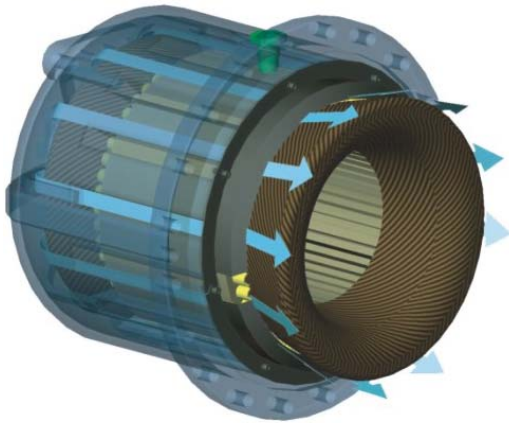


New generation of innovative design  
Screw compressor dedicated to  
R134a, R22, R407C, R404A  
R507, R1234ze, R1234yf

# High-efficiency Model RC2 Series Screw Compressor



# Highlights of RC2 Series Screw Compressor

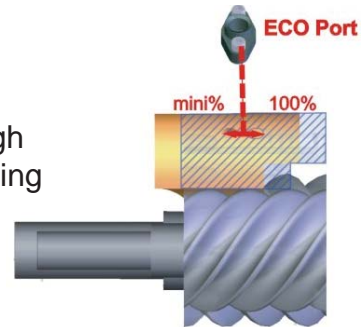


## High-efficiency Motor

- Available for part winding start or star delta start
- Custom-made for specified voltage and frequency of power
- Two options A&B motor for RC2-100~RC2-930. Four options A1, A2 & B1, B2 motors for RC2-1020 ~1530.
- Optimal slot design for passage of refrigerant inside motor casing
- Refrigerant flows through outside of motor winding to provide the most efficient motor cooling
- Sliding-fit stator easier for installation and removal

## Part-load Effective Economizer Operation

- Enhance cooling capacity as well as energy efficiency
- Sustain optimum medium pressure by vapor injection through specially-designed slots in slide valve and compression casing
- Effective under partial load and full load



## High-efficiency Screw Rotor Profile

- 5-to-6 rotor profile patented in Taiwan, US, UK, and China
- Designed according to characteristics of refrigerants
- Hyper volumetric efficiency and minimum clearance

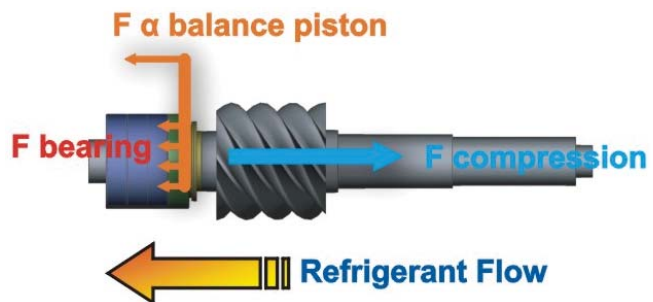


## Dual Capacity Control

- Flanged-on solenoid coil easy for installation
- 3-step / 4-step or continuous (33%~100% / 25%~100%) capacity control system
- Interchangeable by varying control logic without modification of solenoid valves

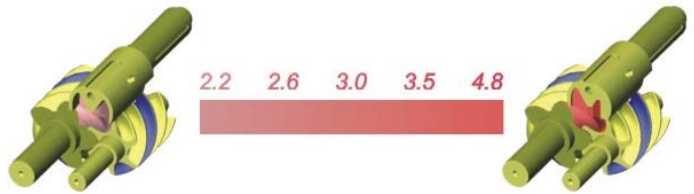
## Durable Bearing Structure

- High-quality bearings (radial and axial resistance)
- Additional bearing for backward rotation
- $\alpha$  balance piston against axial thrust
- Heavy-duty design
- Longer bearing life compared to traditional 9-bearing design



## Wide VI Selection

- Built-in volume ratio (VI)-2.2, 2.6, 3.0, 3.5, 4.8
- Exactly match pressure ratio without over- or under-compression
- Suitable for various applications like refrigeration, water-cooled chiller, air-cooled chiller and heat pump



