

SCROLL COMPRESSOR



HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

High efficiency, high reliability, small size, lightweight, low vibration and low noise have been key demands of the present age in the air conditioning market. HITACHI proudly presents the scroll compressor to answer these demands. It is completely new and revolutionary in construction including the following features.

WORLD FIRST IN SCROLL COMPRESSORS

Hitachi's scroll compressor was developed and manufactured in 1983 as the world's first scroll compressor. (Hitachi's latest production technology has made it possible to introduce these scroll compressors to the market.)

FEWER PARTS

The compression mechanism of a scroll compressor consists of only five main parts.

HIGH EFFICIENCY

High efficiency due to minimal gas leakage during compression. The pressure difference between the two neighboring compression pockets is smaller than the total pressure difference of discharge pressure minus the suction pressure; resulting in minimal leakage. Since the discharge port is not connected to the low pressure side, the compressed gas does not expand.

LOW SOUND, LOW VIBRATION

Suction, compression and discharge processes are simultaneously and continuously performed and therefore, the vibration and noise levels are low and the torque of the scroll compressor varies little in comparison with types of compressors.



HIGH RELIABILITY

As there is no suction valve or discharge valve mounted, the scroll compressor is more efficient, much quieter, and much more reliable.

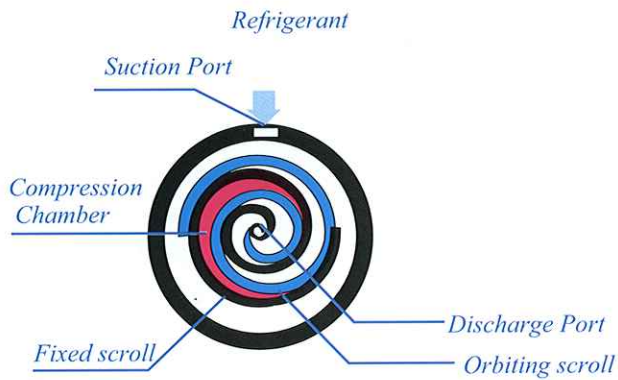
WIDE OPERATING RANGE

Greater efficiency is achieved over a wide range of operating pressure ratios. The volumetric efficiency has improved remarkably, especially in the high pressure ratio range. Smoother operation makes it possible to drive a scroll compressor of higher rotational speeds.

