

Application guidelines

Danfoss scrolls, **H-Series** Residential and light commercial

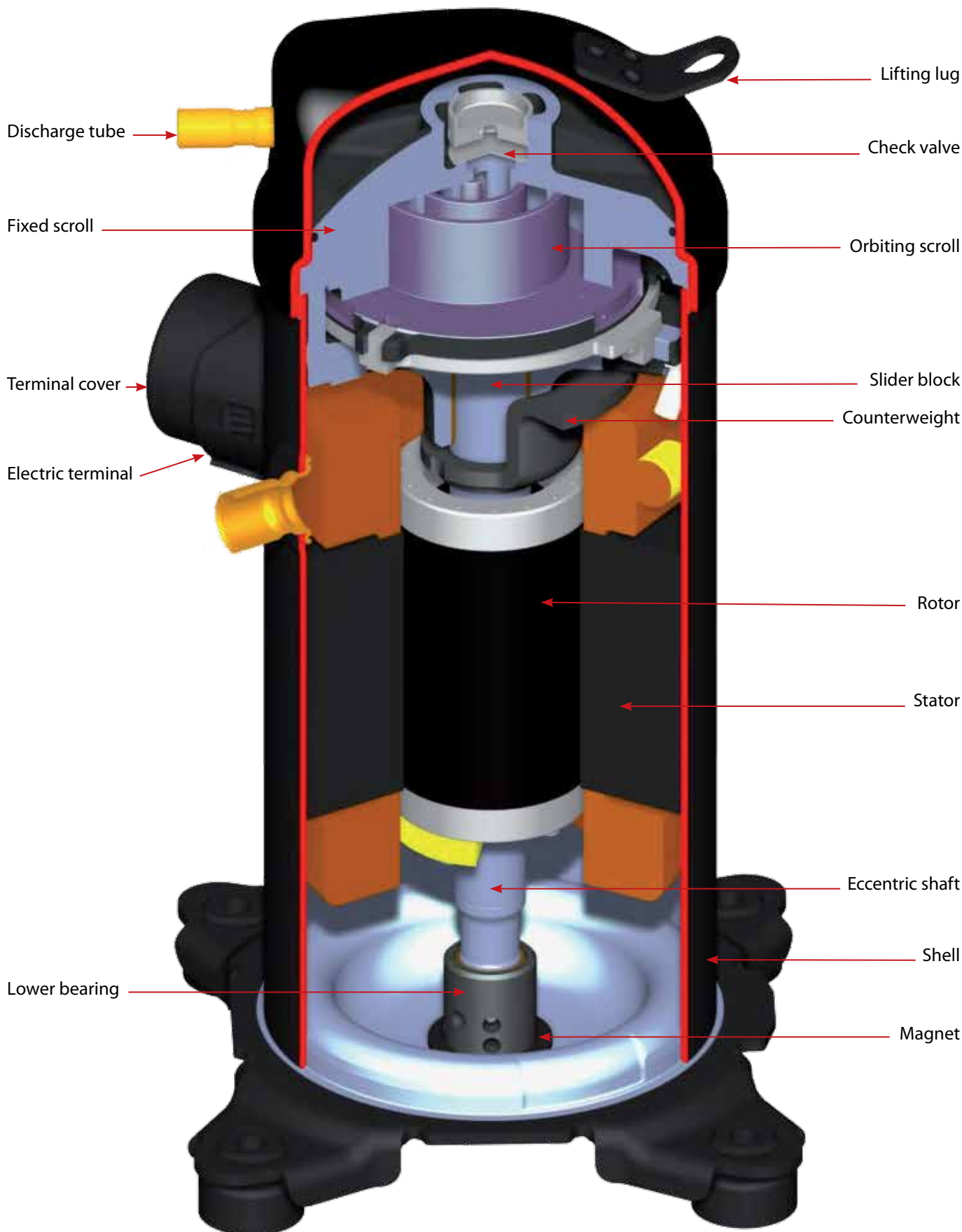
50 - 60 Hz - R22 - R407C - R410A



Features

Danfoss H-series scroll compressors are manufactured using the most advanced machining, assembly, and process control techniques. In design of both the compressor and the factory, very high standards of reliability

and process control were first priority. The result is a highly efficient product with the highest reliability obtainable, and a low sound level. The H-series compressors can be black or blue depending on the production site.



