



FUSHENG

Copeland®

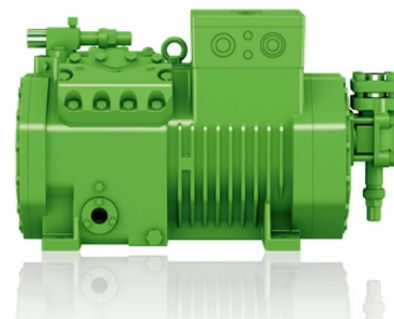


CHAPTER 3

COMPRESSOR

Semi-hermetic Reciprocating

The ECOLINE+ series is a further-developed version of the proven reciprocating compressors. By using the refrigerant CO₂, innovative line-start permanent-magnet motors and optional intelligent electronics, the series achieves the highest energy efficiency values possible.



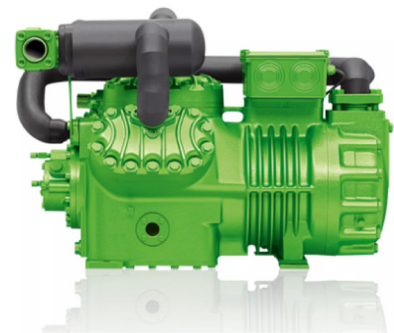
Model	HP	Cooling Capacity			Discharge Inch	Suction Inch	Max Current A	Max Power KW
		Et-10°C Ct45°C R134a	Et-10°C Ct45°C R404a	Et-35°C Ct40°C R404a				
		Watt	Watt	Watt				
2KES-05(Y)	0.5	1010	1,720	435	1/2"	5/8"	4.9/2.8	1.5
2JES-07(Y)	0.7	1290	2,380	675	1/2"	5/8"	6.4/3.7	1.9
2HES-1(Y)	1	1820	3,000	890	1/2"	5/8"	6.7/3.8	2
2HES-2(Y)	2	1810	3,080	910	1/2"	5/8"	7.8/4.5	2.4
2GES-2(Y)	2	2160	3,550	1,110	1/2"	5/8"	8.7/5.0	2.7
2FES-2(Y)	2	2680	4,380	1,360	1/2"	5/8"	9.2/5.3	2.9
2FES-3(Y)	3	2670	4,370	1,350	1/2"	5/8"	10.7/6.1	3.4
2EES-2(Y)	2	3310	5,680	1,770	5/8"	7/8"	10.4/6.0	3.3
2EES-3(Y)	3	3310	5,680	1,770	5/8"	7/8"	13.4/7.5	3.8
2DES-2(Y)	2	3980	6,810	2,180	5/8"	7/8"	13.4/7.5	4
2DES-3(Y)	3	3980	6,810	2,180	5/8"	7/8"	15.0/8.6	4.6
2CES-3(Y)	3	4950	8,440	2,790	5/8"	7/8"	15.8/9.1	5
2CES-4(Y)	4	4950	8,440	2,790	5/8"	7/8"	17.4/10.0	5.6
4FES-3(Y)	3	5080	9,100	3,030	5/8"	7/8"	16.5/9.5	5.3
4FES-5(Y)	5	5070	9,100	3,030	5/8"	7/8"	18.8/10.8	5.8
4EES-4(Y)	4	6780	11,570	3,830	5/8"	1-1/8"	21.2/12.2	6.9
4EES-6(Y)	6	6780	11,410	3,700	5/8"	1-1/8"	23.7/13.6	7.6
4DES-5(Y)	5	7820	13,830	4,580	7/8"	1-1/8"	25.2/14.5	8.1
4DES-7(Y)	7	7820	13,830	4,580	7/8"	1-1/8"	28.7/16.5	8.9
4CES-6(Y)	6	9730	16,720	5,400	7/8"	1-1/8"	30.8/17.7	9.7
4CES-9(Y)	9	9730	16,720	5,400	7/8"	1-1/8"	35.1/20.2	11.3
4VES-6Y	6	10090			7/8"	1-1/8"	10	6
4VES-7(Y)	7	10090	17,210	5,080	7/8"	1-1/8"	16.6	11
4VES-10(Y)	1	9880	17,230	5,110	7/8"	1-1/8"	19.9	12
4TES-8Y	8	12330			1-1/8"	1-3/8"	12.1	7
4TES-9(Y)	9	12330	21,000	6,480	1-1/8"	1-3/8"	19.9	13
4TES-12(Y)	12	12060	20,950	6,450	1-1/8"	1-3/8"	25.1	14
4PES-10Y	10	13850			1-1/8"	1-3/8"	13.6	8
4PES-12(Y)	12	13850	23,850	6,980	1-1/8"	1-3/8"	22.7	14
4PES-15(Y)	15	13560	23,700	6,880	1-1/8"	1-5/8"	28.2	16
4NES-12Y	12	16600			1-1/8"	1-3/8"	15.9	9
4NES-14(Y)	14	16550	28,600	8,820	1-1/8"	1-3/8"	26.6	17
4NES-20(Y)	20	16460	28,600	8,860	1-1/8"	1-5/8"	33.2	19
4JE-13Y	13	19460			1-1/8"	1-5/8"	19.8	11
4JE-15(Y)	15	19320	33,150	10,680	1-1/8"	1-5/8"	30.8	19
4JE-22(Y)	22	18820	32,200	9,920	1-1/8"	1-5/8"	37.2	21
4HE-15Y	15	23000			1-1/8"	1-5/8"	22.5	13
4HE-18(Y)	18	23000	38,800	12,890	1-1/8"	1-5/8"	36.7	22
4HE-25(Y)	25	22500	38,100	12,310	1-1/8"	2-1/8"	44	25
4GE-20Y	20	27000			1-1/8"	2-1/8"	25.9	16

