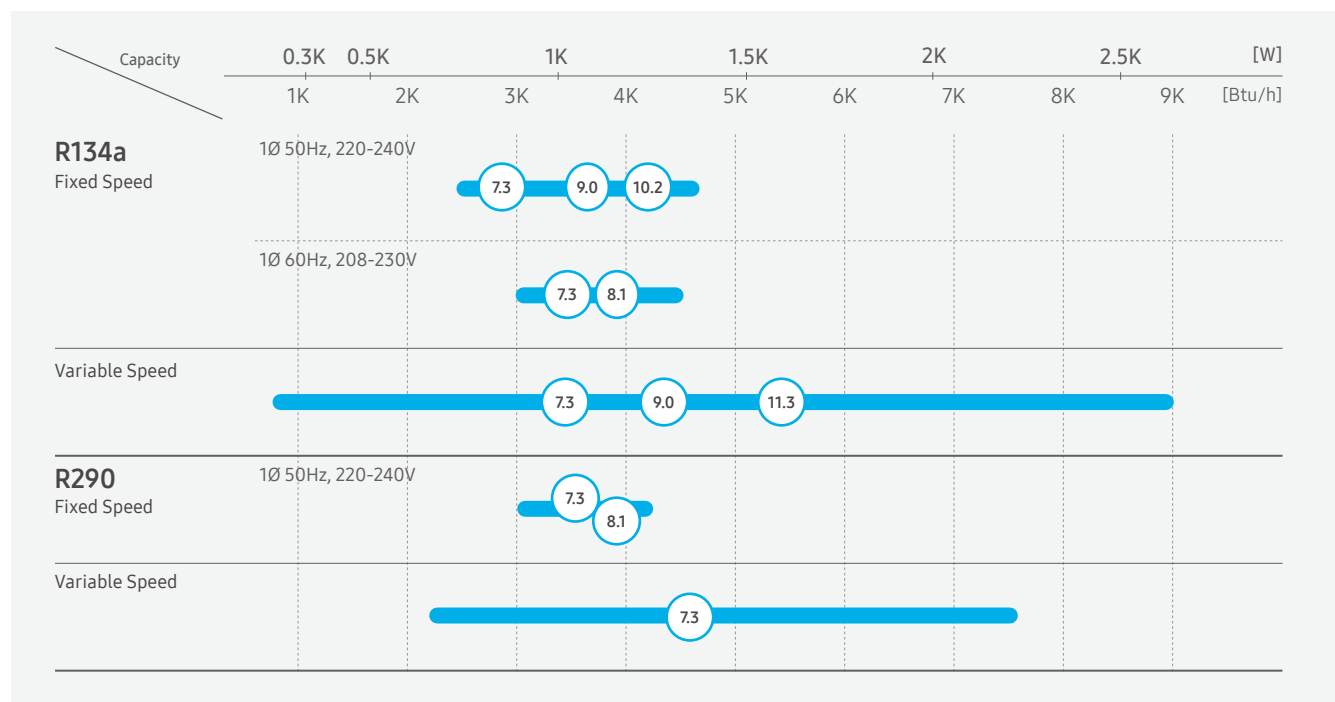
Product Range

Eco-Friendly R290 Refrigerant Line-Up

By using automatic moving RPM technology, it is possible to change inverter refrigerator without any other component changes



Rotary (Dryer)



Specification

Variable Speed for Heat Pump Dryer

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R134a	DC Inverter	Single	39	UX9CK5034F	7.3	3,480	1,020	12.0	3.52	290	21
				UX9AR3044F	9.0	4,340	1,272	11.8	3.46	368	31
				UX9AR5044F	9.0	4,340	1,272	12.2	3.58	356	32
				UX9BR5055F	11.3	5,400	1,583	12.3	3.60	439	33
R290				UF9HA5044F	7.3	4,550	1,333	11.8	3.46	386	38

* R134a & R290 Test condition : ASHRAE

Fixed Speed for Heat Pump Dryer

Ref.	Frame	Piston	Frequency	Power Source	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
						(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R134a	39	Single	50Hz	1Ø, 220-240V	UX9CT1030J	7.3	2,900	850	9.3	2.73	312	37
					UX9CT2030J	7.3	2,900	850	9.8	2.87	296	9
					UX9CT3030J	7.3	2,900	850	8.5	2.50	340	37
					UX9AK2037J	9.0	3,650	1,070	10.1	2.96	360	30
					UX9BJ2042J	10.2	4,260	1,248	10.2	2.99	418	3
			60Hz	1Ø, 208-230V	UX9CT1035I	7.3	3,550	1,041	10.1	2.96	351	37
					UX9AK2040I	8.1	4,000	1,172	10.4	3.05	385	30
			50Hz	1Ø, 220-240V	UF9HA2036J	7.3	3,550	1,040	9.5	2.78	374	37
					UF9HA3036J	7.3	3,550	1,040	10.1	2.96	351	37
					UF9HA3040J	8.1	3,900	1,175	10.1	3.04	386	40
UF9HB2040J	8.1	3,900			1,175	9.6	2.89	406	40			

* R134a & R290 Test condition : ASHRAE

Variable Speed for Heat Pump Water Heater

Ref.	Power Source	Piston	Frame	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R134a	DC Inverter	Twin	48	UX8TH5140F	30.0	14,500	4,250	12.0	3.52	1,210	17
			55	UX5T250FNB	49.4	24,800	7,268	12.1	3.55	2,050	21
R290			39	UF9HC3110F	17.6	10,396	3,046	11.7	3.42	891	36
			48	UF8HC3155F	25.2	16,000	4,689	12.0	3.52	1,333	25
				UF8HC3180F	30.0	19,000	5,568	12.25	3.59	1,551	26
			55	UF5HC3260F	43.0	27,500	8,059	12.3	3.60	2,236	25
				UF5HC3300F	49.4	31,500	9,232	12.3	3.61	2,560	25

* R134a & R290 Test condition : ASHRAE

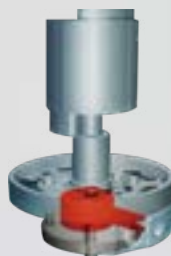


Rotary Compressor for Special Applications

Key Features for Special Applications

Twin Type Mini Rotary Compressor

Twin cylinder compressor has superior performance in noise and vibration



Single Competitor



Twin SAMSUNG

Superior to competitors

Quietness

Low
Vibration

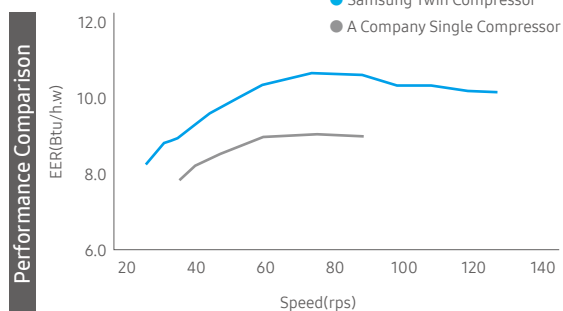
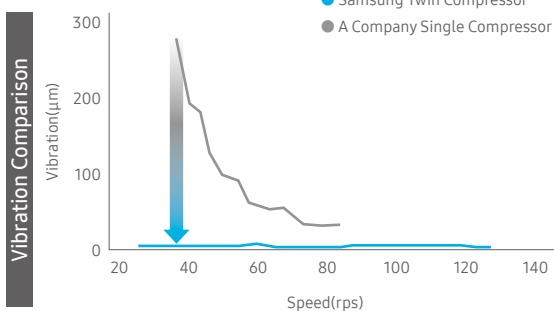
+

Multi
Refrigerant

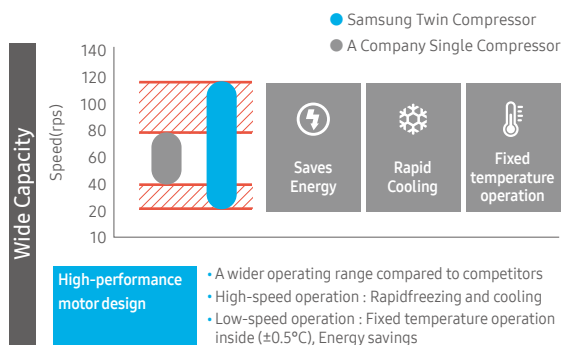
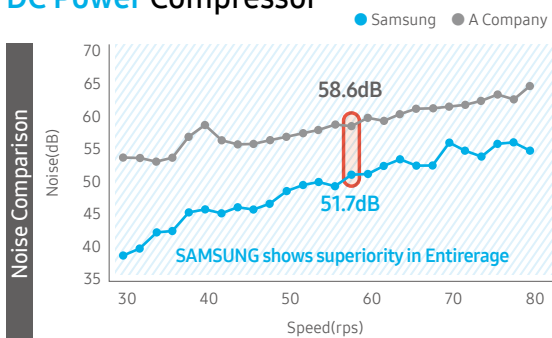
Multi
Power

High Performance

Mini Compressor



DC Power Compressor



Various Application Fields

Provides various cooling solution for small applications

Miniature size:

Inverter dehumidifier,
Ultra-small slim water purifier

Maintains fixed temperature:

Air conditioning, Mini showcases,
and Mobile cooling systems, etc.