## High-performance Integral Oil Separator

- Detachable demister for cleaning
- Finer size of mesh
- Low pressure drop and oil carry-over
- Three-staged oil separation (RC2-1020~RC2-1530)



## Complete Protection & Accessories

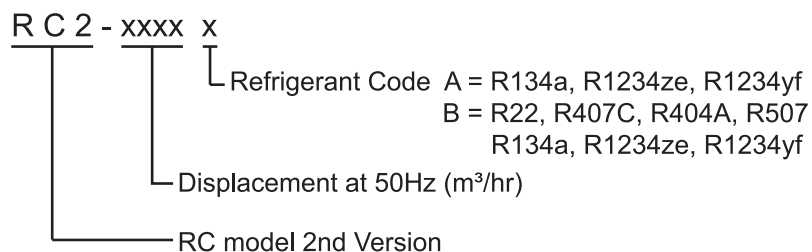
1. Motor temperature sensor (optional)
  - "Built-in" Pt100 or Pt1000 installed in motor winding
  - Accurately registers motor temperature
  - Controller can precisely initiate liquid injection to motor accordingly
2. Discharge Temperature Thermistor & Motor Temperature Thermistor
  - Totally integrated
  - Effectively protect compressor in advance when any abnormal alarm occurs
3. Liquid Injection and Oil Cooler Function (Port & Stop Pin)
  - Both available on every Hanbell screw compressor
4. Oil Level Switch
  - Ensure sufficient lubricant in compressor for better lubrication, capacity control, cooling and sealing
5. Heater (150W & 300W)
  - Increase lubricant's flow-ability when compressor restarts after long-term stop
6. Connection for Pressure Differential Switch
  - Easily detect clog in oil filter
  - Assure effective capacity modulation and lubrication



## Other Advantages

- Low noise level and minimum vibration
- Fewer quantity of parts in screw compressor than those in reciprocating compressor
- Easy for maintenance and overhaul
- Compact geometry, easy for layout

## Compressor Nomenclature



## Approval and Certification

- Production by SOP conformed to major quality standards
- Approved by ISO 9001-2000, UL, CE(PED), Electronic Apparatus for Explosive Atmospheres (EX, China), Lloyd's Register (vessel), Symbol of Excellence in Taiwan

Technical Data RC2-A

MODEL	COMPRESSOR					MOTOR							Lubricant charge	Oil Heater	Hydrostatic Pressure Test	WEIGHT	
	Displacement 60 / 50Hz m³/hr	Rated Speed 60 / 50Hz	VI	Cap. Control (%)		Type	Nominal Hp		Starting	Voltage (V)		Insulation					Protection
				STEP	STEPLESS		60Hz	50Hz		60Hz	50Hz						
RC2-100A	118/98			33, 66, 100	33~100	3 Phase, 2 Pole, Squirrel Cage, Induction Motor	23	19	Y-Δ	208 220 230 380 440 460 480 575	Class F	PTC Protection	7	150/300	42	275	
RC2-140A	165/137			33, 66, 100	33~100		32	26					7			280	
RC2-180A	216/180			33, 66, 100	33~100		42	35					7			300	
RC2-200A	233/193			25, 50, 75, 100	25~100		45	37					8			420	
RC2-230A	277/230			35, 50, 75, 100	35~100		53	44					14			540	
RC2-260A	309/257			25, 50, 75, 100	25~100		59	49					14			545	
RC2-300A	352/293			25, 50, 75, 100	25~100		67	56					16			590	
RC2-310A	371/308			35, 50, 75, 100	35~100		71	59					16			575	
RC2-320A	384/320			25, 50, 75, 100	25~100		72	60					16			595	
RC2-340A	407/339			35, 50, 75, 100	35~100		77	64					16			600	
RC2-370A	440/366			35, 50, 75, 100	35~100		84	70	16	610							
RC2-410A	490/407	2.2		25, 50, 75, 100	25~100		93	78	16	730							
RC2-430A	509/423	2.6		25, 50, 75, 100	25~100		93	78	16	735							
RC2-470A	567/471	3.0	3550/2950	25, 50, 75, 100	25~100		108	90	18	800							
RC2-510A	611/508	3.5		35, 50, 75, 100	35~100		117	98	20	760							
RC2-550A	660/549	4.8		25, 50, 75, 100	25~100		126	105	23	820							
RC2-580A	702/583			35, 50, 75, 100	35~100		131	109	20	805							
RC2-620A	745/619			35, 50, 75, 100	35~100		137	114	23	850							
RC2-710A	858/713			35, 50, 75, 100	35~100		158	131	28	1099							
RC2-790A	952/791			30, 50, 75, 100	30~100		175	146	28	1140							
RC2-830A	993/825			30, 50, 75, 100	30~100	183	152	28	1150								
RC2-930A	1117/929			35, 50, 75, 100	35~100	212	176	28	1180								
RC2-1020A	1223/1017			25, 50, 75, 100	25~100	227	189	40	1500								
RC2-1130A	1350/1122			25, 50, 75, 100	25~100	248	206	40	1520								
RC2-1270A	1521/1268			25, 50, 75, 100	25~100	286	238	53	2100								
RC2-1530A	1847/1539			25, 50, 75, 100	25~100	331	275	53	2200								