GENERAL INFORMATION
PRODUCT INFORMATION
SYSTEM DESIGN
INTEGRATION INTO SYSTEM
ORDERING INFORMATION

Compressor model designation

Danfoss H-series scroll compressor for R22/R407C/R410A is available as single compressor and can be assembled in tandem combinations. The example below presents the compressor

nomenclature which equals the technical reference as shown on the compressor nameplate. Code numbers for ordering are listed section "Ordering information and packaging".

Nomenclature

Type	Size	Motor	Features
HRH	036	U1L	P6

Application: _____
H: high temperature / air conditioning

Family: _____
C: commercial scroll
R: residential scroll
L: light commercial scroll

Refrigerant & lubricant: _____
M: R22, alkylbenzene lubricant
P: R407C, PVE lubricant
H: R410A, PVE lubricant
J: R410A, PVE lubricant

Nominal capacity: _____
 In thousand Btu/h at 60 Hz, ARI conditions

Model variation _____
T: design optimized for 7.2/54.4°C
U: design optimized for 7.2/37.8°C

Other features

	Oil sight glass	Oil equalisation	Oil drain	LP gauge port	Gas equalisation port
6	None	None	None	None	None
7	Threaded	None	None	None	None
8	None	Brazed	None	None	Brazed
T	None	Screw	Schrader	None	None

Tubing and electrical connections
P: brazed connections, spade terminals
C: brazed connections, screw terminals

Motor protection
L: internal motor protection

Motor voltage code
1: 208-230V/1~/60 Hz
2: 200-220V/3~/50Hz & 208-230V/3~/60 Hz
4: 380-415V/3~/50 Hz & 460V/3~/60 Hz
5: 220-240V/1~/50 Hz
7: 575V/ 3~/60 Hz
9: 380V/3~/60 Hz

Feature Version T compressors are built with a threaded oil equalization port to be used with Danfoss variable speed compressors range VZH series.