Operation area:

HBP/MBP/LBP



Aircraft,
automotive sectors



Mobile refrigeration/
freezing applications



Telecommunication
equipment



Military



Dehumidifier,
Water Purifier

Automotive Dc Power Application

Cooling system optimized for the era of electric vehicles

Integrated Thermal Management System

Battery saving solution

Improved
mileage
in electric cars

Improved
energy
efficiency
during winter



Specification

DC Power Source(Mini Rotary) / Variable Speed

Frame	Ref.	Power Source	Piston	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
20	R134a	DC12V	Twin	UX0TM5009S	1.9	850	249	8.1	2.37	105	3
		DC24V	Single	UX0AK5007Z	1.4	630	184	9.4	2.75	67	4
			Twin	UX0T011Z	2.4	1,100	322	9.7	2.85	113	1, 2
		DC48V	Single	UX0AK5007R	1.4	630	184	9.4	2.75	67	4
			Twin	UX0T011R	2.4	1,130	331	9.7	2.85	116	1
	R1234yf	DC24V	Single	UF0AB5007Z	1.4	640	188	9.4	2.75	68	4
			Twin	UF0AB5011Z	2.4	1,120	328	9.7	2.85	115	1
		DC48V	Single	UF0AB5007R	1.4	640	188	9.4	2.75	68	4
			Twin	UF0AB5011R	2.4	1,120	328	9.7	2.85	115	1
	R600a	DC24V	Twin	UF0TN5006Z	2.4	580	170	10.0	2.92	58	1
		DC48V	Twin	UF0TB5006ZR	2.4	580	170	10.0	2.93	58	1
	R404A	DC24V	Twin	*UF0TT5011Z	2.4	1,100	322	8.8	2.57	125	1
	R290	DC24V	Twin	UF0HB5014Z	2.4	1,430	419	10.0	2.93	143	1
		DC48V	Twin	UF0HB5014R	2.4	1,430	419	10.0	2.93	143	1

* Test condition : Samsung mobile refrigerator condition

AC Power Source(Mini Rotary) / Variable Speed

Frame	Ref.	Power Source	Piston	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
20	R134a	AC100V	Twin	UX0T011Q	2.4	1,100	322	10.0	2.92	110	1
		AC220V	Single	UX0AK5007F	1.4	630	184	9.4	2.75	67	4
			Twin	UX0T011F	2.4	1,100	322	10.0	2.92	110	1
	R1234yf	AC100V	Twin	UF0AB5011Q	2.4	1,120	328	10.0	2.93	112	1
		AC220V	Single	UF0AB5007F	1.4	640	188	9.4	2.75	68	4
			Twin	UF0AB5011F	2.4	1,120	328	10.0	2.93	112	1
	R600a	AC100V	Twin	UF0TB5006Q	2.4	580	170	10.0	2.93	58	1
		AC220V		UF0TB5006F	2.4	580	170	10.0	2.93	58	1
	R290	AC100V	Twin	UF0HB5014Q	2.4	1,430	419	10.0	2.93	143	1
		AC220V		UF0HB5014F	2.4	1,430	419	10.0	2.93	143	1

Special Application for DC Power Source / Variable Speed

Ref.	Power Source	Frame	Piston	Model	Displacement	Cooling Capacity		EER	COP	Input	Dimension
					(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(W/W)	(W)	
R134a	DC 24V	20	Single	UX0AK5007Z	1.4	650	190	9.4	2.75	69	4
	DC 12V		Twin	UX0TM5009S	1.9	850	249	8.1	2.37	105	3
	DC24V			UX0T011ZNA	2.4	1,100	322	9.7	2.85	113	1,2
		39	Single	UX9CJ5034Z	7.3	3,480	1,020	11.2	3.28	311	28
				UX9AM5042Z	9.0	4,200	1,232	11.2	3.28	375	39
R1234yf		39	Single	UF9MB5034Z	7.3	3,410	1,000	11.2	3.28	305	28
R404A		20	Twin	*UF0TT5011Z	2.4	1,100	322	8.8	2.58	125	1
		39	Single	*UF9CT5034Z	7.3	3,360	985	10.1	2.97	332	28
R600a		20	Twin	UF0TN5006Z	2.4	580	170	10.0	2.93	58	1

* Test condition : Samsung mobile refrigerator condition

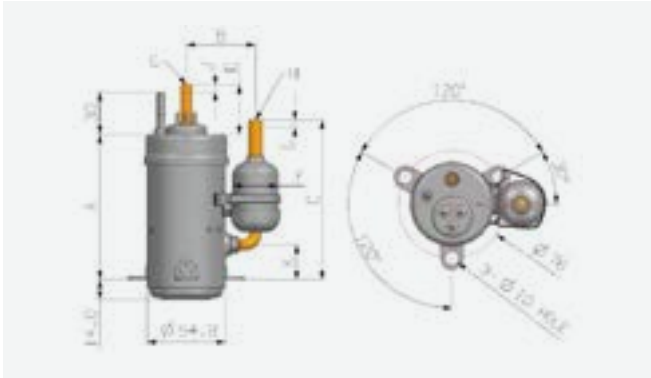
Dimension

20 Frame

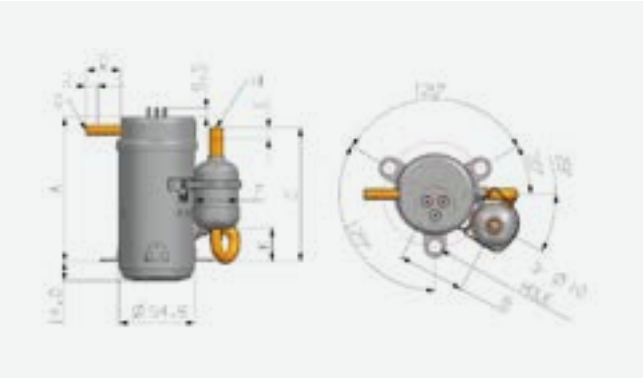
Type	A	B	C	D	E	F	G	H	J	K
1	101.3	48.4	111.3	34.8	5.0	31.8	4.95	6.54	5.0	24.3
2	104.1	48.4	96.3	-	8.0	31.8	4.95	6.54	8.0	24.3
3	94.1	48.4	96.3	-	8.0	31.8	4.95	6.54	8.0	24.3
4	88.1	48.4	83.9	-	8.0	31.8	4.95	6.54	8.0	11.8

(UNIT:mm)

[Type 1]



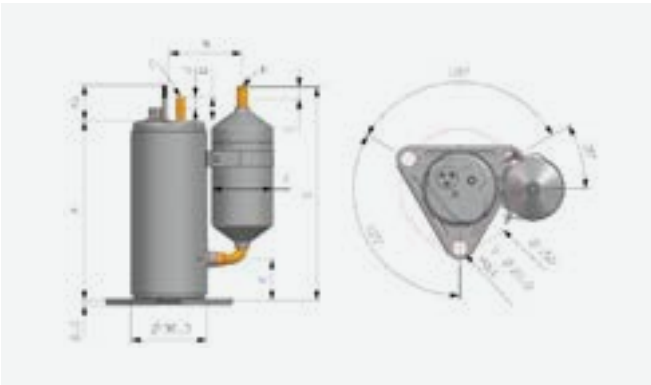
[Type 2, 3, 4]



35 Frame

Type	A	B	C	D	E	F	G	H	J	K
1	241.5	92.5	269.0	30.0	15.0	77.4	8.15	9.64	15.00	52.0
2	226.5	92.5	269.0	30.0	15.0	77.4	8.15	9.64	15.00	52.0
3	212.3	83.5	214.0	30.0	15.0	58.4	8.15	9.64	15.00	52.0
4	251.7	92.5	280.3	30.0	15.0	77.4	8.15	9.64	15.00	63.3

