

HITACHI

Scroll compressors



For Europe Region



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Overview

Features

Hitachi Gas injection DC inverter scroll compressor



Gas Injection Technology

Lower discharge temperatures, increasing capacity and expanded operating envelop for enhanced performance.

Non-contact Oil Membrane

Oil film seals involute section of scroll set, reducing compression leakage for improved performance and lower sound.

Highly Reliable Bearings

Cylindrical bearing and aligning ball bearing, better reliability.

Concentrated Motor

Better performance at mid-low speed, lower winding height and less copper loss, more adaptable to APF condition.



Dynamic Oil Balance Structure

Patented technology for unsurpassed oil balance in parallel piped system operation.

Oil Filter

Filter out impurities, ensure supplied oil clean.



Improved Asymmetric Wrap

Additional displacement and superheat reduction for greater compressor efficiency.

Bypass Valves

Improved partial load efficiency with self-adapting variable pressure ratios for upgraded performance - low ambient heating and high ambient cooling.



Intermediate Gas Pressure

Axial force is continually adapting, blending discharge pressure and compressed suction pressure for optimized performance throughout the operating envelop.



High-Side Pressure Design

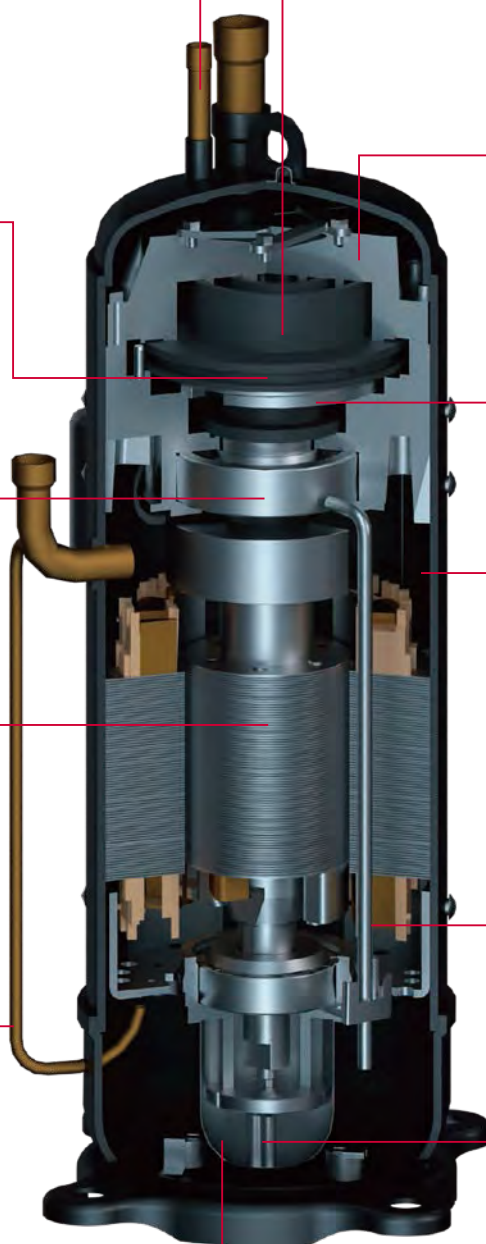
Higher volumetric efficiency and improved oil management.

Internal Oil Circulation Structure

Low oil circulation rate (<2%) keeping oil in the compressor for superior reliability.

Positive Displacement Gear Pump

Ensure necessary oil supplied at variable speed, improve product reliability.



Original Hitachi scroll design innovation

Nomenclature

		E	65	5	D	H	D		-	65	D	2	Y	G	
Application L: For low temperature freezer N: For mid-temperature refrigeration No indication: For air conditioning.															Origin Marking G: Guangzhou
Refrigerant Type E: R410A G: R407C *S: R404A S: Helium No indication: R22															Model Type Standard-Without mark Y: Oil balanced pipe connection with discharge pipe
Specification Code Output power (HP)×10															Piping Connection 2: Brazing connection T: For transportation B: For electric bus
Design Revision Arrange in order of 0,1,2,3,4...															Power Source A: 3φ, 200V, 50Hz 200-220V, 60Hz B: 3φ, 220V, 50/60Hz C: 3φ, 380V, 50Hz 380-400V, 60Hz D: 3φ, 380-415V, 50Hz 440V,60Hz P: 1φ, 208-230V, 60Hz Q: 1φ,220-240V, 50Hz R: 1φ,200V, 50/60Hz
Series Number D: Ø160															Nominal displacement Discharge Volume (cm ³ /rev)
Orientation H: For vertical type L: Horizontal type															
Compressor Type V : AC INV D: DC INV No indication: Fixed speed															
BOM forth digit Customer code (mark when needed).															

Nomenclature

D P 2 A 098 D G A - Y A 1 A

Compressor Code

A: Ø150 Double-sided Type
 C: Ø160 Single-sided Type
 D: Ø160 Double-sided Type
 E: Ø235 Series
 G: Ø190 Double-sided Type
 H: Ø135 Double-sided Type
 S: Low side

Application

P: For air conditioning
 C: Chiller
 D: For data center
 E: For energy storage
 K: For heat pump (including cold region)
 T: For transportation
 B: For electric bus
 L: For low temperature freezer
 M: For refrigerated counter
 S: For ultra low temperature freezer.

Refrigerant

1: R407C, 2: R410A,
 3: R134A, 4: R404A, 5: R22,
 6: R32, 7: R454B, 8: R513A,
 9: R448A, A: He,
 B: Multiple refrigerant
 (see nameplate for specific information),
 C: R1234yf, D: R290,
 E: R515B, F: R455C

Compressor Type

A: Vertical DC INV,
 B: Vertical AC INV,
 C: Vertical Fixed speed,
 D: Horizontal DC INV,
 E: Horizontal AC INV,
 F: Horizontal Fixed speed

Nominal Displacement

The discharge volume of
 compressor per revolution,
 accurate to one digit and represented
 by three digits,
 for example: 98.1 cm³/rev
 is represented by 098

BOM Forth Digit

Customer code

BOM Third Digit

Customer's country, region and
 regulations

BOM Second Digit

Profile characteristics 2

BOM First Digit

Profile characteristics 1

Code	Description	
Y	With DOB-D	With EVI
J	With DOB-D	No EVI
X	With DOB-S	With EVI
H	With DOB-S	No EVI
S	No DOB	With EVI
K	No DOB	No EVI

Remark:

DOB-D: Dynamic Oil Balance Connected to D-Pipe.

DOB-S: Dynamic Oil Balance Connected to System

Cycle.

EVI: Injection (including Vapor, Liquid, Oil).

Design Code

letter A~Z

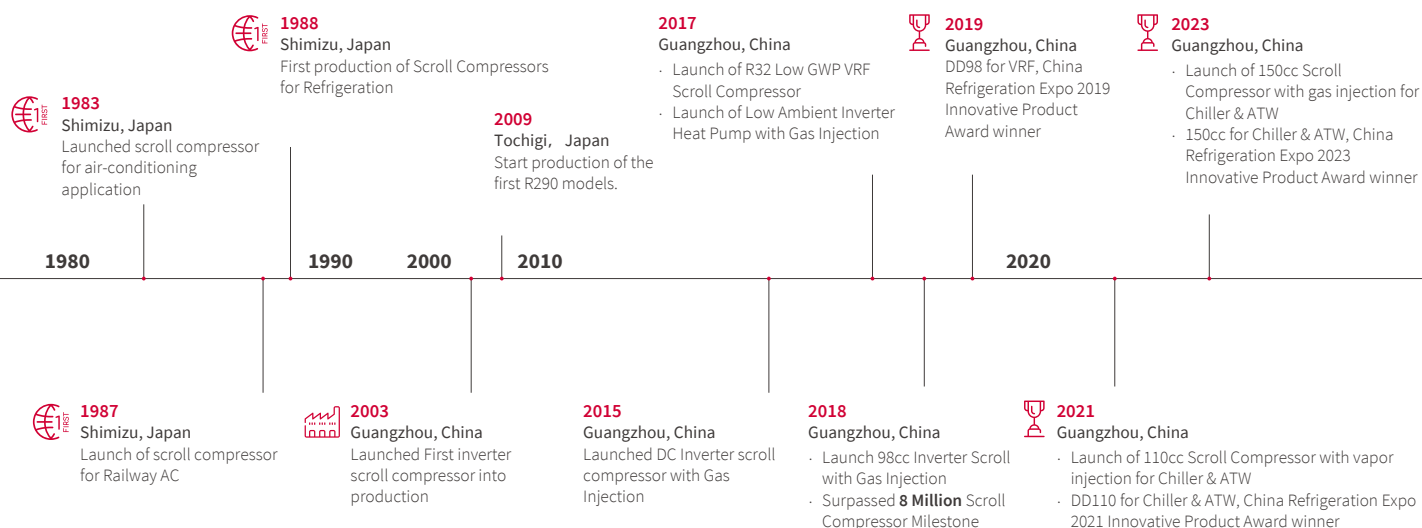
Origin Marking

G: Guangzhou

Power Source

Code	Power source
A	3Ø,200V,50Hz/200-220V,60Hz
B	3Ø,200V,50/60Hz
C	3Ø,380V,50Hz/380-400V,60Hz
D	3Ø380-415V,50Hz/440-460V,60Hz
E	3Ø,380-480V,50/60Hz
F	3Ø,380-575V,60Hz
P	1Ø,208-230V,60Hz
Q	1Ø,220-240V,50Hz
R	1Ø,200V,50Hz/60Hz

History



**For residential
& commercial
application**



**Long and
reliable
experience**

Our high speed compressor enables your unit to achieve high capacity and wide operating range.

Feature

-  High reliability
-  Wider modulation capacity
-  Low sound level & Low vibration
-  Advance scroll-wrap technology



Capacity range

			Capacity(kW)																			
Series	Refrigerant	Motor type	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	60	70	80	90
Premium	R32/R454B	DC INV																				

General data

Premium DC inverter

				R32 /R454B			
Model				APBA055DGA-*A*S	APBA065DGA-*A*S	DPBA083DGA-*A*S	DPBA098DGA-*A*S
Displacement		cm ³ /rev.	55	65	80	98	
Primary power supply	Phase	Φ	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	
Speed range of VS model		rps	10-140	10-140	10-140	10-130	
R32	Capacity range	Min	kW	6.53	7.87	10.10	11.66
		Max	kW	42.47	51.13	65.65	69.96
	Rated performance	Cooling capacity	kW	19.60	23.60	30.30	34.98
		Power input	kW	5.94	7.15	8.78	10.60
		COP	W/W	3.30	3.30	3.45	3.30
R454B	Capacity range	Min	kW	5.60	6.70	8.65	9.97
		Max	kW	36.40	43.55	56.23	59.80
	Rated performance	Cooling capacity	kW	16.80	20.10	25.95	29.90
		Power input	kW	5.17	6.18	7.86	9.20
		COP	W/W	3.25	3.25	3.30	3.25
Frame size		mm	Φ150	Φ150	Φ160	Φ160	
Weight (include Oil)		kg	33.5	35.0	39.0	46.0	
Oil charge		Liter	1.6	1.6	1.9	1.9	
Availability for gas injection type			Yes	Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	Yes	
Certificate			UL/CRAA/CE	UL/CRAA/CE	CE	CE	
Remark			MP	MP	Developing	Developing	
Test condition			A	A	A	A	

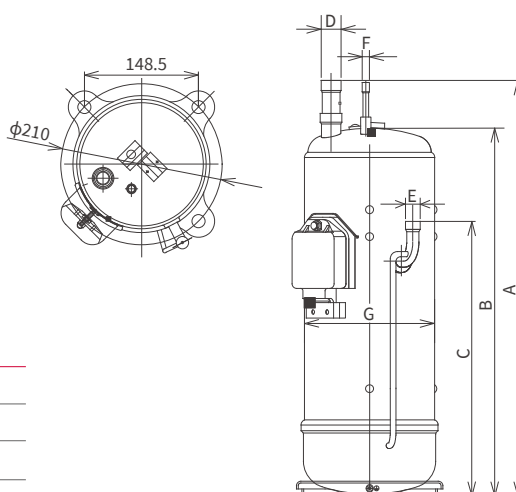
Test condition A

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Rotation speed	60 rps

Dimensions

Premium DC inverter

R32/R454B

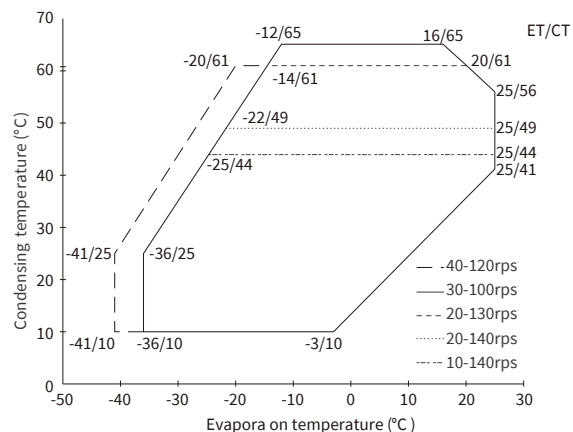


	Type	A	B	C	D	E	F	G
APBA055DGA	DC INV	553	497	362	Φ22.4	Φ16.1	Φ9.7	158
APBA065DGA	DC INV	553	497	362	Φ22.4	Φ16.1	Φ9.7	158
DPBA083DGA	DC INV	566	500	362	Φ25.6	Φ16.1	Φ9.7	168
DPBA098DGA	DC INV	597	530	408	Φ28.9	Φ19.3	Φ12.9	168

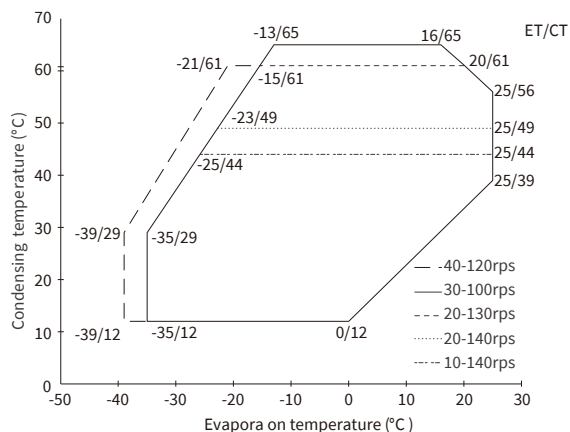
Operating envelop

Premium DC inverter

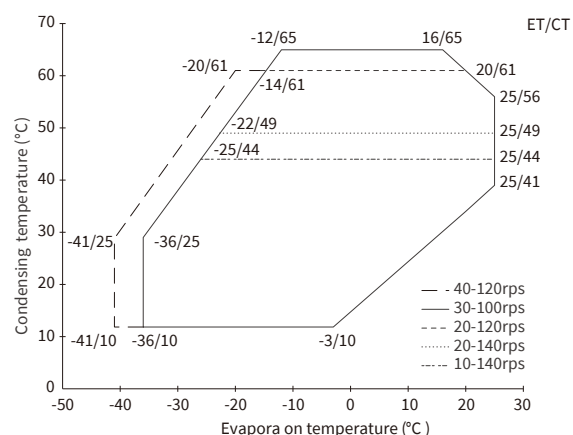
R32 (APBA055DGA, APBA065DGA)



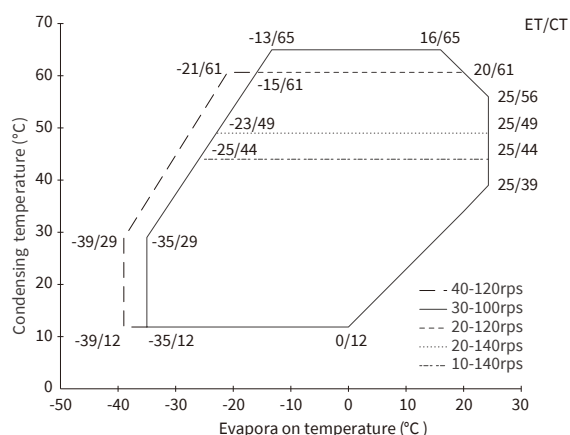
R454B (APBA055DGA, APBA065DGA)



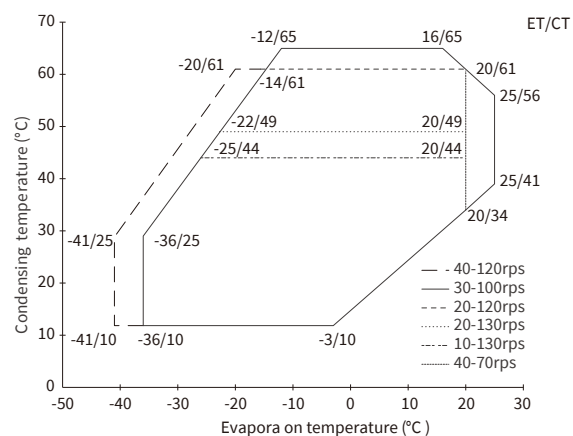
R32 (DPBA083DGA)



