

**Model**

Designation	<b>FR7GH</b>	<b>220-240V/50Hz 1~ 220-240V/60Hz 1~</b>	Sales code:	<b>103G6692</b>
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**Compressor design**

Oil type	Polyolester	Refrigerant(s)	<b>R134a</b>
Oil viscosity	19,2cST	Displacement	6,93cm <sup>3</sup> / 0,42cu.in
Oil quantity	445cm <sup>3</sup> / 15,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	900g / 31,7oz		
Free gas volume comp.	1350cm <sup>3</sup> / 45,6fl.oz		
Weight	10,6kg / 23,4lbs		
Motor protection	1# internal		
Winding resistance main	8,8Ω (at 25°C)		
Winding resistance aux	12Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



**General - Configurations with FR7GH**

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Motorconfiguration	CSIR	CSIR	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz	208-230V/60Hz	208-230V/60Hz
Number of phases	1	1	1	1
Voltage range	198-254V	198-254V	198-254V	198-254V
Approvals	CCC	CCC	CCC	CCC
Starting torque	HST	HST	HST	HST
Note	Compressor with oil cooler.			

**Applications with FR7GH**

	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Refrigerant	R134a	R513A	R134a	R513A
Application	MBP+HBP	MBP+HBP	MBP+HBP	MBP+HBP
System cooling	oil cooled	oil cooled	oil cooled	oil cooled
Hot gas defrost	OK	OK	OK	OK
Long interval pull down	OK	OK	OK	OK

**Electrical data - Configurations with FR7GH**

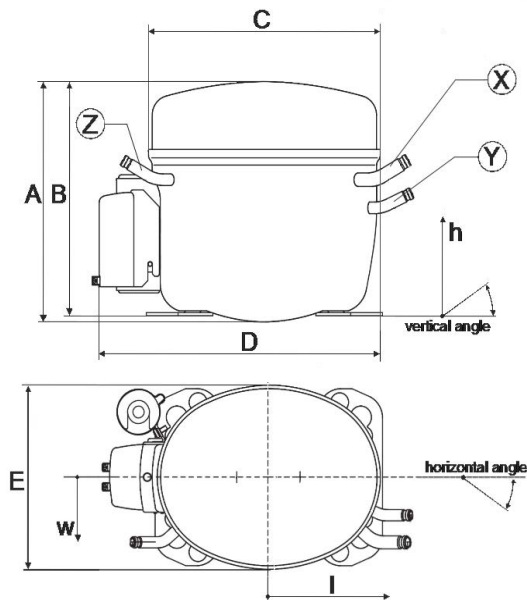
	<b>Conf. 1</b>	<b>Conf. 2</b>	<b>Conf. 3</b>	<b>Conf. 4</b>
Starting device type	relay	relay	relay	relay
Run capacitor	-/-	-/-	-/-	-/-
Start capacitor	80μF	80μF	80μF	80μF
LRA (locked rotor amps / 4s)	9,1A	9,1A	9,1A	9,1A
RLA (rated load amps / 1s)				
Cut in current	9,1A	9,1A	9,1A	9,1A
IP class	21	21	21	21

**Model**

Designation	<b>FR7GH</b>	220-240V/50Hz 1~ 220-240V/60Hz 1~	Sales code:	<b>103G6692</b>
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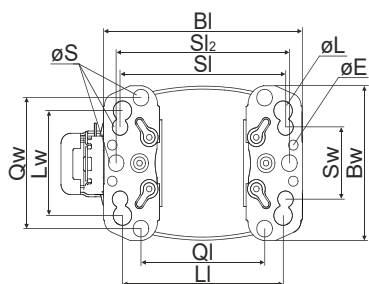
**Compressor dimensions**

<b>Housing</b>	A Height	196mm / 7,72in
	B Height	191mm / 7,52in
	C Length shell	220mm / 8,66in
	D Length w. cover	243mm / 9,57in
	E Width	156mm / 6,14in