(UNIT:mm)

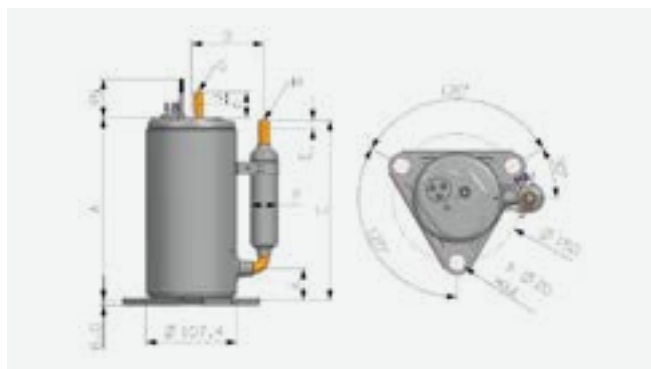


39 Frame

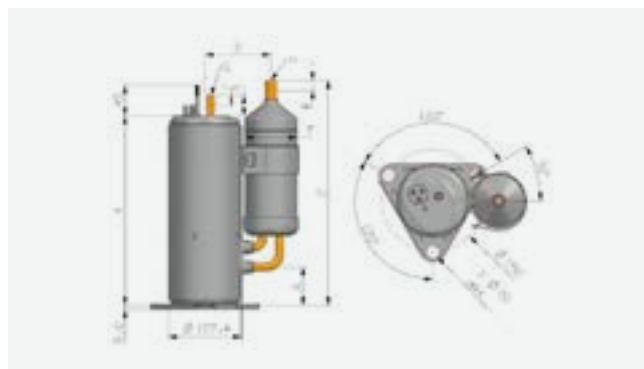
Type	A	B	C	E	F	G	H	K
1	190.3	84.6	201.6	10.0	31.8	8.15	9.64	28.8
2	206.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
3	212.9	84.6	209.8	10.0	31.8	8.15	9.64	37.0
4	193.3	86.5	220.6	15.0	41.3	8.15	9.64	30.3
5	212.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
6	218.9	86.5	227.3	15.0	41.3	8.15	9.64	37.0
7	197.3	84.6	203.1	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	223.5	87.9	263.7	15.0	58.4	8.15	12.85	42.5
25	292.7	97.2	329.6	15.0	77.0	8.15	12.85	56.1
26	277.7	97.2	329.6	15.0	77.0	8.15	12.85	56.1
27	287.7	97.2	329.6	15.0	77.0	8.15	12.85	56.1
28	139.8	84.6	143.5	10.0	31.8	8.15	9.64	28.8
29	190.3	86.5	219.1	15.0	41.3	8.15	9.64	28.8
30	193.3	84.6	203.1	10.0	31.8	8.15	9.64	30.3
31	152.5	84.6	145.0	10.0	31.8	8.15	9.64	30.3
32	162.5	84.6	203.1	10.0	31.8	8.15	9.64	30.3
33	182.3	84.6	209.8	10.0	31.8	8.15	9.64	37.0
34	276.4	97.2	325.2	15.0	77.0	8.15	12.85	64.6
35	279.4	97.2	308.2	15.0	77.0	8.15	12.85	47.6
36	264.4	97.2	308.2	15.0	77.0	8.15	12.85	47.6
37	204.3	84.6	201.6	10.0	31.8	8.15	9.64	28.8
38	159.8	84.6	201.6	10.0	31.8	8.15	9.64	28.8
39	142.8	87.9	192.3	15.0	58.4	8.15	9.64	30.3
40	207.3	84.6	203.1	10.0	31.8	8.15	9.64	30.3
41	281.4	97.2	325.2	15.0	77.0	8.15	12.85	64.6

(UNIT:mm)

[39 Frame Single]



[39 Frame Twin]



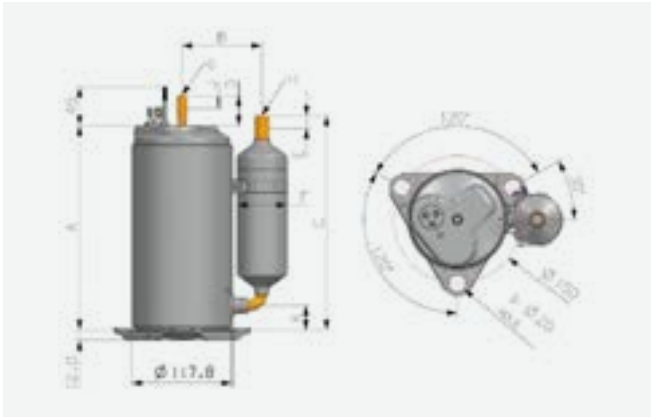
Dimension

44 Frame

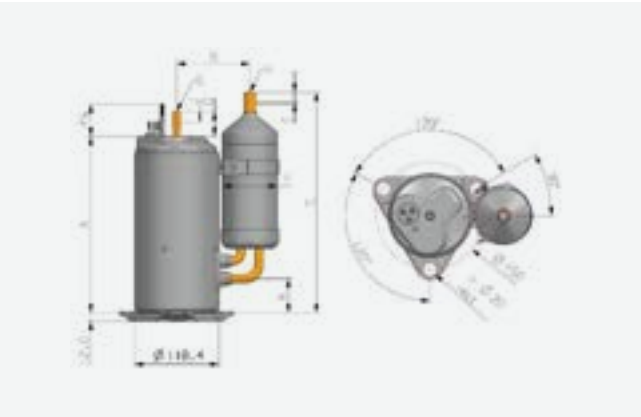
Type	A	B	C	E	F	G	H	K
1	215.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
2	240.7	93.7	274.0	15.0	58.4	8.15	12.85	37.0
3	240.1	93.7	249.8	15.0	58.4	8.15	9.64	28.6
4	240.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
5	252.7	93.7	274.0	15.0	58.4	8.15	12.85	37.0
6	235.1	93.7	251.6	15.0	58.4	8.15	12.85	28.6
7	257.4	93.7	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	264.0	102.6	322.5	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
23	152.6	93.7	190.6	15.0	58.4	8.15	12.85	28.6
24	299.0	102.6	322.5	15.0	77.0	8.15	12.85	49.0
25	264.0	102.6	322.5	15.0	77.0	8.15	12.85	49.0

(UNIT:mm)

[44 Frame Single]



[44 Frame Twin]

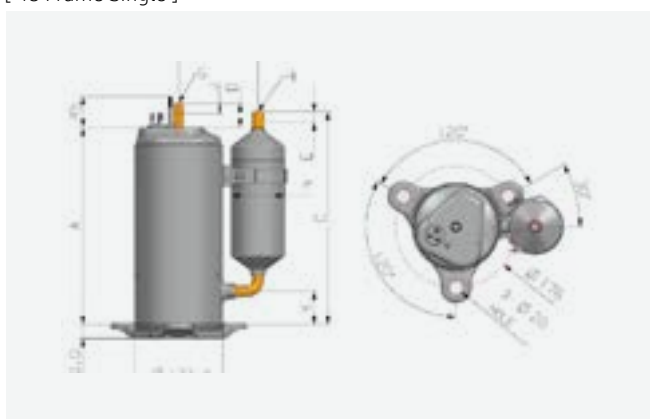


48 Frame

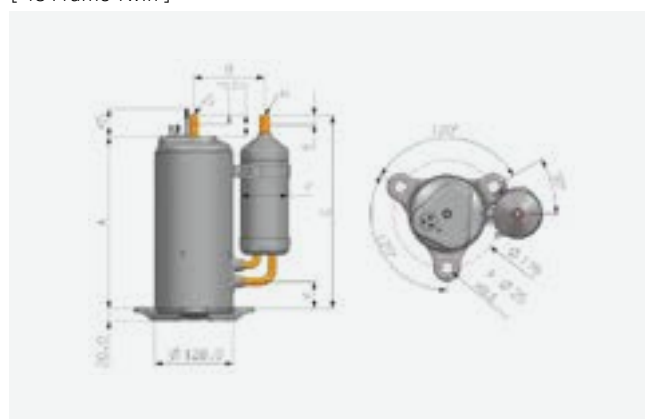
Type	A	B	C	E	F	G	H	K
1	285.8	98.0	285.4	15.0	58.4	9.70	12.85	48.4
2	285.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
3	300.3	114.5	310.6	15.0	77.4	9.70	12.85	50.6
4	295.8	98.0	285.4	15.0	58.4	9.70	12.85	48.4
5	301.3	114.5	310.6	15.0	77.4	9.70	12.85	50.2
6	275.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
7	342.0	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
19	355.0	115.2	368.8	15.0	77.0	9.70	12.85	86.8
20	311.1	115.2	316.0	15.0	77.0	9.70	12.85	86.8
21	365.0	115.2	368.8	15.0	77.0	9.70	12.85	86.8
22	268.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
23	295.8	114.5	308.4	15.0	77.4	9.70	12.85	48.4
24	351.2	115.2	355.3	15.0	77.0	9.70	12.85	83.3
25	296.9	115.2	316.0	15.0	77.0	9.70	12.85	44.5
26	311.9	115.2	329.0	15.0	77.0	9.70	12.85	47.8

