

# Screw Compressors

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40 ~ 180 HP

# FEATURES

## 1 DURABILITY AND RELIABILITY

- Few moving
- Low bearing load
- Low wear
- No oil pump

## 2 COMPACT DESIGN

## 3 HIGH EFFICIENCY

- Engineering plastic gate rotors for tight seals

## 4 LOW VIBRATION AND NOISE

- Balanced compression

# ACCESSORIES

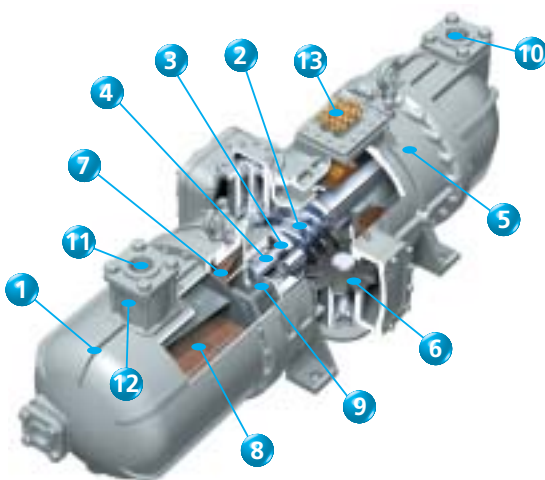
## STANDARD ACCESSORIES

- Discharge check valve
- Suction blind flange
- Discharge blind flange
- Motor protector
- Oil (initial charge)

## OPTIONAL ACCESSORIES

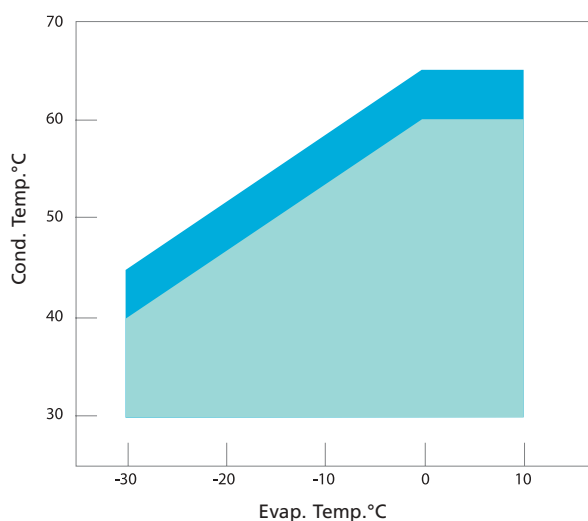
- Solenoid valve for capacity control
- Discharge thermistor
- Crankcase heater
- 4-way valve for heat pump chiller
- Suction flange
- Discharge flange