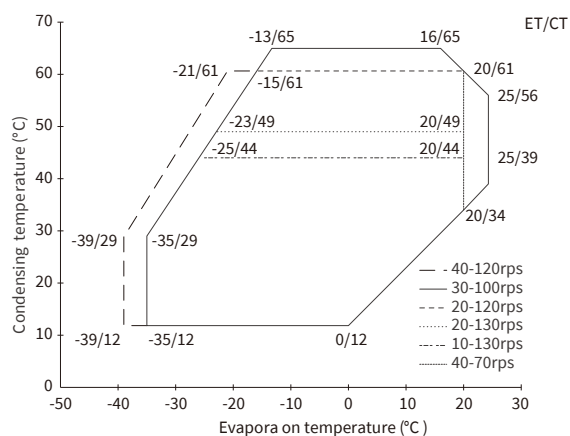
R454B (DPBA083DGA)



R32 (DPBA098DGA)



R454B (DPBA098DGA)



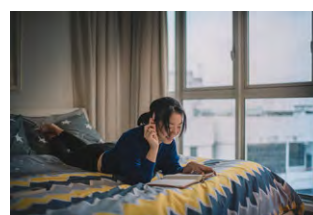
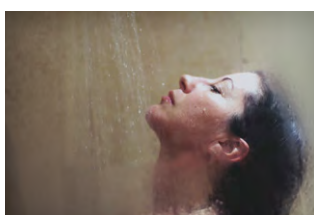
**For
heat pump
application**



**Stable
heat pump
for reliable
winter comfort**

Feature

-  High reliability
-  Wider modulation capacity
-  Low sound level & Low vibration
-  Advance scroll-wrap technology



Capacity range

Application	Series	Refrigerant	Motor type	Capacity(kW)																	
				2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	60	70
Standard heat pump	Premium	R454B	DC INV																		
	Standard	R32	Fixed speed																		
air To water	Premium	R454B	DC INV																		
		R290	Fixed speed																		
		R290	Fixed speed																		
		R454B	DC INV																		
		R32	DC INV																		
		R454C																			

General data

General heat pump

Premium DC inverter

			R454B	R32				
Model			DA80PHDG-D1*7	AA55PHDG-D1*6	DA65PHDG-D1*6	DA80PHDG-D1*6	DD110PHDG-D1*6	
Displacement		cm³/rev.	80	55	65	80	110	
Primary power supply	Phase	φ	3	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440	380~415/440	380~415/440	380~415/440	380~415/440	
Speed range of VS model		rps	10-130	15-140	10-130	10-130	15-130	
R454B	Capacity range	Min	kW	16.23	6.35	5.04	6.24	8.65
		Max	kW	59.49	50.80	60.46	74.82	103.80
	Rated performance	Heating capacity	kW	32.45	25.40	30.23	37.41	51.90
		Power input	kW	7.65	5.90	7.03	8.70	11.90
		COP	W/W	4.25	4.30	4.30	4.30	4.35
Frame size		mm	Φ160	Φ150	Φ160	Φ160	Φ160	
Weight (include Oil)		kg	41.0	34.0	40.0	41.0	48.5	
Oil charge		Liter	1.1	1.6	1.6	1.9	2.3	
Availability for gas injection type			Yes	Yes	Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	Yes	Yes	
Certificate			CE/UL	CE/CQC	CE/CQC	CE/CQC/UKCA	CE/CQC/UKCA	
Remark			MP	MP	MP	MP	MP	
Test condition			A	A	A	A	A	

Test condition A

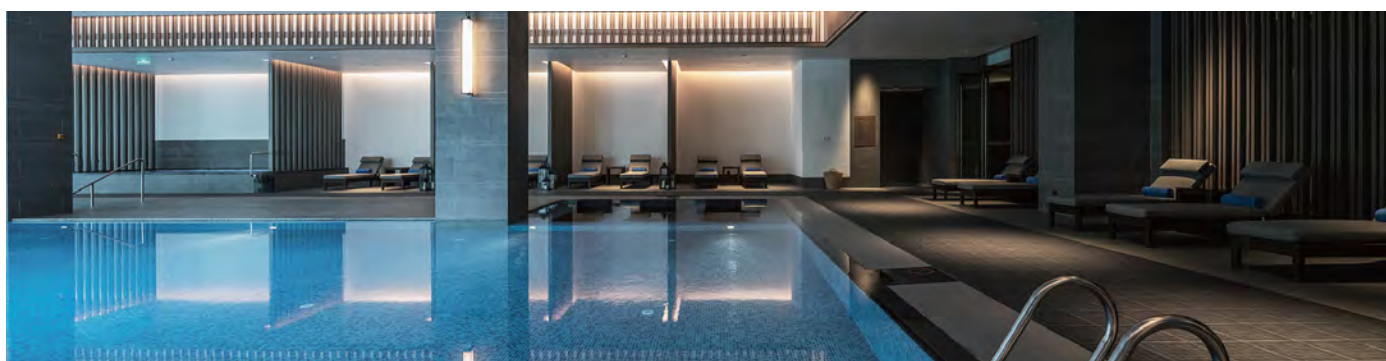
Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Rotation speed	60 rps

Standard fixed speed

				R454B	
Model				DA59PHAG-D1*7	DA80PHAG-D1*7
Displacement			cm ³ /rev.	59	80
Primary power supply	Phase	Φ	3	3	
	Frequency	Hz	50/60	50/60	
	Voltage	V	380~415/440	380~415/440	
Speed range of VS model			rps	-	-
R454B	Capacity range	Min	kW	-	-
		Max	kW	-	-
	Rated performance	Heating capacity	kW	19.25	26.12
		Power input	kW	4.75	6.45
		COP	W/W	4.0	4.0
Frame size			mm	Φ160	Φ160
Weight (include Oil)			kg	44	49
Oil charge			Liter	1.1	1.1
Availability for gas injection type				Yes	Yes
Availability for multiple connection type				Yes	Yes
Certificate				CE/UL	CE
Remark				MP	MP
Test condition				I	I

Test condition I

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Frequency	50 Hz



air to water

Premium DC inverter

			R290						
Model			AKDA055DGA-*A4S	AKDA065DGA-*A1S	DKDA083DGA-*A1S	DKDA110DGB-*A1N	GKDA150DGA-*A1S	GKDA168DGA-*A1S	
Displacement		cm ³ /rev.	55	65	83	110	150	168	
Primary power supply	Phase	φ	3	3	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	
Speed range of VS model		rps	14-130	14-130	14-130	14-130	14-130	14-130	
R290	Capacity range	Min	kW	2.15	2.54	3.25	4.3	6.10	6.59
		Max	kW	19.96	23.55	30.16	40.77	56.70	61.23
	Rated performance	Heating capacity	kW	9.21	10.87	13.92	18.82	26.17	52.6
		Power input	kW	2.88	3.40	4.22	5.54	7.58	15.24
		COP	W/W	3.20	3.20	3.30	3.40	3.45	3.45
	Frame size		mm	Φ150	Φ150	Φ160	Φ160	Φ190	Φ190
Weight (include Oil)		kg	34.0	35.5	37.0	45.0	76.0	78.0	
Oil charge		Liter	1.6	1.6	1.9	2.3	2.3	4	
Availability for gas injection type			Yes	Yes	Yes	Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	Yes	Yes	Yes	
Certificate			-	-	-	CE	CE/CRAA	-	
Remark			Developing	Developing	Developing	MP	MP	Developing	
Test condition			H	H	H	H	H	-	

Fixed speed

			R290		
Model			DKDC110DGA-*A1S	GKDC168DGA-*A1S	
Displacement		cm³/rev.	110	168	
Primary power supply	Phase	Φ	3	3	
	Frequency	Hz	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	
Speed range of VS model		rps	-	-	
R290	Capacity range	Min	kW	-	-
		Max	kW	-	-
	Rated performance	Heating capacity	kW	19.57	29.87
		Power input	kW	4.83	7.37
		COP	W/W	4.05	4.05
Frame size		mm	Φ160	Φ190	
Weight (include Oil)		kg	45.0	76.0	
Oil charge		Liter	2.3	2.8	
Availability for gas injection type			Yes	Yes	
Availability for multiple connection type			Yes	Yes	
Certificate			-	-	
Remark			Developing	Developing	
Test condition			P	P	

Test condition H

Evaporating temp.	-7.0 °C
Condensing temp.	50.0 °C
Super heat.	5.0 K
Sub cooling.	4.0 K
Ambient temp.	35.0 °C
Rotation speed	60 rps

Test condition P

Evaporating temp.	-7.0 °C
Condensing temp.	50.0 °C
Super heat.	5.0 K
Sub cooling.	4.0 K
Ambient temp.	35.0 °C
Frequency	50 Hz

General data

air to water

Premium DC inverter

			R454B			
Model			DA80PHDG-D1*7	DD110KHDG-D1*7	GK7A150DGA-*A*S	
Displacement		cm ³ /rev.	80	110	150	
Primary power supply	Phase	φ	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	380~415/440~460	
Speed range of VS model		rps	10-130	10-140	15-130	
R454B	Capacity range	Min	kW	10.85	18.79	26.17
		Max	kW	57.83	81.41	113.39
	Rated performance	Heating capacity	kW	40.57	56.36	78.50
		Power input	kW	12.23	16.40	23.00
		COP	W/W	3.31	3.44	3.41
Frame size		mm	Φ160	Φ160	Φ190	
Weight (include Oil)		kg	44.0	45.2	75.0	
Oil charge		Liter	1.9	2.3	4.0	
Availability for gas injection type			Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	
Certificate			CRAA/CE/UL	CE/CRAA	-	
Remark			MP	Developing	Developing	
Test condition			B	B	B	

Test condition B (Variable Speed)

Evaporating temp.	0.0 °C
Condensing temp.	55.0 °C
Super heat.	11.1 K
Sub cooling.	8.3 K
Ambient temp.	35.0 °C
Rotation speed	90 rps

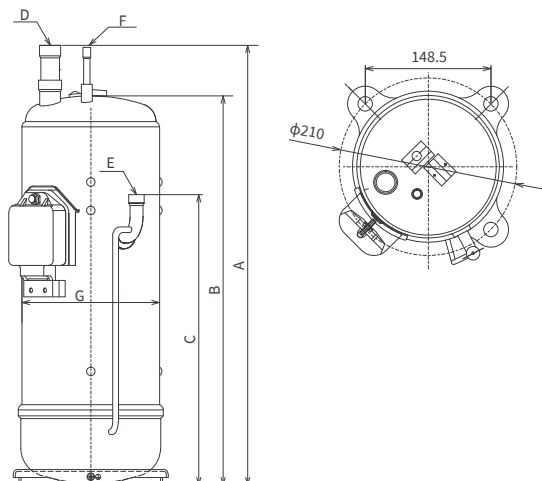
				R454C		
Model				DKFA110DGA-*A4S	GKFA168DGA-*A4S	
Displacement		cm ³ /rev.	110	168		
Primary power supply	Phase	φ	3	3		
	Frequency	Hz	50/60	50/60		
	Voltage	V	380~415/440~460	380~415/440~460		
Speed range of VS model			rps	14-130	14-130	
R454C	Capacity range	Min	kW	5.24	8.06	
		Max	kW	48.64	74.85	
	Rated performance	Heating capacity	kW	22.45	34.55	
		Power input	kW	6.80	10.8	
		COP	W/W	3.30	3.20	
			Frame size	mm	φ160	φ190
Weight (include Oil)			kg	48.0	71.0	
Oil charge			Liter	2.3	4.0	
Availability for gas injection type				Yes	Yes	
Availability for multiple connection type				Yes	Yes	
Certificate				-	-	
Remark				Developing	Developing	
Test condition				B	B	

			R32					
Model			HK6A055DGB-SG*S	DK6A083DGA-*A*S	DK6A110DGA-*F*S	GK6A150DGA-*A*S	GK6A168DGA-*A*S	
Displacement		cm³/rev.	55	83	110	150	168	
Primary power supply	Phase	φ	3	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	380~415/440~460	
Speed range of VS model		rps	20-130	20-120	15-130	10-130	15-120	
R32	Capacity range	Min	kW	11.00	22.05	18.16	30.87	25.38
		Max	kW	42.90	55.13	87.17	123.48	111.65
	Rated performance	Heating capacity	kW	31.70	49.62	65.38	92.61	60.9
		Power input	kW	9.10	14.51	18.52	26.11	15.24
		COP	W/W	3.48	3.42	3.53	3.55	3.45
Frame size		mm	Φ135	Φ160	Φ160	Φ190	Φ190	
Weight (include Oil)		kg	25.3	39.5	48.5	75.0	76.0	
Oil charge		Liter	1.2	2.3	2.3	4.0	4.0	
Availability for gas injection type			Yes	Yes	Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	Yes	Yes	
Certificate			-	UL	-	CQC	-	
Remark			Developing	Developing	Developing	MP	Developing	
Test condition			B	B	B	B	B	

Dimensions

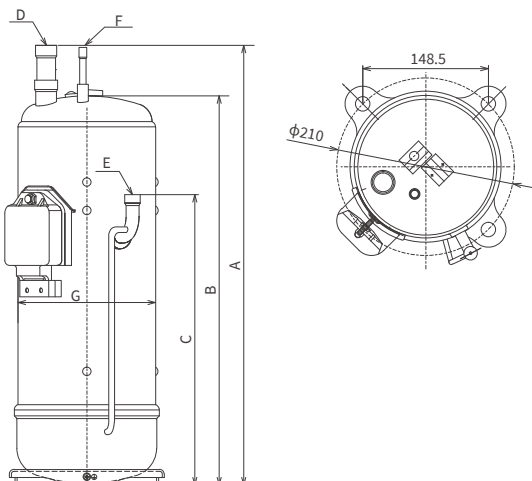
General heat pump

Premium DC inverter R454B



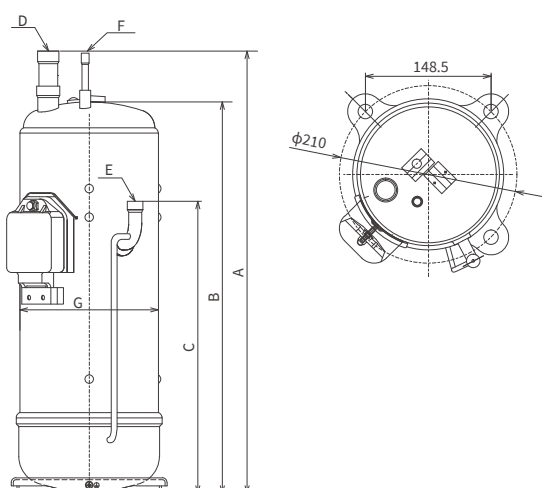
	A	B	C	D	E	F	G
DA80PHDG	555	496	357	Φ22.4	Φ16.1	Φ9.7	Φ170

R32



	A	B	C	D	E	F	G
AA55PHDG	556	492	354	Φ22.4	Φ16.1	Φ9.7	Φ160
DA65PHDG DA80PHDG	555	496	357	Φ22.4	Φ16.1	Φ9.7	Φ170
DD110PHDG	597	530	408	Φ28.9	Φ19.3	Φ12.9	Φ170