SEMI-HERMETIC 2-STAGE RECIPROCATING

Model	HP	Cooling Capacity			Discharge Inch	Suction Inch	Max Current A	Max Power KW
		Et-10°C Ct45°C R134a	Et-10°C Ct45°C R404a	Et-35°C Ct40°C R404a				
		Watt	Watt	Watt				
4GE-23(Y)	23	25700	45,000	15,420	1-1/8"	2-1/8"	43.9	27
4GE-30(Y)	30	26350	43,800	14,410	1-1/8"	2-1/8"	51.2	28
4FE-25Y	25	31950			1-1/8"	2-1/8"	32.1	19
4FE-28(Y)	28	31950	53,300	18,460	1-1/8"	2-1/8"	52.8	31
4FE-35(Y)	35	31050	52,800	18,030	1-1/8"	2-1/8"	62.1	35
6JE-22Y	22	28600			1-3/8"	2-1/8"	28.5	16
6JE-25(Y)	25	28200	49,350	15,970	1-3/8"	2-1/8"	46.4	27
6JE-33(Y)	33	28400	47,700	14,610	1-3/8"	2-1/8"	53.2	30
6HE-25Y	25	33650			1-3/8"	2-1/8"	32.9	19
6HE-28(Y)	28	33650	57,100	19,020	1-3/8"	2-1/8"	53.2	33
6HE-35(Y)	35	32900	56,000	18,140	1-3/8"	2-1/8"	64.4	36
6GE-30Y	30	40100			1-3/8"	2-1/8"	40	23
6GE-34(Y)	34	38850	66,700	23,600	1-3/8"	2-1/8"	65.5	40
6GE-40(Y)	40	38800	63,800	21,250	1-3/8"	2-1/8"	73.9	42
6FE-40Y	40	47050			1-5/8"	2-1/8"	51.1	27
6FE-44(Y)	44	47050	79,900	27,700	1-5/8"	2-1/8"	83.2	46
6FE-50(Y)	50	45700	78,000	26,100	1-5/8"	2-1/8"	96.2	51
8GE-50(Y)	50	52500			1-5/8"	3"	92	51
8GE-60(Y)	60	52500	90,500		1-5/8"	3"	113	63
8FE-60(Y)	60	62200			2-1/8"	3"	113	63
8FE-70(Y)	70	62200	107,100		2-1/8"	3"	139	78

Semi-hermetic 2-Stage Reciprocating

The 2-stage reciprocating compressors are designed for an extensive application range and boast an optimised drive gear and efficient motor. The highly reliable semi-hermetic series is designed to be robust and suitable for a variety of refrigerants.