# STRUCTURE



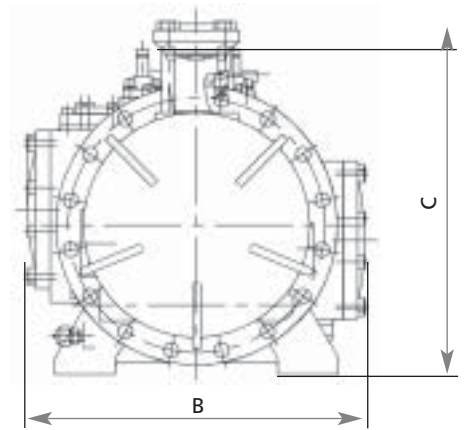
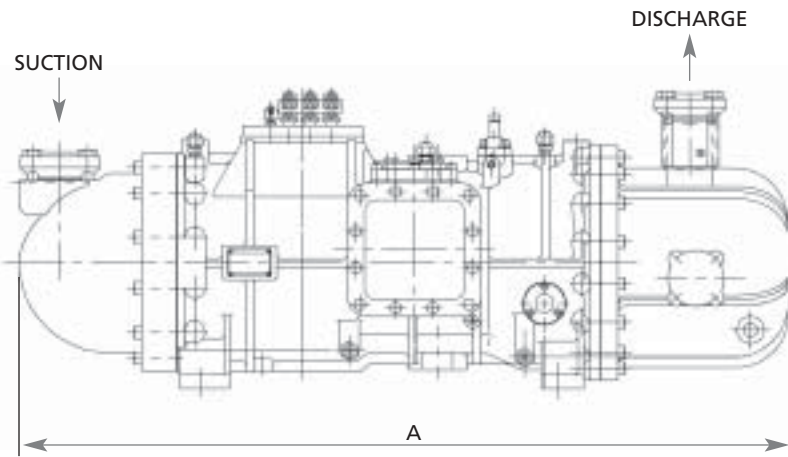
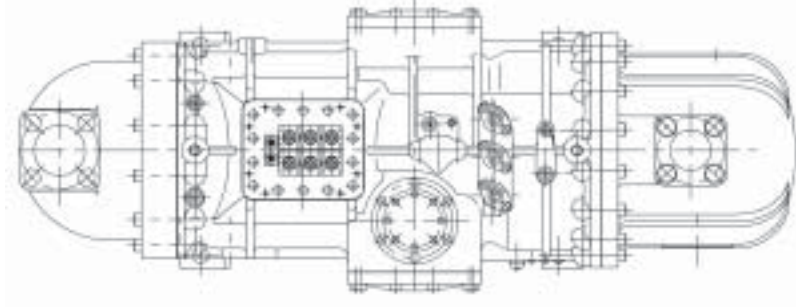
- 1 Casing
- 2 Screw rotor
- 3 Slide valve
- 4 Bearing
- 5 Motor
- 6 Gate rotor
- 7 Demister (oil separator)
- 8 2nd stage oil separator
- 9 Oil return filter
- 10 Refrigerant suction
- 11 Refrigerant discharge
- 12 Non-return valve
- 13 Compressor terminal + CTP

# OPERATION RANGE



- R-407C (mean point temperature)
- R-22 (dew point temperature)  
■ R-134a (dew point temperature)

# DIMENSIONAL DRAWING



PERFORMANCE DATA *					DIMENSIONS					
Model	Capacity (kW)	Power input (kW)	EER	Current (A)	Dimensions (mm)			Connections (mm)		
					A	B	C	Suction	Discharge	
<b>R-407C</b>	ZHC3UTG(U)YE	96.7	371	2.63	64.9	1,139	416	437	50.8	44.5
	ZHC3WLG(U)YE	122.1	44.7	2.73	78.4	1,191	416	437	50.8	44.5
	ZHC5LMG(U)YE	151.0	54.1	2.79	88.8	1,277	480	490	63.5	50.8
	ZHC5WLG(U)YE	187.4	67.9	2.76	112.5	1,360	480	490	63.5	50.8
	ZHC7LSG(U)YE	252.0	88.9	2.83	149.6	1,499	548	566	76.2	63.5
	ZHC7WSG(U)YE	335.7	113.5	2.96	186.9	1,580	548	566	76.2	63.5
	ZHC9LSG(U)YE	360.5	131.6	2.74	215.1	1,752	596	624	114.3	76.2
	ZHC9WSG(U)YE	450.5	163.9	2.75	269.4	1,752	596	624	114.3	76.2
<b>R-22</b>	ZH3UTG(U)YE	97.6	36.0	2.71	63.4	1,139	416	437	50.8	44.5
	ZH3WLG(U)YE	122.4	38.0	3.22	69.3	1,191	416	437	50.8	44.5
	ZH5LMG(U)YE	152.0	52.1	2.92	85.8	1,277	480	490	63.5	50.8
	ZH5WLG(U)YE	189.8	66.7	2.85	110.9	1,360	480	490	63.5	50.8
	ZH7LSG(U)YE	255.6	87.5	2.92	147.5	1,499	548	566	76.2	63.5
	ZH7WSG(U)YE	333.1	110.7	3.01	182.6	1,580	548	566	76.2	63.5
	ZH9LSG(U)YE	362.3	128.5	2.82	210.5	1,752	596	624	114.3	76.2
	ZH9WSG(U)YE	451.8	160.2	2.82	263.8	1,752	596	624	114.3	76.2
<b>R-134a</b>	ZHA5LMG(U)YE	101.2	34.8	2.91	58.2	1,247	480	490	63.5	50.8
	ZHA5WLG(U)YE	124.8	43.7	2.86	72.0	1,313	480	490	63.5	50.8
	ZHA7MSG(U)YE	154.1	54.5	2.83	92.0	1,399	548	566	76.2	63.5
	ZHA7WSG(U)YE	224.8	74.8	3.01	125.9	1,530	548	566	76.2	63.5
	ZHA9LSG(U)YE	240.2	83.9	2.86	142.1	1,683	596	624	114.3	76.2
	ZHA9WSG(U)YE	295.6	103.8	2.85	172.3	1,708	596	624	114.3	76.2