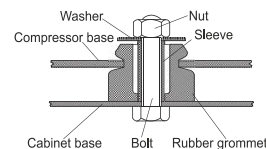
<b>Connectors</b>		<b>Suction</b>	<b>Discharge</b>	<b>Process</b>
		<b>X</b>	<b>Y</b>	<b>Z</b>
Diameter	[mm]	øi 8,11-8,29	øi 8,11-8,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,32-0,33	øi 0,32-0,33	øi 0,24-0,25
Material		steel/CU	copper	steel/CU
Horizontal angle	±2°	0°	0°	0°
Vertical angle	±2°	30°	25°	150°
Position l/h/w	[mm]	125/130/55	128/102/32	-123/127/55
	[in]	4,9/5,1/2,2	5/4/1,3	-4,8/5/2,2
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5

**Compressor fixation**

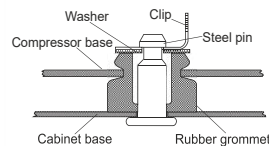


Baseplate	[mm]	[inch]
BI	204	8.03
Bw	150	5.9
øE	ø 9.7	ø 0.38
Large holes		
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63
QI	127	5
Qw	127	5

**Bolt joint**



**Snap-on**



<b>Mounting accessories</b>	one comp.	multi pack
Bolt joint   M6   ø16mm	118-1917	118-1918
Bolt joint   ø1/4"   ø16mm	118-1946	
Bolt joint   ø1/4"   ø19mm	118-1949	
Snap-on   ø7,3   ø16mm	118-1947	118-1919

**Application notes**

Compressor with oil cooler.

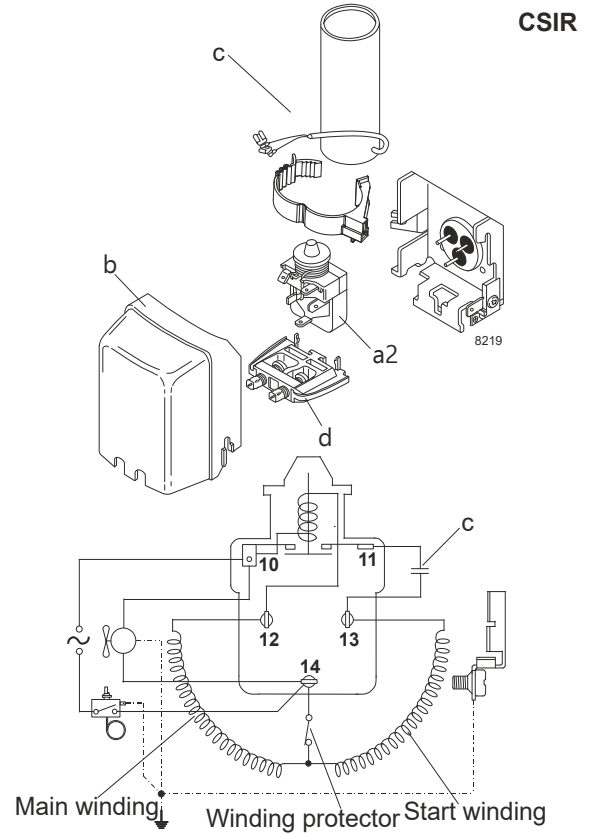
**Model**

Designation	<b>FR7GH</b>	<b>220-240V/50Hz</b>	<b>Conf. 1</b>	Sales code:	<b>103G6692</b>
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**Configuration**

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R134a
Application	MBP+HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC

**Electrical accessories / wiring diagram**

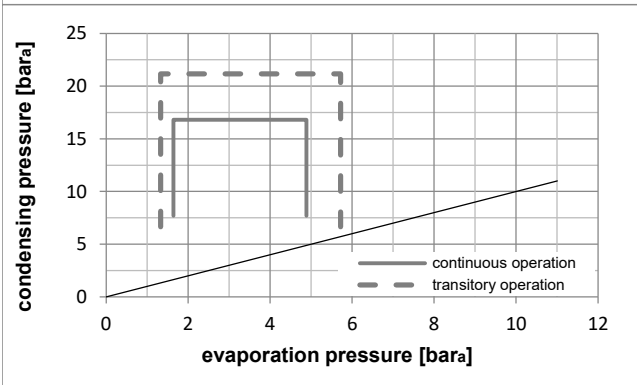
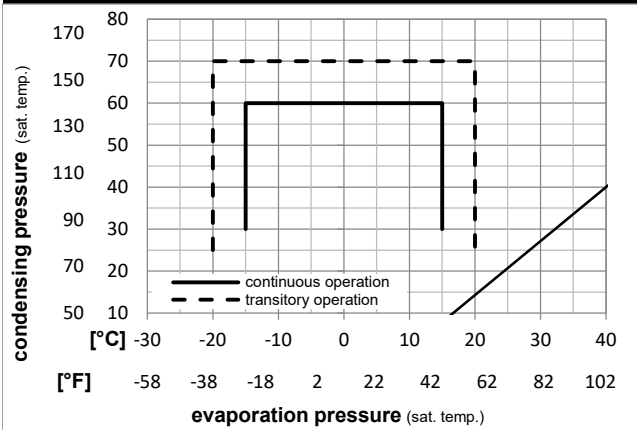