Unit : m³/hr 0 500 1000 1500

Nominal HP:

All above Nominal HP are not equal to the maximum compressor HP; please refer to Hanbell selection software for power input in specified working condition.

### Technical Data RC2-B

MODEL	COMPRESSOR					MOTOR							Lubricant charge	Oil Heater	Hydrostatic Pressure Test	WEIGHT	
	Displacement 60 / 50Hz m <sup>3</sup> /hr	Rated Speed 60 / 50Hz	VI	Cap. Control (%)		Type	Nominal Hp		Starting	Voltage (V)		Insulation					Protection
				STEP	STEPLESS		60Hz	50Hz		60Hz	50Hz						
RC2-100B	118/98			33, 66, 100	33~100	3 Phase, 2 Pole, Squirrel Cage, Induction Motor	38	31	Y-Δ	208 220 230 380 440 460 480 575	Class F	PTC Protection	L	W	Kg/cm <sup>2</sup> G	kg	
RC2-140B	165/137			33, 66, 100	33~100		50	41					7	280			
RC2-180B	216/180			33, 66, 100	33~100		66	55					7	285			
RC2-200B	233/193			25, 50, 75, 100	25~100		70	58					7	335			
RC2-230B	277/230			35, 50, 75, 100	35~100		81	67					8	425			
RC2-260B	309/257			25, 50, 75, 100	25~100		90	75					14	555			
RC2-300B	352/293			25, 50, 75, 100	25~100		107	89					14	560			
RC2-310B	371/308			35, 50, 75, 100	35~100		110	91					16	600			
RC2-320B	384/320			25, 50, 75, 100	25~100		114	94					16	580			
RC2-340B	407/339			35, 50, 75, 100	35~100		121	101					16	600			
RC2-370B	440/366	2.2		35, 50, 75, 100	35~100		130	108					16	620			
RC2-410B	490/407	2.6		25, 50, 75, 100	25~100		146	121					16	640			
RC2-470B	567/471	3.0	3550/2950	25, 50, 75, 100	25~100		170	141					18	740			
RC2-510B	611/508	3.5		35, 50, 75, 100	35~100		183	152					18	810			
RC2-550B	660/549	4.8		25, 50, 75, 100	25~100		195	162					20	780			
RC2-580B	702/583			35, 50, 75, 100	35~100		210	175					20	850			
RC2-620B	745/619			35, 50, 75, 100	35~100		220	183					23	880			
RC2-710B	858/713			35, 50, 75, 100	35~100		250	208					28	1099			
RC2-790B	952/791			30, 50, 75, 100	30~100		276	230					28	1180			
RC2-830B	993/825			30, 50, 75, 100	30~100		290	234					28	1215			
RC2-930B	1117/929			35, 50, 75, 100	35~100	334	278	28	1240								
RC2-1020B	1223/1017			25, 50, 75, 100	25~100	357	297	40	1540								
RC2-1130B	1350/1122			25, 50, 75, 100	25~100	393	327	40	1560								
RC2-1270B	1521/1268			25, 50, 75, 100	25~100	471	392	53	2200								
RC2-1530B	1847/1539			25, 50, 75, 100	25~100	534	443	53	2300								