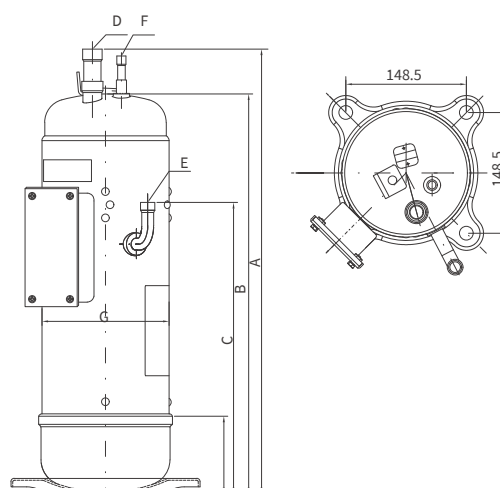
Standard fixed speed R454B



	A	B	C	D	E	F	G
DA59PHAG	555	496	357	Φ22.4	Φ12.9	Φ9.7	Φ170
DA80PHAG	555	496	357	Φ22.4	Φ16.1	Φ9.7	Φ170

air to water

Premium DC inverter R290

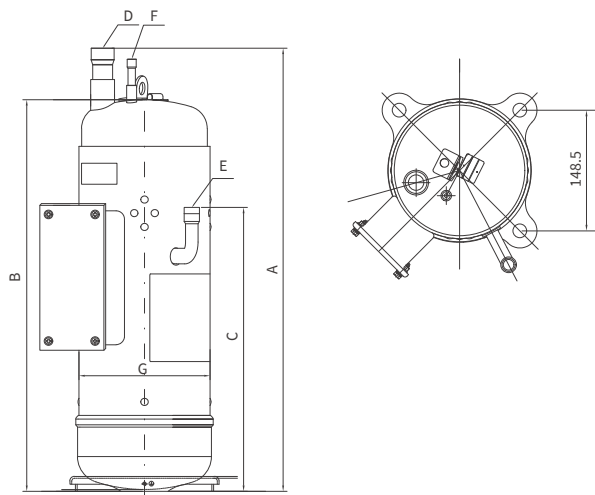


	A	B	C	D	E	F	G
AKDA055DGA-*A1S AKDA065DGA-*A1S	553	497	362	Φ22.4	Φ16.1	Φ9.7	Φ158

Dimensions

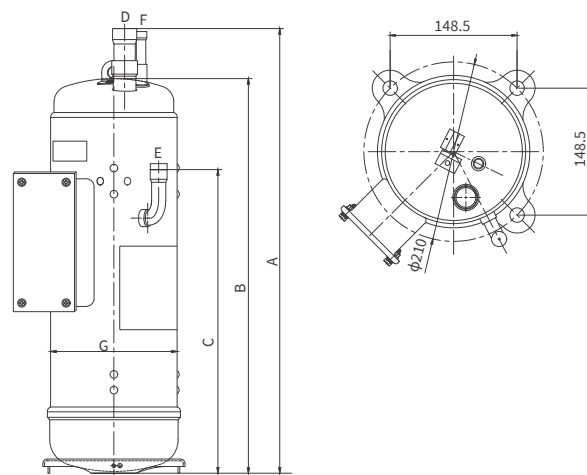
air to water

Premium DC inverter R290



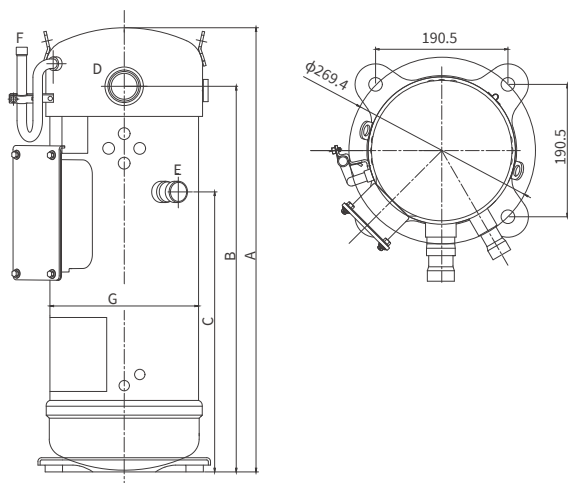
	A	B	C	D	E	F	G
DKDA083DGA-*A1S	566	500	362	φ25.6	φ16.1	φ9.7	φ168

R290



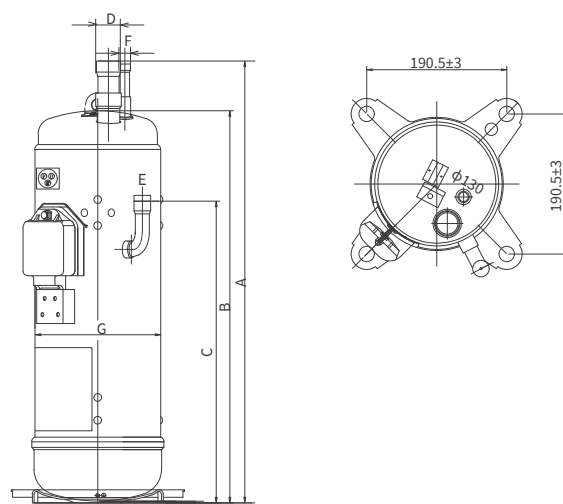
	A	B	C	D	E	F	G
DKDA110DGB-*A1S DKDC110DGA-*A1S	597	530	408	φ28.9	φ19.3	φ12.9	φ168

R290/R454C



	A	B	C	D	E	F	G
GKDA150DGA-*A1S GKDA168DGA-*A1S GKFA168DGA-*A1S	600	522	380	φ35.3	φ25.6	φ12.9	φ202

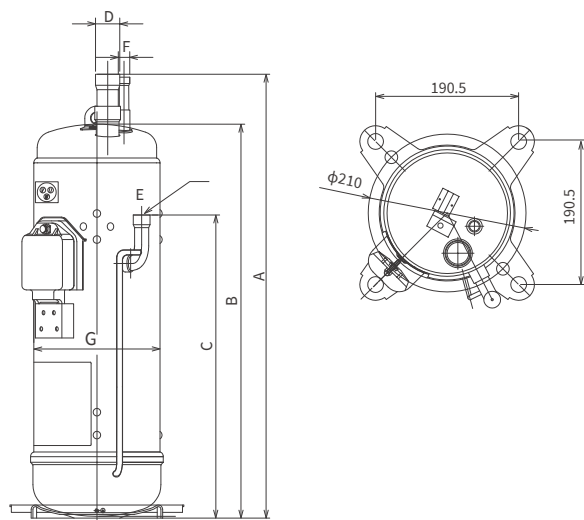
R454C



	A	B	C	D	E	F	G
DKFA110DGA	597	530	408	φ28.9	φ19.3	φ12.8	φ168

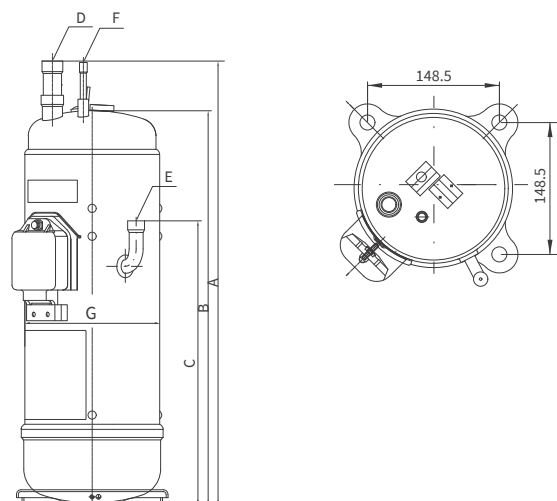
air to water

Premium DC inverter R454B



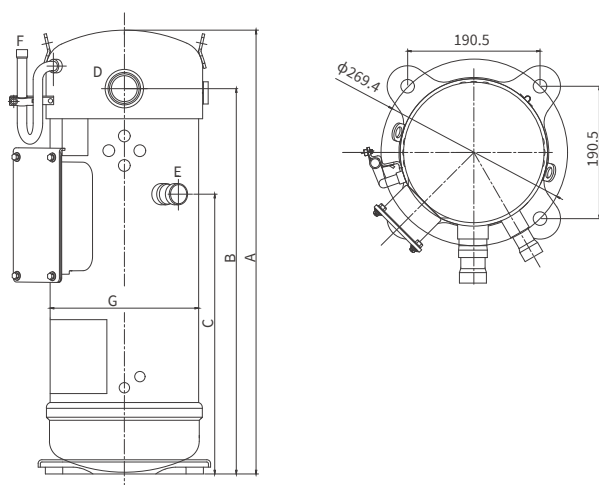
	A	B	C	D	E	F	G
DD110KHDG	597	530	408	Φ28.9	Φ19.3	Φ12.9	Φ170

R454B



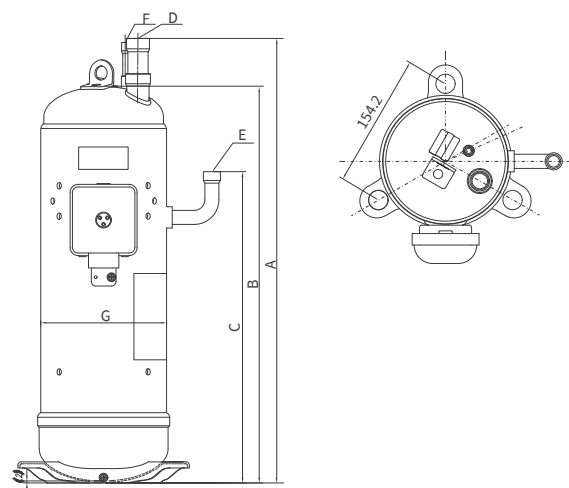
	A	B	C	D	E	F	G
DA80PHDG-D1*7	555	496	357	Φ22.4	Φ16.1	Φ9.7	Φ170

R454B



	A	B	C	D	E	F	G
GK7A150DGA-A*S	600	522	380	Φ35.3	Φ25.6	Φ12.9	Φ202

R32

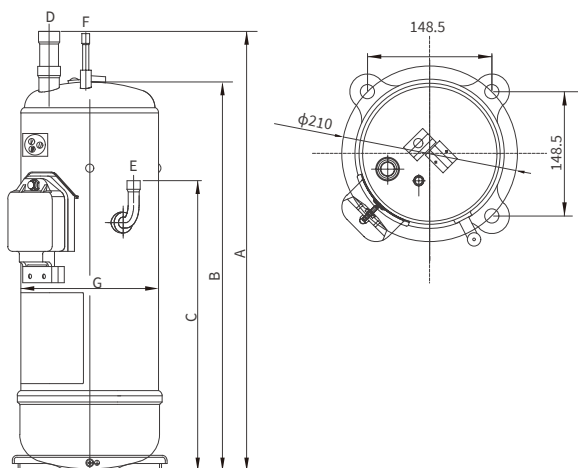


	A	B	C	D	E	F	G
HK6A055DGA-SG*S	505	450	354	Φ22.4	Φ16.1	Φ9.7	Φ143

Dimensions

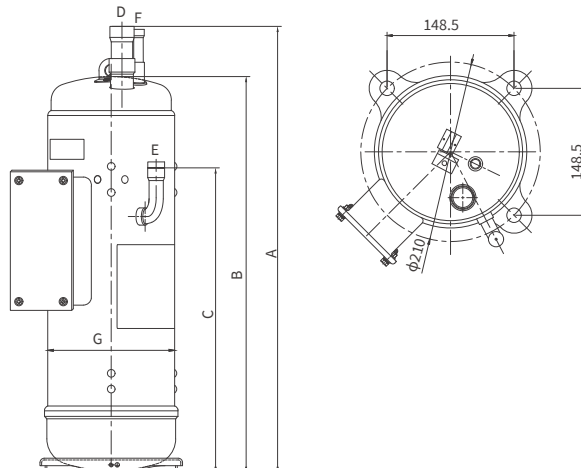
air to water

Premium DC inverter R32



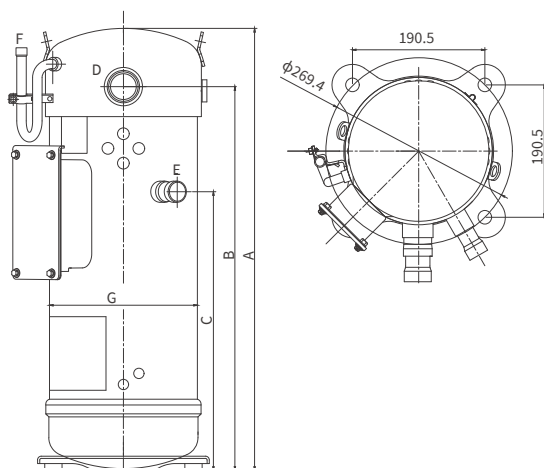
	A	B	C	D	E	F	G
DK6A083DGA	566	500	362	φ25.6	φ16.1	φ9.7	φ168

R32



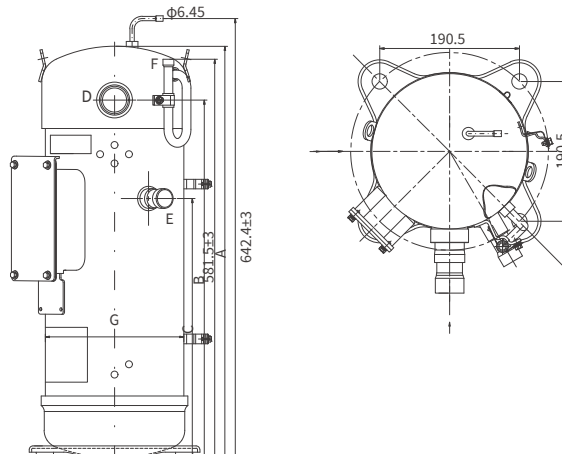
	A	B	C	D	E	F	G
DK6A110DGA	597	531	408	φ28.9	φ19.3	φ12.9	φ170

R32



	A	B	C	D	E	F	G
GK6A150DGA	600	522	380	φ35.3	φ25.6	φ12.9	φ202

R32



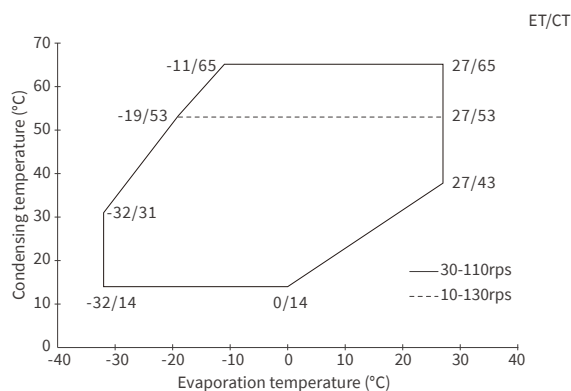
	A	B	C	D	E	F	G
GK6A168DGA-A*S	600	523	380	φ35.3	φ25.6	φ12.9	φ202

Operating envelop

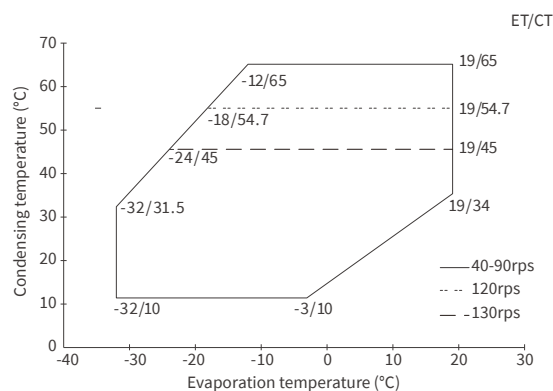
General heat pump

Premium DC inverter

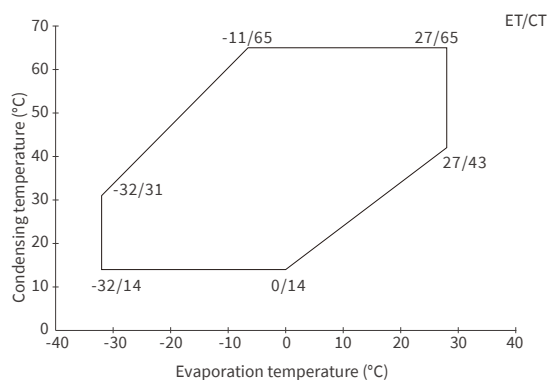
R454B
(DA80PHDG)



R32
(AA55PHDG/DA65PHDG/DA80PHDG/DD110PHDG)



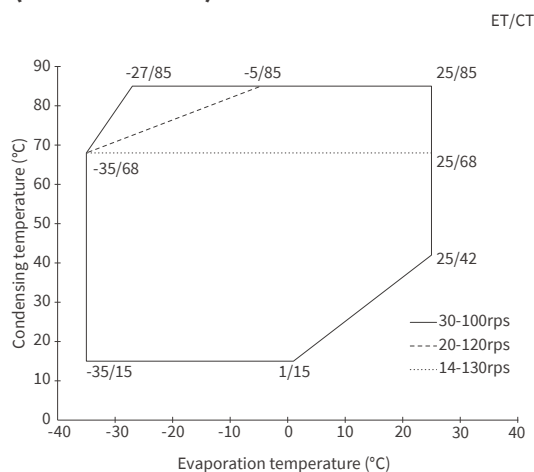
R32
(DA59PHAG/DA80PHAG)