GENERAL INFORMATION

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Technical specifications

50-60 Hz data

Model	Nominal tons 60 Hz	Nominal cooling capacity		Power input	COP	E.E.R	Swept volume	Displacement	Oil charge	Net weight	
	TR	W	Btu/h	kW	W/W	Btu/h/W	cm ³ /rev	m ³ /h	dm ³	kg	
50Hz	HRH029U4	2.4	7 120	24 310	2.43	2.93	10	27.8	4.84	1.06	32
	HRH031U4	2.6	7 530	25 710	2.67	2.82	9.62	29.8	5.19	1.06	32
	HRH032U4	2.7	7 670	26 170	2.75	2.79	9.51	30.6	5.33	1.06	32
	HRH034U4	2.8	8 500	29 000	2.9	2.93	10	33.3	5.75	1.06	32
	HRH036U4	3	8 820	30 110	3.13	2.82	9.62	34.7	6.04	1.06	32
	HRH038U4	3.2	9 250	31 560	3.35	2.76	9.41	36.5	6.36	1.06	39
	HRH040U4	3.3	10 200	34 810	3.58	2.85	9.72	39.6	6.9	1.33	39
	HRH041U4	3.3	10 050	34 300	3.43	2.93	10	39.3	6.8	1.57	39
	HRH044U4	3.7	10 830	36 940	3.92	2.76	9.41	42.6	7.41	1.57	39
	HRH047U4	3.9	11 340	38 700	3.87	2.93	10.01	44.4	7.73	1.57	39
	HRH049U4	4.1	12 110	41 320	4.04	2.99	10.22	47.4	8.24	1.57	39
	HRH051U4	4.3	12 860	43 890	4.21	3.05	10.42	49.3	8.58	1.57	41
	HRH054U4	4.5	13 340	45 510	4.41	3.02	10.32	52.1	9.07	1.57	41
	HRH056U4	4.7	13 830	47 200	4.58	3.02	10.31	54.1	9.42	1.57	41
	HLH061T4	5.1	15 210	51 880	4.89	3.11	10.61	57.8	10.1	1.57	41
	HLH068T4	5.7	16 880	57 610	5.26	3.21	10.96	64.4	11.21	1.57	41
	HLJ072T4	6	17 840	60 900	5.56	3.21	11	68	11.82	1.57	41
	HLJ075T4	6.3	18 600	63 490	5.77	3.22	11	70.8	12.32	1.57	41
	HLJ083T4	6.9	20 420	69 690	6.28	3.25	11.1	78.1	13.59	1.57	41
	H CJ090T4	7.5	22 320	76 190	7.19	3.11	10.6	86.9	15.11	2.66	44
H CJ091T4	7.5	22 380	76 360	7.03	3.18	10.87	86.9	15.11	2.46	49	
H CJ105T4	8.8	26 100	89 090	8.25	3.16	10.8	101.6	17.68	2.66	44	
H CJ106T4	8.8	26 050	88 880	8.07	3.23	11.01	101.6	17.68	2.46	49	
H CJ120T4	10	29 610	101 080	9.53	3.11	10.6	116.4	20.24	2.66	44	
H CJ121T4	10	29 720	101 400	9.22	3.22	11	116.4	20.24	2.46	49	
60Hz	HRH029U4	2.4	8 500	29 000	2.84	2.99	10.2	27.8	5.84	1.06	32
	HRH031U4	2.6	9 080	30 990	3.04	2.99	10.2	29.8	6.26	1.06	32
	HRH032U4	2.7	9 380	31 990	3.1	3.02	10.3	30.6	6.43	1.06	32
	HRH034U4	2.8	10 110	34 510	3.38	2.99	10.2	33.3	6.94	1.06	32
	HRH036U4	3	10 370	35 390	3.47	2.99	10.2	34.7	7.3	1.06	32
	HRH038U4	3.2	11 100	37 890	3.79	2.93	10	36.5	7.67	1.06	39
	HRH040U4	3.3	12 160	41 490	4.03	3.02	10.3	39.6	8.3	1.33	39
	HRH041U4	3.3	12 100	41 300	4.05	2.99	10.2	39.3	8.3	1.57	39
	HRH044U4	3.7	13 010	44 390	4.31	3.02	10.3	42.6	8.95	1.57	39
	HRH047U4	3.9	13 630	46 510	4.56	2.99	10.2	44.4	9.33	1.57	39
	HRH049U4	4.1	14 360	48 990	4.66	3.08	10.5	47.4	9.95	1.57	39
	HRH051U4	4.3	15 180	51 780	4.84	3.14	10.7	49.3	10.36	1.57	41
	HRH054U4	4.5	15 970	54 480	5.14	3.11	10.6	52.1	10.94	1.57	41
	HRH056U4	4.7	16 670	56 880	5.36	3.11	10.6	54.1	11.36	1.57	41
	HLH061T4	5.1	18 050	61 580	5.7	3.17	10.8	57.8	12.13	1.57	41
	HLH068T4	5.7	20 130	68 670	6.3	3.2	10.9	64.4	13.52	1.57	41
	HLJ072T4	6	21 240	72 500	6.65	3.19	10.9	68	14.27	1.57	41
	HLJ075T4	6.3	22 320	76 190	6.86	3.25	11.1	70.8	14.87	1.57	41
	HLJ083T4	6.9	24 340	83 090	7.55	3.22	11	78.1	16.4	1.57	41
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H CJ105T4	8.8	31 170	106 390	9.75	3.2	10.9	101.6	21.34	2.66	44	
H CJ106T4	8.8	31 670	108 050	9.67	3.28	11.18	101.6	21.34	2.46	49	
H CJ120T4	10	35 620	121 600	11.15	3.2	10.9	116.4	24.43	2.66	44	
H CJ121T4	10	35 940	122 620	11.07	3.25	11.08	116.4	24.43	2.46	49	

① Displacement at nominal speed: 2900 rpm at 50 Hz, 3500 rpm at 60 Hz

② Net weight with oil charge

TR = Ton of Refrigeration
COP = Coefficient Of Performance
EER = Energy Efficiency Ratio

Standard rating conditions: ARI standard
Refrigerant: R410A
Superheat: 11.1 K

Evaporating temperature: 7.2 °C
Condensing temperature: 54.4 °C
Sub-cooling: 8.3 K

All performance test data after run-in 72hr

Subject to modification without prior notification

Data given for motor code 4 compressor, for full data details and capacity tables refer to Online Datasheet Generator: www.danfoss.com/odsg