Unit : m<sup>3</sup>/hr 0 500 1000 1500

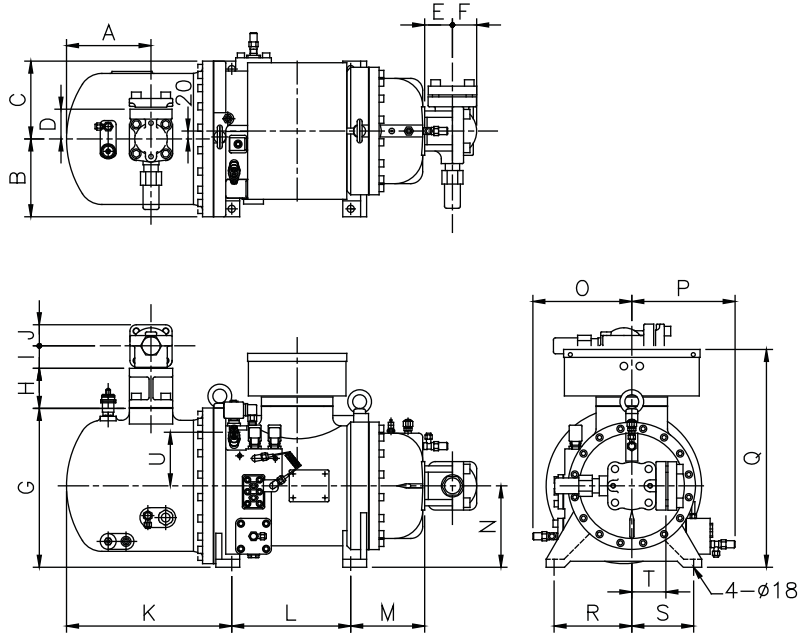
#### Nominal HP:

All above Nominal HP are not equal to the maximum compressor HP; please refer to Hanbell selection software for power input in specified working condition.



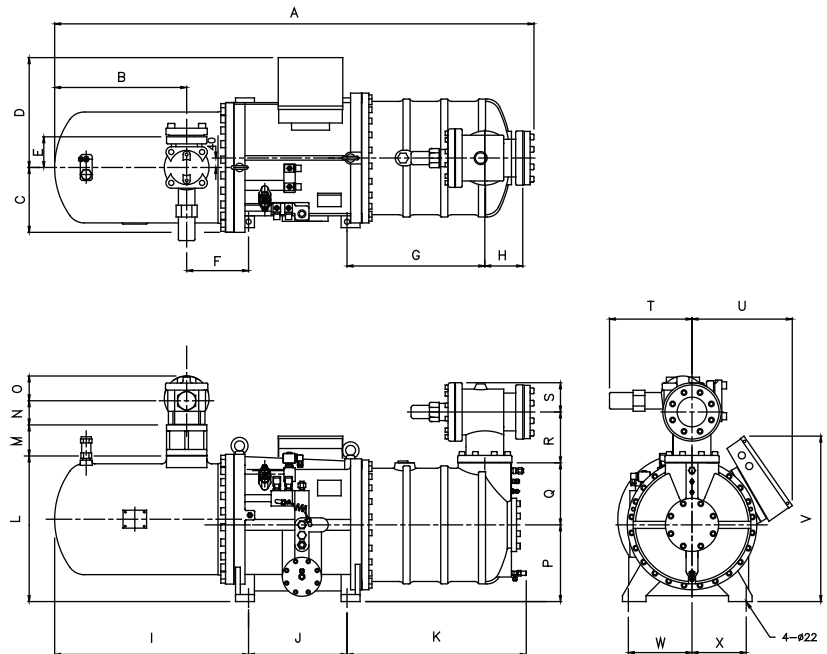
**RC2-100~RC2-180 Outline**

Note: Number in red indicate dimensions in which RC2-B differs from RC2-A (A / B)