(UNIT:mm)

[48 Frame Single]



[48 Frame Twin]



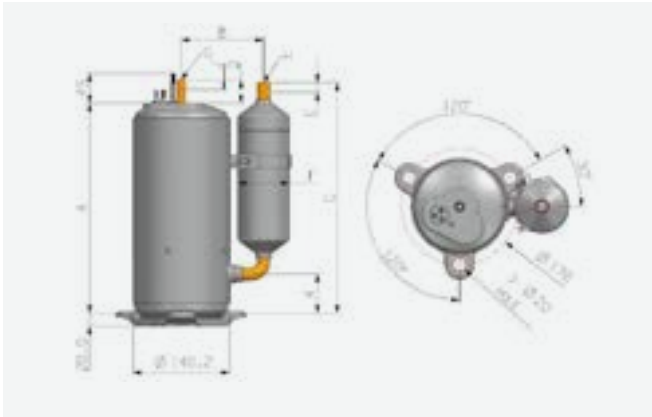
Dimension

55 Frame

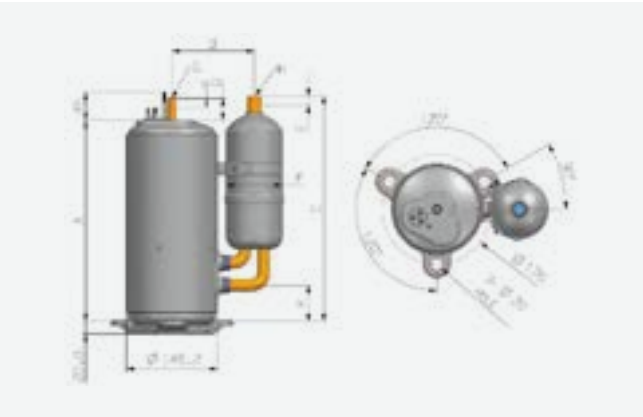
Type	A	B	C	E	F	G	H	K
1	294.4	124.8	306.7	15.0	77.4	9.70	16.0	42.7
2	311.4	124.8	349.7	15.0	77.4	9.70	16.0	59.7
3	286.4	124.8	349.7	15.0	77.4	9.70	16.0	59.7
4	303.7	124.8	349.7	15.0	77.4	9.70	16.0	59.7
5	318.7	124.8	349.7	15.0	77.4	9.70	16.0	59.7
6	301.4	124.8	349.7	15.0	77.4	9.70	16.0	59.7
7	323.8	124.8	349.7	15.0	77.4	9.70	16.0	59.7
8	345.9	132.4	358.7	15.0	90.0	9.70	19.2	87.8
9	370.8	132.4	370.0	15.0	90.0	9.70	19.2	99.1
10	296.4	124.8	349.7	15.0	77.4	9.70	16.0	59.7
11	360.9	132.4	360.1	15.0	90.0	9.70	19.2	89.2
12	306.4	124.8	348.3	15.0	77.4	9.70	16.0	58.3
13	323.4	132.4	362.2	15.0	90.0	9.70	19.2	58.3
14	341.2	132.4	361.0	15.0	90.0	9.70	19.2	57.2
15	395.8	125.5	455.4	15.0	77.0	9.70	16.0	104.6
16	386.0	125.5	445.6	15.0	77.0	9.70	16.0	94.8
17	311.5	125.5	351.0	15.0	77.0	9.70	16.0	55.2
18	371.0	125.5	390.5	15.0	77.0	9.70	16.0	94.8
19	323.5	132.4	362.1	15.0	90.0	9.70	19.2	58.3
20	383.0	132.4	401.6	15.0	90.0	9.70	19.2	97.8
21	393.0	132.4	401.6	15.0	90.0	9.70	19.2	97.8
22	363.0	132.4	401.6	15.0	90.0	9.70	19.2	97.8
23	363.0	132.4	401.6	15.0	90.0	9.70	19.2	97.8
24	353.0	132.4	401.6	15.0	90.0	9.70	19.2	97.8
25	363.0	132.4	362.1	15.0	90.0	9.70	19.2	58.3

(UNIT:mm)

[55 Frame Single]



[55 Frame Twin]



Inverter Controller

Series		SBMC (for 20Fr comp)					SBMC (for 39Fr comp)
		SBMC1				SBMC2	SBMC3
		-V1	-V2	-V3	-V4	-V2	-V2
Compressor Model		UX0T011ZNAE5 UF0TN5006ZE5		UF0TT5011ZNAE5EX UX0T011ZNAE5E3	UX0TM5009SE9EX	UX0T011FNAE5 (2.4cc)	UX0T011QNAE5 (2.4cc)
Image							
Power Supply	Rated Voltage	24V	24V	24V/48V	12V	AC100V(230V)	12/24/48V
	Voltage Range	16~32V	16~32V	16~60V	9.6~17V	85~130V (187~265V)	9.6~17/9.6~ 31.5/33~60V
	Frequency	-	-	-	-	50/60HZ	-
	Max Input Arms	10A	10A	10A	15A	4A	25A
	Max Input Power	250W	250W	250W	180W	230W	620W
Interface	Type	Frequency input or Resistor	Frequency input or Resistor	Frequency input or Resistor	Frequency input or Resistor	Frequency input	Frequency input or Resistor
Structure	PBA or CASE	PBA or Case(Seperated)	Case(Seperated)	Case(Seperated)	PBA	Case(Seperated)	Case(Seperated)
	Size	104*58.2*34.9	107.6*62.4*39.6	107.6*62.4*39.6	104*58.2*34.9	107.6*62.4*47.5	97.6*65.4*122.6
	Cooling	Static	Static	Static	Static	Static	Static
Environ- ment	Ambient Temp.	-20~43°C	-20~43°C	-20~43°C	-20~43°C	-5~43°C	-20~43°C
	Storage Temp.	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-25~85°C	-40~85°C
	Max. Storage Relative Humidity	85%	85%	85%	85%	85%	85%
Protection		Voltage/ Current	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current	Voltage/ Current/ Temp.

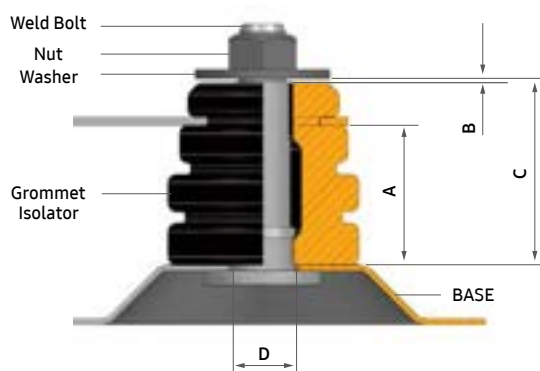
Inverter Controller

SBMC (for 39Fr comp)	SBHC (for Rotary comp)					
SBMC5	SBHC3	SBHC1	SBHC3		SBHC4	SBHC5
-V2	-V1	-V2	-V2	-V3	-V2	-V3
UX9AM5042ZJDSH	2/3Ton	1Ton	2/3Ton	2/3Ton	4Ton	5Ton
						
12/24/48V	208-240V	208-240V	208-240V	208-240V	208-240V	208-240V
9.6~17/9.6~ 31.5/9.6~60V	187~253	187~253	187~253	187~253	187~253	187~253
-	50/60HZ	50/60HZ	50/60HZ	50/60HZ	50/60HZ	50/60HZ
30A	20A	7A	19A	20A	24.75A	30A
720W	4.6kW	1.5kW	3.2kW	4.6kW	4.2kW	6.1kW
Frequency input or Resistor	RS-485 Modbus or UART TTL	UART TTL Modbus 9600bps, 3750Vrms	RS-485 Modbus 19200bps, 5000Vrms	UART TTL Modbus 9600bps, 3750Vrms	RS-485 Modbus 19200bps, 5000Vrms	RS-485 Modbus 19200bps, 5000Vrms
PBA	PBA	PBA	PBA	PBA	PBA	PBA
152*119*53.2	280*200*138.7	42*142*46.5	319.1*256.5*148.3	280*200*138.7	319.1*256.5*129.3	319.1*256.5*148.3
Static	BLDC Fan	BLDC Fan/AC Fan	BLCD Fan	BLDC Fan	BLDC Fan	BLDC Fan
-20~43°C	-30~60°C	-30~57°C	-30~60°C	-30~57°C	-30~60°C	-30~60°C
-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C
85%	95%	95%	95%	95%	95%	95%
Voltage/ Current/Temp. /Comp temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.	Voltage/ Current/ Temp.