GENERAL INFORMATION

PRODUCT INFORMATION

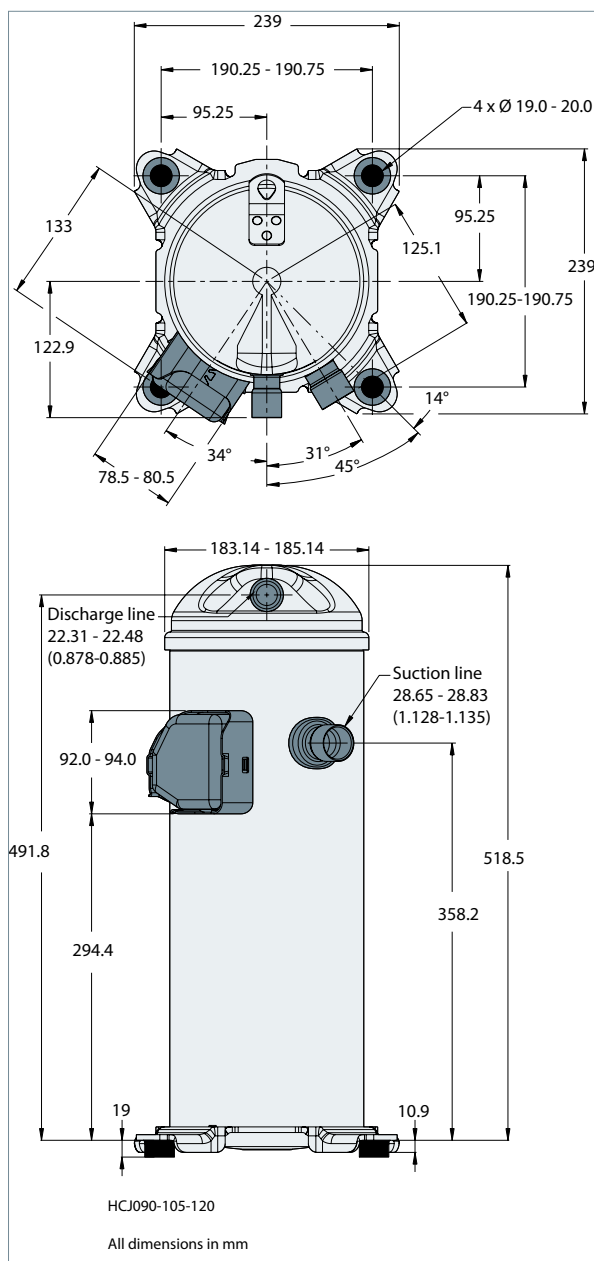
SYSTEM DESIGN

INTEGRATION INTO SYSTEM

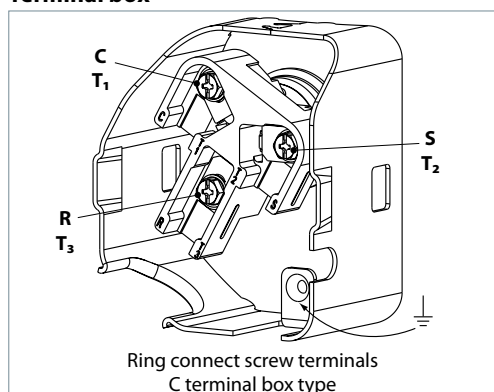
ORDERING INFORMATION

Dimensions

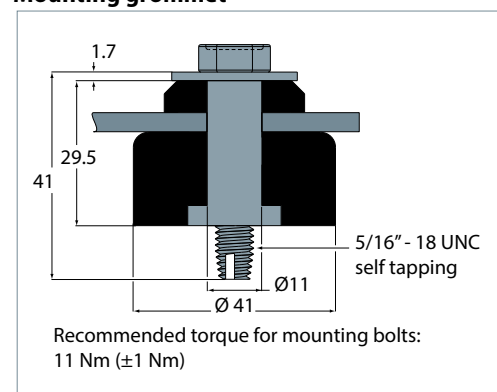
HCJ090-105-120



Terminal box



Mounting grommet



Refer to section 44 for overview of shipped mounting accessories

Danfoss Commercial Compressors

is a worldwide manufacturer of compressors and condensing units for refrigeration and HVAC applications. With a wide range of high quality and innovative products we help your company to find the best possible energy efficient solution that respects the environment and reduces total life cycle costs.

We have 40 years of experience within the development of hermetic compressors which has brought us amongst the global leaders in our business, and positioned us as distinct variable speed technology specialists. Today we operate from engineering and manufacturing facilities spanning across three continents.



Danfoss Scrolls



Danfoss Inverter Scrolls



Danfoss Turbocor Compressors



Danfoss Light Commercial Refrigeration Compressors



Danfoss Maneurop Reciprocating Compressors



Danfoss Optyma Condensing Units

Our products can be found in a variety of applications such as rooftops, chillers, residential air conditioners, heatpumps, coldrooms, supermarkets, milk tank cooling and industrial cooling processes.

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Danfoss Commercial Compressors, BP 331, 01603 Trévoux Cedex, France | +334 74 00 28 29



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