

ENGINEERING
TOMORROW

Danfoss

Danfoss Optyma™ condensing units for Europe

Match your application needs – every time

With the Danfoss Optyma™ outdoor and indoor condensing units for Europe, with MBP and LBP refrigeration, there is a solution for your exact application needs. Featuring multiple lower-GWP refrigerants, high energy performance ratios and trouble-free installation, they help reduce running costs and increase cooling quality for the safer protection of perishables.

Make the optimal choice from our extensive range of outdoor and indoor condensing units.

Optimal Efficiency

for high cooling quality while reducing system's life-cycle costs and downtime



cr.danfoss.com

EcoDesign

Optyma™
by Danfoss

Danfoss Optyma™ packaged/outdoor condensing units

Highly efficient and reliable plug and play condensing units designed with the contractor and end-user in mind. and providing unique benefits.



Benefits for the contractor

- Simple and fast selection and installation. reduced maintenance time
- Models compatible with multiple lower GWP refrigerants
- Reduced refrigerant costs thanks to microchannel condenser inside



Benefits for the end-user

- Increased food safety and longer products shelf life
- Units suitable for residential areas thanks to low sound level operation
- Reduced life cycle costs of refrigeration equipment thanks to highly efficient units

Optyma™ Slim Pack W05



Compact and cost effective. When space. quiet operation. efficiency and simple installation matter. **With microchannel condenser**



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Optyma™ Slim Pack W09



Compact and cost effective. When space. quieter operation. efficiency. faster and safer installation and maintenance matter. **W05 base + fan speed controller and main switch included**



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Optyma™ Plus P00/P02



Top performer. When quietness. high efficiency. connectivity and fastest installation and maintenance matter. **P00 version:** With electronic controller

P02 version: P00 base + liquid injection with electronic expansion valve



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Optyma™ Plus INVERTER



Premium unit. When top efficiency. fastest installation and maintenance. tight temperature and humidity control matter. **With variable speed drive**



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Feature overview:

	Optyma™ Slim Pack		Optyma™ Plus		Optyma™ Plus INVERTER
	W05	W09	P00	P02	
IP level	IP54		IP54		IP54
Compressor technology	Scroll/Reciprocating		Scroll/Reciprocating	Scroll	Variable speed scroll
Control box (pre-wired E-panel)	yes		yes	yes	yes
Microchannel condenser	yes		yes	yes	yes
Fan speed controller	-	yes	yes	yes	yes
Main switch (circuit breaker)	-	yes	yes	yes	yes
Filter drier (flare connections)	yes		yes	yes	yes
Sight glass	yes		yes	yes	yes
Crankcase heater	yes		yes	yes	yes
HP/LP adjustable pressostat	Mechanical		Electronic		Electronic
Liquid injection kit	-		-	yes	-
Fail safe mini-pressostat	-		Mechanical		Mechanical
Access door(s)	-		yes	yes	yes
Acoustic insulation	-		yes	yes	yes
Condensing unit electronic controller	-		yes	yes	yes
Network connectivity	-		yes	yes	yes
Stack mounting	-		yes	yes	-
Oil separator	-		-	-	yes
Net weight in kg	B1 housing: from 50.4 to 53 B2 housing: from 61.5 to 77 B3 housing: from 76 to 79		H1 housing: from 49 to 53 H2 housing: from 80 to 94 H3 housing: from 101 to 107 H4 housing: 169	H3 housing: 135 and 136 H4 housing: from 161 to 166	124 & 125
Dimensions in mm (height x width x depth)	B1 housing: 530 x 910 x 364 B2 housing: 690 x 1087 x 464 B3 housing: 825 x 1105 x 464		H1 housing: 652 x 906 x 356 H2 housing: 813 x 1055 x 430 H3 housing: 967 x 1406 x 481 H4 housing: 966 x 1800 x 600	H3 housing: 965 x 1441 x 531 H4 housing: 966 x 1835 x 650	H3 housing: 965 x 1406 x 481 H3 housing: 965 x 1406 x 583

Overview by range and refrigerant:

Min / Max Cooling capacity range [kW]	Optyma™ Slim Pack	Optyma™ Plus	Optyma™ Plus INVERTER
Medium temperature (MBP)			
R448/R449A	0.9 - 11.0	0.7 - 15.2	5.9-12.4
R455A	0.7 - 10.8	0.6 - 15.2	-
R454C	0.6 - 10.0	0.7 - 14.3	-
R1234yf	1.3 - 1.4	1.3 - 1.4	-
R134a	1.4 - 6.6	1.4 - 10.3	-
R513A	1.3 - 7.0	1.3 - 10.3	-
R452A	0.8 - 10.8	0.8 - 16.7	-
R404A/507	0.8 - 10.4	0.8 - 16.1	5.4 - 12.7
Low temperature (LBP)			
R448A/R449A	-	2.6 - 6.6	-
R452A	0.4 - 3.5	0.6 - 8.0	-
R404A/507	0.4 - 3.6	0.5 - 5.9	-

Rating conditions EN 13215 (dew point):

MBP: Ambient temp = 32°C; Evap temp = -10°C; Superheat = 10K; Subcooling = 0K / LBP: Ambient temp = 32°C; Evap temp = -35°C; Superheat = 10K; Subcooling = 0K

MBP and LBP applications



✓ Cold rooms, display cabinets in convenience stores, mini-markets, restaurants, fisheries, butcheries, bakeries, florists, laboratories

✓ Wine cellars

✓ Milk cooling

✓ Industrial processes

✓ Dairy and general food storage

Designation

OP - MSXM034 ML W05 G

1 2 3 4 5 6 7 8

OP = Optyma

1	Application: M = MBP ; L = LBP
2	Condensing unit family: S = Slim Pack / P = OP Plus. OP Plus INVERTER
3	Refrigerant: B = R404A/R507. R448A. R449A. R452A; G = R134a. R513A; H = R404A/R507; I = R404A/R507. R134a. R407A. R407F. R448A. R513A. R449A. R452A. R454C. R455A; K = R404A. R448A. R449A. R452A. R454C. R455A; O = R452A. R404A/R507. R448A. R449A; P = R448A/R449A. R407A/F. R404A/R507; Q = R452A. R404A/R507; S = R134a. R513A. R1234yf; T = R404A/R507. R455A. R454C. R448A/R449A. R452A; V = R454C. R455A. R452A. R404A/R507; X = R404A/R507. R134a. R407A. R407F. R448A. R513A. R449A. R452A; Y = R404A/R507. R449A
4	M = Microchannel condenser
5	Displacement in cm ³ : