

Next generation of innovative design  
Screw compressor dedicated to  
R134a, R22, R407C

# High COP & IPLV Model RE Series Screw Compressor



## Highlights of RE Series Screw Compressor



### High-efficiency Screw Rotor Profile

- 5-6 rotor profile patented in Taiwan, US, UK, and China
- Less power consumption under the same work load results in better COP
- Hyper volumetric efficiency and minimum clearance
- Upgraded rotor profile increases efficiency

### High-efficiency Motor

- Optimized A&B motor, RE-A for water-cooled in R134a. RE-B for air-cooled & heat-pump in R134a and water-cooled in R22 & R407C
- Available for part winding start or star-delta start
- Custom-made for specified voltage and frequency
- Motor cooling by suction gas out of motor winding
- Sliding-fit stator easier for installation and removal

### Wide Vi Selection

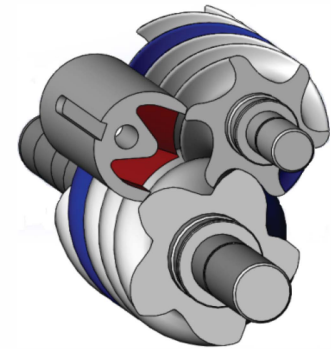
- Built-in volume ratio (Vi)-2.2, 2.6, 3.0, 3.5, 4.4
- Exactly match system pressure ratio without over (or under) compression
- Optimized volume ratio even under part-load results in better IPLV
- Suitable for various applications such as water-cooled chiller, air-cooled chiller and heat pump

### High-performance Integral Oil Separator

- Detachable demister for cleaning
- Finer size of mesh
- Low pressure drop and oil carry-over

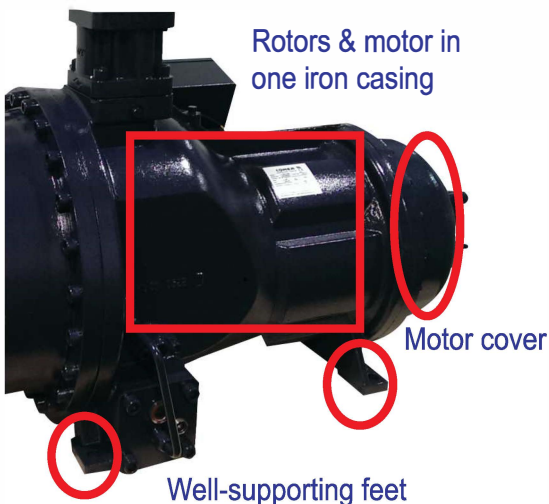
### Durable Bearing Structure

- High-quality bearings (radial and axial resistance)
- Additional bearings for backward rotation
- Heavy-duty design



### Superior Capacity Control Mechanism

- Optimal slide valve layout with strong support in all strokes
- New internal structure for piston rod obtains additional support during capacity modulation
- New design at capacity modulation piston results in high reliability



### Compact and Robust Body

- Shorten compressor length by combining screw rotors and motor in one iron casing
- Ribbed casing provides high stiffness and rigidity
- Minimized vibration by well-supporting feet
- Smoother refrigerant flow path avoids unnecessary pressure drop

## Complete Protection & Accessories

1. Motor temperature sensor
  - “Built-in” Pt1000 (standard) or Pt100 (optional) temperature sensor in motor winding
  - Motor temperature can be read accurately
  - Controller can precisely initiate liquid injection to motor
2. Discharge Temperature Thermistor & Motor Temperature Thermistor
  - Totally integrated
  - Effectively protect compressor in advance when any abnormal alarm occurs
3. Optical Oil Level Switch (optional)
  - Ensure sufficient lubricant in compressor for better lubrication, capacity control, cooling and sealing
4. Heater
  - Increase lubricant flow ability when compressor restarts after long-term stop
  - Avoid refrigerant mixed with the oil under low ambient temperature
5. Safety valve (optional)
  - Intergrated inside compressor body
  - Bypass gas to low pressure side at any abnormal high pressure occurrence

## Compressor Nomenclature

RE - xxx x

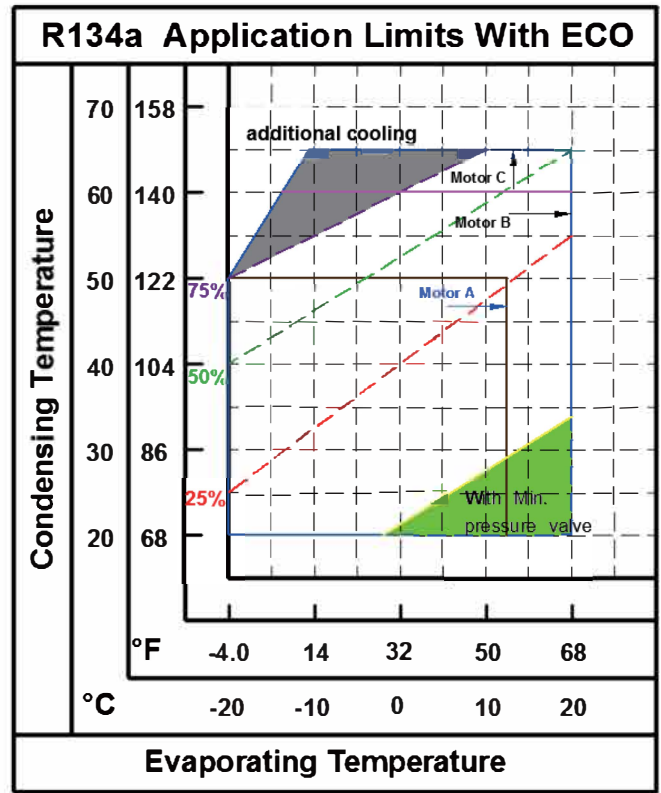
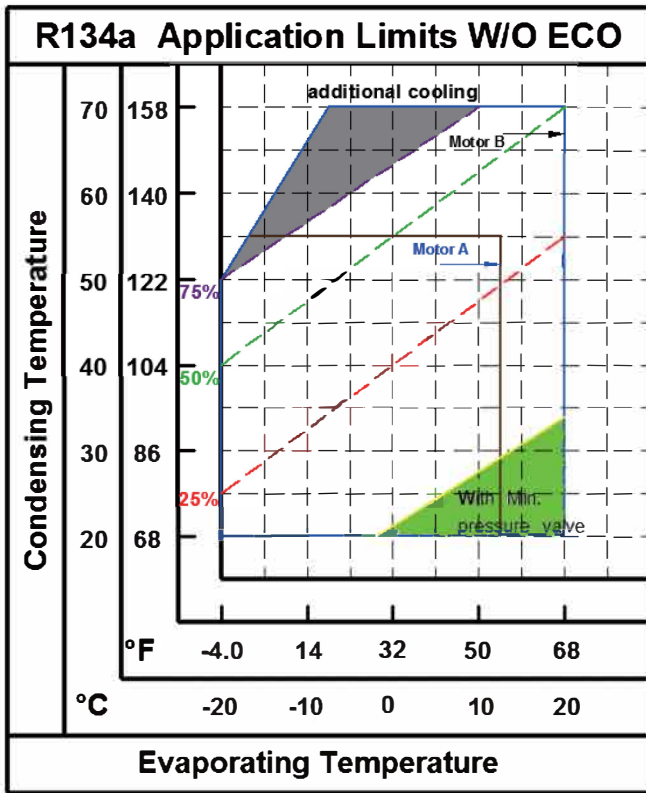
A = R134a (water-cooled application)  
 B = R134a (air-cooled & heat-pump application)  
 R22, R407C (water-cooled application)

Displacement at 50Hz (m<sup>3</sup>/hr)

## Technical Data

MODEL	COMPRESSOR					MOTOR					Lubricant Charge	Weight
	Displacement 60 / 50Hz	Rated Speed	Vi	Cap. Control (%)		Nominal Hp		Starting	Voltage (V)			
	m <sup>3</sup> /hr	60 / 50Hz		Step	Stepless	60Hz (A/B)	50Hz (A/B)		60Hz	50Hz		
RE-230A/B	279/232	3550/2950	2.2	25, 50, 75, 100	25~100	56/76	47/63	Y-Δ	380 440 460 480	380 400 415	12	428
RE-260A/B	320/266					63/82	52/68				14	448
RE-300A/B	369/306					69/97	58/81				14	484
RE-420A/B	501/417					96/132	80/110				16	600
RE-480A/B	579/481					108/146	90/122				17	630
RE-550A/B	666/554					132/166	110/138				19	670
RE-620A/B	752/625					146/197	122/164				23	870
RE-710A/B	857/712					166/214	138/178				26	920
RE-820A/B	987/820					197/233	164/194				28	1050
RE-920A/B	1112/924					214/258	178/215				28	1135

# Application Limits



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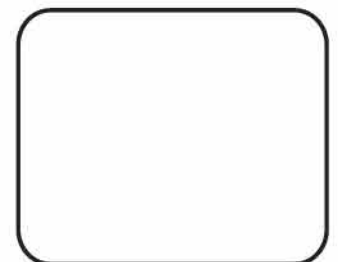
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HBCE-RE-16-A(1000)