**Ambient temperatures / system cooling**

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	oil cooled	oil cooled
38°C / 100°F	n/a	oil cooled	oil cooled
43°C / 110°F	n/a	oil cooled	oil cooled

**Operation pressure range**



**Components**

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

**Model**

Designation **FR7GH 220-240V/50Hz** Conf. 1 Sales code: **103G6692**

**Optimization + standard conditions**

220V/50Hz, CSIR, fan 1,5m/s, CCC

Evaporating pressure (saturation temperature)		Condensing pressure (saturation temperature)				Cooling capacity			COP	EER	Power consumption			ASHRAE HBP
Return gas temp.		Liquid temp.		[W]		[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	7,22	54,4	35	46,1	645,2	2203	555,2	2,44	8,33	2,10	264,6	1,72	14,31	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	5	55	32	55	525,4	1794	452,1	2,04	6,95	1,75	258,2	1,70	12,95	cecomaf HBP
[°F]	41	131	89,6	131										
[°C]	5	50	20	50	553,7	1891	476,5	2,23	7,60	1,92	248,7	1,67	13,95	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-6,66	54,4	35	46,1	334,8	1143	288,1	1,60	5,47	1,38	208,9	1,53	7,30	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	255,2	872	219,7	1,33	4,53	1,14	192,4	1,47	6,17	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	301,9	1031	259,8	1,61	5,51	1,39	187,2	1,48	7,07	EN12900 MBP
[°F]	14	113	68	113										

**Performance tables**

220V/50Hz, CSIR, fan 1,5m/s, CCC

	pe	Cooling capacity			COP	EER	P1	I	m		
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-15	5	242,0	826	208,2	1,47	5,02	1,27	164,5	1,42	5,27
cond. pressure	-10	14	313,2	1070	269,5	1,67	5,71	1,44	187,2	1,48	6,85
pc= 45/113	-5	23	400,9	1369	345,0	1,94	6,62	1,67	206,9	1,54	8,82
return gas temp.	0	32	506,7	1730	436,1	2,26	7,73	1,95	223,8	1,60	11,21
RGT= 32/90	5	41	632,3	2160	544,2	2,66	9,08	2,29	237,8	1,64	14,08
liquid temp	10	50	779,5	2662	670,8	3,13	10,69	2,69	249,0	1,68	17,49
Tliq= 45/113	15	59	949,8	3244	817,4	3,69	12,61	3,18	257,2	1,72	21,51
[°C / °F]	-15	5	199,0	680	171,2	1,21	4,13	1,04	164,7	1,38	4,79
cond. pressure	-10	14	255,2	872	219,7	1,33	4,53	1,14	192,4	1,47	6,17
pc= 55/131	-5	23	327,3	1118	281,7	1,51	5,15	1,30	217,2	1,55	7,96
return gas temp	0	32	416,8	1423	358,7	1,74	5,95	1,50	239,1	1,63	10,19
RGT= 32/90	5	41	525,4	1794	452,1	2,04	6,95	1,75	258,2	1,70	12,95
liquid temp	10	50	654,8	2236	563,5	2,39	8,15	2,05	274,3	1,76	16,28
Tliq= 55/131	15	59	806,7	2755	694,2	2,80	9,58	2,41	287,6	1,81	20,26