Model	HP	Cooling Capacity		Discharge Inch	Suction Inch	Max Current A	Max Power KW
		Et-25°C Ct50°C R404a	Et-50°C Ct50°C R404a				
S4T-5.2(Y)	5	8500	3020	7/8"	1-1/8"	14	6.9
S4N-8.2(Y)	8	11990	4310	7/8"	1-1/8"	17	9.7
S4G-12.2(Y)	12	18070	7100	1-1/8"	1-3/8"	24	13.8
S6J-16.2(Y)	16	25500	10210	1-3/8"	1-5/8"	31	18.1
S6H-20.2(Y)	20	29350	11800	1-3/8"	1-5/8"	37	21.5
S6G-25.2(Y)	25	33450	13490	1-3/8"	1-5/8" 2-1/8"	43	24.9
S6F-30.2(Y)	30	39500	16060	1-3/8"	1-5/8" 2-1/8"	51	31.9
S66J-32.2(Y)	32	51000	20400	1-3/8" x2	1-5/8" x2	31 x2	18.1 x2
S66H-40.2(Y)	40	58700	23600	1-3/8" x2	1-5/8" x2	37 x2	21.5 x2
S66G-50.2(Y)	50	66900	27000	1-3/8" x2	1-5/8" x2 2-1/8" x2	45 x2	24.9 x2
S66F-60.2(Y)	60	79000	32100	1-3/8" x2	1-5/8" x2 2-1/8" x2	53 x2	30.1 x2

Open Drive Reciprocating

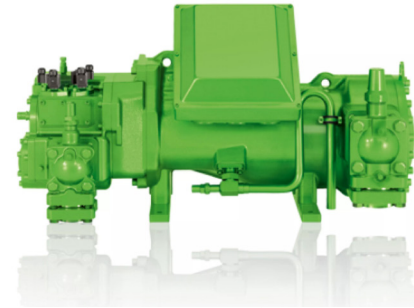
Open drive reciprocating compressors are available in two model series: for (H)CFC/HFC refrigerants and ammonia. Due to the open drive design, standard motors can be attached to the compressor via coupling housing or belt drive. Reliability and easy maintenance have made them popular options for years.



Model	Cooling Capacity		Discharge Inch	Suction Inch	Water Inch
	Et0°C Ct50°C R404a (S230/K) KW	Et-20°C Ct50°C R404a (S230/K) KW			
2T.2(Y)-K	13.88	6.24	7/8"	1-1/8"	G1/2"
2N.2(Y)-K	19.92	8.89	7/8"	1-1/8"	G1/2"
4T.2(Y)-K	27.8	12.47	1-1/8"	1-3/8"	G1/2"
4P.2(Y)-K	33.2	14.92	1-1/8"	1-3/8"	G1/2"
4N.2(Y)-K	39.8	17.78	1-1/8"	1-3/8"	G1/2"
4H.2(Y)-K	50.3	22.4	1-1/8"	1-5/8"	G3/4"
4G.2(Y)-K	59.1	25.5	1-1/8"	1-5/8"	G3/4"
6H.2(Y)-K	75.4	33.6	1-3/8"	2-1/8"	G3/4"
6G.2(Y)-K	88.6	38.2	1-3/8"	2-1/8"	G3/4"
6E.2(Y)-K	106.2	46.4	1-3/8"	2-1/8"	G3/4"

Semi-hermetic Screw

Efficient, robust, durable: thanks to the HSK/N version, HS semi-hermetic screw compressors are suitable for many application ranges and refrigerants. The internal capacity control is multistep and, from HS.85, stepless as an optional feature. All HS compressors are suitable for speed-controlled operation. From HS.95 with IQ MODULE.



