

ENGINEERING
TOMORROW

Danfoss

60Hz Catalogue

Danfoss **Light Commercial Refrigeration** Compressors B, U, L, P, X, S Ranges - **60Hz**

R134a | R404A | R507 | R290 | R22



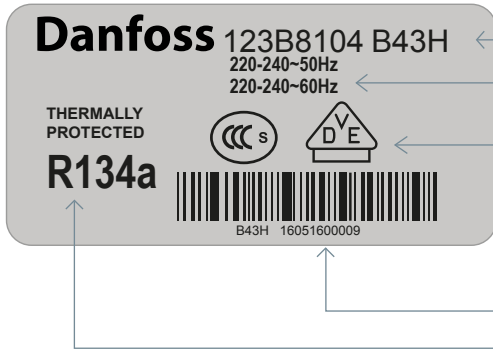
Labels and Approvals

For U, L, P, X, S



- Compressor code and model
- Voltage
- Approvals
- Production Date
- Bar Code
- Refrigerant

For Small L & B



- Compressor code and model
- Voltage
- Approvals
- Bar Code
- Refrigerant

Approvals



Directive compliance declarations



Flammable gases



Compressor Nomenclature U, L, P, X and S Ranges

model
G L Y 6 0 R A a

Indicates refrigerant. Not appearing in case of ranges for R22

G = R134a **N** = R290
M = R404A/R507

Indicates compressor range (overall design).

L = 4 - 11cm³ **X** = 16 - 23cm³
U = 4.5 - 9cm³ **P** = 12 - 18cm³ **S** = 18 - 34cm³

Indicates energy efficiency level. Not appearing in case of Standard efficiency.

M = Medium
Y = High Efficiency - Run Capacitor Optional RSIR/RSCR or CSIR/CSR
T = Top Efficiency - Run Capacitor RSCR or CSR

Indicates approximate compressor displacement under the following rule:

U / L ranges 10 times the approx. displacement in cm³/rev (GL90TG -> approx 9 cm³/rev)
P / X / S ranges The approx. displacement in cm³/rev (MX21TG -> approx 21 cm³/rev)

Indicates the starting torque, application type and compressor cooling:

A = LBP - LST - S	L = LBP - HST - Fan (Current Relay)	R = HMBP - HST - FAN
C = LBP - LST - FAN	M = HMBP - LST/HST - S/FAN	(CSR versions with Current Relay)
D = LBP - HST - S	N = LMBP - LST/HST - S/FAN	T = HMBP - HST - FAN
F = LBP - HST - FAN	P = HMBP - LST - FAN	(CSR versions with Potential Relay)

Indicates the rated voltage:

A = 220-240V 50Hz	G = 200-220V 50Hz / 220-230V 60Hz
B = 220-240V 50Hz (standard efficiency)	J = 100V 50/60Hz
C = 100V 50/60Hz (standard efficiency)	N = 200-220V 50Hz or 200-240V 50Hz / 220-230V 60Hz
D = 115V 60Hz	R = 115-127V 60Hz
E = 115V 60Hz (standard efficiency)	3 = 3 phase 400-440V 50/60Hz
F = 208-230V 60Hz	

Indicates a variant of the model that only affects the configuration of electrical components. Its meaning may vary from model to model. It does not appear on the compressor label but it is used for ordering, invoicing and HCB internal processes.

Examples:

1. In high-efficiency compressors ("Y" series, i.e.: GPY12LA or MLY80RD), the letters "a" or "b" may indicate the type of electrical connection corresponding to the electrical accessories supplied with the compressor.