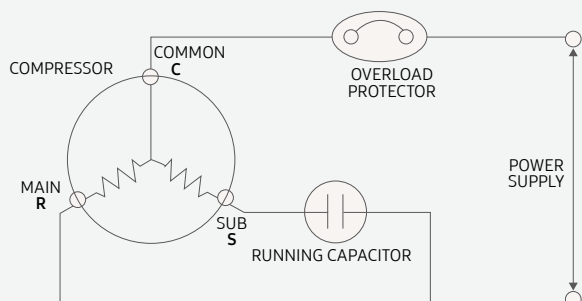
Mounting System

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

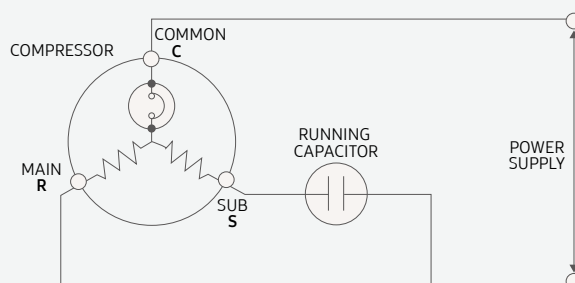
Frame	A	B	C	E
20F	294.4	124.8	306.7	15.0
35F / 39F	311.4	124.8	349.7	15.0
44, 48, 55, 63F	286.4	124.8	349.7	15.0



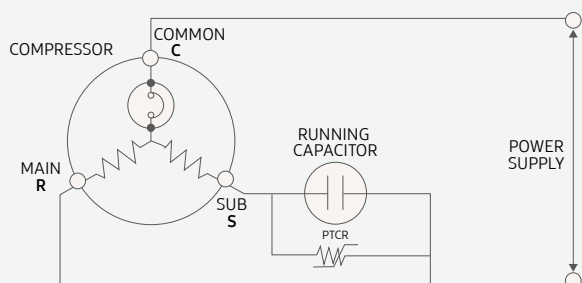
Wiring Diagram



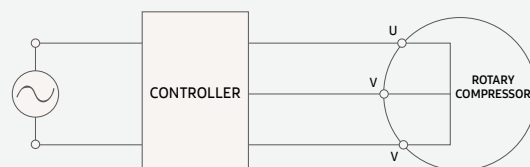
External OLP Type



Internal OLP Type



Internal OLP Type with PTCR



Inverter Type

Test Conditions

Refrigerant	Rotary Compressor		
	R22 / R410A / R134a / R290 / R404A (ASHRAE)	R32 / R454B (ARI)	Samsung Mobile Refrigerator Condition (R404A)
Condensing Temp.	54.4°C (130°F)	54.4°C (130°F)	31.1°C (88°F)
Evaporating Temp.	7.2°C (45°F)	7.2°C (45°F)	-14.3°C (6.3°F)
Ambient Temp.	35.0°C (95°F)	35.0°C (95°F)	15.0°C (59°F)
Return Gas Temp.	35.0°C (95°F)	18.3°C (64.9°F)	15.0°C (59°F)
Liquid Temp.	46.1°C (115°F)	46.1°C (115°F)	23.0°C (73.4°F)

Accessory Parts

Item	Application				Quantity(PCS)
	Comp. With External OLP	Comp. With Internal OLP	BLDC Compressor		
			Type1	Type2	
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)



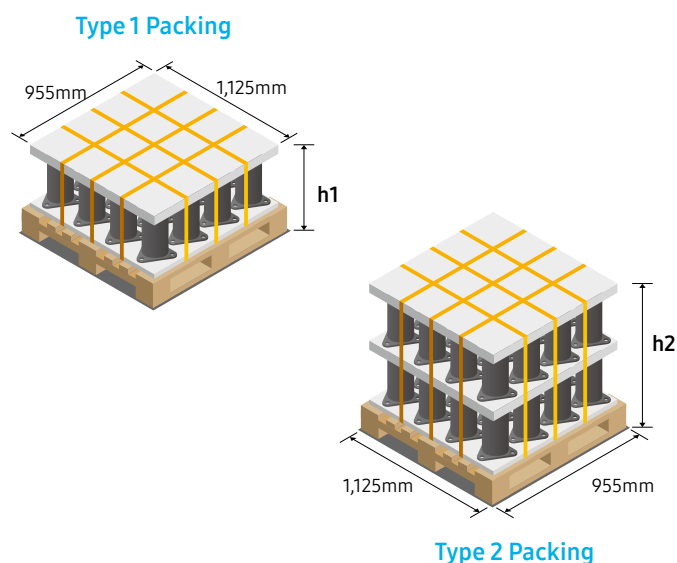
Packing Information

Frame	Compressor Quantity(pcs)		Carton Quantity		Accessory Box (E)	Loading Quantity(T) (pcs)	Packing Height (Max)	
	Type1(A)	Type2(B)	Type1(C)	Type2(D)			Type1(h1)	Type2(h2)
20F	182	364	-	12	48	4,368	593	965
20F(Twisted Tube)	154	308	-	12	48	3,696	235	395
39F	36	72	2	24	6	1,800	477	788
35F/39F BLDC	35	70	2	22	5	1,610	562	962
44F Ex(In)OLP	36	72	4	16	6(5)	1,296	521	880
44F 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

Ex.) Compressor total quantity of 44Frame Ex(In)OLP model (T) = (A) X (C) + (B) X (D) = 1,296 pcs

Ex.) Carton total quantity of 44F Ex OLP model = (C) + (D) + (E) = 26 Cartons. (In OLP model = 25Cartons)

* 20Frame carton Type2 is 4stacks



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

Samsung scroll compressor are Innovative,
have a tough design and provides unparalleled
performance