\*Selection criteria: Condensing temperature: 50°C • Evaporating temperature: 0°C • Suction gas superheat: 8K • Liquid subcooling: 5K • Capacity regulation: 100%

## TECHNICAL SPECIFICATIONS - R-407C/R-22

MODEL (1)	R-407C	ZHC3LTG(U)YE	ZHC3WLG(U)YE	ZHC5LMG(U)YE	ZHC5WLG(U)YE	ZHC7LSG(U)YE	ZHC7WSG(U)YE	ZHC9LSG(U)YE	ZHC9WSG(U)YE
	R-22	ZH3LTG(U)YE	ZH3WLG(U)YE	ZH5LMG(U)YE	ZH5WLG(U)YE	ZH7LSG(U)YE	ZH7WSG(U)YE	ZH9LSG(U)YE	ZH9WSG(U)YE
Screw diameter	mm	132		147		175		196	
Gate rotor diameter	mm	135		154		183		203	
Displacement (50Hz)	m <sup>3</sup> /h	123.20	158.72	189.06	239.87	302.96	365.92	420.53	536.75
Step capacity control	%	100,70,40,12 (starting position)						100,70,40,25,12 (starting position)	
Stepless capacity control	%	infinite 15 --> 100%							
Refrigerant oil		FVC68D (R-407C) / SUNISO 4GSD (R-22)							
Oil charged	l	55		75		10		14	
Motor type		2 pole, 3 phase, induction motor							
Motor revolution (50Hz)	rpm	2,880							
Rated output	kW (HP)	30 (40)	37 (50)	45 (60)	60 (80)	75 (100)	90 (120)	110 (150)	135 (180)
Power supply (2)	V	380 ~ 415 / 50Hz							
Net weight (3)	kg	355	365	445	460	570	595	760	790
Airtight test pressure (Design pressure)	kg/cm <sup>2</sup>	2.98 (R-407C) / 2.8 (R-22)							
Hydrostatic test pressure	kg/cm <sup>2</sup>	4.47 (R-407C) / 4.2 (R-22)							

## TECHNICAL SPECIFICATIONS - R-134a

MODEL (1)	R-134a	ZHA5LMG(U)YE	ZHA5WLG(U)YE	ZHA7MSG(U)YE	ZHA7WSG(U)YE	ZHA9LSG(U)YE	ZHA9WSG(U)YE
Screw diameter	mm	147		175		196	
Gate rotor diameter	mm	154	154	175	183	203	203
Displacement (50Hz)	m <sup>3</sup> /h	189.06	239.87	270.42	365.92	420.53	536.75
Step capacity control	%	100,70,40,12 (starting position)				100,70,40,25,12 (starting position)	
Stepless capacity control	%	infinite 15 --> 100%					
Refrigerant oil		FVC68D					
Oil charged	l	75		10		14	
Motor type		2 pole, 3 phase, induction motor					
Motor revolution (50Hz)	rpm	2,880					
Rated output	kW (HP)	30 (40)	37 (50)	45 (60)	60 (80)	75 (100)	90 (120)
Power supply (2)	V	380 ~ 415 / 50Hz					
Net weight (3)	kg	425	440	515	540	690	730
Airtight test pressure (Design pressure)	kg/cm <sup>2</sup>	2.0					
Hydrostatic test pressure	kg/cm <sup>2</sup>	3.0					

- Notes:**
1. U = stepless capacity control
  2. For other power supply, please contact Daikin
  3. Net weight includes charged oil
  4. The standard colour is ivory white (Munsell code 5Y7.5/1)



Single screw compressor with 4-way valve for heat pump application

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### DAIKIN EUROPE N.V.

Zandvoordestraat 300  
B-8400 Oostende, Belgium  
Internet: <http://www.daikineurope.com>  
e-mail: [compressor@daikineurope.com](mailto:compressor@daikineurope.com)