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Compression Principle



$\theta = 0^\circ$ Suction Finish



$\theta = 90^\circ$ Compression 1



$\theta = 270^\circ$ Compression 3



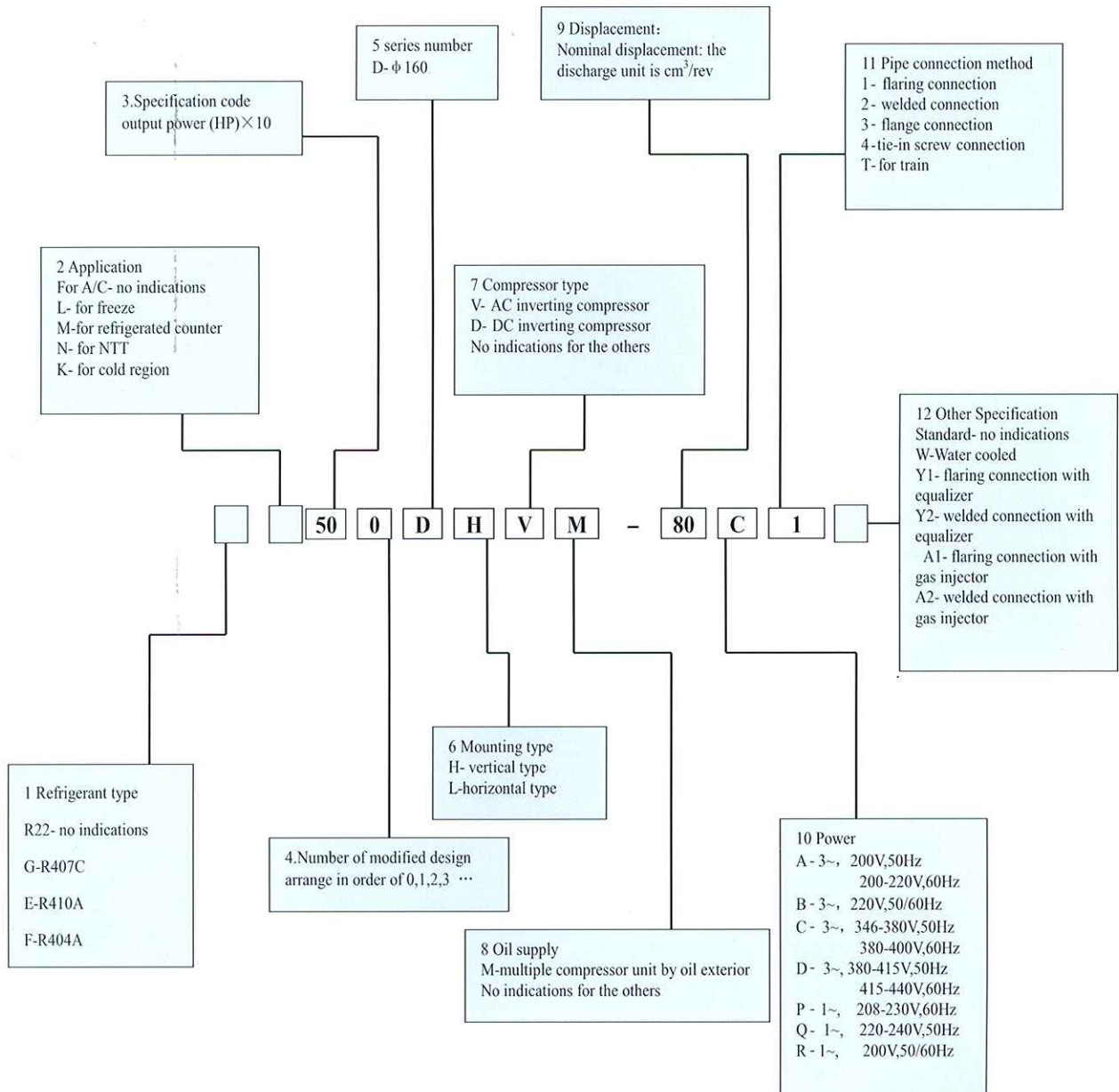
$\theta = 180^\circ$ Compression 2



HITACHI SCROLL COMPRESSORS

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Model Code Identification



HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Higt Efficiency

50Hz

50 Hertz Performance Nominals											R22		
Power Type	Q	220-240V 1~ 50Hz			Test Voltage: 220V 1~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47Q1(2)	47	29500	7440	8650	2780	13.3	83.4	10.7	2.70	3.14	60	1.2	36
303DH-50Q1(2)	50	32050	8080	9400	2980	13.8	85.0	10.7	2.70	3.14	60	1.2	37
353DH-56Q1(2)	56	34780	8770	10200	3400	15.7	96.11	10.2	2.58	3.0	60	1.2	36
403DH-64Q1(2)	64	40920	10320	12000	4000	19.5	117.4	10.2	2.58	3.0	60	1.2	36

50 Hertz Performance Nominals											R22		
Power Type	C	346-380V 3~ 50Hz			Test Voltage: 380V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47C1(2)	47	29500	7440	8650	2700	5.0	42.5	10.9	2.75	3.20	60	1.2	35
303DH-50C1(2)	50	32220	8130	9450	2900	5.40	42.5	10.9	2.75	3.20	60	1.2	35
353DH-56C1(2)	56	35460	8940	10400	3200	6.0	44	11.1	2.80	3.25	60	1.2	35
403DH-64C1(2)	64	40240	10150	11800	3600	6.7	49	11.1	2.80	3.25	60	1.2	35
453DH-72C1(2)	72	46040	11610	13500	4000	7.6	64	11.6	2.92	3.40	60	1.4	36
503DH-80C1(2)	80	50800	12810	14900	4400	7.9	62	11.6	2.92	3.40	60	1.4	37
503DH-83C1(2)	83	52510	13240	15400	4550	8.2	62	11.6	2.92	3.40	60	1.4	37
603DH-90C1(2)	90	57290	14450	16800	5000	9.5	70	11.6	2.92	3.40	60	1.4	37

50 Hertz Performance Nominals											R22		
Power Type	D	380-415V 3~ 50Hz			Test Voltage: 380V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47D1(2)	47	29500	7440	8650	2700	4.82	40	10.9	2.75	3.20	60	1.2	36
303DH-50D1(2)	50	32220	8130	9450	2900	5.25	44	10.9	2.75	3.20	60	1.2	36
353DH-56D1(2)	56	35460	8940	10400	3200	5.65	44	11.1	2.80	3.25	60	1.2	36
403DH-64D1(2)	64	40240	10150	11800	3600	6.30	48	11.1	2.92	3.25	60	1.2	36
453DH-72D1(2)	72	46040	11610	13500	4000	7.00	53	11.6	2.92	3.40	60	1.4	36
503DH-80D1(2)	80	50800	12810	14900	4400	7.50	53	11.6	2.92	3.40	60	1.4	36
503DH-83D1(2)	83	52510	13240	15400	4550	8.00	53	11.6	2.92	3.40	60	1.4	37
603DH-90D1(2)	90	57290	14450	16800	5000	8.60	57	11.6	2.92	3.40	60	1.4	37

50 Hertz Performance Nominals											R22		
Power Type	B	220V 3~ 50/60Hz			Test Voltage: 220V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47B1(2)	47	29500	7440	8650	2700	8.21	81	10.9	2.75	3.20	60	1.2	35
403DH-64B1(2)	64	40240	10150	11800	3600	11.2	97	11.1	2.80	3.25	60	1.2	35
503DH-80B1(2)	80	50800	12810	14900	4400	13.4	113	11.6	2.92	3.40	60	1.4	37

Test condition of cooling capacity

Evaporating temp.	7.2°C	Return gas temp.	18.3°C
Condensing temp.	54.4°C	Liquid temp.	46.1°C
Ambient temp.	35.0°C		

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Higt Efficiency

60Hz

60 Hertz Performance Nominals											R22		
Power Type	P _i	208-230V 1~ 60Hz			Test Voltage: 220V 1~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47P1(2)	47	36490	9200	10700	3450	16.0	115	10.6	2.67	3.10	60	1.2	37