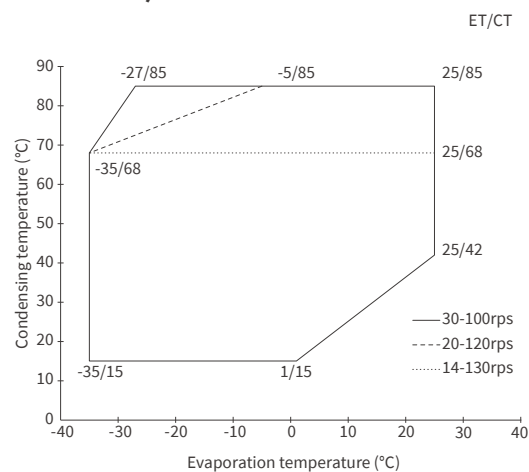
air to water

Premium DC inverter

R290
(DKDA083DGA)



R290
(DKDA110DGA)



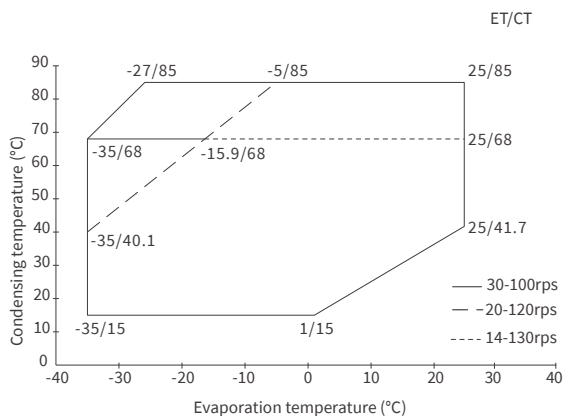
Operating envelop

air to water

Premium DC inverter

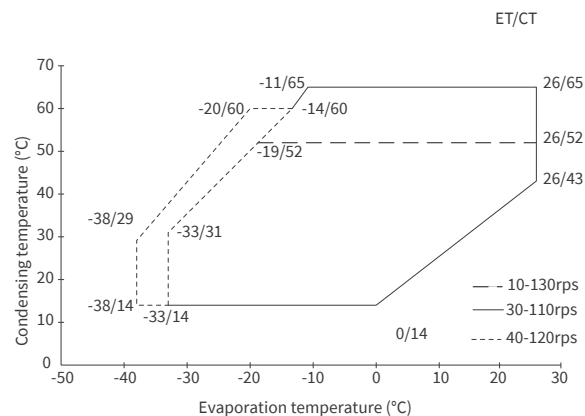
R290

(GKDA150DGA/GKDA168DGA)



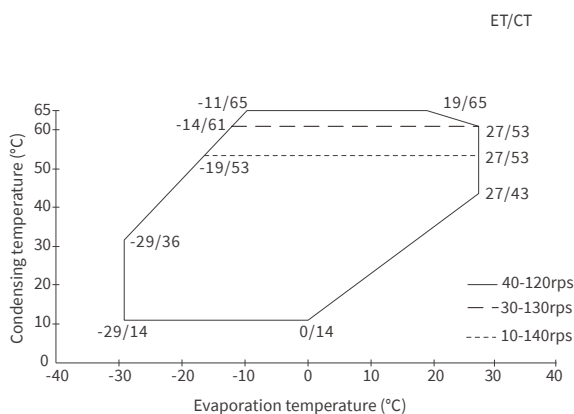
R454B

(DA80PHDG-D1*7)



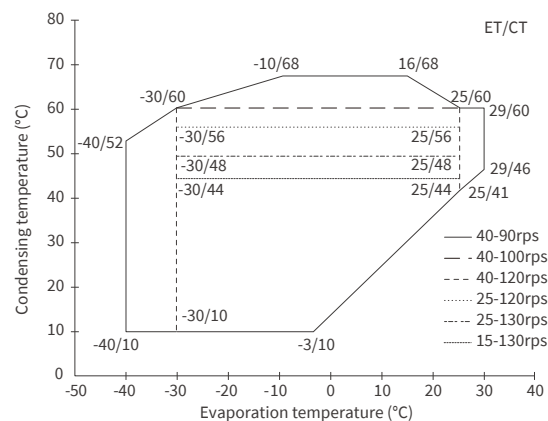
R454B

(DD110KHDG)



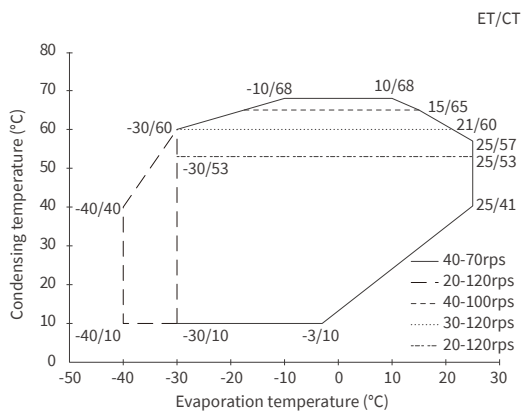
R454B

(GK7A150DGA)



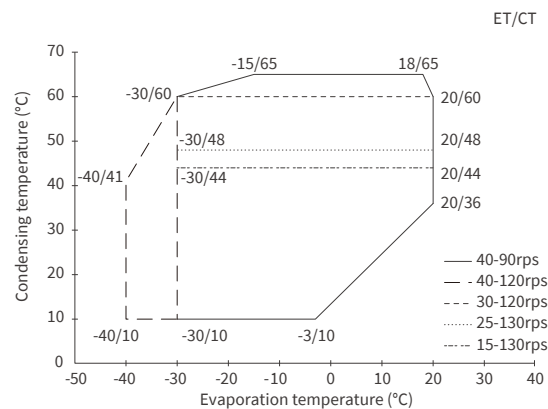
R32

(DK6A083DGA)



R32

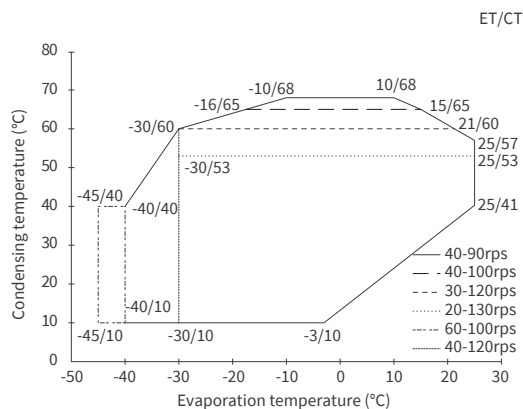
(DK6A110DGA)



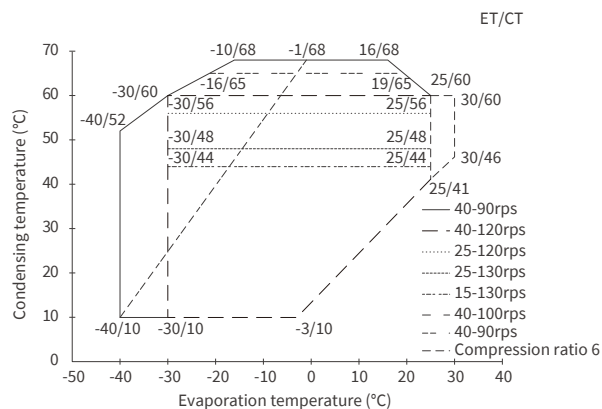
air to water

Premium DC inverter

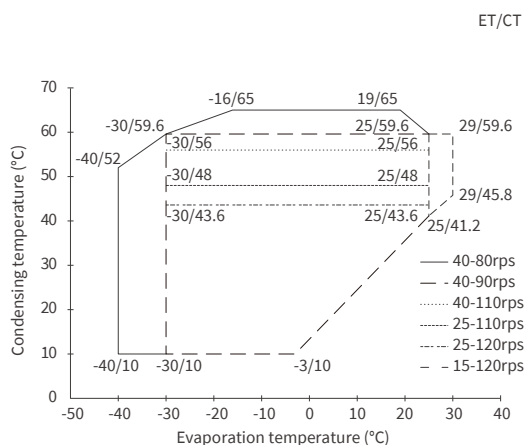
R32
(HK6A055DGB)



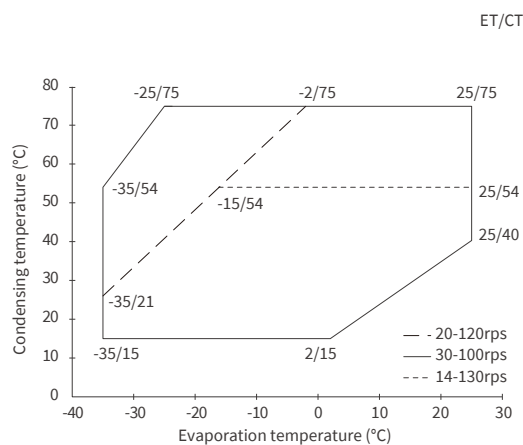
R32
(GK6A150DGA)



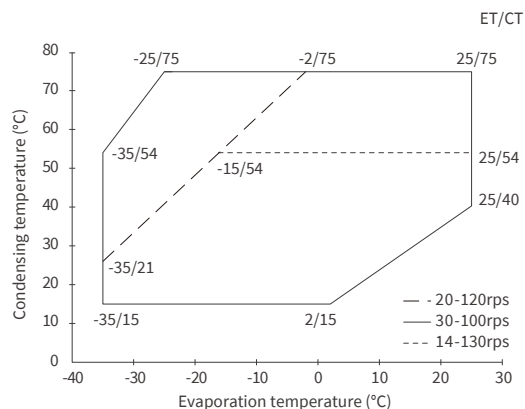
R32
(GK6A168DGA)



R454C
(DKFA110DGA)



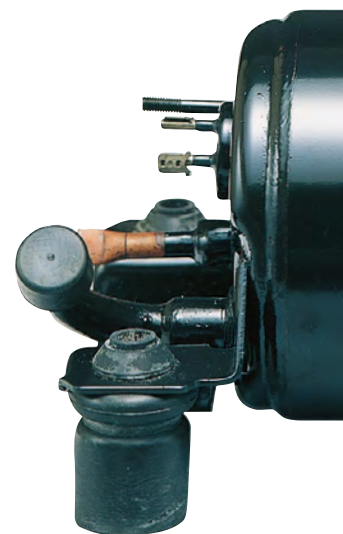
R454C
(GKFA168DGA)



For refrigeration application

Total solution for refrigeration

The Hitachi scroll compressor contribute at various stages in the cold chain, by keeping products at low temperature without interruption between the producing, transporting and consuming processes.



Cold chain management

Cold chains play an important role in delivering fresh foods and pharmaceutical drugs in a safe, fresh state to consumers.



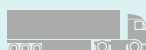
**Refrigerated warehouses
and Producing areas**



Processing plants



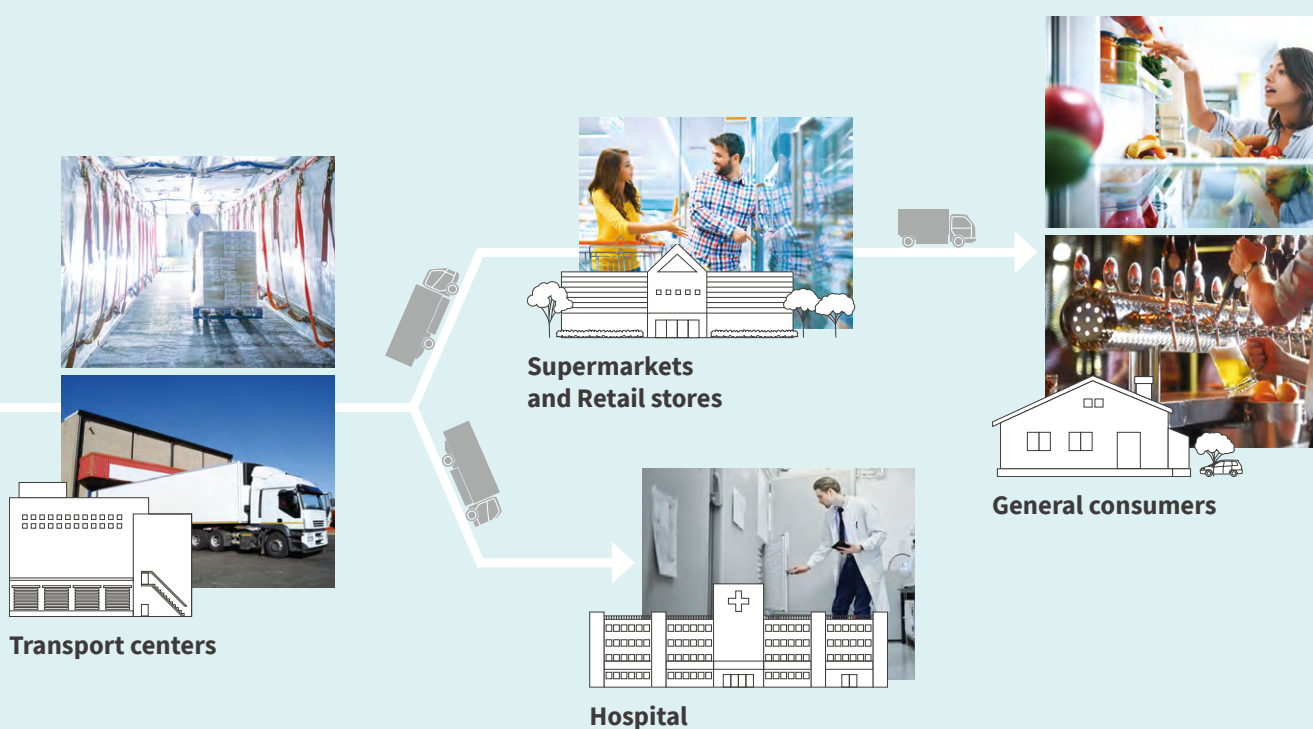
Pharmaceutical companies



Distribution center



-  **Compact size & lightweight**
-  **Low sound level & low vibration**
-  **High reliability**
-  **Advance scroll-wrap technology**



Capacity range

Series	Refrigerant	Motor type	Capacity(kW)																			
			2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	60	70	80	90
Low-temp	R448A/R449A /R404A	DC INV	—————																			
		Fixed Speed			•	•	•															
	R454A/R454C /R455A/R448A /R449A/R404A	DC INV	—————																			
		Fixed Speed			•	•	•		•													



General data

Low-temp DC inverter

Model				R448A/R449A/R404A		
				CA47LHDG-D1KA	CA64LHDG-D1YA	CA90LHDG-D1YA
Displacement		cm³/rev.	47	64	90	
Primary power supply	Phase	φ	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	
	Voltage	V	380~415/440	380~415/440	380~415/440	
Speed range of VS model		rps	30-90	30-90	30-90	
R404A	Capacity range	Min	kW	2.63	3.63	5.25
		Max	kW	7.88	10.88	15.75
	Rated performance	Cooling capacity	kW	5.25	7.25	10.50
		Power input	kW	3.00	3.81	5.25
		COP	W/W	1.75	1.90	2.00
R448A	Capacity range	Min	kW	2.53	3.48	4.95
		Max	kW	7.58	10.43	14.85
	Rated performance	Cooling capacity	kW	5.05	6.95	9.90
		Power input	kW	2.80	3.56	4.82
		COP	W/W	1.80	1.95	2.05
R449A	Capacity range	Min	kW	2.53	3.48	4.95
		Max	kW	7.58	10.43	14.85
	Rated performance	Cooling capacity	kW	5.05	6.95	9.90
		Power input	kW	2.80	3.56	4.82
		COP	W/W	1.80	1.95	2.05
Frame size		mm	Φ160	Φ160	Φ160	
Weight (include Oil)		kg	34.0	34.0	36.0	
Oil charge		Liter	1.8	1.8	1.8	
Availability for gas injection type			Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	
Certificate			CCC/CE	CCC/CE	CCC/CE	
Remark			MP	MP	MP	
Test condition			D	D	D	

Test condition D

Evaporating temp.	-15.0 °C
Condensing temp.	45.0 °C
Super heat.	33.0 K
Sub cooling.	5.0K
Discharge temp.	35.0 °C
Rotation speed	60 rps

Low-temp fixed speed

				R448A/R449A/R404A		
Model				CA64LHAG-D1KA	CA83LHAG-D1YA	CA90LHAG-D1YA
Displacement		cm ³ /rev.	64	83	90	
Primary power supply	Phase	φ	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	
	Voltage	V	380~415/440	380~415/440	380~415/440	
Speed range of VS model		rps	-	-	-	
R404A	Capacity range	Min	kW	-	-	
		Max	kW	-	-	
	Rated performance	Cooling capacity	kW	5.80	7.60	8.36
		Power input	kW	3.41	4.35	4.78
		COP	W/W	1.70	1.75	1.75
R448A	Capacity range	Min	kW	-	-	-
		Max	kW	-	-	-
	Rated performance	Cooling capacity	kW	5.60	7.20	7.82
		Power input	kW	3.11	4.00	4.36
		COP	W/W	1.80	1.80	1.80
R449A	Capacity range	Min	kW	-	-	-
		Max	kW	-	-	-
	Rated performance	Cooling capacity	kW	5.60	7.20	7.82
		Power input	kW	3.11	4.00	4.36
		COP	W/W	1.80	1.80	1.80
Frame size		mm	Φ160	Φ160	Φ160	
Weight (include Oil)		kg	35.0	35.5	36.0	
Oil charge		Liter	1.8	1.8	1.8	
Availability for gas injection type			Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	
Certificate			CE	CE	CE	
Remark			Developing	Developing	Developing	
Test condition			L	L	L	