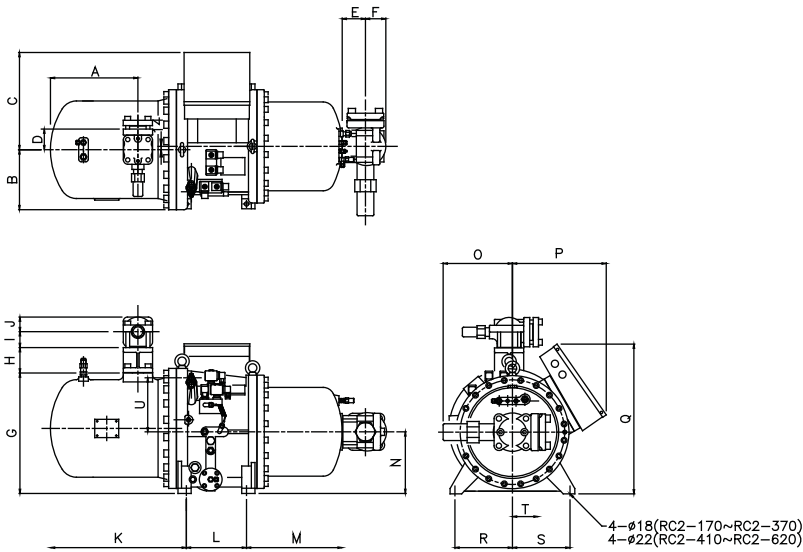
MODEL	Dimensions																				Unit: mm
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
RC2-100	213	196	196	75	70	61	400	101	57	53	416.5	300	186.5	205	249	260	548.5	196	156	86	135
RC2-140	213	196	196	75	70	61	400	101	57	53	416.5	300	186.5	205	249	260	548.5	196	156	86	135
RC2-180	283	196	196	75	81	68.5	410	101	57	53	486.5	386	196	205	239	362	548.5	196	156	95	123

**RC2-710~RC2-930 Outline**



MODEL	Dimensions																							Unit: mm	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
RC2-710	1898.5 /1968.5	560	275	466	130	262.5	514.5 /584.5	161	822.5	353	690 /760	617	131.5	103	105	325	263	215.5	124	350	426	701	270	230	269
RC2-790	1963.5 /2033.5	560	275	466	130	262.5	514.5 /584.5	161	822.5	418	690 /760	617	131.5	103	105	325	263	215.5	124	350	426	701	270	230	230
RC2-830	1963.5 /2033.5	560	275	466	130	262.5	514.5 /584.5	161	822.5	418	690 /760	617	131.5	103	105	325	263	215.5	124	350	426	701	270	230	230
RC2-930	2033.5 /2087.5	560	275	466	130	262.5	584.5 /638.5	161	822.5	418	760 /814	617	131.5	103	105	325	263	215.5	124	350	426	701	270	230	230