60 Hertz Performance Nominals											R22		
Power Type	C	380- 400V 3~ 60Hz			Test Voltage: 400V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47C1(2)	47	35120	8860	10300	3200	5.4	39	10.9	2.75	3.20	60	1.2	35
303DH-50C1(2)	50	38360	9680	11250	3480	6.50	39	10.9	2.75	3.20	60	1.2	35
353DH-56C1(2)	56	42630	10750	12500	3850	6.3	41	11.1	2.80	3.25	60	1.2	35
403DH-64C1(2)	64	48420	12210	14200	4350	7.5	45	11.1	2.80	3.25	60	1.2	35
453DH-72C1(2)	72	55240	13930	16200	4800	9.1	60	11.6	2.92	3.40	60	1.4	36
503DH-80C1(2)	80	61040	15390	17900	5300	8.8	56	11.6	2.92	3.40	60	1.4	37
503DH-83C1(2)	83	62740	15820	18400	5450	9.8	56	11.6	2.92	3.40	60	1.4	37
603DH-90C1(2)	90	68880	17370	20200	6000	10.0	64	11.6	2.92	3.40	60	1.4	37

60 Hertz Performance Nominals											R22		
Power Type	D	415- 440V 3~ 60Hz			Test Voltage: 440V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47D1(2)	47	36830	9290	10800	3400	5.13	42	10.9	2.75	3.20	60	1.2	36
303DH-50D1(2)	50	38360	9680	11250	3480	5.40	45	10.9	2.75	3.20	60	1.2	36
353DH-56D1(2)	56	43650	11010	12800	3950	5.95	45	11.1	2.80	3.25	60	1.2	36
403DH-64D1(2)	64	48420	12210	14200	4350	6.80	48	11.1	2.80	3.25	60	1.2	36
453DH-72D1(2)	72	55240	13930	16200	4800	7.60	54	11.6	2.92	3.40	60	1.4	36
503DH-80D1(2)	80	61040	15390	17900	5300	8.20	54	11.6	2.92	3.40	60	1.4	36
503DH-83D1(2)	83	62740	15820	18400	5450	8.30	54	11.6	2.92	3.40	60	1.4	37
603DH-90D1(2)	90	68880	17370	20200	6000	9.00	60	11.6	2.92	3.40	60	1.4	37

60 Hertz Performance Nominals											R22		
Power Type	B	220V 3~ 60Hz			Test Voltage: 220V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
303DH-47B1(2)	47	35120	8860	10300	3200	9.5	72	10.9	2.75	3.20	60	1.2	35
403DH-64B1(2)	64	48420	12210	14200	4350	12.9	86	11.1	2.80	3.25	60	1.2	35
503DH-80B1(2)	80	61040	15390	17900	5300	15.8	100	11.6	2.92	3.40	60	1.4	37

Test condition of cooling capacity

Evaporating temp	7.2°C	Return gas temp .	18.3°C
Condensing temp.	54.4°C	Liquid temp.	46.1°C
Ambient temp.		35.0°C	

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of High Efficiency

50Hz

50 Hertz Performance Nominals											R407C		
Power Type	Q	220-240V 1~ 50Hz			Test Voltage: 220V 1~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47Q1(2)	47	30620	7720	8980	2860	12.9	83.4	10.7	2.70	3.14	60	1.2	36
G303DH-50Q1(2)	50	33010	8320	9680	3070	13.4	85.0	10.7	2.70	3.14	60	1.2	37
G353DH-56Q1(2)	56	35810	9030	10500	3500	16.2	96.11	10.2	2.58	3.0	60	1.2	36
G403DH-64Q1(2)	64	41940	10580	12300	4100	19.5	117.4	10.2	2.58	3.0	60	1.2	36

50 Hertz Performance Nominals											R407C		
Power Type	C	346 - 380V 3~ 50Hz			Test Voltage: 380V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			DB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47C1(2)	47	30380	7660	8910	2780	5.2	42.5	10.9	2.75	3.20	60	1.2	35
G303DH-50C1(2)	50	33180	8370	9730	2990	5.6	42.5	10.9	2.75	3.20	60	1.2	35
G353DH-56C1(2)	56	36520	9210	10710	3300	6.2	54	11.1	2.80	3.25	60	1.2	35
G403DH-64C1(2)	64	41120	10370	12060	3710	6.9	49	11.1	2.80	3.25	60	1.2	35
G453DH-72C1(2)	72	47430	11960	13910	4120	7.8	64	11.6	2.92	3.40	60	1.4	36
G503DH-80C1(2)	80	52510	13240	15400	4530	8.1	62	11.6	2.92	3.40	60	1.4	37
G503DH-83C1(2)	83	54080	13640	15860	4690	8.4	62	11.6	2.92	3.40	60	1.4	37
G603DH-90C1(2)	90	58990	14880	17300	5150	9.8	70	11.6	2.92	3.40	60	1.4	37

50 Hertz Performance Nominals											R407C		
Power Type	D	380 - 415V 3~ 50Hz			Test Voltage: 380V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			DB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47D1(2)	47	30380	7660	8910	2780	5.0	40	10.9	2.75	3.20	60	1.2	36
G303DH-50D1(2)	50	33180	8370	9730	2990	5.5	44	10.9	2.75	3.20	60	1.2	36
G353DH-56D1(2)	56	36520	9210	10710	3300	5.8	44	11.1	2.80	3.25	60	1.2	36
G403DH-64D1(2)	64	41120	10370	12060	3710	6.5	48	11.1	2.80	3.25	60	1.2	36
G453DH-72D1(2)	72	47430	11960	13910	4120	7.2	53	11.6	2.92	3.40	60	1.4	36
G503DH-80D1(2)	80	52510	13240	15400	4530	7.8	53	11.6	2.92	3.40	60	1.4	36
G503DH-83D1(2)	83	54080	13640	15860	4690	8.3	53	11.6	2.92	3.40	60	1.4	37
G603DH-90D1(2)	90	58990	14880	17300	5150	8.86	57	11.6	2.92	3.40	60	1.4	37