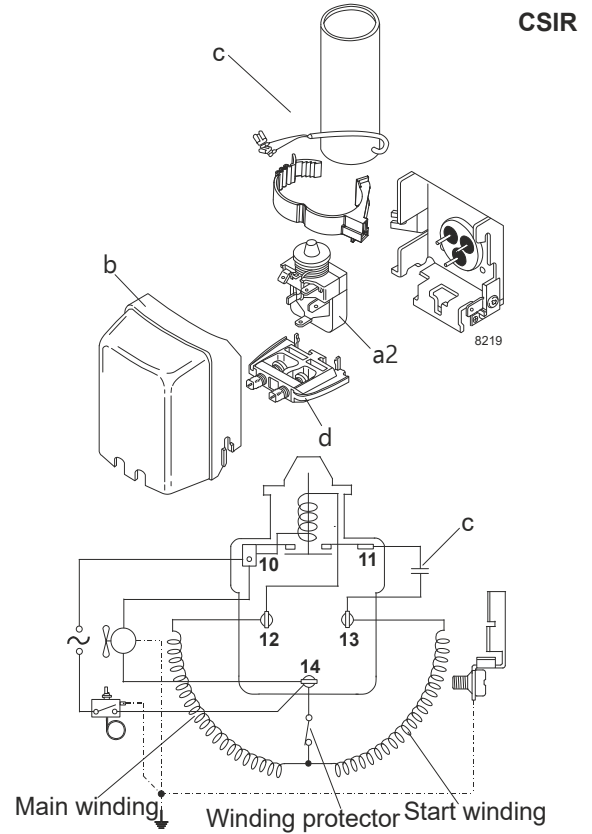
**Model**

Designation	<b>FR7GH</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>103G6692</b>
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**Configuration**

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R513A
Application	MBP+HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC

**Electrical accessories / wiring diagram**

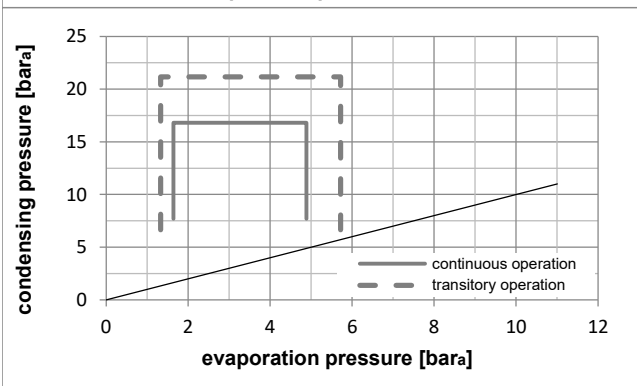
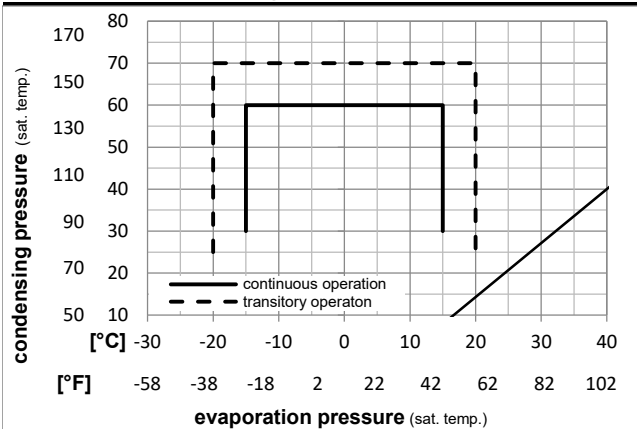


**Ambient temperatures / system cooling**

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	oil cooled	oil cooled
38°C / 100°F	n/a	oil cooled	oil cooled
43°C / 110°F	n/a	oil cooled	oil cooled

**Operation pressure range**



**Components**

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

**Model**

Designation	<b>FR7GH</b>	<b>220-240V/50Hz</b>	<b>Conf. 2</b>	Sales code:	<b>103G6692</b>
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**Optimization + standard conditions**

220V/50Hz, CSIR, fan 1,5m/s, CCC

Evaporating pressure (saturation temperature)		Condensing pressure (saturation temperature)				Cooling capacity			COP	EER	Power consumption			ASHRAE HBP
Return gas temp.		Liquid temp.		[W]		[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	Ref. mass flow	
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C]	7,22	54,4	35	46,1	664,6	2270	572,0	2,41	8,24	2,08	275,5	1,77	16,51	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	5	55	32	55	533,3	1821	459,0	1,98	6,76	1,70	269,4	1,75	14,99	cecomaf HBP
[°F]	41	131	89,6	131										
[°C]	5	50	20	50	563,0	1923	484,5	2,17	7,41	1,87	259,5	1,72	16,14	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-6,66	54,4	35	46,1	353,1	1206	303,9	1,60	5,46	1,38	220,9	1,59	8,65	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	266,4	910	229,3	1,30	4,46	1,12	204,2	1,54	7,37	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	316,9	1082	272,7	1,60	5,47	1,38	198,0	1,52	8,40	EN12900 MBP
[°F]	14	113	68	113										