Model	Cooling Capacity			Step %	Discharge Inch	Suction Inch
	Et5°C Ct50°C R134a (KW)	Et-10°C Ct45°C R448a R449a (KW)	Et-35°C Ct45°C R448a R449a with ECO (KW)			
HSK5343-30	46.4	40.8	-	100/90/70	1-5/8"	2-1/8"
HSN5343-20	-	-	21.7	100/90/55	1-5/8"	2-1/8"
HSK5353-35	56.7	49.3	-	100/85/60	1-5/8"	2-1/8"
HSN5353-25	-	-	25.6	100/80/50	1-5/8"	2-1/8"
HSK5363-40	67.2	58.7	-	100/80/55	1-5/8"	2-1/8"
HSN5363-30	-	-	29.9	100/75/45	1-5/8"	2-1/8"
HSK6451-40	81.1	-	-	100/85/60 100/75/50	1-5/8"	2-1/8"
HSK6451-50	81.1	71.5	-		1-5/8"	2-1/8"
HSN6451-40	-	-	36	100/80/55 100/75/45	1-5/8"	2-1/8"
HSK6461-40	96.8	-	-	100/80/55 100/75/45	1-5/8"	2-1/8"
HSK6461-60	96.8	86	-		1-5/8"	2-1/8"
HSN6461-50	-	-	42.2	100/75/45	1-5/8"	2-1/8"
HSK7451-50	117.3	-	-	100/75/45 100/80/65	2-1/8"	3-1/8"
HSK7451-70	117.3	104	-		2-1/8"	3-1/8"
HSN7451-60	-	-	50.6	100/70/40 100/75/60	2-1/8"	3-1/8"
HSK7461-60	134.9	-	-	100/60/40 100/75/55	2-1/8"	3-1/8"
HSK7461-80	134.9	119.2	-		2-1/8"	3-1/8"
HSN7461-70	-	-	58.3	100 <=> 50 or 100/75/50	2-1/8"	3-1/8"
HSK7471-70	146.6	-	-		2-1/8"	3-1/8"
HSK7471-90	146.6	130.5	-	100 <=> 25	2-1/8"	3-1/8"
HSN7471-75	-	-	62.5		2-1/8"	3-1/8"
HSK8551-80	179.6	-	-	100 <=> 25	3-1/8"	DN100
HSK8551-110	179.6	161.5	-		3-1/8"	DN100
HSK8561-90	205	-	-		3-1/8"	DN100
HSK8561-125	205	184.6	-		3-1/8"	DN100
HSN8561-110	-	-	86.1		3-1/8"	DN100
HSK8571-110	237	-	-		3-1/8"	DN100
HSK8571-140	237	213	-		3-1/8"	DN100
HSN8571-125	-	-	103.9		3-1/8"	DN100
HSK8581-125	260	-	-		3-1/8"	DN100
HSK8581-160	260	248	-		3-1/8"	DN100
HSK8591-140	300	-	-		3-1/8"	DN100
HSK8591-180	300	277	-		3-1/8"	DN100
HSN8591-160	-	-	129	3-1/8"	DN100	
HSK9593-240	520	-	-	100 <=> 25	DN125	DN150
HSK9593-280	520	445	206			
HSK95103-280	590	-	-			
HSK95103-320	590	510	-			
HSN95103-280	-	-	236			

BSR

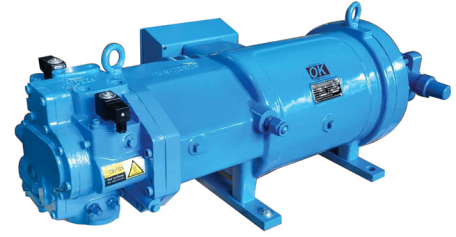
The BSR screw refrigerant compressors are built with high-precision helical rotors and they feature minimal backlash, highly efficient operation, and compact structures. The compressors are small, easy to install, and they minimize low pressure loss and vibration. These units offer precise volume control, and a long service lifespan.