Test condition L (Fixed Speed)

Evaporating temp.	-15.0 °C
Condensing temp.	45.0 °C
Super heat.	33.0 K
Sub cooling.	5.0K
Discharge temp.	35.0 °C
Frequency	50 Hz

General data

Low-temp DC inverter

				R448A/R449A/R404A/R454A/R454C/R455A			
Model				CLBA047DGA-*F4S	CLBA064DGA-*F4S	CLBA090DGA-*F4S	DLBA110DGA-*F4S
Displacement		cm³/rev.	47	64	90	110	
Primary power supply	Phase	Φ	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440-460	380~415/440-460	380~415/440-460	380~415/440-460	
Speed range of VS model		rps	20-100	20-100	20-100	20-100	
R454A	Capacity range	Min	kW	1.72	2.42	3.42	4.20
		Max	kW	8.62	12.12	17.12	21.00
	Rated performance	Cooling capacity	kW	5.17	7.27	10.29	12.70
		Power input	kW	2.96	3.82	5.15	6.20
		COP	W/W	1.75	1.90	2.00	2.05
R454C	Capacity range	Min	kW	1.49	2.05	2.95	3.67
		Max	kW	7.45	10.25	14.73	18.30
	Rated performance	Cooling capacity	kW	4.36	6.15	8.84	11.11
		Power input	kW	2.42	3.08	4.21	5.25
		COP	W/W	1.80	2.00	2.10	2.10
R455A	Capacity range	Min	kW	1.60	2.21	3.20	3.90
		Max	kW	8.00	11.05	15.98	19.50
	Rated performance	Cooling capacity	kW	4.80	6.63	9.59	12.05
		Power input	kW	2.59	3.31	4.46	5.60
		COP	W/W	1.85	2.00	2.15	2.15
R404A	Capacity range	Min	kW	1.75	2.42	3.50	4.27
		Max	kW	8.75	12.08	17.50	21.30
	Rated performance	Cooling capacity	kW	5.25	7.25	10.50	13.20
		Power input	kW	3.00	3.81	5.25	6.40
		COP	W/W	1.75	1.90	2.00	2.05
R448A	Capacity range	Min	kW	1.68	2.32	3.30	4.03
		Max	kW	8.42	11.58	16.50	20.17
	Rated performance	Cooling capacity	kW	5.05	6.95	9.90	12.10
		Power input	kW	2.80	3.56	4.82	5.90
		COP	W/W	1.80	1.95	2.05	2.05
R449A	Capacity range	Min	kW	1.68	2.32	3.30	4.03
		Max	kW	8.42	11.58	16.50	20.17
	Rated performance	Cooling capacity	kW	5.05	6.95	9.90	12.10
		Power input	kW	2.80	3.56	4.82	5.90
		COP	W/W	1.80	1.95	2.05	2.05
Frame size		mm	Φ160	Φ160	Φ160	Φ160	
Weight (include Oil)		kg	34.0	34.0	36.0	44.5	
Oil charge		Liter	1.8	1.8	1.8	2.3	
Availability for gas injection type			Yes	Yes	Yes	Yes	
Availability for multiple connection type			Yes	Yes	Yes	Yes	
Certificate			CE	CE	CE	CE	
Remark			Developing	Developing	Developing	Developing	
Test condition			D	D	D	D	

Test condition D

Evaporating temp.	-15.0 °C
Condensing temp.	45.0 °C
Super heat.	33.0 K
Sub cooling.	5.0K
Discharge temp.	35.0 °C
Rotation speed	60 rps

Low-temp fixed speed

				R448A/R449A/R404A/R454A/R454C/R455A			
Model				CLBC064DGA-*F4S	CLBC083DGA-*F4S	CLBC090DGA-*F4S	GLBC150DGA-*F4S
Displacement			cm ³ /rev.	64	83	95	150
Primary power supply	Phase	Φ	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440-460	380~415/440-460	380~415/440-460	380~415/440-460	
Speed range of VS model			rps	-	-	-	-
R454A	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	5.75	7.50	8.22	-
		Power input	kW	3.19	4.17	4.45	-
		COP	W/W	1.80	1.80	1.85	-
R454C	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	4.95	6.38	7.13	-
		Power input	kW	2.68	3.45	4.75	-
		COP	W/W	1.85	1.85	1.85	-
R455A	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	5.30	6.88	7.50	-
		Power input	kW	2.87	3.71	3.95	-
		COP	W/W	1.85	1.85	1.90	-
R404A	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	5.80	7.60	8.36	14.60
		Power input	kW	3.41	4.35	4.78	7.90
		COP	W/W	1.70	1.75	1.75	1.85
R448A	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	5.60	7.20	7.82	-
		Power input	kW	3.11	4.00	4.34	-
		COP	W/W	1.80	1.80	1.80	-
R449A	Capacity range	Min	kW	-	-	-	-
		Max	kW	-	-	-	-
	Rated performance	Cooling capacity	kW	5.60	7.20	7.82	-
		Power input	kW	3.11	4.00	4.58	-
		COP	W/W	1.80	1.80	1.80	-
Frame size			mm	Φ160	Φ160	Φ160	Φ190
Weight (include Oil)			kg	34.00	35.50	36.00	75.50
Oil charge			Liter	1.80	1.80	1.80	4.00
Availability for gas injection type				Yes	Yes	Yes	Yes
Availability for multiple connection type				Yes	Yes	Yes	Yes
Certificate				CE	-	CE	-
Remark				Developing	Developing	Developing	Developing
Test condition				L	L	L	L

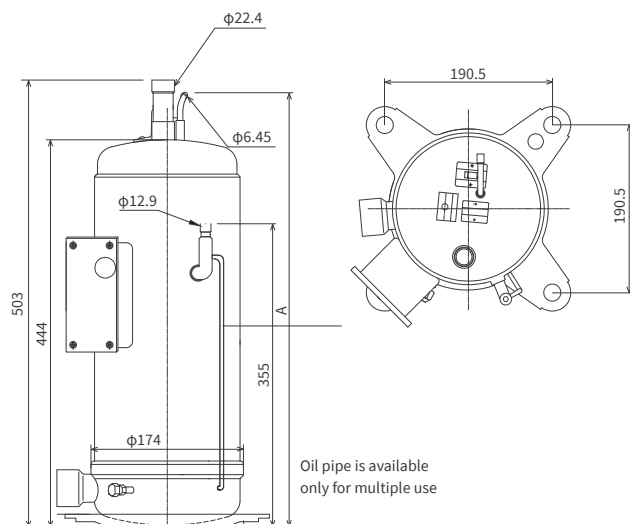
Test condition L

Evaporating temp.	-15.0 °C
Condensing temp.	45.0 °C
Super heat.	33.0 K
Sub cooling.	5.0K
Discharge temp.	35.0 °C
Frequency	50 Hz

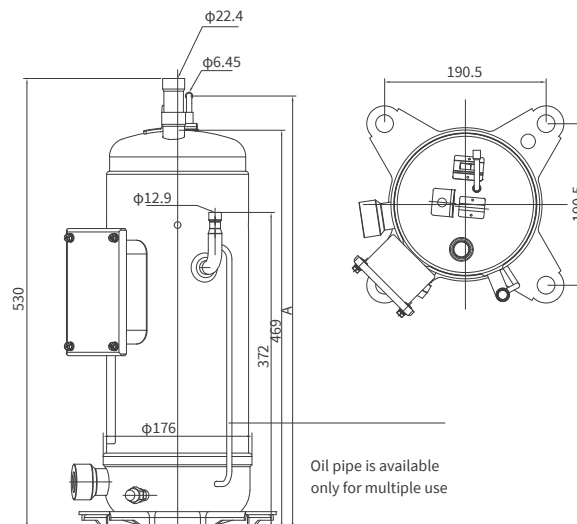
Dimensions

Low-temp DC inverter

R448A/R449A/R404A/R454A/R454C/R455A



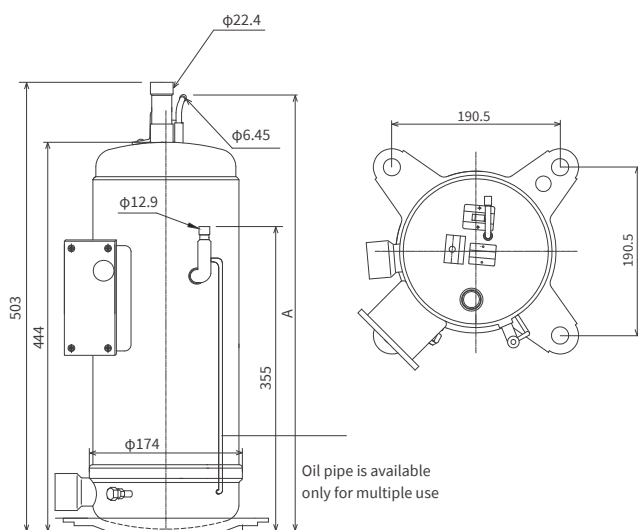
	A
CA47LHDG	488
CA64LHDG	492
CA90LHDG	500



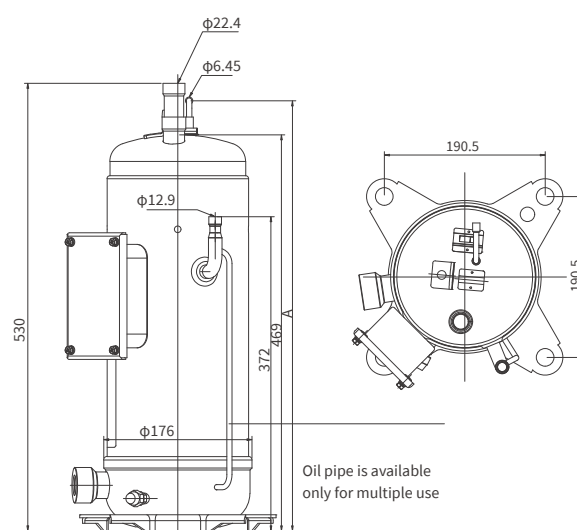
	A
CLBA047DGA	509
CLBA064DGA	513
CLBA090DGA	515

Low-temp fixed speed

R448A/R449A/R404A/R454A/R454C/R455A



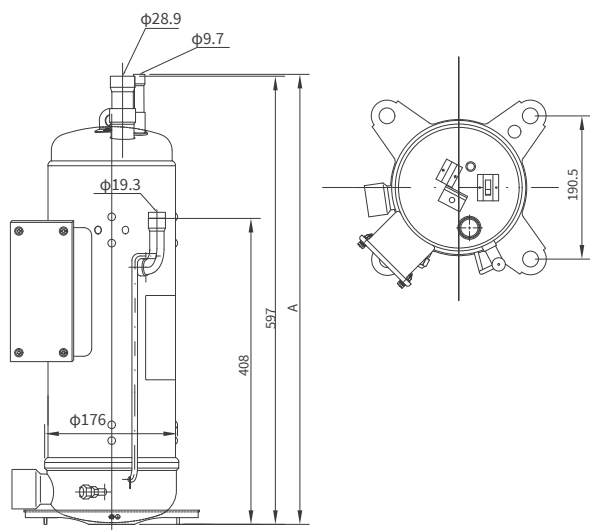
	A
CA64LHAG	492
CA83LHAG	495
CA90LHAG	500



	A
CLBC064DGA	513
CLBC083DGA	513
CLBC090DGA	515

Low-temp DC inverter

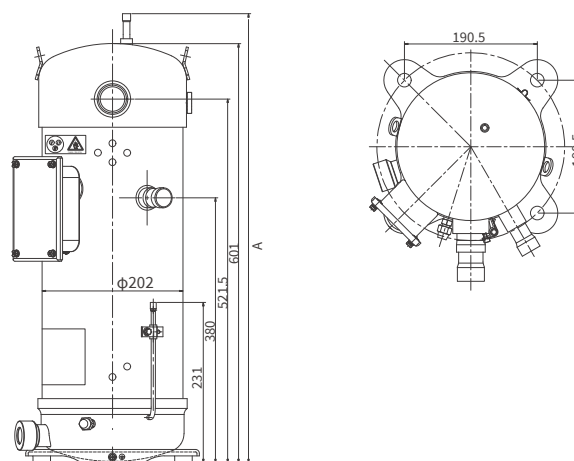
**R448A/R449A/R404A/R454A/
R454C/R455A**



	A
DLBA110DGA	600

Low-temp fixed speed

**R448A/R449A/R404A/R454A/
R454C/R455A**



	A
GLBC150	644

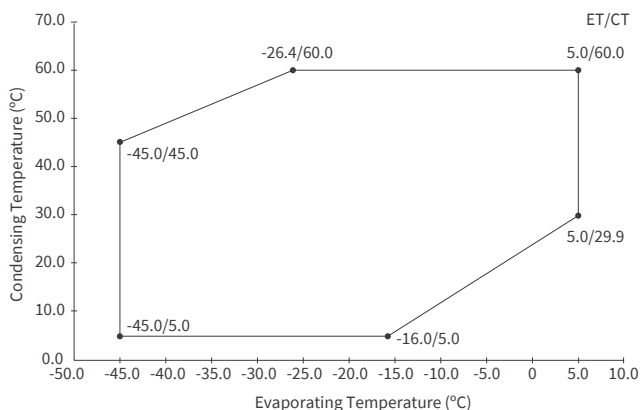


Operating envelop

Low-temp DC inverter

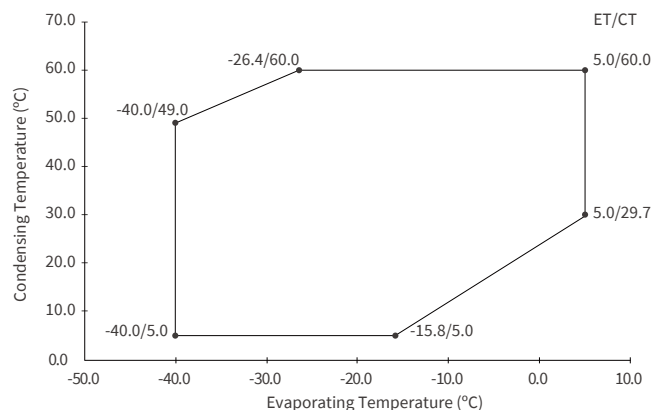
R404A

(CA47/64/90 CLBA047/064/090 DLBA110)



R448A/R449A

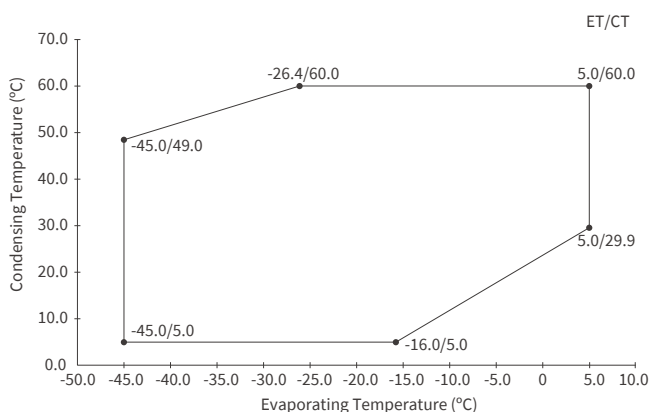
(CA47/64/90 CLBA047/064/090 DLBA110)



Low-temp fixed speed

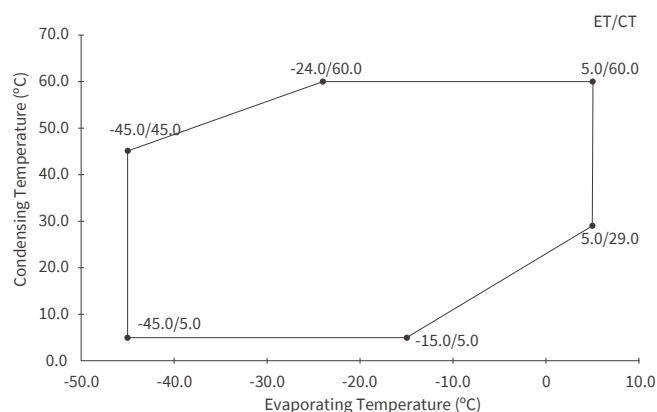
R404A

(CA64/83/90)



