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HANBELL SCREW COMPRESSORS

HVAC & Refrigeration Type

With Internal Oil Separator



RC10 ~ RC17

28 Tons ~ 185 Tons

RC Series HVAC & Refrigeration Screw Compressors



+5°F ~ +59°F
-15°C ~ +15°C

R22

R134a

R407C

R404A

R507

Compressor Features:

Multi-Nation Patents of High Efficiency Screw Rotor

The new 5:6 ratio high efficiency rotor profile is patented in Taiwan, US, UK, Japan and China. This new high volume, high efficiency rotor profile was designed specifically for modern refrigerant characteristics. The new higher efficiency is accomplished by using precision CNC machining centers, rotor milling machines, rotor grinding machines and cutter sharpening machines. Strict ISO 9001 process control and the use of precise inspection equipment, such as ZEISS 3D coordinate measuring equipment, ensures efficient, high quality, low noise, low vibration Hanbell RC Series Compressors for worldwide distribution.



High Efficiency Motor

Premium-grade low-loss core steel with the special RC motor cooling slot design plus the inner & outer refrigerant guide design pilots the cool suction refrigerant gas through the motor, providing the highest operating efficiency possible no matter how difficult the operating conditions.

Overall Range of Volume Ratio (Vi)

The compressor Volume Ratio (Vi) is the ratio between the suction and discharge operating conditions and Hanbell can provide specific Vi ratios for special applications. The use of various refrigerants such as R22, R134a, R404A, R407C, plus widely varying operating conditions may require the use of specific Vi ratio compressors. There are several built-in volume ratios offered (Vi=2.2, 2.6, 3.0, 3.5, 4.8) to provide the most efficient compressor for the application.



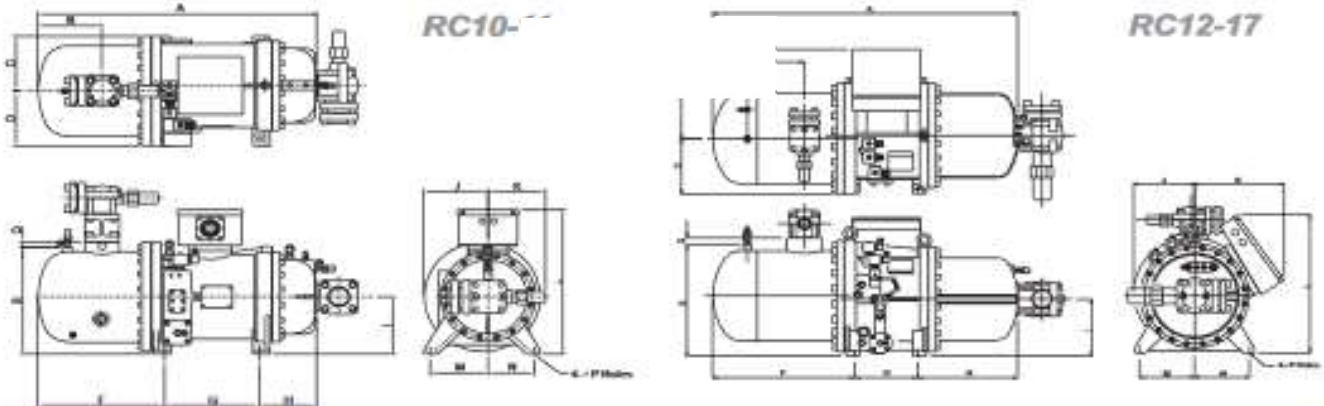
Long Life Bearings & High Reliability

The RC Series Screw Compressor utilizes a combination of 11 B-Type bearings & the α -Type axial balance piston design for excellent bearing life and superior compressor reliability. Adding standard accessories such as economizer, liquid injection for compression chamber cooling, liquid injection for motor cooling and an oil cooler, when needed for specific applications, will increase performance and improve operating efficiency up to 8% plus further extend the compressor bearing life and compressor reliability.

Performance Data ~ R22 ~ 60Hz

RC Series Model	Water/Evaporative Cooled Ratings						Air Cooled Ratings					
	35°F SST & 105°F SCT			45°F SST & 105°F SCT			35°F SST & 120°F SCT			45°F SST & 120°F SCT		
	Capacity Tons	Power kW	EER BTU/hw	Capacity Tons	Power kW	EER BTU/hw	Capacity Tons	Power kW	EER BTU/hw	Capacity Tons	Power kW	EER BTU/hw
RC 10	30.9	28.0	13.2	37.4	29.8	15.0	28.1	32.5	10.4	34.1	34.5	11.9
RC 11	41.7	36.9	13.6	50.5	39.2	15.5	37.9	42.7	10.7	46.1	45.4	12.2
RC 12	52.9	46.5	13.6	64.0	49.4	15.6	48.0	53.9	10.7	58.3	57.2	12.2
RC 13	59.6	51.2	14.0	72.1	55.4	15.9	54.2	54.4	11.9	65.8	63.1	12.5
RC 14	78.9	68.8	13.8	95.6	72.9	15.7	71.7	79.5	10.8	87.1	84.5	12.4
RC 15L	101.2	83.4	14.6	122.6	88.6	16.6	92.0	96.7	11.4	111.7	102.7	13.1
RC 16	126.9	106.9	14.2	153.6	113.6	16.2	115.3	123.9	11.2	140.0	131.6	12.8
RC 17	152.5	124.8	14.7	184.6	132.6	16.7	138.5	144.6	11.5	168.3	153.6	13.1