Model	R404a Et-10°C Ct50°C				R404a Et-25°C Ct50°C				Step %	Dis-charge Inch	Suction Inch
	CAP	Power	Current	COP	CAP	Power	Current	COP			
BSR213S	71.71 kW	40.95 kW	69.9 A	1.75	41.16 kW	37.31 kW	63.7 A	1.1	100/75/50/25 or 25-100	1-5/8"	2-5/8"
BSR213	81.35 kW	41.77 kW	71.3 A	1.95	46.69 kW	38.1 kW	65.04 A	1.23	100/75/50/25 or 25-100	1-5/8"	2-5/8"
BSR216	103.65 kW	53.06 kW	90.57 A	1.95	59.49 kW	48.39 kW	82.61 A	1.23	100/75/50/25 or 25-100	1-5/8"	2-5/8"
BSR311S	119.73 kW	59.42 kW	101.44 A	2.01	68.72 kW	54.22 kW	92.55 A	1.27	100/75/50/25 or 25-100	2-5/8"	3-1/8"
BSR311	132.69 kW	66.93 kW	114.26 A	1.98	76.15 kW	61.06 kW	104.23 A	1.25	100/75/50/25 or 25-100	2-5/8"	3-1/8"
BSR314	165.6 kW	83.29 kW	142.19 A	1.99	95.04 kW	75.98 kW	129.71 A	1.25	100/75/50/25 or 25-100	2-5/8"	3-1/8"
BSR316	195.12 kW	97.86 kW	167.05 A	1.99	111.99 kW	89.27 kW	152.39 A	1.25	100/75/50/25 or 25-100	2-5/8"	3-1/8"
BSR321	209.09 kW	100.63 kW	171.79 A	2.08	120 kW	91.83 kW	156.77 A	1.31	100/75/50/25 or 25-100	3-1/8"	4"
BSR323	249.51 kW	119.75 kW	204.43 A	2.08	143.2 kW	109.29 kW	186.57 A	1.31	100/75/50/25 or 25-100	3-1/8"	4"
BSR324	277.88 kW	133 kW	227.05 A	2.09	159.49 kW	121.38 kW	207.21 A	1.31	100/75/50/25 or 25-100	3-1/8"	4"
BSR326	298.15 kW	142.31 kW	242.94 A	2.1	171.12 kW	129.88 kW	221.72 A	1.32	100/75/50/25 or 25-100	3-1/8"	4"
BSR413	359.28 kW	164.9 kW	281.5 A	2.18	206.2 kW	150.54 kW	256.99 A	1.37	100/75/50/25 or 25-100	3-1/8"	4"
BSR415	399.67 kW	181.98 kW	310.67 A	2.2	229.38 kW	166.15 kW	283.64 A	1.38	100/75/50/25 or 25-100	3-1/8"	4"
BSR421	462.66 kW	206.86 kW	353.13 A	2.24	265.54 kW	188.89 kW	322.45 A	1.41	100/75/50/25 or 25-100	4"	5"
BSR423	504.9 kW	225.16 kW	384.38 A	2.24	289.78 kW	205.6 kW	350.99 A	1.41	100/75/50/25 or 25-100	4"	5"
BSR424	567.02 kW	252.21 kW	430.56 A	2.25	325.43 kW	230.31 kW	393.17 A	1.41	100/75/50/25 or 25-100	4"	5"
BSR426	625.71 kW	277.6 kW	473.9 A	2.25	359.11 kW	253.5 kW	432.76 A	1.42	100/75/50/25 or 25-100	4"	5"
BSR427	690.7 kW	305.65 kW	521.79 A	2.26	396.41 kW	279.12 kW	476.5 A	1.42	100/75/50/25 or 25-100	4"	5"
BSR428	740.53 kW	326.87 kW	558 A	2.27	425.01 kW	298.5 kW	509.58 A	1.42	100/75/50/25 or 25-100	4"	5"
BSR516L	807.98 kW	357.74 kW	610.71 A	2.26	463.73 kW	326.69 kW	557.7 A	1.42	100/75/50/25 or 25-100	5"	6"
BSR518L	954.12 kW	424.57 kW	724.8 A	2.25	547.6 kW	387.7 kW	661.86 A	1.41	100/75/50/25 or 25-100	5"	8"
BSR614L	1160.39 kW	515.07 kW	879.28 A	2.25	665.98 kW	470.35 kW	802.94 A	1.42	100/75/50/25 or 25-100	6"	8"
BSR616L	1290.23 kW	571.26 kW	975.21 A	2.26	740.5 kW	521.68 kW	890.57 A	1.42	100/75/50/25 or 25-100	6"	8"
BSR513	669.37 kW	291.73 kW	498.03 A	2.29	384.17 kW	266.44 kW	454.85 A	1.44	100/75/50/25 or 25-100	5"	6"
BSR514	746.02 kW	324.33 kW	553.67 A	2.3	428.16 kW	296.22 kW	505.68 A	1.45	100/75/50/25 or 25-100	5"	6"
BSR516	832.97 kW	361.22 kW	616.65 A	2.31	478.07 kW	329.92 kW	563.22 A	1.45	100/75/50/25 or 25-100	5"	6"
BSR613	983.63 kW	428.7 kW	731.85 A	2.29	564.53 kW	391.54 kW	668.4 A	1.44	100/75/50/25 or 25-100	6"	8"
BSR614	1196.28 kW	520.07 kW	887.83 A	2.3	686.58 kW	475 kW	810.88 A	1.45	100/75/50/25 or 25-100	6"	8"
BSR616	1330.13 kW	576.81 kW	984.69 A	2.31	763.4 kW	526.83 kW	899.37 A	1.45	100/75/50/25 or 25-100	6"	8"