**Performance tables**

220V/50Hz, CSIR, fan 1,5m/s, CCC

[°C / °F]	pe	Cooling capacity			COP	EER	P1			I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-15	5	258,8	884	222,8	1,48	5,06	1,27	174,9	1,45	6,34
cond. pressure	-10	14	331,4	1132	285,2	1,67	5,72	1,44	198,0	1,52	8,15
pc= 45/113	-5	23	420,1	1435	361,6	1,93	6,59	1,66	217,8	1,58	10,37
return gas temp.	0	32	526,7	1799	453,3	2,25	7,67	1,93	234,5	1,64	13,06
RGT= 32/90	5	41	652,7	2229	561,7	2,63	8,99	2,26	248,0	1,68	16,28
liquid temp	10	50	799,5	2730	688,0	3,09	10,56	2,66	258,5	1,71	20,07
Tliq= 45/113	15	59	968,7	3308	833,7	3,64	12,43	3,13	266,1	1,74	24,51
[°C / °F]	-15	5	210,3	718	181,0	1,20	4,08	1,03	176,0	1,45	5,79
cond. pressure	-10	14	266,4	910	229,3	1,30	4,46	1,12	204,2	1,54	7,37
pc= 55/131	-5	23	337,9	1154	290,8	1,47	5,04	1,27	229,2	1,62	9,39
return gas temp	0	32	426,4	1456	367,0	1,70	5,80	1,46	250,9	1,69	11,91
RGT= 32/90	5	41	533,3	1821	459,0	1,98	6,76	1,70	269,4	1,75	14,99
liquid temp	10	50	660,3	2255	568,3	2,32	7,91	1,99	284,9	1,80	18,69
Tliq= 55/131	15	59	808,9	2762	696,1	2,72	9,29	2,34	297,4	1,84	23,10

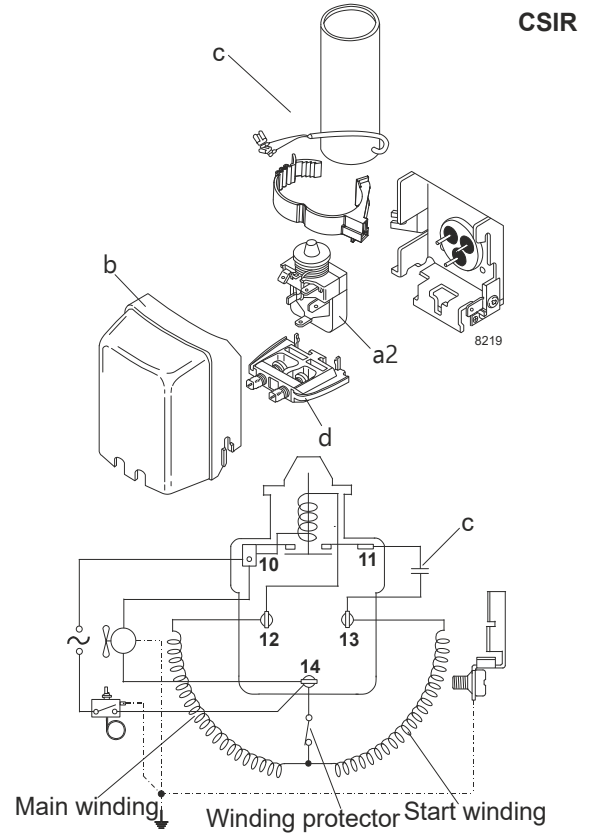
**Model**

Designation	<b>FR7GH</b>	<b>208-230V/60Hz</b>	<b>Conf. 3</b>	Sales code:	<b>103G6692</b>
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**Configuration**

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R134a
Application	MBP+HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC

**Electrical accessories / wiring diagram**

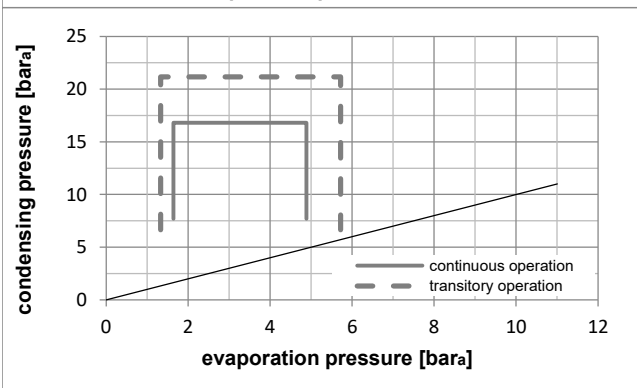
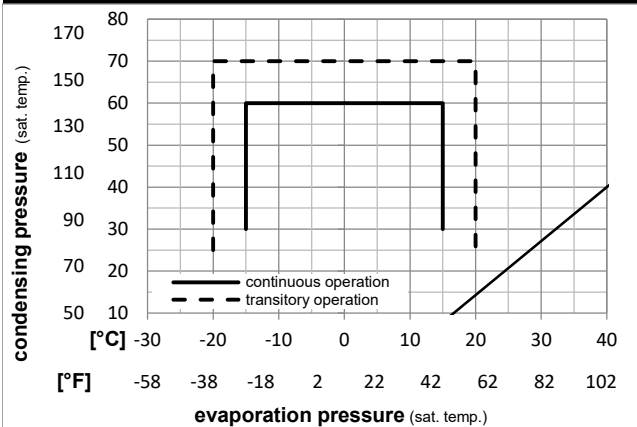


**Ambient temperatures / system cooling**

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	oil cooled	oil cooled
38°C / 100°F	n/a	oil cooled	oil cooled
43°C / 110°F	n/a	oil cooled	oil cooled

**Operation pressure range**



**Components**

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

**Model**

Designation **FR7GH 208-230V/60Hz** Conf. 3 Sales code: **103G6692**

**Optimization + standard conditions**

220V/60Hz, CSIR, fan 1,5m/s, CCC

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Power consumption				
					Return gas temp.					Current consumption				
					Liquid temp.					Ref. mass flow				
					Cooling capacity					COP EER				
					P1					I m				
pe	pc	RGT	Tliq		[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	7,22	54,4	35	46,1	742,7	2537	639,2	2,26	7,71	1,94	329,1	1,85	16,48	ASHRAE HBP
[°F]	45	130	95	115										
[°C]	5	55	32	55	606,5	2071	522,0	1,91	6,54	1,65	316,9	1,79	14,95	cecomaf HBP
[°F]	41	131	89,6	131										
[°C]	5	50	20	50	632,6	2160	544,4	2,12	7,23	1,82	299,0	1,74	15,94	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-6,66	54,4	35	46,1	386,6	1320	332,7	1,62	5,53	1,39	238,6	1,49	8,43	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	293,9	1004	252,9	1,35	4,62	1,16	217,4	1,41	7,11	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	341,4	1166	293,8	1,62	5,52	1,39	211,2	1,41	7,99	EN12900 MBP
[°F]	14	113	68	113										

**Performance tables**

220V/60Hz, CSIR, fan 1,5m/s, CCC

	pe	Cooling capacity			COP			EER			P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]		
[°C / °F]	-15	5	271,1	926	233,3	1,46	4,99	1,26	185,7	1,34	5,91		
cond. pressure	-10	14	354,2	1210	304,8	1,68	5,73	1,44	211,2	1,41	7,75		
pc= 45/113	-5	23	454,9	1554	391,5	1,93	6,58	1,66	236,2	1,49	10,00		
return gas temp.	0	32	575,4	1965	495,2	2,21	7,54	1,90	260,6	1,58	12,72		
RGT= 32/90	5	41	717,6	2451	617,5	2,52	8,62	2,17	284,4	1,68	15,98		
liquid temp	10	50	883,5	3017	760,3	2,87	9,81	2,47	307,6	1,80	19,82		
Tliq= 45/113	15	59	1075,2	3672	925,3	3,26	11,12	2,80	330,1	1,92	24,35		
[°C / °F]	-15	5	225,3	770	193,9	1,22	4,18	1,05	184,1	1,31	5,42		
cond. pressure	-10	14	293,9	1004	252,9	1,35	4,62	1,16	217,4	1,41	7,11		
pc= 55/131	-5	23	378,9	1294	326,1	1,51	5,16	1,30	250,6	1,53	9,21		
return gas temp	0	32	482,4	1648	415,2	1,70	5,81	1,46	283,8	1,65	11,80		
RGT= 32/90	5	41	606,5	2071	522,0	1,91	6,54	1,65	316,9	1,79	14,95		
liquid temp	10	50	753,2	2572	648,2	2,15	7,35	1,85	349,9	1,94	18,72		
Tliq= 55/131	15	59	924,5	3157	795,6	2,42	8,25	2,08	382,7	2,10	23,22		