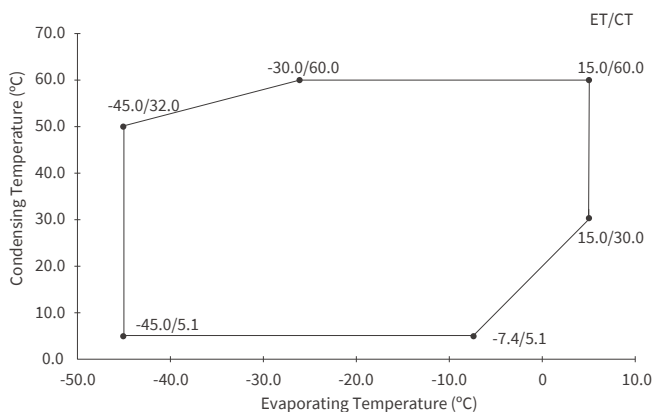
R404A

(CLBC064/083/090)



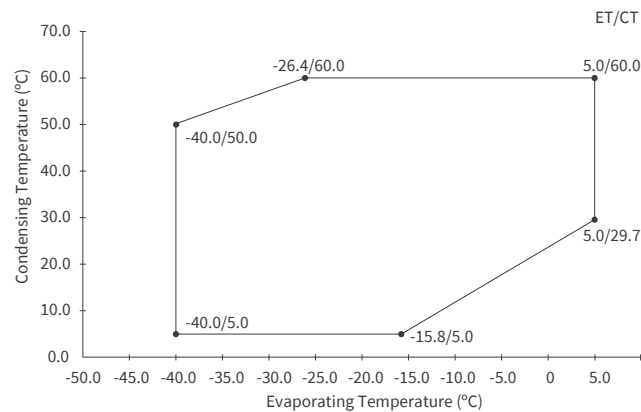
R404A

(GLBC150DGA)



R448A/R449A

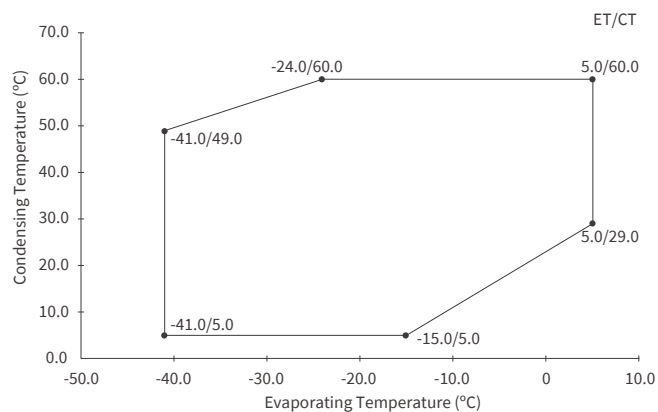
(CA64/83/90 CLBC064/083/090)



Low-temp DC inverter and fixed speed

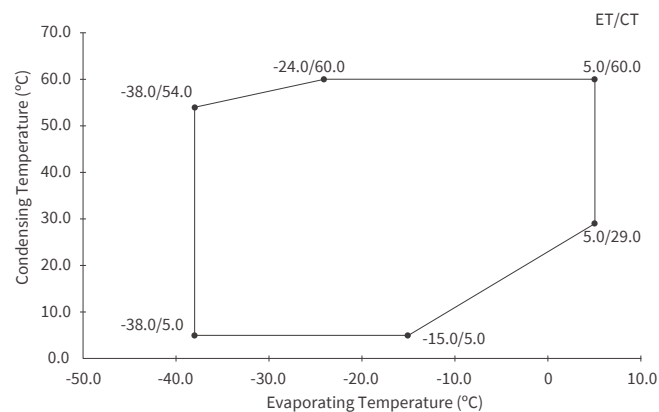
R454A

(CLBA047/064/090 DLBA110 CLBC064/083/090)



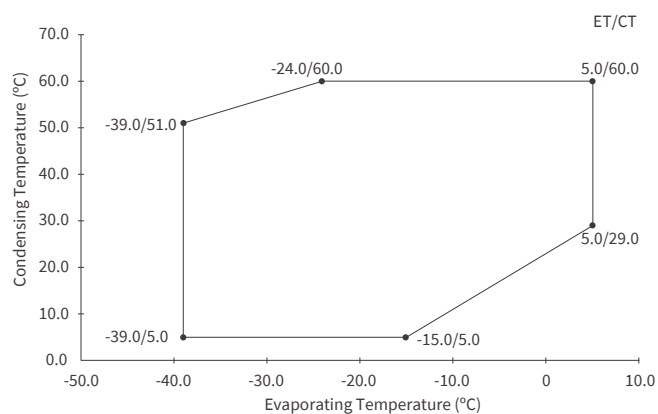
R454C

(CLBA047/064/090 DLBA110 CLBC064/083/090)



R455A

(CLBA047/064/090 DLBA110 CLBC064/083/090)



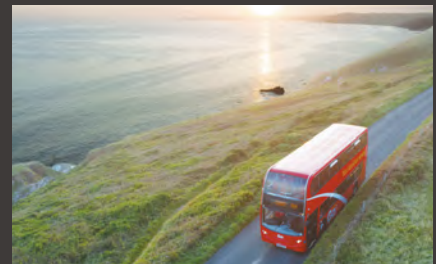
For transport application

Exclusive design for transport air conditioning

-  Compact size & lightweight
-  Low sound level & low vibration
-  High reliability
-  Advance scroll-wrap technology



Used in more than 30 countries



Shinkansen (Bullet train) / High-speed train / Commuter / Metro / Tram / Monorail / All-electric bus / Local train

Advantages

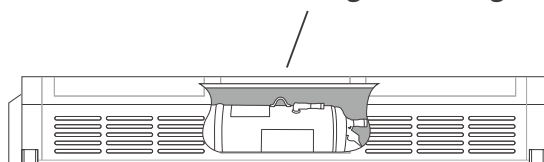
Compact size & lightweight



* C series

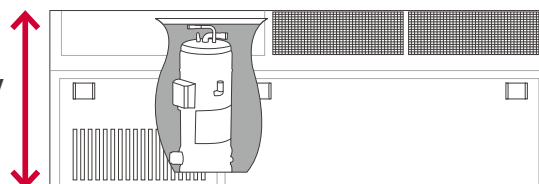
Downsizing of HVAC unit

Reduce HVAC height and weight!!



HVAC with Hitachi horizontal compressor C series

Cut by nearly
50%

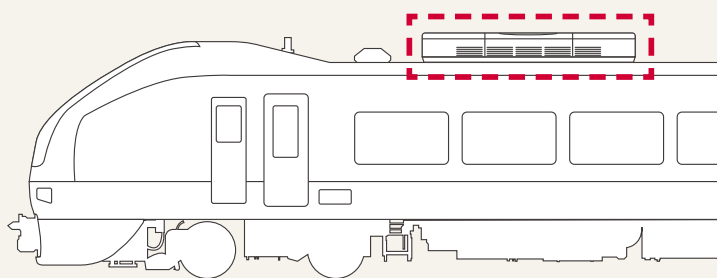


HVAC with Hitachi vertical compressor equivalent capacity of C series

Low profile HVAC unit is optimum approach for rooftop application

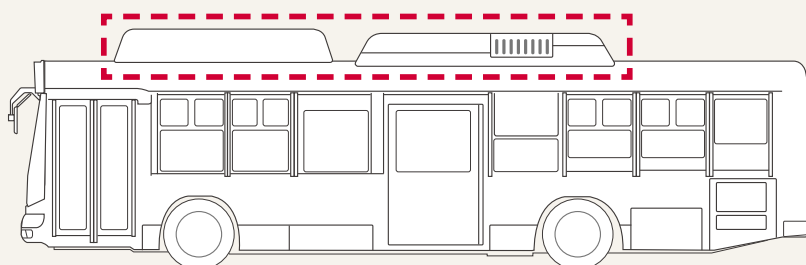
For railway air conditioning

Space-saving HVAC is suitable for Metro, LRT, and the bus.



For hybrid/all-electric bus air conditioning & battery cooler

Light weight HVAC/Battery cooler can realize power-saving of the bus itself.





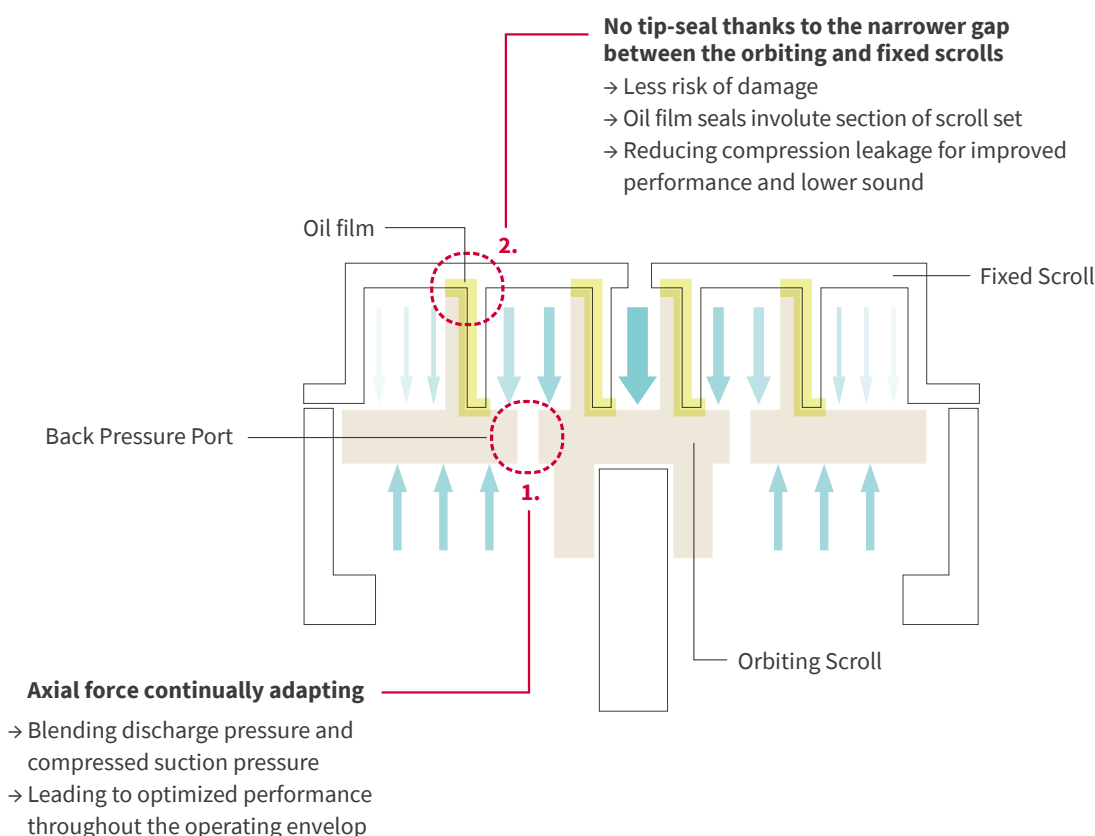
Advantages

☆ **High reliability &** ♥ **Comfortable operation**

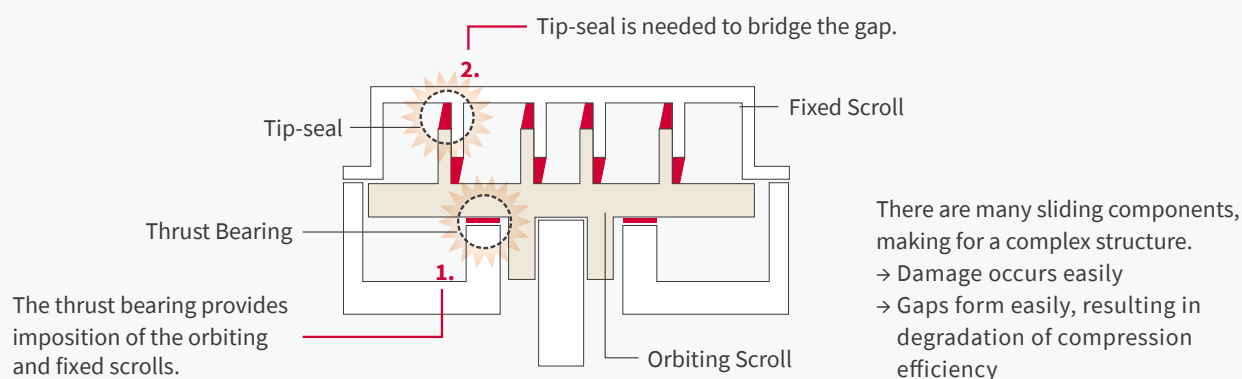
Merits of Hitachi pioneering high-side pressure design

(1) A simple structure leading to fewer superfluous parts

- Damage is abated, improving reliability
- Compressor efficiency is improved



Low-side pressure design (Thrust Bearing System)

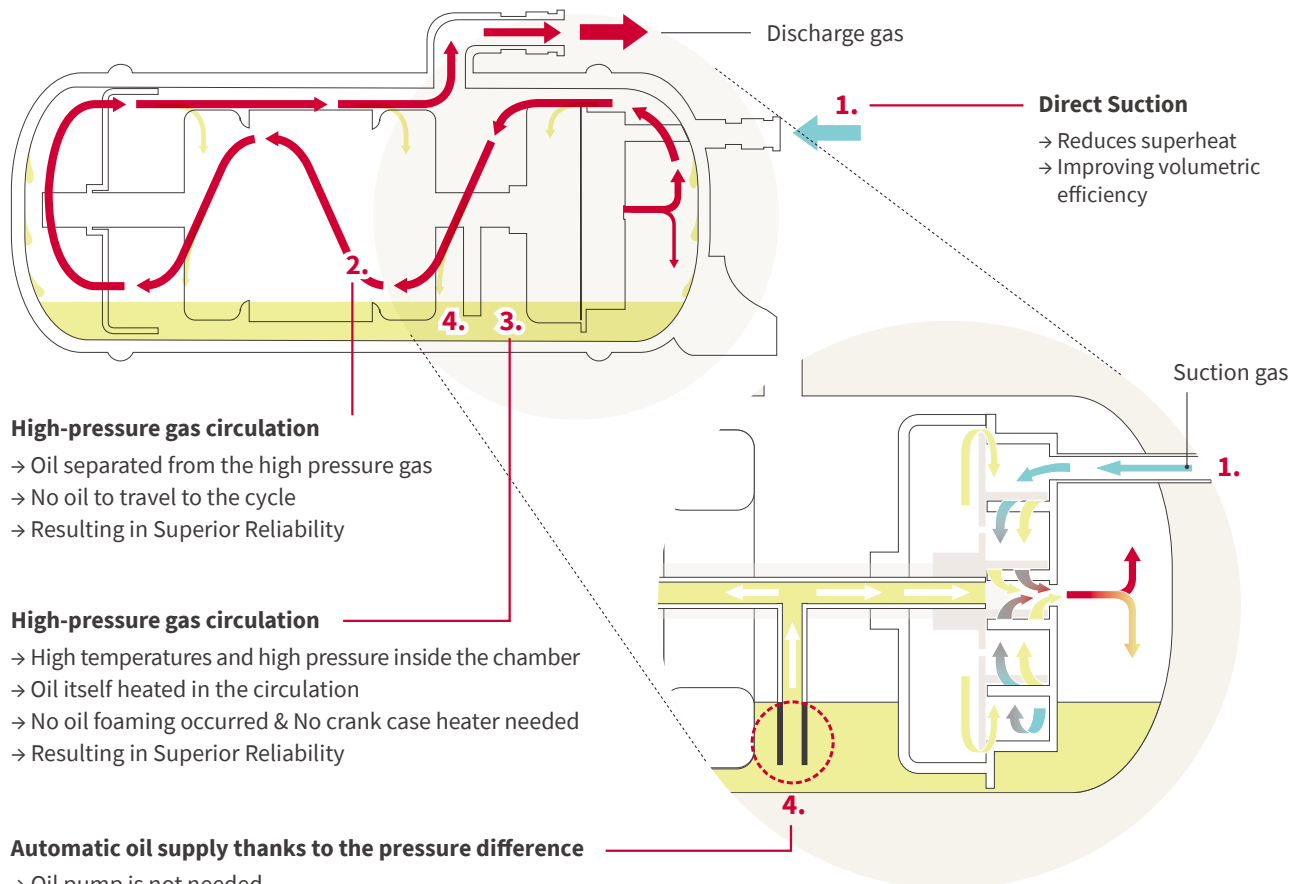


- High reliability
- Low noise and low vibration
- High performance

(2) High-side pressure design

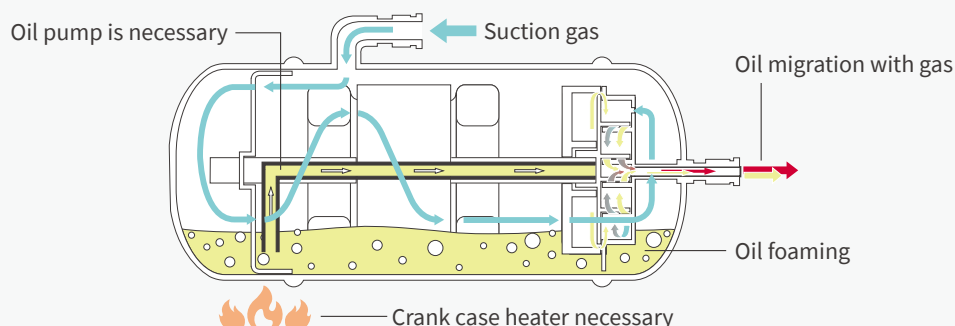
- Improved volumetric efficiency thanks to direct suction
- Less parts leading to superior reliability
- Keeping oil in the compressor resulting in superior reliability

High pressure gas Low pressure gas Oil



Low-side pressure design

After starting, pressure and temperature decreases and refrigerant bubbles come over from the oil.