CSRL

The CSRL series refrigerant compressors are designed based on Fusheng's newly developed helical teeth rotors and it is developed to meet the application requirements in the 7.5oC to -45oC medium-to-low temperature fields. Each compressor is tested under simulated working conditions of refrigerant systems and qualified with a CE certification. The CSRL series are 100% designed and manufactured in Taiwan.

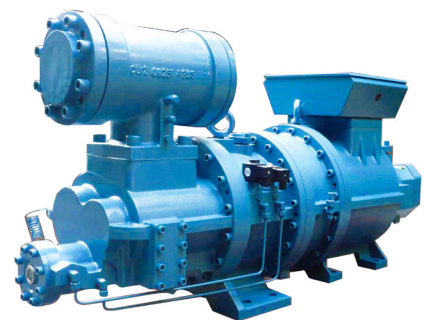


Model	R404a Et-10°C Ct50°C				R404a Et-20°C Ct50°C				Step %	Discharge Inch	Suction Inch
	CAP	Power	Current	COP	CAP	Power	Current	COP			
CSRL100-MP	60.72 kW	35.64 kW	60.84 A	1.7	41.59 kW	35.41 kW	60.45 A	1.17	100/75/50	1-5/8"	2-5/8"
CSRL120-MP	73.76 kW	42.79 kW	73.04 A	1.72	51.19 kW	43.04 kW	73.47 A	1.19	100/75/50	1-5/8"	2-5/8"
CSRL140-MP	83.45 kW	46.8 kW	79.9 A	1.78	57.46 kW	46.74 kW	79.79 A	1.23	100/75/50	1-5/8"	2-5/8"
CSRL170-MP	108.76 kW	57.94 kW	98.92 A	1.88	75.35 kW	58.47 kW	99.82 A	1.29	100/75/50	1-5/8"	2-5/8"
CSRL190-MP	124.99 kW	68.95 kW	117.71 A	1.81	85.9 kW	68.75 kW	117.37 A	1.25	100/75/50	2-5/8"	3-1/8"
CSRL220-MP	142.01 kW	81.47 kW	139.08 A	1.74	97.35 kW	85.39 kW	145.77 A	1.14	100/75/50	2-5/8"	3-1/8"
CSRL250-MP	166.51 kW	89.49 kW	152.77 A	1.86	115.55 kW	90.71 kW	154.86 A	1.27	100/75/50	2-5/8"	3-1/8"