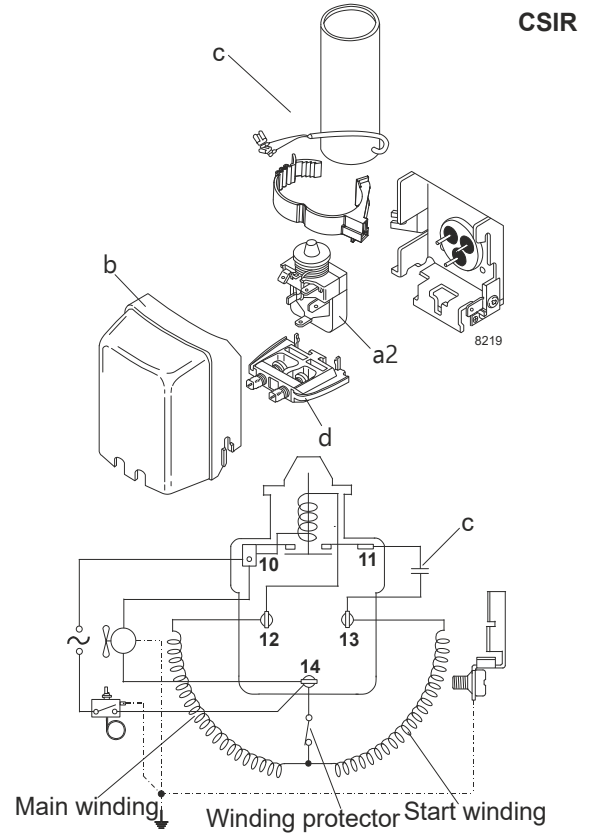
**Model**

Designation	<b>FR7GH</b>	<b>208-230V/60Hz</b>	<b>Conf. 4</b>	Sales code:	<b>103G6692</b>
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**Configuration**

Motorconfiguration	CSIR
Power supply (nominal)	208-230V/60Hz 1~
Refrigerant	R513A
Application	MBP+HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC

**Electrical accessories / wiring diagram**

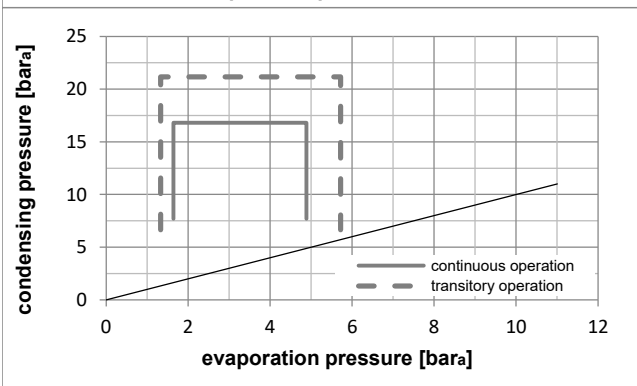
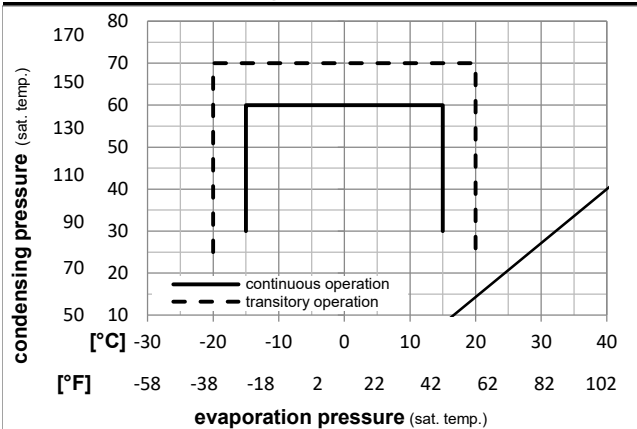