### RC2-200~RC2-580 Outline

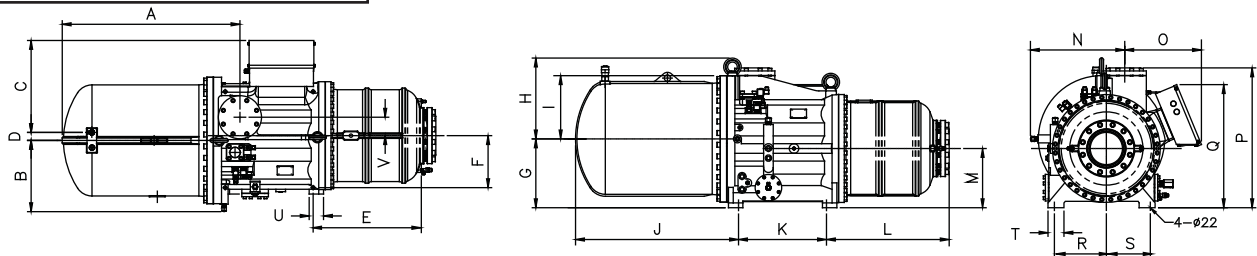


### RC2-550~RC2-620 Outline



MODEL	Dimensions																				Unit: mm
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
RC2-200	345	229	378	75	82	69	447	101	57	53	536	228	341 /386	225	245	362	592	225	225	95	196
RC2-230	365	250	405	86	97	85	502	106	67	61	567	251	399	257	289	391	624	240	240	107	225
RC2-260	365	250	405	86	97	85	502	106	67	61	567	251	399	257	289	391	624	240	240	107	225
RC2-300	408	250	405	86	97	85	502	106	67	61	610	285	399 /444	257	289	391	624	240	240	107	229
RC2-310	408	250	405	86	97	85	502	106	67	61	610	251	444	257	289	391	624	240	240	107	225
RC2-320	408	250	405	86	97	85	502	106	67	61	610	285	399 /444	257	289	391	624	240	240	107	229
RC2-340	408	250	405	95	103	105	502	121	81	69	610	285	447 /492	257	310	391	624	240	240	130	228
RC2-370	408	250	405	95	103	105	502	121	81	69	610	285	447 /492	257	310	391	624	240	240	130	228
RC2-410	392	275	453	95	103	105	553	120	81	69	613	288	433	275	315	413	655	270	230	130	255
RC2-430	392	275	453	95	103	105	553	120	81	69	613	288	433	275	315	413	655	270	230	130	255
RC2-470	440	275	453	95	103	105	553	120	81	69	661	320	433 /478	275	315	413	655	270	230	130	255
RC2-510	465	275	453	107	103	105	560	131.5	96.5	88	696	288	484	275	331	413	655	270	230	130	254
RC2-550	484	275	451.5	107	103	105	572	131.5	96.5	88	720	320	477 /536	280	331	411.5	659	270	230	130	112
RC2-580	465	275	453	107	103	105	560	131.5	96.5	88	696	320	484	275	331	413	655	270	230	130	255
RC2-620	484	275	451.5	107	220	124	572	131.5	96.5	88	720	320	525	280	331	411.5	659	270	230	161	112