Contents

- 88 Product Range
- 89 Model Identification

90

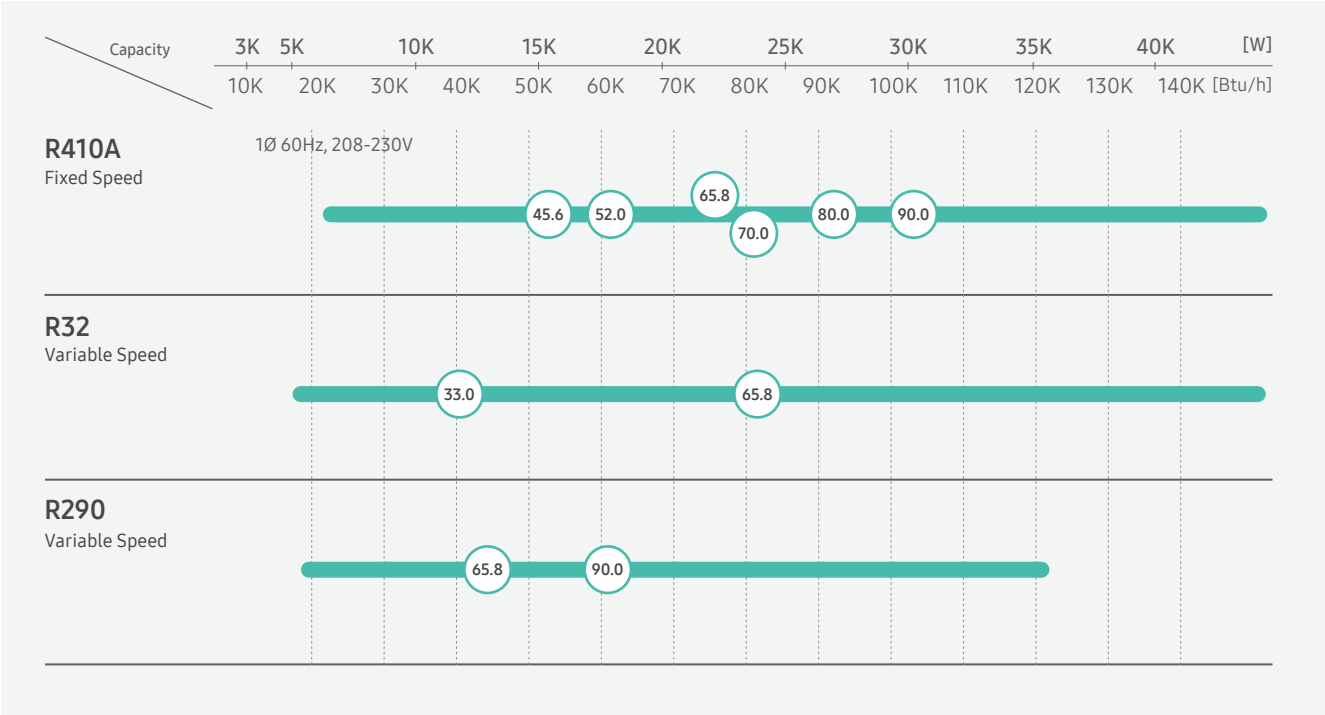
Inverter Scroll

- 90 Key Features
- 92 Specification

-
- 93 Dimension
 - 94 Assembly Diagrams
 - 94 Mounting Accessories
 - 94 Inverter Controller
 - 95 Packing Information
 - 95 Handling Guide

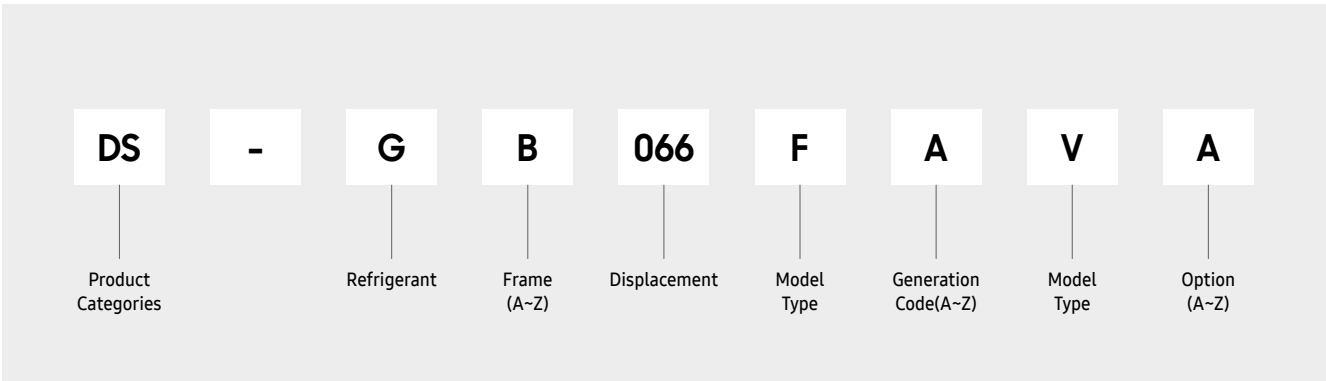
Product Range

Scroll

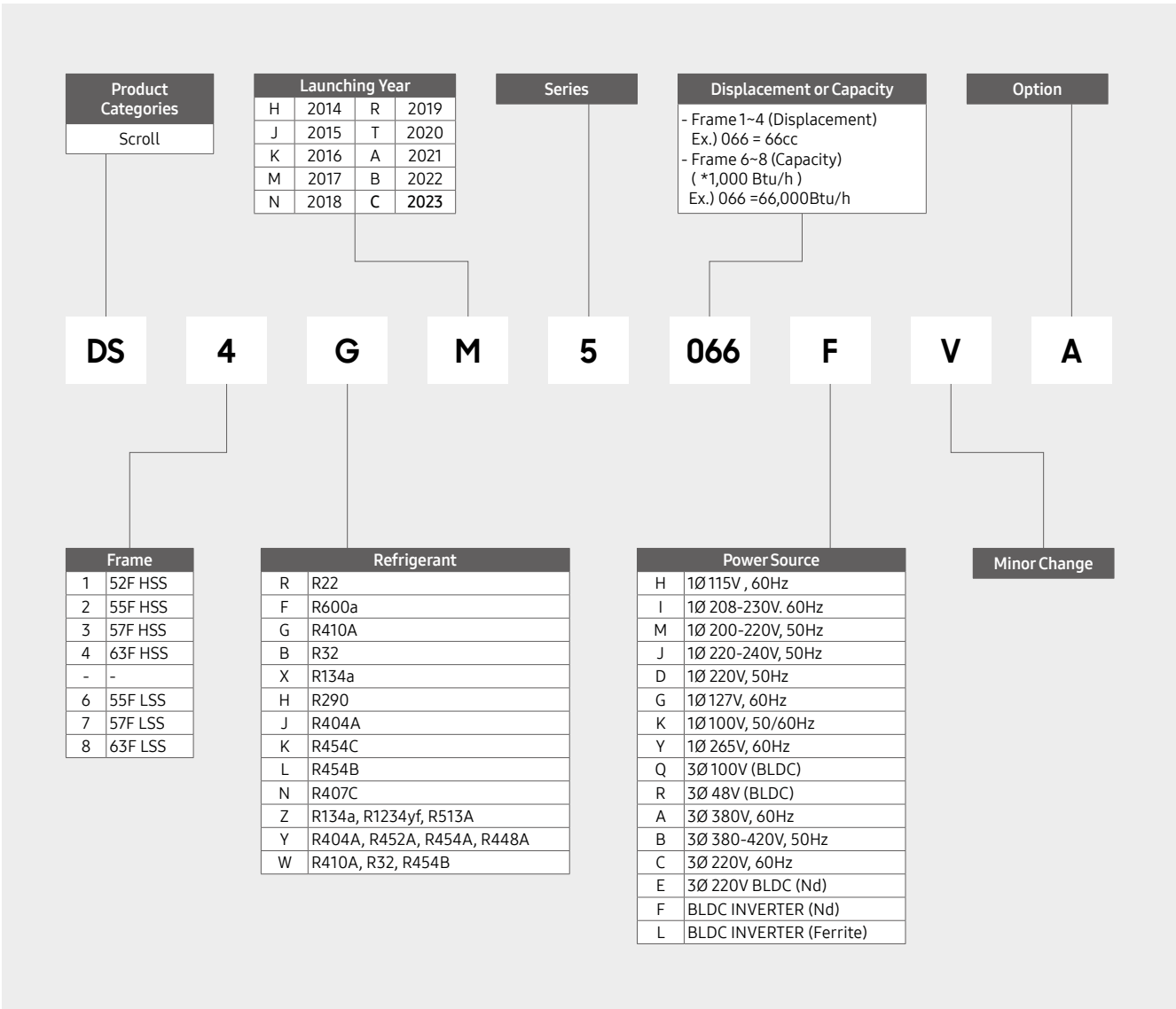


Model Identification

Type 1



Type 2



Key Features Variable Speed Scroll Compressor

Samsung Scroll Compressor is innovative, has a robust structure and provides unparalleled performances

Robust Structure, World's best Performances, Wider Operation Range

Optimal Scroll Wrap Design

- Various Wrap Design
 - Involute, Algebraic, Hybrid
 - Reduce compression loss
 - Maximize capacity

Optimal Back Pressure Design

- Mid back pressure structure
- World Best Performance at part load



Low Oil Circulation Ratio

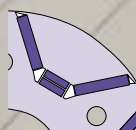
- Effective shaft oil groove design
- Unique Oil Supply Structure



*patent applied

High Efficiency & Output Motor

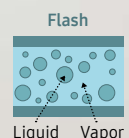
- 6 Pole 9 Slot, BLDC(Nd magnet)
- Unique Double Magnet Structure



*patent applied

Injection Technology

- Improve heating & Cooling performance
- Vapor injection and Flash Gas Injection