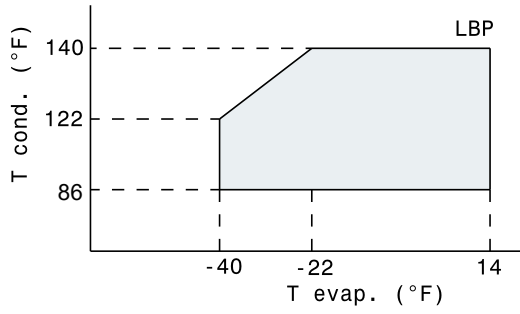
a = no use of running capacitor
b = use of running capacitor

2. In X range it indicates the electrical accessories corresponding to the following situations:

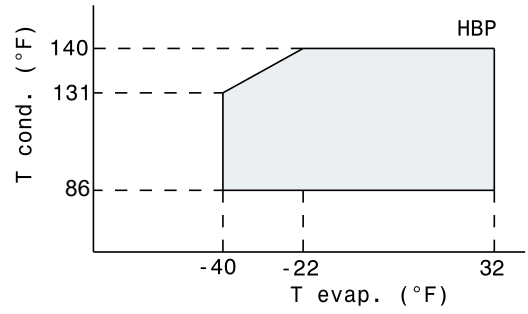
a = Current relay + NTC
(no external connecting box)