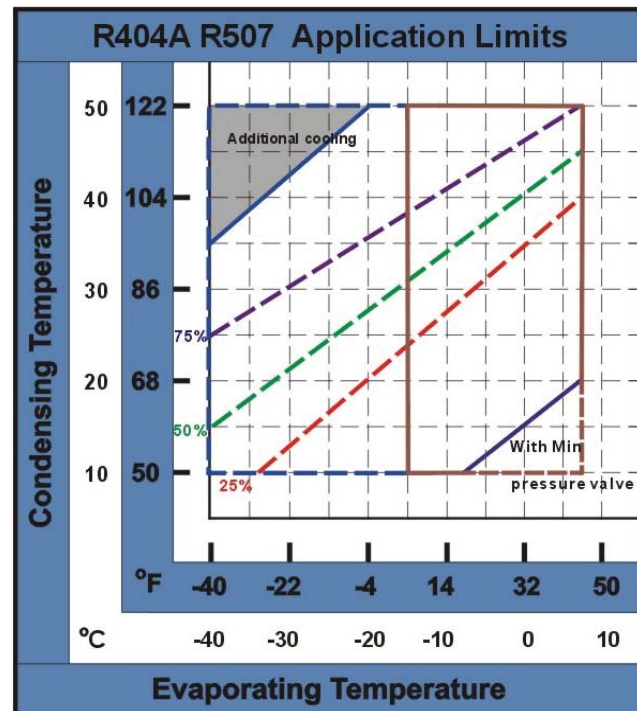
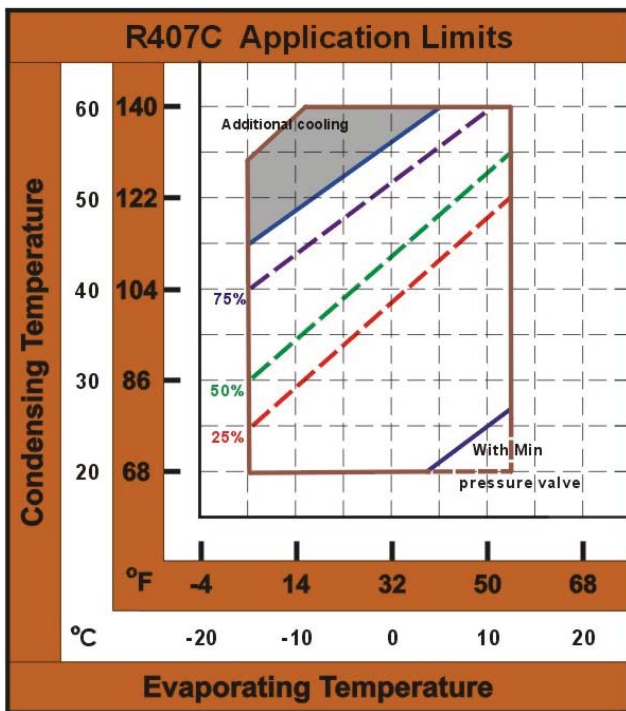
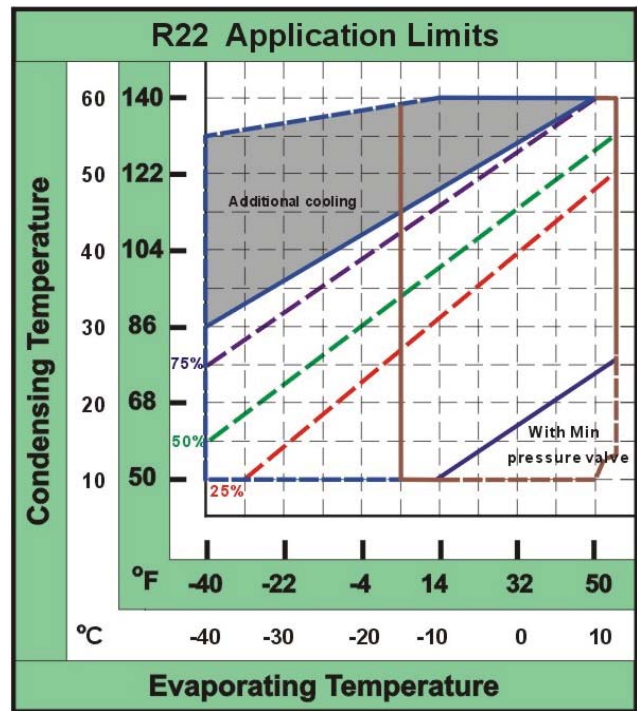
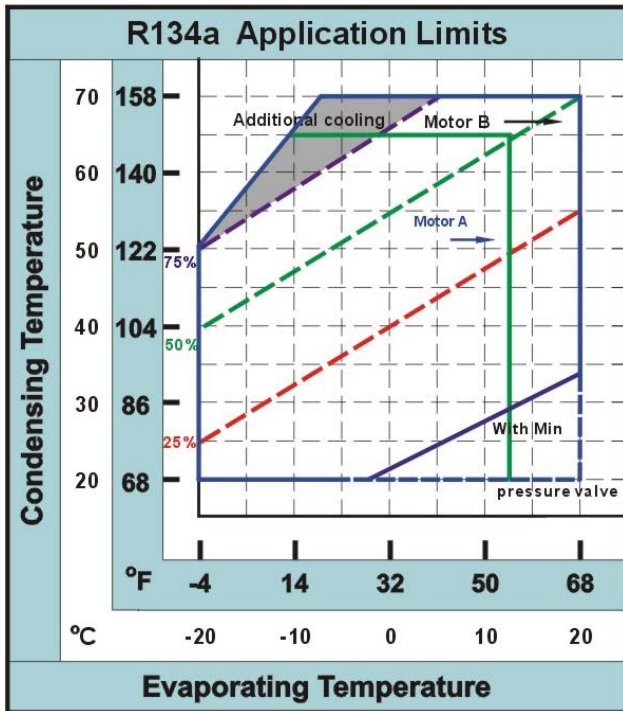
### RC2-1020~RC2-1530 Outline



MODEL	Dimensions											Unit: mm
	A	B	C	D	E	F	G	H	I	J	K	
RC2-1020/1130	1120	350	480	45	656	325	410	365	350	1000	470	
RC2-1270/1530	1112	445	575	50	677	325	430	505	395	1020	550	

MODEL	Dimensions											Unit: mm
	L	M	N	O	P	Q	R	S	T	U	V	
RC2-1020/1130	723	370	451	499	715	728	325	275	100	100	60	
RC2-1270/1530	768	370	590	480	825	770	325	275	100	90	115	

# RC2-100~RC2-930 Application Limits



Please consult Hanbell sales representatives for the application limits of models RC2-1020~RC2-1530



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HBCE-RC2-14-B(1000)