Unique Valve Structure

- Reduce noise & high reliability



*patent applied

Bypass Valve

- Reduce the over compression loss



Wide Range Operation

- 1.4 ~ 10.0 compression ratio range
- 10 ~ 170rps operation range
 - Rigid frame structure (12~16pts welding)
 - Improve reliability at high speed operation
 - Unique Thrust Bearing Material

Key Features Variable Speed Scroll Compressor

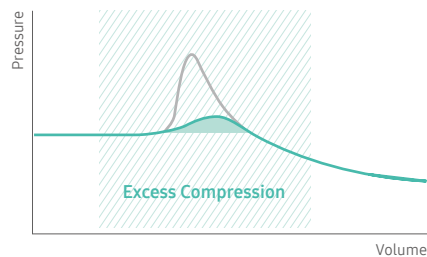
High efficiency by partial load reduction technology

Uses 9 Release Valves

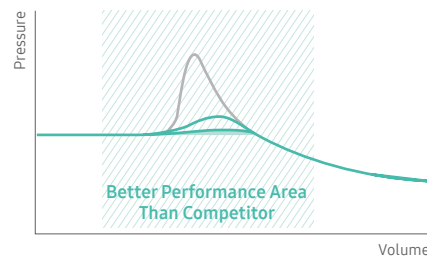
Competitors : 6 Release Valves



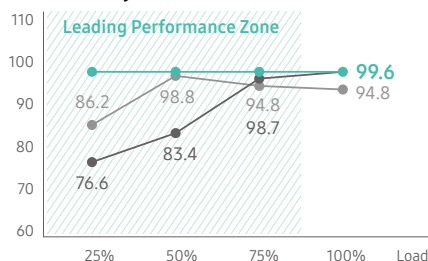
6 Release Valves



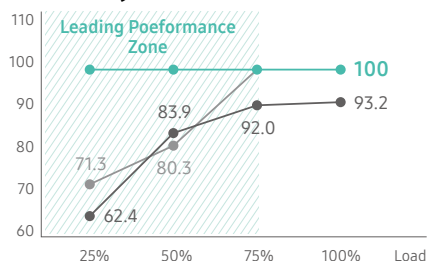
6 Release Valves



Efficiency(7HP)



Efficiency(10HP)



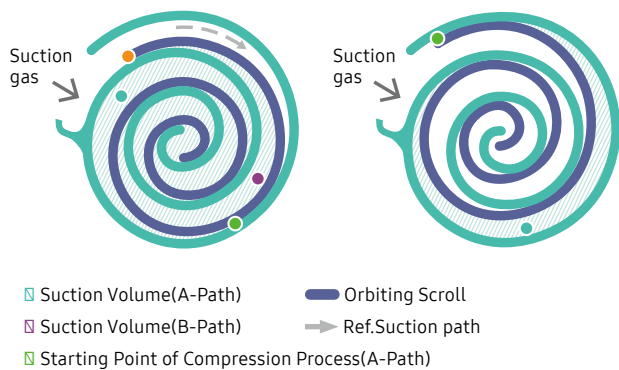
Competitor 1 Competitor 2 Samsung [Unit : %]

Key Features Fixed Speed Scroll Compressor

3% improvement in efficiency

Efficient Flow Path Design

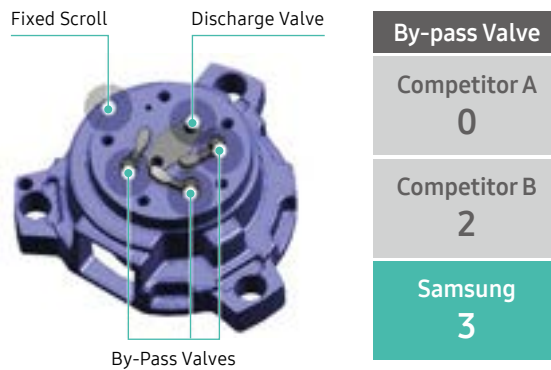
(Improved Volume Efficiency)



Reduced Suction Flow Loss

Optimized Bypass Valve

(Efficiency Improvement)

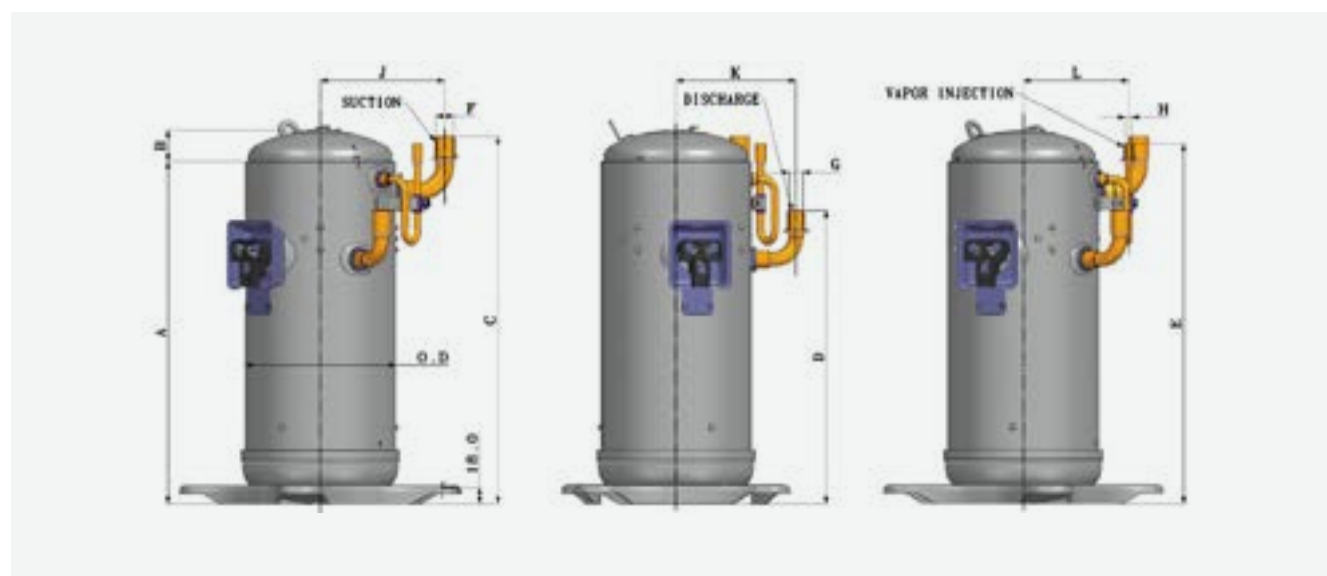


Reduced Excess Compression Loss at DOE A & B

Specification

Variable Speed

Ref.	Power Source	Frame	Model	Displace- ment	Cooling Capacity		EER	COP	Input	Oil Charge	Net Weight	Dimen- sion
				(cc/rev)	(Btu/h)	(W)	(Btu/Wh)	(w/w)	(W)	(cc)	(kg)	
R410A	3Ø 380-460V	55	DS2GR7046FVT	45.6	52,000	15,240	11.3	3.31	4,602	1,400	24.6	1
		63	DS4GM5052FVT	52.0	60,500	17,732	11.2	3.28	5,403	1,700	32.4	2
			DS4GR7066FVT	65.8	75,400	22,098	11.3	3.31	6,670	1,700	35.6	3
			DS4GR5070FVT	70.0	80,300	23,535	11.5	3.37	6,990	1,700	37.3	3
			DS4GR5080FVT	80.0	90,500	26,524	11.2	3.28	8,080	2,000	41.3	4
			DS4GM7090FVT	90.0	103,400	30,305	11.2	3.28	9,230	2,000	40.8	5
	3Ø 220V	55	DS2GT7046EVT	45.6	52,000	15,240	11.3	3.31	4,602	1,400	24.8	1
		63	DS4GT5052EVT	52.0	60,500	17,732	11.3	3.31	5,354	1,700	32.4	2
			DS4GT5066EVT	65.8	76,000	22,284	11.4	3.34	6,667	1,700	36.0	3
R32	1Ø 220V / 3Ø 380V	55	DS2BB5033FVT	33.0	40,200	11,782	11.1	3.25	3,622	1,400	27.5	6
	3Ø 380-460V	63	DS4BC7066FVT	65.8	80,400	23,564	11.1	3.25	7,243	1,700	35.6	3
	3Ø 220V	63	DS4BC7066EVT	65.8	80,400	23,564	11.1	3.25	7,243	1,700	35.6	3
R290	1Ø 220V / 3Ø 380V	63	DS4HC5066FNT	65.8	44,500	13,042	11.7	3.43	3,803	1,100	35.7	7
			DS4HD5066FVT	65.8	44,500	13,042	11.7	3.43	3,803	1,100	35.7	3
	3Ø 380V		DS4HD5090FNT	90.0	61,000	17,878	11.6	3.40	5,259	1,400	40.8	8
			DS4HD5090FVT	90.0	61,000	17,878	11.6	3.40	5,259	1,400	40.8	5