Danfoss Light Commercial Refrigeration Compressors

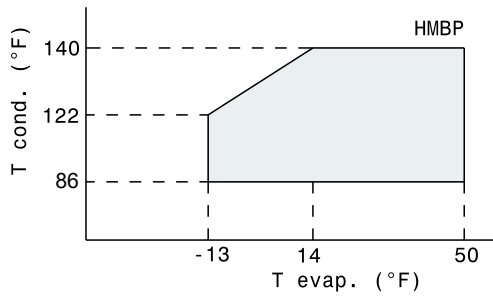
R290 LBP



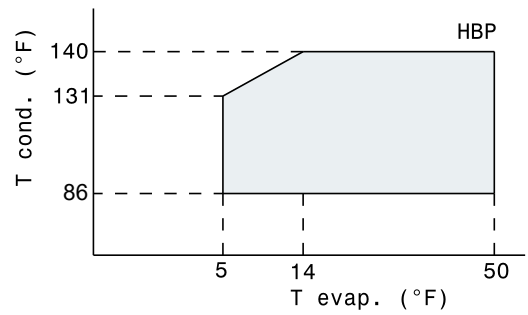
R290 LMBP



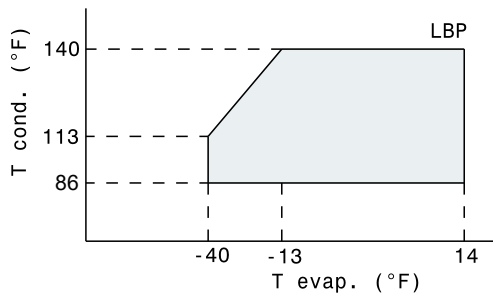
R290 HMBP



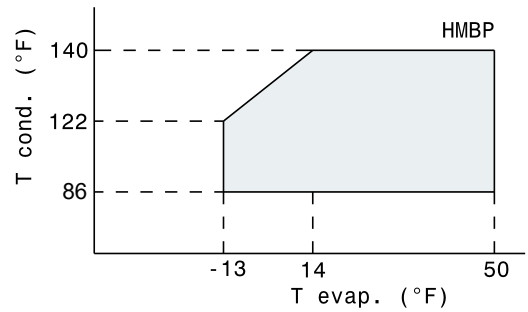
R290 HBP



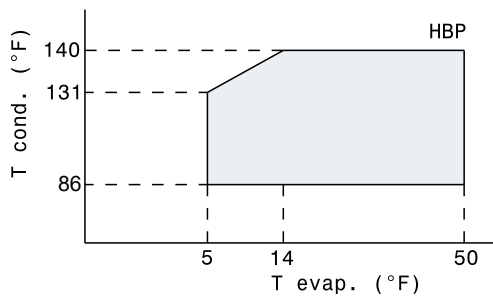
R404A LBP



R404A HMBP



R404A HBP



Danfoss Light Commercial Refrigeration Compressors

R290 LBP | LMBP

COMPRESSOR MODEL	DANFOSS CODE (a)	DISPLACEMENT		MOTOR TYPE	VOLTAGE FREQUENCY	APPLICATION	COMPRESSOR COOLING	REFRIGERATION CAPACITY								WEIGHT	DESIGN
		ASHRAE conditions Condensing temperature = 131°F (55°C)															
		-22°F (-30°C)						-10°F (-23.3°C)			+14°F (-10°C)						
								Cooling Capacity		COP				EER			
		Btu/h	W					Btu/h	W	W/W	Btu/Wh	Btu/h	W	lbs			
✓ NUT60LRa	123B3149	6.00	1/3	CSIR	115-127V 60 Hz	LBP	Fan	899	263	1250	366	1.60	5.46	2170	636	20.7	Ub
✓ NUT60LRb	123B3150	6.00	1/3	CSR	115-127V 60 Hz	LBP	Fan	899	263	1250	366	1.73	5.90	2170	636	20.9	Ub
✓ NUT60LRc	123B3151	6.00	1/3	CSIR	115-127V 60 Hz	LBP	Static	899	263	1250	366	1.60	5.46	2170	636	20.7	Ub
✓ NUT60LRd	123B3152	6.00	1/3	CSR	115-127V 60 Hz	LBP	Static	899	263	1250	366	1.73	5.90	2170	636	20.9	Ub
✓ NLY75NRa	123B3301	7.57	1/3	CSIR	115-127V 60 Hz	LMBP	Fan	999	293	1389	407	1.34	4.57	2411	707	20.9	Lc
✓ NLY75NRb	123B3302	7.57	1/3	CSR	115-127V 60 Hz	LMBP	Fan	999	293	1389	407	1.46	4.98	2411	707	20.9	Lc
✓ NLY80LRa	123B3133	8.10	1/4	CSIR	115-127V 60 Hz	LBP	Fan	1040	305	1393	408	1.28	4.36	2659	779	24.0	Lc
✓ NLY80LRb	123B3134	8.10	1/4	CSR	115-127V 60 Hz	LBP	Fan	1040	305	1393	408	1.35	4.60	2659	779	24.0	Lc
✓ NLY90NRa	123B3309	9.09	1/3	CSIR	115-127V 60 Hz	LMP	Fan	1176	345	1663	487	1.37	4.68	2962	868	24.7	Ld
✓ NLY90NRb	123B3310	9.09	1/3	CSR	115-127V 60 Hz	LMP	Fan	1176	345	1663	487	1.45	4.95	2962	868	24.7	Ld
✓ NLY12NRa	123B3303	10.70	1/3	CSIR	115-127V 60 Hz	LMBP	Fan	1540	452	2063	605	1.40	4.78	3937	1155	23.8	Ld
✓ NLY12NRb	123B3304	10.70	1/3	CSR	115-127V 60 Hz	LMBP	Fan	1540	452	2063	605	1.50	5.12	3937	1155	23.8	Ld
✓ NPY12LRa	123B3137	12.10	3/8	CSIR	115-127V 60 Hz	LBP	Fan	1579	463	2115	620	1.28	4.36	4036	1183	27.1	Pd
✓ NPY12LRb	123B3138	12.10	3/8	CSR	115-127V 60 Hz	LBP	Fan	1579	463	2115	620	1.41	4.81	4036	1183	27.1	Pd
✓ NPT16LR	123B3165	16.15	1/2	CSR	115-127V 60 Hz	LBP	Fan	2074	608	2924	857	1.42	4.84	5266	1543	28.0	Pd
✓ NLY75NGa	123B3307	7.57	1/3	CSIR	208-230V 60Hz	LMBP	Fan	814	239	1210	355	1.3	4.43	2263	663	22.0	Ld
✓ NLY75NGb	123B3308	7.57	1/3	CSR	208-230V 60Hz	LMBP	Fan	814	239	1210	355	1.4	4.78	2263	663	22.0	Ld
✓ NLY12NGa	123B3305	10.70	1/3	CSIR	220-230V 60Hz	LMBP	Fan	1416	415	1984	581	1.35	4.61	3550	1040	24.7	Ld
✓ NLY12NGb	123B3306	10.70	1/3	CSR	220-230V 60Hz	LMBP	Fan	1416	415	1984	581	1.45	4.95	3550	1040	24.7	Ld
✓ NPY14LFa	123B3139	14.32	1/2	CSIR	208-230V 60Hz	LBP	Fan	2080	610	2786	816	1.83	6.24	5316	1558	27.1	Pd
✓ NPY14LFb	123B3140	14.32	1/2	CSR	208-230V 60Hz	LBP	Fan	2080	610	2786	816	2.01	6.86	5316	1558	27.1	Pd