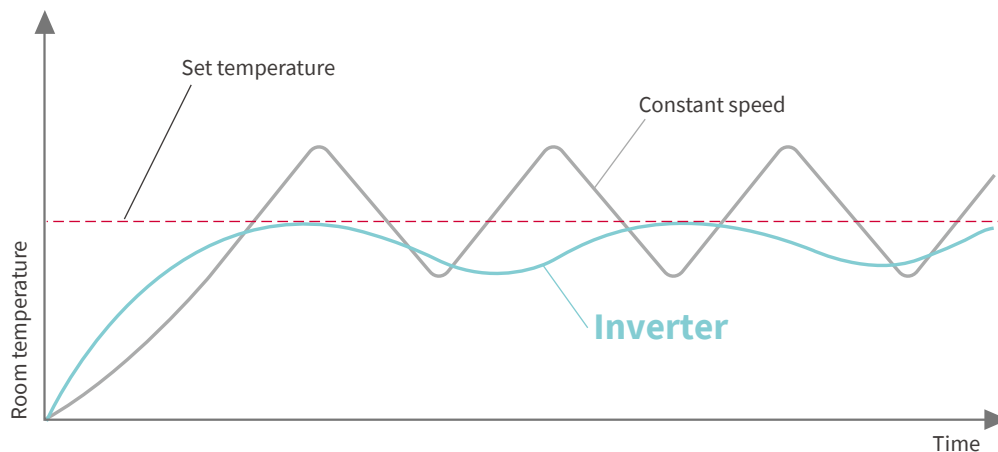
Advantages

💰 Advantage with inverter control

Comfort & cost-optimized

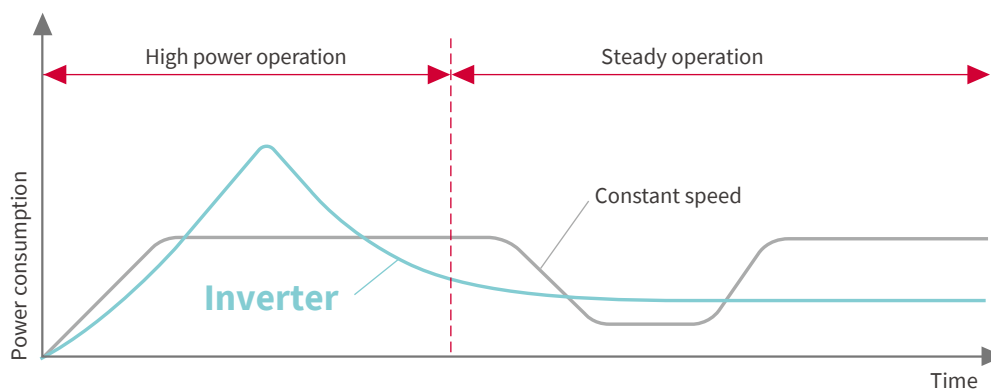
Precise temperature control

Inverter control can maintain a comfortable temperature without ON/OFF operation or step control.



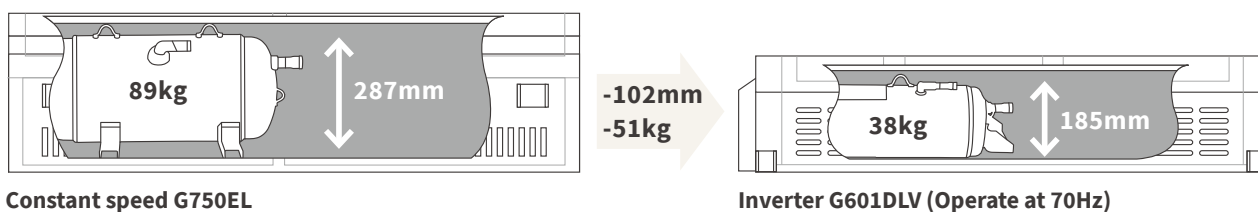
Stable performance under low-load conditions

Inverter enables continuous operation, avoiding frequent ON/OFF cycling.



Downsized HVAC by operating at high frequency

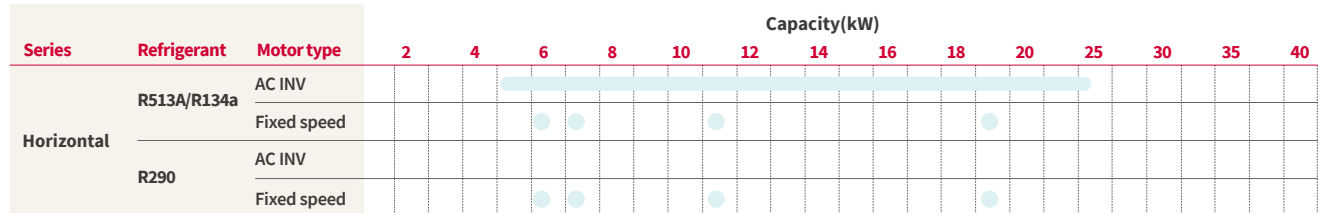
Operation at high frequency enables large capacity to downsized HVAC.



Platform design

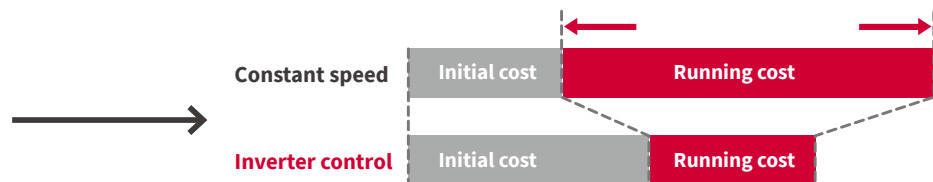
Enables HVAC standardization by its capacity control.

Nominal rating



Saving running cost by operating at high frequency

Considering the future in which one can save energy?



General data

Horizontal AC inverter

Model				R513A/R134a CB64TLVG-D1SA	R407C/R134a CB90TLVG-D1SA	DD110TLVG-D1SA
Displacement			cm ³ /rev.	64	90	110
Primary power supply	Phase	φ		3	3	3
	Frequency	Hz		50/60	50/60	50/60
	Voltage	V		380~415/440	380~415/440	380~415/440
Frequency range			Hz	30-90	30-90	20-100
R513A	Capacity range	Min	kW	4.60	-	-
		Max	kW	13.80	-	-
	Rated performance	Cooling capacity	kW	9.20	-	-
		Power input	kW	3.06	-	-
		COP	W/W	3.01	-	-
R134a	Capacity range	Min	kW	4.50	6.35	-
		Max	kW	13.50	19.05	-
	Rated performance	Cooling capacity	kW	9.00	12.70	-
		Power input	kW	3.00	4.23	-
		COP	W/W	3.00	3.00	-
R407C	Capacity range	Min	kW	-	10.05	7.89
		Max	kW	-	30.15	39.47
	Rated performance	Cooling capacity	kW	-	20.10	23.68
		Power input	kW	-	6.70	7.4
		COP	W/W	-	3.00	3.20
Frame size			mm	Φ160	Φ160	Φ160
Weight (include Oil)			kg	36.0	38.0	48.0
Oil charge			Liter	1.5	1.7	1.8
Availability for gas injection type				No	No	No
Availability for multiple connection type				No	No	No
Certificate				-	-	CRAA
Remarks				Developing	MP	MP
Test condition				G	G	G

Test condition G

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Frequency	60Hz

Horizontal fixed speed

				R513A/R134a		
Model				CA47TLAG-D1SA	CA56TLAG-D1SA	GTBF150DGA -*A*S
Displacement		cm³/rev.	47	56	150	
Primary power supply	Phase	φ	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	
	Voltage	V	380~415/440	380~415/440	380~415/440~460	
Speed range of VS model		rps	-	-	-	
R513A	Capacity range	Min	kW	-	-	
		Max	kW	-	-	
	Rated performance	Cooling capacity	kW	5.60	6.70	19.00
		Power input	kW	1.90	2.23	5.90
		COP	W/W	2.95	3.00	3.22
R134a	Capacity range	Min	kW	-	-	
		Max	kW	-	-	
	Rated performance	Cooling capacity	kW	5.60	6.70	19.10
		Power input	kW	1.86	2.20	5.88
		COP	W/W	3.00	3.05	3.25
Frame size		mm	Φ160	Φ160	Φ190	
Weight (include Oil)		kg	35.0	36.0	64.0	
Oil charge		Liter	1.7	1.3	2.3	
Availability for gas injection type			No	No	Yes	
Availability for multiple connection type			No	No	No	
Certificate			CCC/CE	CCC/CE	-	
Remarks			Developing	MP	Developing	
Test condition			I	I	I	

Test condition I

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Frequency	50Hz

Horizontal fixed speed

				R513A		
Model				CA47TLAG-D1S8	CA56TLAG-D1S8	CB90TLAG-D1S8
Displacement		cm³/rev.		47	56	90
Primary power supply	Phase	φ		3	3	3
	Frequency	Hz		50/60	50/60	50/60
	Voltage	V		380~415/3Ph-440	380~415/3Ph-440	380~415/440
Speed range of VS model		rps		-	-	-
R513A	Capacity range	Min	kW	-	-	-
		Max	kW	-	-	-
	Rated performance	Cooling capacity	kW	5.60	6.70	10.75
		Power input	kW	1.90	2.23	3.58
		COP	W/W	2.95	3.00	3.00
R134a	Capacity range	Min	kW	-	-	-
		Max	kW	-	-	-
	Rated performance	Cooling capacity	kW	-	-	-
		Power input	kW	-	-	-
		COP	W/W	-	-	-
Frame size		mm		Φ160	Φ160	Φ160
Weight (include Oil)		kg		35.0	35.0	37.0
Oil charge		Liter		1.7	1.7	1.7
Availability for gas injection type				No	No	Yes
Availability for multiple connection type				No	No	No
Certificate				CCC/CE	CCC/CE/EAC	-
Remarks				MP	MP	MP
Test condition				I	I	I

Test condition I

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Frequency	50Hz

Horizontal fixed speed

				R290		
Model				CTDF056DGA-*A4S	DTDF110DGA-*A4S	GTDF150DGA-*A4S
Displacement		cm ³ /rev.	56	110	150	
Primary power supply	Phase	φ	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	
	Voltage	V	380~415/3Ph-440	380~415/3Ph-440	380~415/3Ph-440	
Speed range of VS model		rps	-	-	-	
R290	Capacity range	Min	kW	-	-	
		Max	kW	-	-	
	Rated performance	Cooling capacity	kW	5.125	17.20	23.80
		Power input	kW	2.50	5.30	7.00
		COP	W/W	2.05	3.25	3.40
Frame size		mm	Φ160	Φ160	Φ190	
Weight (include Oil)		kg	36.0	36.0	70.0	
Oil charge		Liter	1.7	1.8	1.9	
Availability for gas injection type			No	No	No	
Availability for multiple connection type			No	No	No	
Certificate			-	-	-	
Remarks			Developing	Developing	Developing	
Test condition			J	I	I	

Test condition J

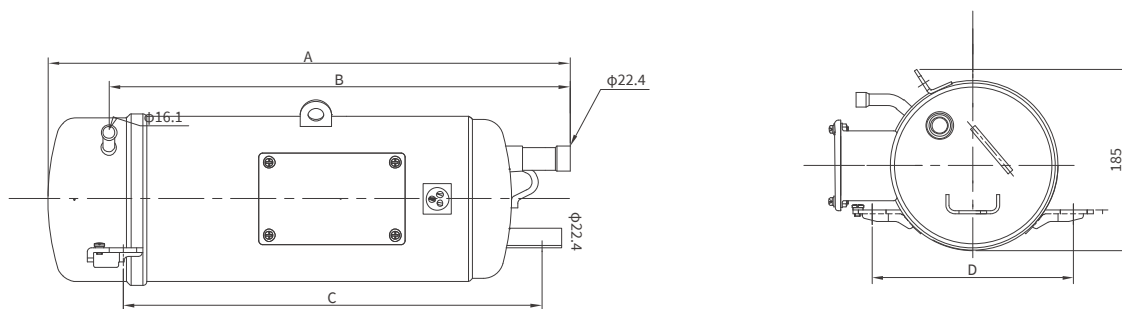
Evaporating temp.	-7.0 °C
Condensing temp.	50.0 °C
Super heat.	5.0K
Sub cooling.	4.0K
Ambient temp.	35.0 °C
Frequency	50Hz

Dimensions

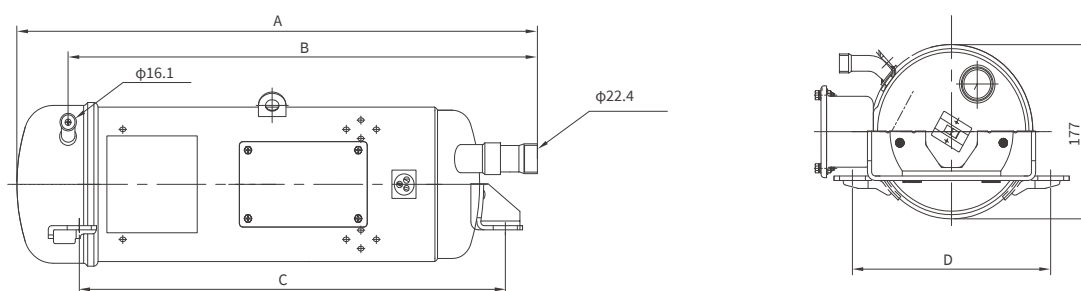
Horizontal AC inverter and fixed speed

Models:

CB64TLVG, CB90TLVG, CTDF056DGA, DD110TLVG, DTDF110DGA, DTDD110DGA



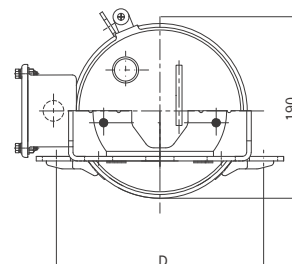
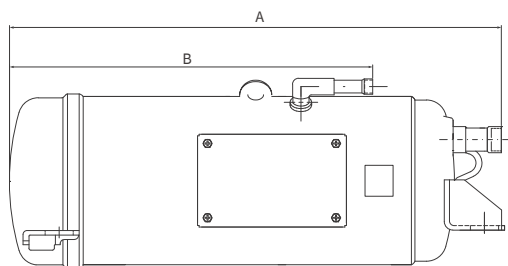
	A	B	C	D
CB64TLVG/CB90TLVG	527	473	423	210
CTDF056DGA	534	480	432	210



	A	B	C	D
DD110TLVG/DTDF110DGA/DTDD110DGA	605	545	495	213.5

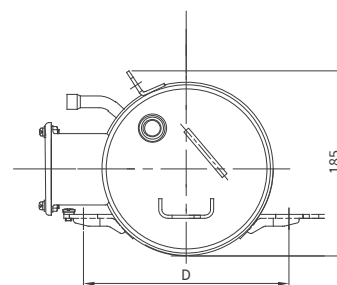
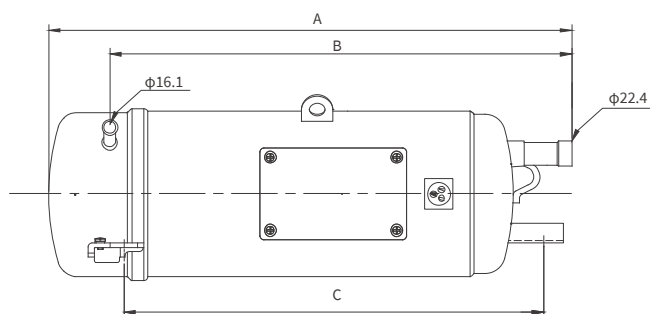
Horizontal fixed speed R513A/R134a