**Ambient temperatures / system cooling**

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	43°C / 110°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	n/a	oil cooled	oil cooled
38°C / 100°F	n/a	oil cooled	oil cooled
43°C / 110°F	n/a	oil cooled	oil cooled

**Operation pressure range**



Components

a2	relay	117U6016
c	start capacitor (80µF)	117U5015
b	plastic cover	103N2011
d	cord relief	103N1010

**Model**

Designation	<b>FR7GH</b>	<b>208-230V/60Hz</b>	<b>Conf. 4</b>	Sales code:	<b>103G6692</b>
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**Optimization + standard conditions**

220V/60Hz, CSIR, fan 1,5m/s, CCC

Evaporating pressure (saturation temperature)		Condensing pressure (saturation temperature)				Cooling capacity			COP	EER	Power consumption			ASHRAE HBP
Return gas temp.		Liquid temp.							Current consumption		Ref. mass flow			
pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	m		
[°C]	[°C]	[°C]	[°C]							[W]	[A]	[kg/h]		
7,22	54,4	35	46,1	765,0	2613	658,4	2,22	7,60	1,91	343,8	1,96	19,01		
45	130	95	115											
[°C]	5	55	32	55	615,7	2103	529,9	1,86	6,34	1,60	331,8	1,92	17,30	cecomaf HBP
[°F]	41	131	89,6	131										
[°C]	5	50	20	50	643,2	2197	553,6	2,06	7,02	1,77	312,9	1,84	18,44	EN12900 HBP
[°F]	41	122	68	122										
[°C]	-6,66	54,4	35	46,1	407,7	1392	350,9	1,61	5,50	1,39	253,1	1,60	9,99	ASHRAE MBP
[°F]	20	130	95	115										
[°C]	-10	55	32	55	306,7	1048	264,0	1,32	4,52	1,14	231,7	1,51	8,48	cecomaf MBP
[°F]	14	131	89,6	131										
[°C]	-10	45	20	45	358,3	1224	308,4	1,60	5,46	1,37	224,3	1,49	9,50	EN12900 MBP
[°F]	14	113	68	113										

**Performance tables**

220V/60Hz, CSIR, fan 1,5m/s, CCC

[°C / °F]	pe	Cooling capacity			COP	EER	P1	I	m		
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
-15	5	289,9	990	249,5	1,46	4,99	1,26	198,4	1,38	7,10	
cond. pressure	-10	14	374,7	1280	322,5	1,67	5,71	1,44	224,3	1,49	9,21
pc= 45/113	-5	23	476,8	1628	410,3	1,91	6,53	1,65	249,4	1,59	11,77
return gas temp.	0	32	598,2	2043	514,8	2,18	7,46	1,88	273,8	1,68	14,84
RGT= 32/90	5	41	740,6	2529	637,4	2,49	8,50	2,14	297,5	1,78	18,47
liquid temp	10	50	906,1	3094	779,8	2,83	9,66	2,43	320,4	1,87	22,75
Tliq= 45/113	15	59	1096,4	3744	943,6	3,20	10,93	2,75	342,5	1,96	27,74
-15	5	238,2	813	205,0	1,20	4,11	1,04	197,8	1,38	6,56	
cond. pressure	-10	14	306,7	1048	264,0	1,32	4,52	1,14	231,7	1,51	8,48
pc= 55/131	-5	23	391,2	1336	336,7	1,47	5,04	1,27	265,3	1,65	10,87
return gas temp	0	32	493,6	1686	424,8	1,65	5,64	1,42	298,7	1,78	13,79
RGT= 32/90	5	41	615,7	2103	529,9	1,86	6,34	1,60	331,8	1,92	17,30
liquid temp	10	50	759,5	2594	653,6	2,08	7,11	1,79	364,7	2,05	21,50
Tliq= 55/131	15	59	926,7	3165	797,6	2,33	7,97	2,01	397,2	2,18	26,47