Model	R404a Et-25°C Ct50°C				R404a Et-40°C Ct50°C				Step %	Discharge Inch	Suction Inch
	CAP	Power	Current	COP	CAP	Power	Current	COP			
CSRL100-DP	34.96 kW	32.32 kW	55.18 A	1.08	16.38 kW	31.85 kW	54.37 A	0.51	100/75/50	1-5/8"	2-5/8"
CSRL120-DP	42.18 kW	37.67 kW	64.31 A	1.12	20.22 kW	37.55 kW	64.11 A	0.54	100/75/50	1-5/8"	2-5/8"
CSRL140-DP	47.96 kW	40.93 kW	69.88 A	1.17	24.09 kW	40.22 kW	68.66 A	0.6	100/75/50	1-5/8"	2-5/8"
CSRL170-DP	64.22 kW	51.79 kW	88.41 A	1.24	32.2 kW	52.57 kW	89.74 A	0.61	100/75/50	1-5/8"	2-5/8"
CSRL190-DP	71.73 kW	58.66 kW	100.14 A	1.22	36.76 kW	57.64 kW	98.39 A	0.64	100/75/50	2-5/8"	3-1/8"
CSRL220-DP	82.25 kW	69.59 kW	118.79 A	1.18	41.46 kW	82.93 kW	141.57 A	0.5	100/75/50	2-5/8"	3-1/8"
CSRL250-DP	98.46 kW	76.54 kW	130.67 A	1.29	49.62 kW	80.9 kW	138.1 A	0.61	100/75/50	2-5/8"	3-1/8"

SRT

The SRT two-stage screw compressors are designed for pressure differential refrigeration and application to heat pumps. The compound two-stage screw compressor is equipped with a pair of rotors, one on high pressure and one on low pressure, for a synchronous direct drive of the electrical machinery. It is also built with highly precise curved-tooth gear coupling to achieve the best state of balance and to make the entire design more compact and exquisite.



Model	R404a Et-25°C Ct50°C				R404a Et-50°C Ct50°C				Step %	Discharge Inch	Suction Inch
	CAP	Power	Current	COP	CAP	Power	Current	COP			
SRT218	46.27 kW	36.4 kW	62.14 A	1.27	17.84 kW	20.4 kW	34.82 A	0.87	100/50	1-5/8"	2-5/8"
SRT314	91.15 kW	65.18 kW	111.13 A	1.4	32.67 kW	35.89 kW	59.58 A	0.91	100/50/25 or 25-100	1-5/8"	2-5/8"
SRT321	132.79 kW	95.25 kW	159.72 A	1.39	47.6 kW	52.44 kW	90.27 A	0.91	100/50/25 or 25-100	2-5/8"	4"
SRT324	180.4 kW	129.23 kW	219.27 A	1.4	64.66 kW	71.14 kW	127.3 A	0.91	100/50/25 or 25-100	2-5/8"	4"
SRT413	222.32 kW	159.29 kW	271.93 A	1.4	79.69 kW	87.69 kW	149.7 A	0.91	100/50/25 or 25-100	3-1/8"	4"
SRT415	264.28 kW	189.33 kW	323.21 A	1.4	94.72 kW	104.23 kW	177.93 A	0.91	100/50/25 or 25-100	3-1/8"	4"