50 Hertz Performance Nominals											R407C		
Power Type	B	220V 3~ 50Hz			Test Voltage: 220V 3~ 50Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	Kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47B1(2)	47	30380	7660	8910	2780	8.5	81	10.9	2.75	3.20	60	1.2	35
G403DH-64B1(2)	64	41120	10370	12060	3710	11.6	97	11.1	2.80	3.25	60	1.2	35
G503DH-80B1(2)	80	52510	13240	15400	4530	13.8	113	11.6	2.92	3.40	60	1.4	37

Test condition of cooling capacity

Evaporating temp	7.2°C	Return gas temp.	18.3°C
Condensing temp.	54.4°C	Liquid temp.	43.9°C
Ambient temp.		35.0°C	

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Higt Efficiency

60Hz

60 Hertz		Performance Nominals									R407C		
Power Type	P	208-230V 3~ 60Hz			Test Voltage: 220V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47P1(2)	47	37580	9480	11020	3550	16.2	115	10.6	2.67	3.10	60	1.2	37

60 Hertz		Performance Nominals									R407C		
Power Type	C	380-400V 3~ 60Hz			Test Voltage: 400V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47C1(2)	47	36180	9120	10610	3300	5.6	39	10.9	2.75	3.20	60	1.2	35
G303DH-50C1(2)	50	39520	9970	11590	3580	6.7	39	10.9	2.75	3.20	60	1.2	35
G353DH-56C1(2)	56	43920	11080	12880	3970	7.4	50	11.1	2.80	3.25	60	1.2	35
G403DH-64C1(2)	64	49320	12440	14470	4450	7.7	45	11.1	2.80	3.25	60	1.2	35
G453DH-72C1(2)	72	56910	14350	16690	4940	9.4	60	11.6	2.92	3.40	60	1.4	36
G503DH-80C1(2)	80	63090	15910	18500	5450	9.1	56	11.6	2.92	3.40	60	1.4	37
G503DH-83C1(2)	83	64620	16300	18950	5610	10.0	56	11.6	2.92	3.40	60	1.4	37
G603DH-90C1(2)	90	70930	17890	20800	6180	10.3	64	11.6	2.92	3.40	60	1.4	37

60 Hertz		Performance Nominals									R407C		
Power Type	D	415 - 440V 3~ 60Hz			Test Voltage: 440V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			DB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47D1(2)	47	36180	91240	10610	3300	5.28	42	10.9	2.75	3.20	60	1.2	36
G303DH-50D1(2)	50	39520	9970	11590	3580	5.60	45	10.9	2.75	3.20	60	1.2	35
G353DH-56D1(2)	56	43920	11080	12880	3970	6.13	45	11.1	2.80	3.25	60	1.2	36
G403DH-64D1(2)	64	49320	12440	14470	4450	7.0	48	11.1	2.80	3.25	60	1.2	36
G453DH-72D1(2)	72	56910	14350	16690	4940	7.8	54	11.6	2.92	3.40	60	1.4	36
G503DH-80D1(2)	80	63090	15910	18500	5450	8.4	54	11.6	2.92	3.40	60	1.4	36
G503DH-83D1(2)	83	64620	16300	18950	5610	8.5	54	11.6	2.92	3.40	60	1.4	37
G603DH-90D1(2)	90	70930	17890	20800	6180	9.27	60	11.6	2.92	3.40	60	1.4	37

60 Hertz		Performance Nominals									R407C		
Power Type	B	220V 3~ 60Hz			Test Voltage: 220V 3~ 60Hz						Sound Level	Oil Charge	Net Weight
Model	Displacement	Cooling Capacity			Motor Input	Current		EER/COP			dB(A)	Liter	kg
	cm ³ /rev	BTU/H	KCAL/H	WATTS	WATTS	RLA	LRA	BTU/W.H	KCAL/W.H	W/W			
G303DH-47B1(2)	47	36180	9120	10610	3300	9.8	72	10.9	2.75	3.20	60	1.2	35
G403DH-64B1(2)	64	49320	12440	14470	4450	13.3	86	11.1	2.80	3.25	60	1.2	35
G503DH-80B1(2)	80	63090	15910	18500	5450	16.3	100	11.6	2.92	3.40	60	1.4	37

Test condition of cooling capacity

Evaporating temp.	7.2°C	Return gas temp.	18.3°C
Condensing temp.	54.4°C	Liquid temp.	43.9°C
Ambient temp.		35.0°C	