Models:
CA47TLAG, CA56TLAG



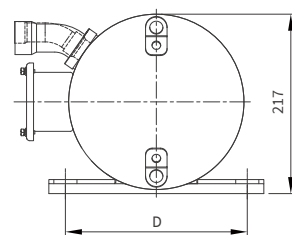
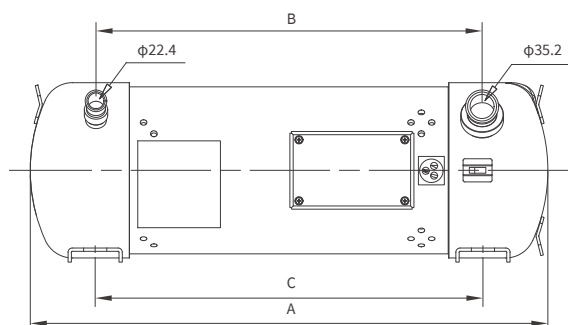
	A	B	D
CA47TLAG/ CA56TLAG	488	361	210

Models:
CB90TLAG



	A	B	C	D
CB90TLAG	527	473	423	210

Models:
GTBF150DGA-*A*S



	A	B	C	D
GTBF150DGA-*A*S / GTDF150DGA-*A4S	626	467	469	220

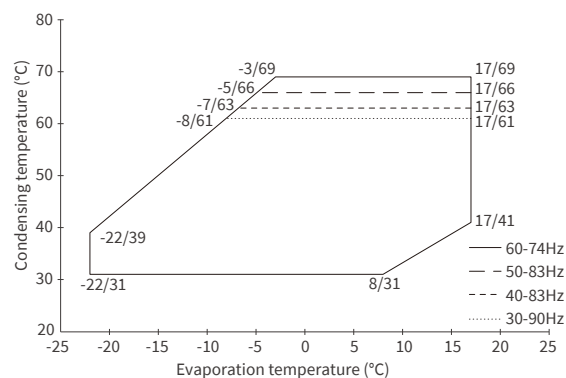
Operating envelop

Horizontal AC inverter

R513A

(CB64TLVG/CB90TLVG)

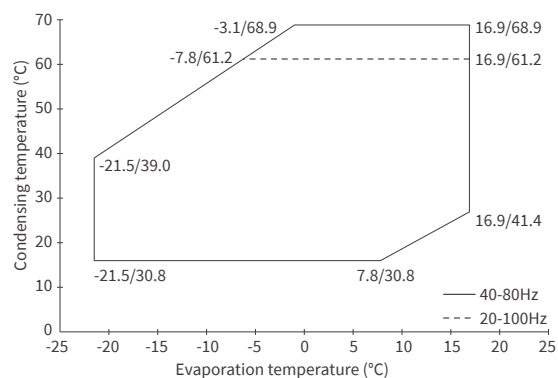
ET/CT



R134a

(DD110TLVG)

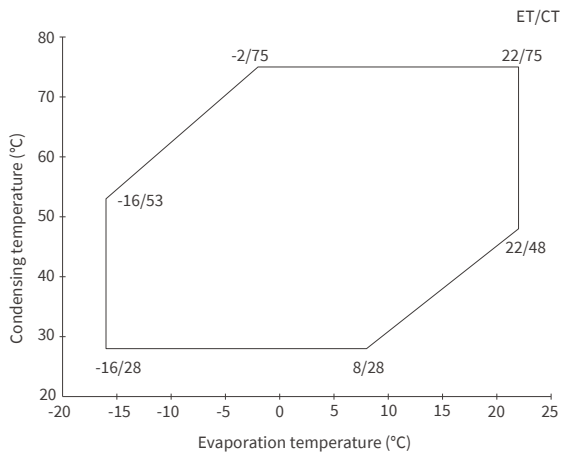
ET/CT



Horizontal fixed speed

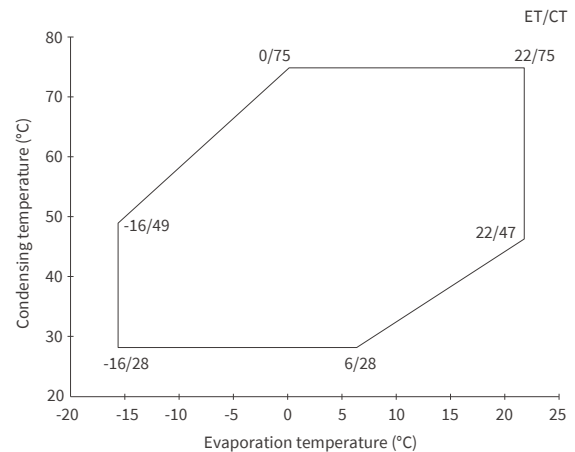
R513A

(CA47TLAG/CA56TLAG/CB47TLAG/CB56TLAG
/CB90TLAG/GTBF150DGA)



R134a

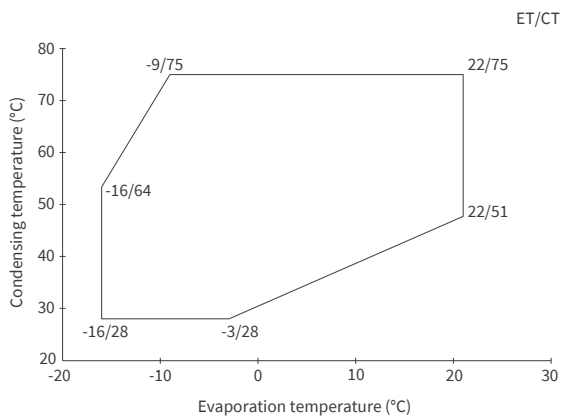
(CA47TLAG/CA56TLAG/CB47TLAG/CB56TLAG
/CB90TLAG/GTBF150DGA)



Horizontal fixed speed

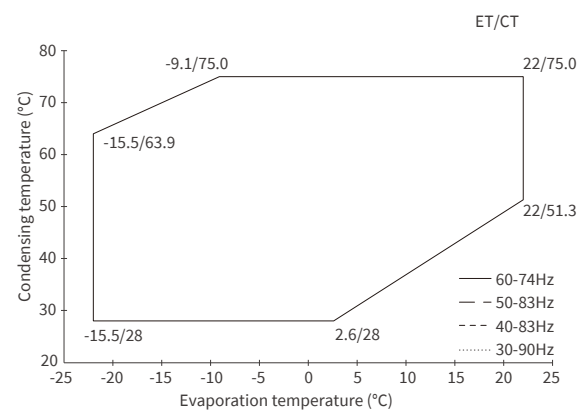
R290

(CTDF056DGA/GTDF150DGA)



R290

(DTDF110DGA)



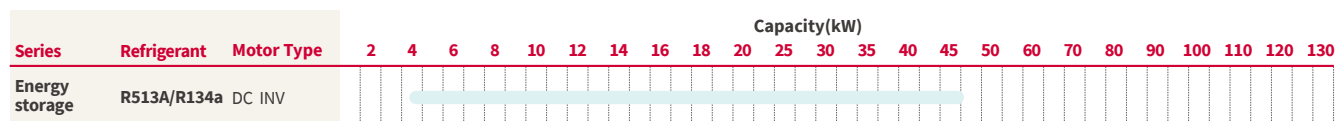
For energy storage application



Technology expert in energy storage air conditioning

- ♥ High reliability
- 📄 Variable frequency speed control
- 🔄 Ultra-wide pressure ratio operating range
- 👍 IP67 level of electrical junction box
- 🛡️ High corrosion resistance design

Capacity range



General data

Energy storage DC inverter

				R513A & R134a&R32			
Model				DEBA080DGA-*A*S	DEBA110DGA-*A*S	DEBA125EGA-*A*S	GEBA150DGA-*A*S
Displacement		cm³/rev.	80	110	125	150	
Primary power supply	Phase	φ	3	3	3	3	
	Frequency	Hz	50/60	50/60	50/60	50/60	
	Voltage	V	380~415/440~460	380~415/440~460	380~480	380~415/440~460	
Speed range of VS model		rps	20-120	20-120	20-120	20-120	
R513A	Capacity range	Min	kW	3.93	5.57	-	7.83
		Max	kW	23.60	33.40	-	47.00
	Rated performance	Cooling capacity	kW	11.80	16.70	-	23.50
		Power input	kW	3.78	5.00	-	7.23
		COP	W/W	3.12	3.34	-	3.25
R134a	Capacity range	Min	kW	3.89	5.44	-	7.67
		Max	kW	23.36	32.64	-	46.00
	Rated performance	Cooling capacity	kW	11.68	16.32	-	23.00
		Power input	kW	3.65	4.80	-	7.05
		COP	W/W	3.20	3.40	-	3.25
R32	Capacity range	Min	kW	-	-	6.33	-
		Max	kW	-	-	38.00	-
	Rated performance	Cooling capacity	kW	-	-	19.00	-
		Power input	kW	-	-	5.70	-
		COP	W/W	-	-	3.34	-
Frame size		mm	Φ160	Φ160	Φ160	Φ190	
Weight (include Oil)		kg	39.0	42.0	45.5	70.0	
Oil charge		Liter	1.1	1.6	1.8	1.8	
Availability for gas injection type			No	No	No	No	
Availability for multiple connection type			No	No	No	No	
Certificate			UL	UL	-	CE/UL/CRAA	
Remark			MP	MP	Developing	Developing	
Test condition			A	A	A	A	

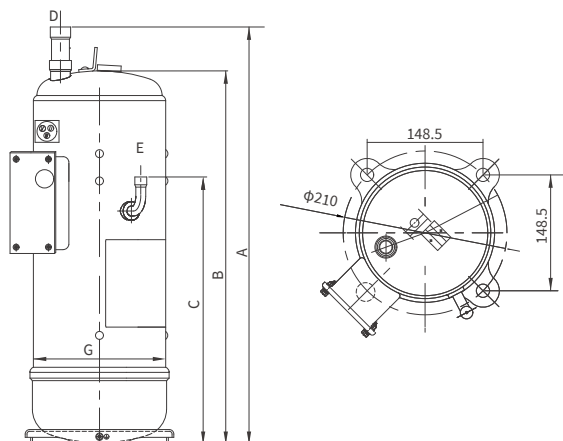
Test condition A

Evaporating temp.	7.2 °C
Condensing temp.	54.4 °C
Super heat.	11.1K
Sub cooling.	8.3K
Ambient temp.	35.0 °C
Rotation speed	60 rps

Dimensions

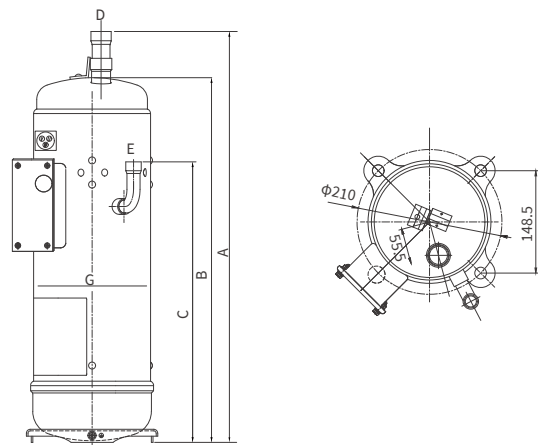
Energy storage DC inverter

R513A & R134a



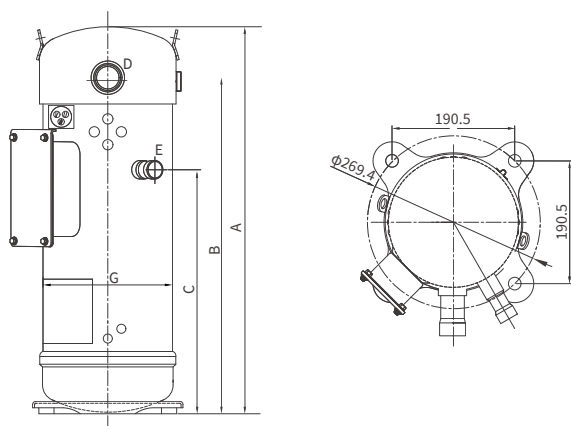
	A	B	C	D	E	F	G
DEBA080DGA-*A*S	539	478	357	φ22.4	φ16.1	/	φ168

R513A & R134a



	A	B	C	D	E	F	G
DEBA110DGA-*A*S	597	530	408	φ28.9	φ19.3	/	φ168
DEBA125EGA-*A*S	619	552	408	φ28.9	φ19.3	/	φ168

R513A & R134a

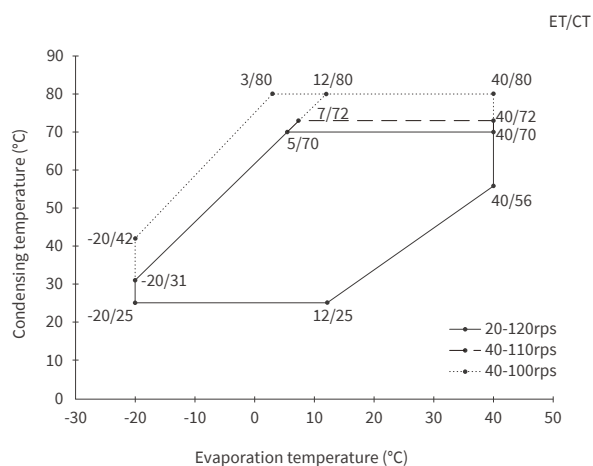


	A	B	C	D	E	F	G
GEBA150DGA-*A*S	600	522	380	φ35.2	φ25.6	/	φ202

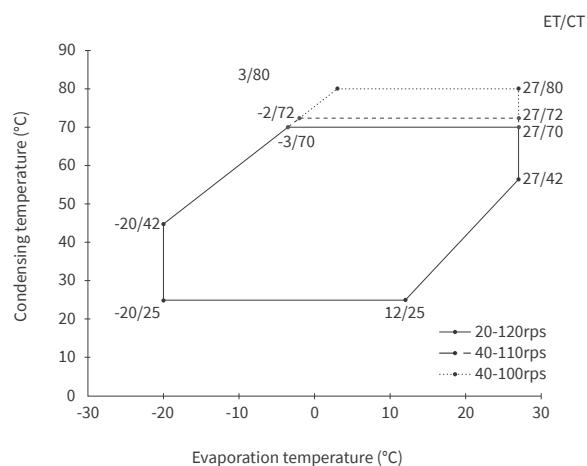
Operating envelop

Energy storage DC inverter

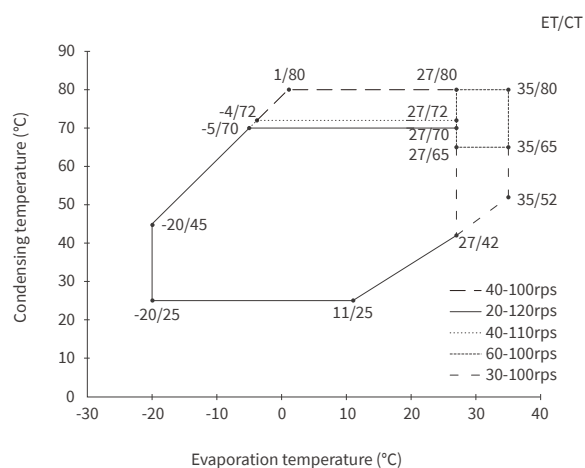
R134a (DEBA080DGA)

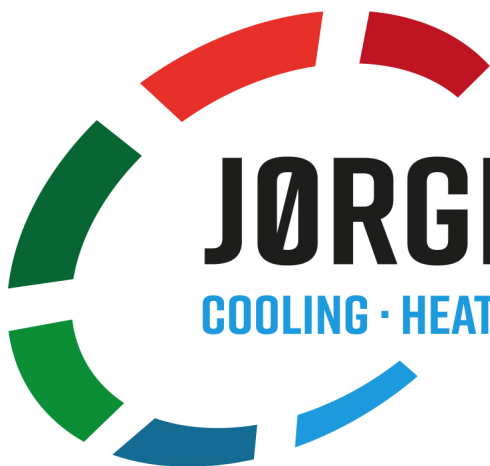


R134a/R513A (DEBA110DGA)



R134a/R513A (DEBA125EGA/GEBA150DGA)





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