Physical Specifications:										
Description			RC10	RC11	RC12	RC13	RC14	RC15L	RC16	RC17
Compressor	Displacement @ 60 Hz.	CFH	4167	5827	7310	7875	10912	13561	17304	20023
	Displacement @ 50 Hz.	CFH	3461	4838	6074	6816	9076	11301	14373	16633
	Rated Speed	RPM	60 Hz = 3550 & 50 Hz = 2950							
	Volume Ratios Available	Vi	2.2, 2.4, 2.6, 3.0, 3.5, 4.8							
	Capacity Control	%	Modulating Capacity Control between 25% & 100%							
	Refrigerant		R22, R134a, R407C, R404A, R507A							
	Lubrication		Differential Pressure Feed Lubrication							
	Oil Heater Wattage	Watts	150 Watts							
	Lubricant Type	Mineral	SUN SUNISO - 5GS or CPI 4214-320							
	Lubricant Type	POE	CPI SOLEST - 370							
	Hydrostatic Pressure Test	PSIG	600							
	Discharge Connection Size	inches O.D.	1 5/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 5/8"	2 5/8"
	Suction Connection Size	inches O.D.	2 1/8"	2 1/8"	2 5/8"	2 5/8"	3 1/8"	3 1/8"	4 1/8"	4 1/8"
Compressor Weights	Lbs.	573	595	860	959	1190	1367	1675	1830	
Compressor Weights	kg	260	270	390	435	540	620	760	830	
Motor	Motor & Voltage Phase	Type	3 Phase, 2 Pole, Induction Motor							
	Starting Methods	YD	YD Starting ~ (60Hz. and 50Hz.)							
	Voltage Availability	60 Hz	208/3/60, 230/3/60, 460/3/60, 575/3/60 - Standard							
	Voltage Availability	50 Hz	380/3/50, 400/3/50, 415/3/50							
	Insulation	Type	Class F							
Protection	Type	PTC Protection								



Compressor Outline Dimensions																
Dimensions in Inches ~ Converted from Metric "mm"																
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q
RC10	34.76	7.99	7.72	7.72	15.04	15.83	11.81	7.17	8.07	8.50	7.68	20.35	7.72	6.14	0.71	0.75
RC11	34.76	7.99	7.72	7.72	15.04	15.83	11.81	7.17	8.07	8.50	7.68	20.35	7.72	6.14	0.71	0.75
RC12	41.02	12.20	14.92	9.06	17.68	19.72	7.87	13.43	8.86	9.06	14.29	23.23	8.86	8.86	0.71	0.96
RC13	45.28	13.58	14.92	9.06	17.68	21.10	8.98	15.20	8.86	9.06	14.29	23.23	8.86	8.86	0.71	0.96
RC14	47.91	14.37	15.91	9.84	19.80	22.32	9.88	15.71	10.04	10.39	15.35	24.57	9.45	9.45	0.71	1.14
RC15L	52.72	16.06	15.91	9.84	19.80	24.02	11.22	17.48	10.04	10.39	15.35	24.57	9.45	9.45	0.71	1.14
RC16	52.52	15.43	17.80	10.83	21.97	24.13	11.34	17.05	10.83	12.40	16.22	25.79	10.63	9.06	0.87	1.46
RC17	57.44	16.42	17.80	10.83	21.97	26.02	12.60	18.82	10.83	12.40	16.22	25.79	10.63	9.06	0.87	1.46

RC Series ~ Sound Data									
Hanbell ~ Model	RC10	RC11	RC12	RC13	RC14	RC15L	RC16	RC17	
R22 ~ Nominal Capacity in Tons	33	44	56	63	85	106	139	162	
Sound Data Frequency in Hz.	63	52.4	52.9	56.0	56.2	56.8	57.4	59.6	60.4
	125	54.1	54.6	57.8	58.0	58.6	59.3	61.5	62.3
	250	61.0	61.5	65.2	65.5	66.1	66.9	69.4	70.3
	500	58.2	58.7	62.2	62.4	63.1	63.8	66.2	67.1
	1000	60.4	60.9	64.6	64.8	65.5	66.2	68.7	69.6
	1600	63.8	64.3	68.2	68.4	69.1	69.9	72.5	73.5
	2000	62.7	63.2	66.9	67.2	67.9	68.6	71.2	72.2
	2500	62.7	63.2	66.9	67.2	67.9	68.6	71.2	72.2
	4000	58.8	59.3	62.8	63.1	63.7	64.4	66.8	67.7
8000	45.6	46.0	48.8	48.9	49.4	50.0	51.9	52.6	
Overall dB(A)	73.1	73.7	78.1	78.4	79.2	80.1	83.1	84.2	

Note:

1. The above 1/3 octave sound spectrum data is based on 122°F (50°C) SCT & 32°F (0°C) SST, R22 operation.
2. The sound data is compatible for R22, R134a, R407C, R404A & R507A providing the compressor is operated within operating limits.
3. The sound data is very similar for all refrigerants and working conditions, with +/- 2dBa overall tolerance.
4. The above data is based on ISO-2151 Standards.

“Hanbell Screw Compressors”

Designed for the challenges of **Commercial** and **Industrial** Applications
High efficiency rotor profile **patented** in Taiwan, US, UK, Japan and China
Manufactured and Inspected under ISO9001 **Quality Assurance** Program
Ideal for OEM and Retrofit Applications
Supports R22, R407C, R404A & R507a
Optimized R134a Motors ~ Available