* RLA: Running Current

LRA: Locked Rotor Current

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Multiple Series

Multiple compressor unit by oil interior

Nominal Rating	Model	Refrigerant	Displacement	Voltage	Frequency	Cooling Capacity		Motor Input	EER/COP		Remark				
			cm ³ /rev	V	Hz	WATTS	BTU/h	WATTS	BTU/W.H	W/W					
3HP	303DH-47Q2Y	R22	47	220	50	8650	29500	2780	10.7	3.14	50Hz				
	303DH-47C2Y		47	346-380 / 380-400	50/60	8650	29500	2700	10.9	3.20					
3.5HP	353DH-56C2Y		56			10400	35460	3200	11.1	3.25					
4HP	403DH-64C2Y		64			11800	40240	3600	11.1	3.25					
4.5HP	453DH-72C2Y		72			13500	46040	4000	11.6	3.40					
5HP	503DH-80C2Y		80			14900	50800	4400	11.6	3.40					
6HP	603DH-90C2Y		90			16800	57290	5000	11.6	3.40					
Inverter	303DHSV-47B2Y		47			73-180	146-360	30~90	10700	36490		3370	10.9	3.20	60Hz
	303DHSV-47D2Y		47			10700			36490	3350		10.9	3.20		
	403DHSV-64D2Y		64	14200	48420	4300			11.2	3.30					
	503DHSV-80D2Y	80	17900	61040	5300	11.6			3.40						
	401DHSV-64D2Y	64	160-380	20~115	18000	61380	5600	10.9	3.20	75Hz					

Test condition:

Evaporating temp.: 7.2°C

Return gas temp.: 18.3°C

Condensing temp.: 54.4 °C

Liquid temp.: 46.1 °C

Ambient temp: 35.0 °C

Multiple compressor unit by oil exterior

Nominal Rating	Model	Refrigerant	Displacement	Voltage	Frequency	Cooling Capacity		Motor Input	EER/COP		Remark
			cm ³ /rev	V	Hz	WATTS	BTU/h	WATTS	BTU/W.H	W/W	
4HP	400DHM-64D1(2)	R22	64	380-415 / 415-440	50/60	11200	38190	3600	10.6	3.10	50Hz
5HP	500DHM-80D1(2)		80			14000	47740	4300	11.1	3.25	
6HP	600DHM-90D1(2)		90			15700	53540	4800	11.1	3.25	
Inverter	401DHVM-64D1(2)		64	160-380	20~115	16500	56270	5250	10.7	3.14	75Hz

Test condition:

Return gas temp.: 18.3°C

Return gas temp.: 14.4°C

Condensing temp.: 48.7 °C

Liquid temp.: 36.2°C

Ambient temp.: 35.0 °C

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Multiple Series

Multiple compressor unit by oil interior

Nominal Rating	Model	Refrigerant	Displacement	Voltage	Frequency	Cooling Capacity		Motor Input		EER/COP		Remark	
			cm ³ /rev	V	Hz	WATTS	BTU/h	WATTS	BTU/W.H	W/W			
3HP	G303DH-47Q2Y	R407C	47	220	50/60	8980	30620	2860	10.7	3.14	50Hz		
	G303DH-47C2Y		47			8910	30380	2780	10.9	3.20			
3.5HP	G353DH-56C2Y		56			10710	36520	3300	11.1	3.25			
4HP	G403DH-64C2Y		64	346-380		12060	41120	3710	11.1	3.25			
4.5HP	G453DH-72C2Y		72	380-400		13910	47430	4120	11.6	3.40			
5HP	G503DH-80C2Y		80			15400	52510	4530	11.6	3.40			
6HP	G603DH-90C2Y		90			17300	58990	5150	11.6	3.40			
Inverter	G303DHSV-47B2Y		47	73-180		30~90	11000	37510	3470	10.9		3.20	60Hz
	G303DHSV-47D2Y		47	146-360			11000	37510	3450	10.9		3.20	
	G403DHSV-64D2Y		64				14600	49790	4430	11.2		3.30	
	G503DHSV-80D2Y	80	135-360	18400	62740		5460	11.6	3.40				
	G401DHSV-64D2Y	64	160-380	20~115	18540		63220	5770	10.9	3.20	75Hz		

Test condition:

Evaporating temp.: 7.2 °C Return gas temp.: 18.3 °C
 Condensing temp.: 54.4 °C Liquid temp.: 43.9 °C
 Ambient temp.: 35.0 °C

Multiple compressor unit by oil exterior

Nominal Rating	Model	Refrigerant	Displacement	Voltage	Frequency	Cooling Capacity		Motor Input		EER/COP		Remark
			cm ³ /rev	V	Hz	WATTS	BTU/h	WATTS	BTU/W.H	W/W		
4HP	G400DHM-64D1(2)	R407C	64	380-415	50/60	11540	39350	3710	10.6	3.10	50Hz	
5HP	G500DHM-80D1(2)		80			14420	49170	4430	11.1	3.25		
6HP	G600DHM-90D1(2)		90			16170	55140	4940	11.1	3.25		
Inverter	G401DHVM-64D1(2)		64	160-380		20~115	17000	57970	5410	10.7		3.14

Test condition:

Evaporating temp.: 4.4 °C Return gas temp.: 14.4 °C
 Condensing temp.: 48.7 °C Liquid temp.: 33.9 °C
 Ambient temp.: 35.0 °C

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Specification Of Inverter Series