R290 HBP | HMBP

COMPRESSOR MODEL	DANFOSS CODE (a)	DISPLACEMENT		MOTOR TYPE	VOLTAGE FREQUENCY	APPLICATION	COMPRESSOR COOLING	REFRIGERATION CAPACITY								WEIGHT	DESIGN		
		ASHRAE conditions Condensing temperature = 131°F (55°C)																	
		+14°F (-10°C)						+20°F (-6.7°C)			+45°F (+7.2°C)								
								Cooling Capacity		COP				EER	Cooling Capacity			COP	EER
		Btu/h	W					Btu/h	W	W/W	Btu/Wh	Btu/h	W	W/W	Btu/Wh			lbs	
✓ NLY45RRa	123B3516	4.56	1/6	CSIR	115-127V 60 Hz	HMBP	Fan	1317	386	1509	442	1.79	6.11	2511	736	2.41	8.22	23.2	Lc
✓ NLY45RRb	123B3517	4.56	1/6	CSR	115-127V 60 Hz	HMBP	Fan	1317	386	1509	442	1.93	6.59	2511	736	2.61	8.91	23.2	Lc
✓ NLY60RRa	123B3518	5.98	1/5	CSIR	115-127V 60 Hz	HMBP	Fan	1790	525	2043	599	1.88	6.40	3353	983	2.43	8.29	23.8	Lc
✓ NLY60RRb	123B3519	5.98	1/5	CSR	115-127V 60 Hz	HMBP	Fan	1790	525	2043	599	2.02	6.90	3353	983	2.65	9.04	23.8	Lc
✓ NLY75RRa	123B3520	7.57	1/4	CSIR	115-127V 60 Hz	HMBP	Fan	2147	629	2420	709	1.77	6.03	4214	1235	2.50	8.53	22.1	Ld
✓ NLY75RRb	123B3521	7.57	1/4	CSR	115-127V 60 Hz	HMBP	Fan	2147	629	2478	726	1.95	6.66	4214	1235	2.77	9.45	22.1	Ld
✓ NLY80RRa	123B3522	8.10	1/4	CSIR	115-127V 60 Hz	HMBP	Fan	2325	682	2668	782	1.86	6.34	4464	1308	2.45	8.36	24.5	Ld
✓ NLY80RRb	123B3523	8.10	1/4	CSR	115-127V 60 Hz	HMBP	Fan	2325	682	2668	782	2.02	6.89	4464	1308	2.67	9.11	24.5	Ld
✓ NLY90RRa	123B3524	9.09	1/3	CSIR	115-127V 60 Hz	HMBP	Fan	2623	769	3022	886	1.78	6.08	5036	1476	2.56	8.74	25.1	Ld
✓ NLY90RRb	123B3525	9.09	1/3	CSR	115-127V 60 Hz	HMBP	Fan	2623	769	3022	886	1.92	6.56	5036	1476	2.76	9.42	25.1	Ld
✓ NLT12RR	123B3533	10.70	1/2	CSR	115-127V 60 Hz	HMBP	Fan	3238	949	3706	1086	1.84	6.32	6087	1784	2.51	8.55	26.2	Ld
✓ NLY12RGa	123B3531	10.70	1/2	CSIR	220-230V 60Hz	HMBP	Fan	3079	902	3515	1030	1.77	6.04	5770	1691	2.3	7.85	24.5	Ld
✓ NLY12RGB	123B3532	10.70	1/2	CSR	220-230V 60Hz	HMBP	Fan	3110	911	3557	1042	1.89	6.45	5870	1720	2.56	8.74	24.5	Ld

Green Cooling Models

(a) Ordering code for single compressors. For pallet packed compressors, please use 123F instead of 123B