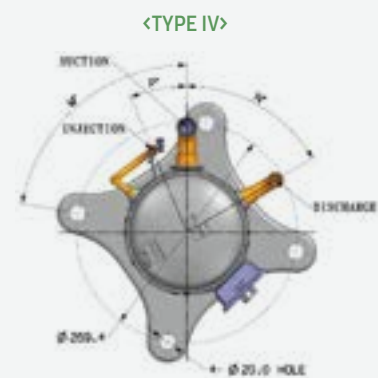
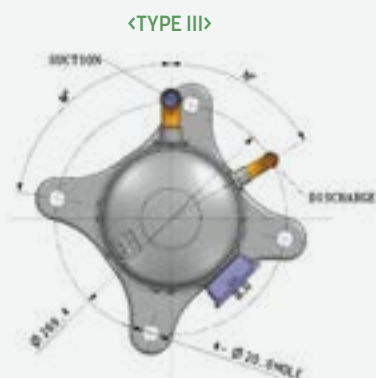
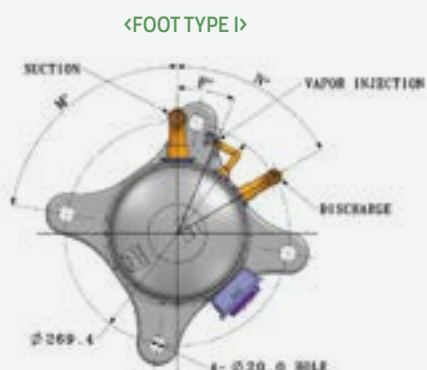


Dimension

Variable Speed

Type	Foot Type	O.D	A	B	C	D	E	F	G
1	I	Ø146.2	379.8	29.1	406.5	327.8	399.8	22.40	16.05
2	I	Ø168.4	382.8	34.8	410.6	328.0	402.8	22.40	16.05
3	I	Ø168.4	419.8	34.8	441.3	358.8	439.8	22.40	16.05
4	I	Ø168.4	462.2	34.8	482.4	391.8	482.4	25.58	16.05
5	I	Ø168.4	462.2	34.8	484.7	391.8	482.4	31.92	16.05
6	IV	Ø146.2	379.8	29.1	406.5	327.8	399.8	22.40	16.05
7	III	Ø168.4	419.8	34.8	441.3	358.8	439.8	22.40	16.05
8	III	Ø168.4	462.2	34.8	484.7	391.8	482.4	31.92	16.05

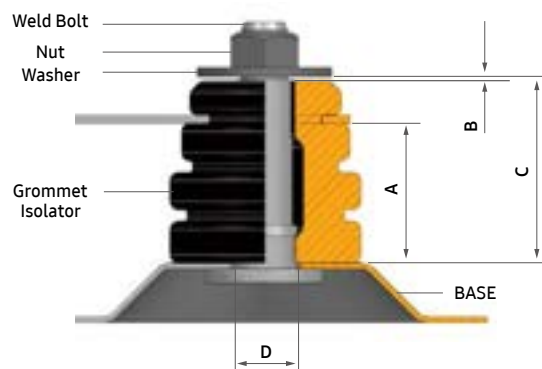
Type	Foot Type	H	J	K	L	M	N	P
1	I	8.15	127.9	123.6	106.8	80°	59.5°	21.4°
2	I	8.15	139.2	134.2	116.8	80°	59.5°	22.8°
3	I	8.15	139.2	134.2	116.8	80°	59.5°	22.8°
4	I	8.15	142.2	134.2	116.8	80°	59.5°	22.8°
5	I	8.15	142.2	134.2	116.8	80°	59.5°	22.8°
6	IV	8.15	127.9	123.6	108.1	80°	59.5°	22.6°
7	III	8.15	139.2	134.2	-	80°	59.5°	-
8	III	8.15	142.2	134.2	-	80°	59.5°	-



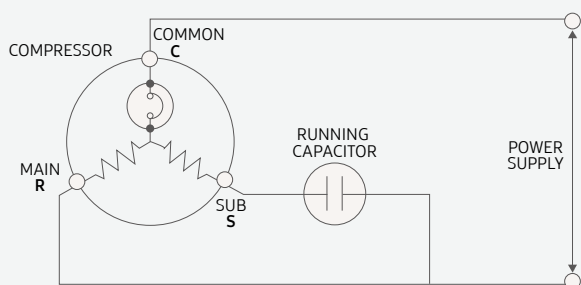
Mounting System

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

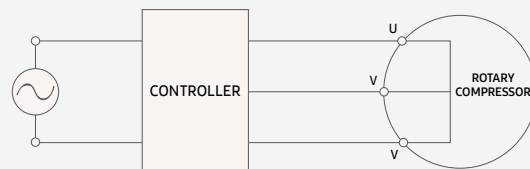
Frame	A	B	C	D
55, 63F	29.0	0.5-2.0	Max38.0	11.5



Wiring Diagram



Fixed speed Type



Inverter Type

Test Conditions

Refrigerant	Scroll Compressor
	R410A / R290 / R32
Condensing Temp.(°C)	54.4
Evaporating Temp.(°C)	7.2
Ambient Temp.(°C)	35
Return Gas Temp.(°C)	18.3
Liquid Temp.(°C)	46.1

Accessory Parts

Item	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	4

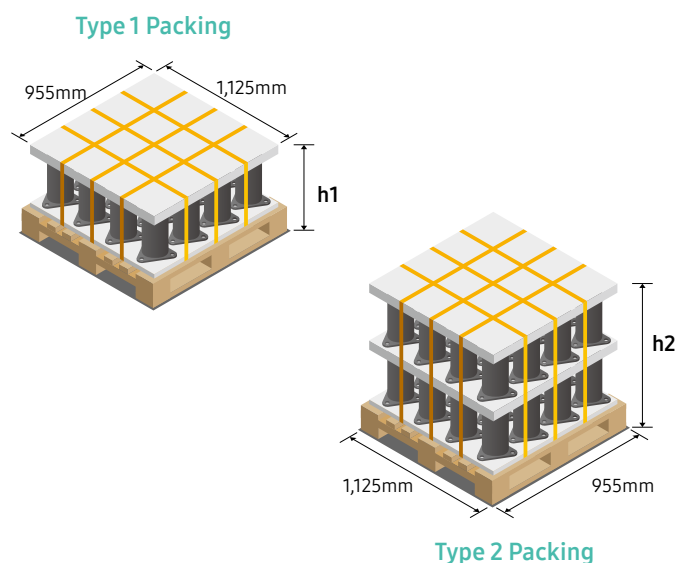


Packing Information

Frame	Compressor Quantity(pcs)		Carton Quantity		Accessory Box (E)	Loading Quantity(T) (pcs)	Packing Height (Max)	
	Type1(A)	Type2(B)	Type1(C)	Type2(D)			Type1(h1)	Type2(h2)
DS2GN5046FVT	12	24	1	23	5	564	628	1,090
DS2GT7046EVT								
DS4GM5052FVT	12	24	5	18	4	492	631	1,094
DS4GT5052EVT								
DSGM5066FVT	12	24	11	12	4	420	672	1,169
DS4GT5066EVT								
DS4GR5070FVT								
DS4GR5080FVT	12	24	9	12	4	396	710	1,253
DS4GM7090FVT								

Ex.) Compressor total quantity of 'DS2GN5046FVT' model (T) = (A) X (C) + (B) X (D) = 564 pcs

Ex.) Carton total quantity of 'DS2GN5046FVT' model = (C) + (D) + (E) = 29 Cartons.



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.



宁波裕月科技有限公司

Ningbo Yuyue Technical & Science Development Co., Ltd.

Add: Room 951 Bilding 13, Zhihuijiayuan, Xiangbao Qu, Ningbo, Zhejiang, China

Kunming Office.: Room 902, Building A, Zhixing Yinhe Plaza, Chenggong District, Kunming, China.

Web: <https://refricompressor.com/>