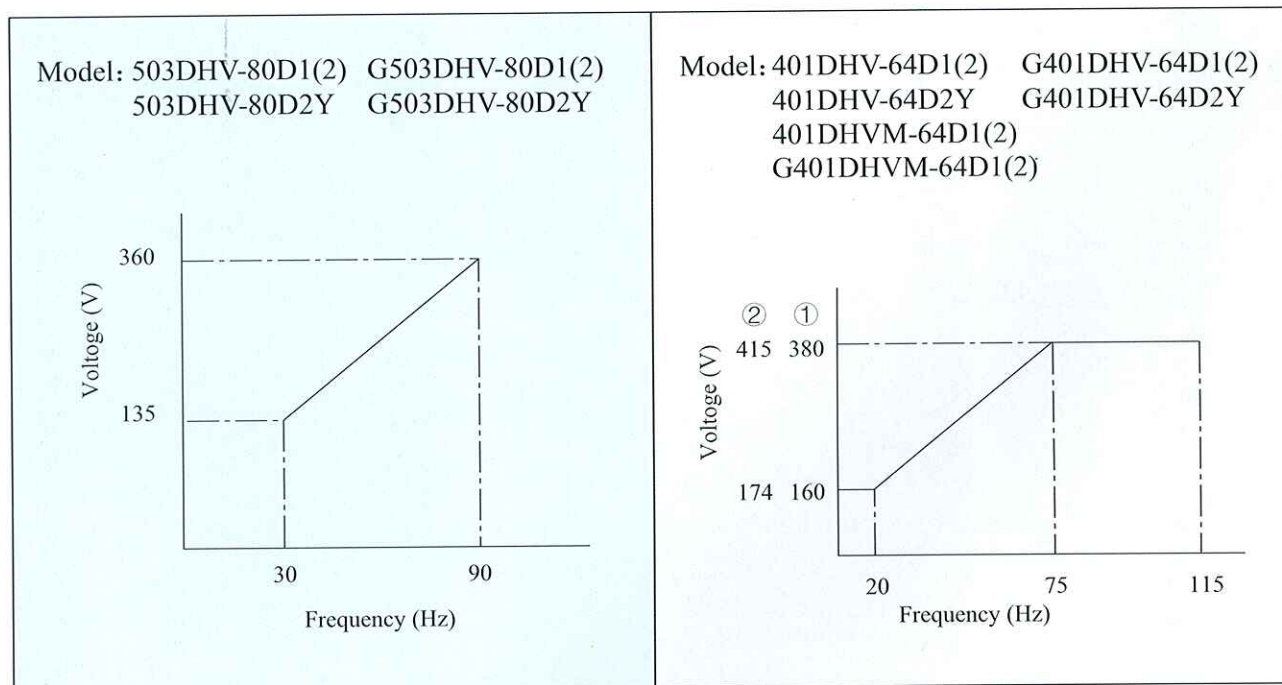
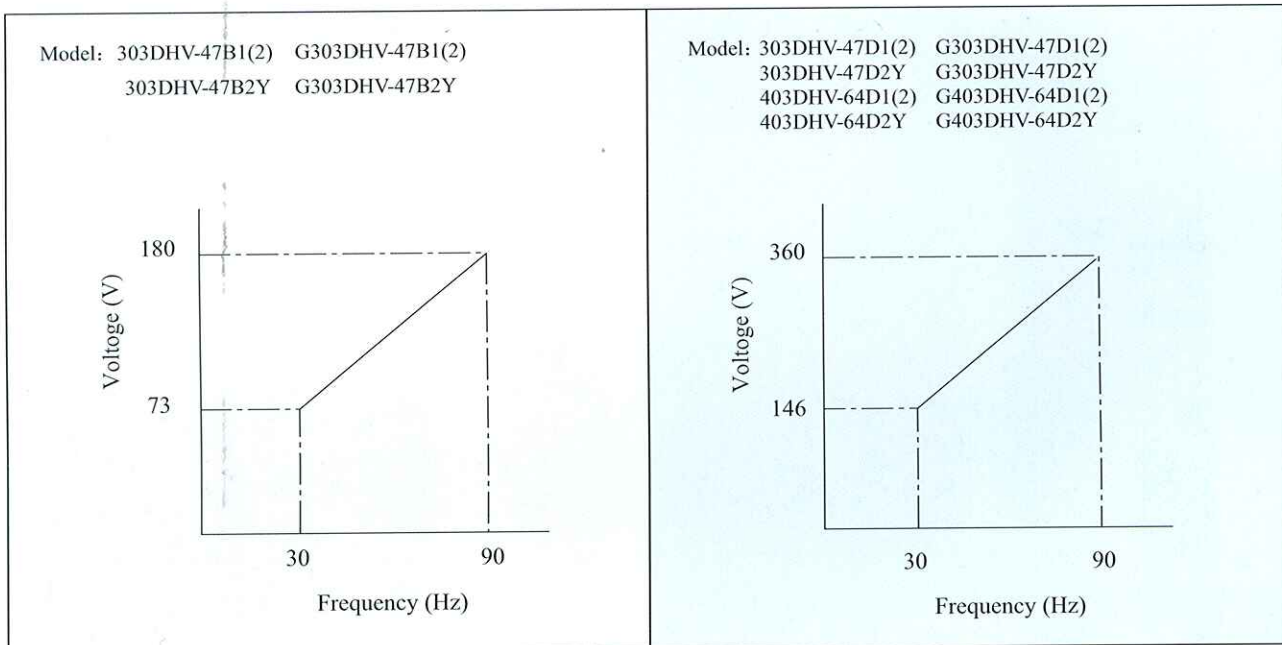
Specifications of inverter controlled compressors

Nominal Rating		3HP		4HP		5HP
Power of Inverter		B	D	D	D	D
Model		303DHV-47B1(2)	303DHV-47D1(2)	403DHV-64D1(2)	401DHV-64D1(2)	503DHV-80D1(2)
Cooling Capacity	WATTS	10700	10700	14200	18000	17900
	KCAL/H	9200	9200	12210	15480	15390
	BTU/H	36490	36490	48420	61380	61040
Motor Input	WATTS	3370	3350	4300	5600	5300
Current	AMPERES	18.5	8.6	11.5	10.5	15.0
COP	W/W	3.20	3.20	3.30	3.20	3.40
Displacement	cm ³ /rev	47		64		80
Test Frequency (Hz)		60			75	60
Voltage Range (V)		73~180	146~360		160~380	135~360
Frequency Range(Hz)		30~90			20~115	30~90
Net Weight (Kg)		36	36	37	36	37
Refrigerant		R22				
Test condition: Evaporating temp.: 7.2 °C Return gas temp. : 18.3 °C Condensing temp. : 54.4 °C Liquid temp.: 46.1 °C Ambient temp. : 35.0 °C						
Nominal Rating		3HP		4HP		5HP
Power of Inverter		B	D	D	D	D
Model		G303DHV-47B1(2)	G303DHV-47D1(2)	G403DHV-64D1(2)	G401DHV-64D1(2)	G503DHV-80D1(2)
Cooling Capacity	WATTS	11000	11000	14600	18540	18400
	KCAL/H	9460	9460	12560	15940	15820
	BTU/H	37510	37510	49790	63220	62740
Motor Input	WATTS	3470	3450	4430	5770	5460
Current	AMPERES	19.1	8.9	11.8	10.8	15.5
COP	W/W	3.20	3.20	3.30	3.20	3.40
Displacement	cm ³ /rev	47		64		80
Test Frequency (Hz)		60			75	60
Voltage Range (V)		73~180	146~360		160~380	135~360
Frequency Range(Hz)		30~90			20~115	30~90
Net Weight (Kg)		36	36	37	36	37
Refrigerant		R407C				
Test condition: Evaporating temp.: 7.2 °C Return gas temp. : 18.3 °C Condensing temp. : 54.4 °C Liquid temp.: 43.9 °C Ambient temp. : 35.0 °C						

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Basic V/F Characteristics

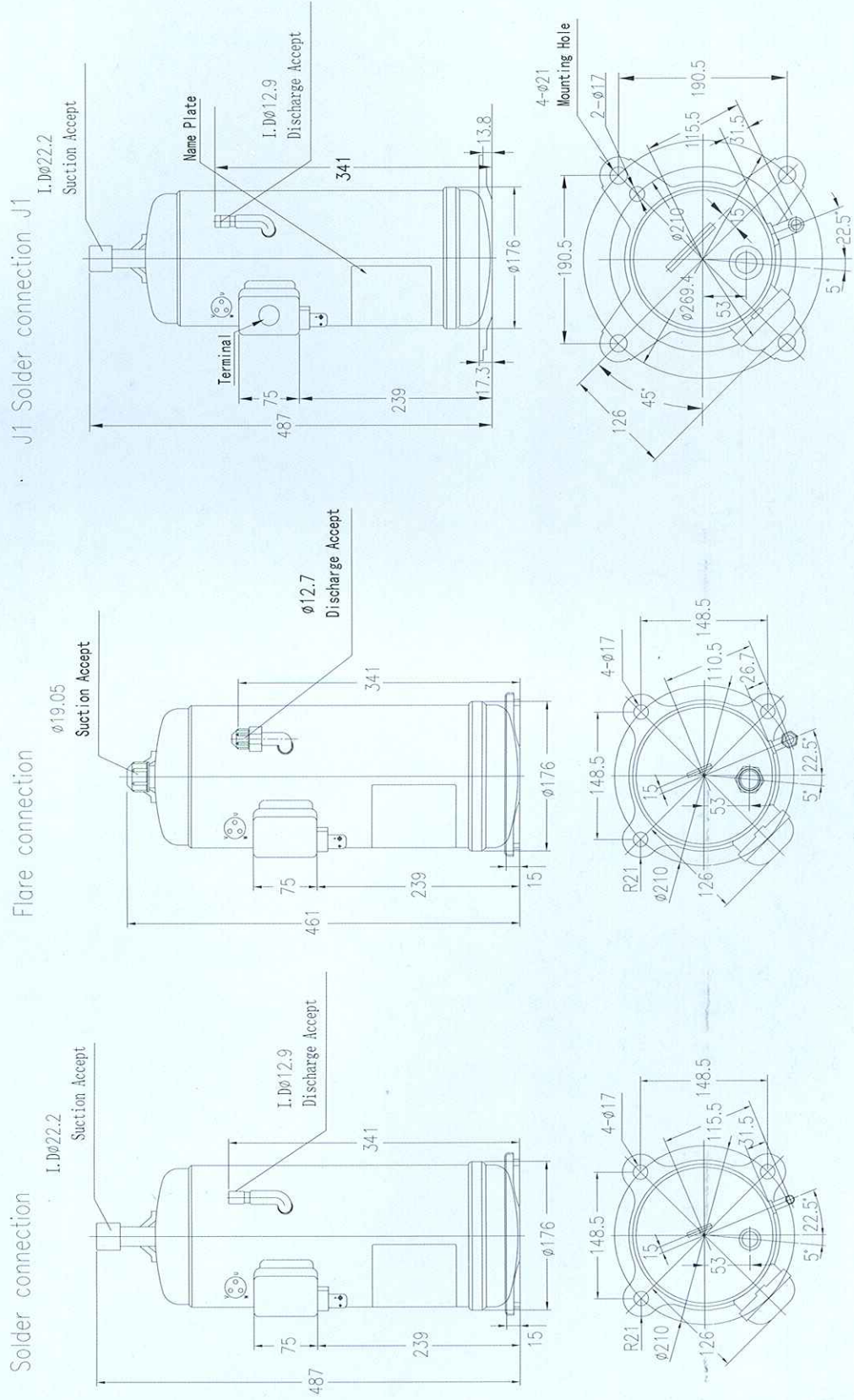


Detailed specifications are available for each model. Please contact HCPG.

HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

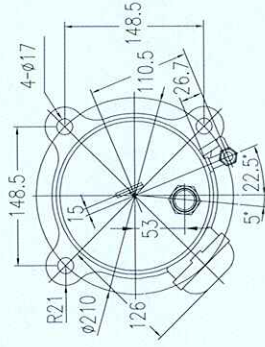
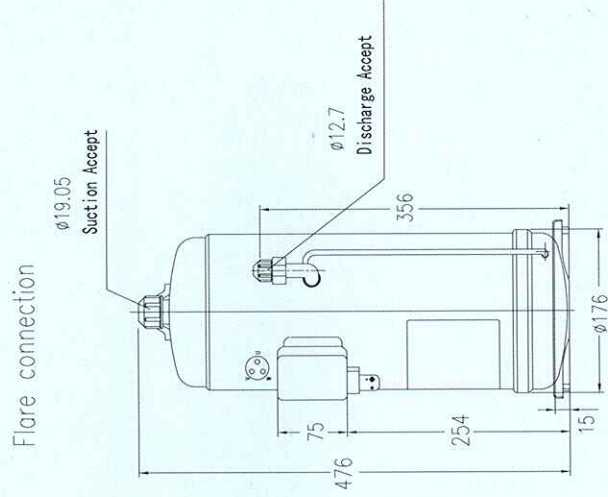
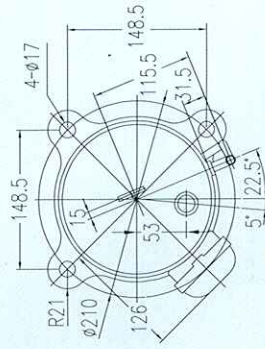
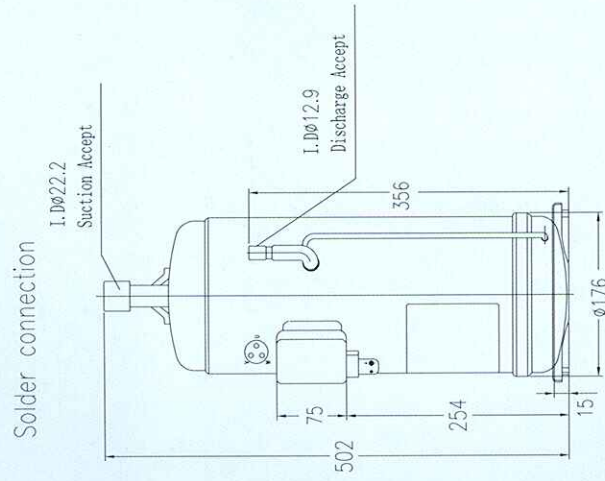
Dimensions



HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Dimensions of Scroll Multiple compressor unit



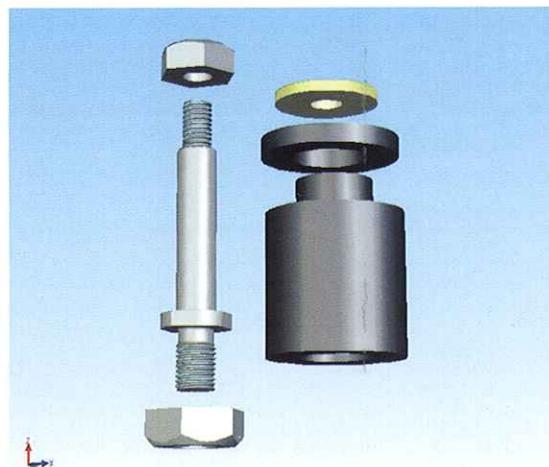
HITACHI SCROLL COMPRESSORS

For Heat Pump & Air Conditioning Application

Accessories of compressor

NO.	Part name	Qty	Drawing NO	Remarks
1	Bolt	4	TP1-101	Standard parts
2	Rubber grommet A	4	TP1-102	
3	Rubber grommet B	4	TP1-103	
4	Washer	4	TP1-104	
5	M6 screw nut M6	4	GB41-86-M6	
6	M8 crew nut M8	4	GB41-86-M8	
7	Spring Washer	4	GB93-87-6	
8	Thermostat holder	1	TP1-105	Option parts
9	Discharge thermostat	1	TP1-106	
10	Reversing valve relay	1	TP1-107	
11	over current relay	1	TP1-108	
12	Capacitor	1	TP1-109	
13	Crankcase heater	1	TP1-110	

Units Conversion Chart
 BTU/H=WATTS X 3.41
 KCAL/H=WATTS X 0.86





Hitachi Compressor Products (Guangzhou) Co.,Ltd.

ADD: QIGAN TOWN CONGHUA CITY GUANGZHOU

TEL: 020-87861360

FAX: 020-87861808,87861358

ZIP: 510935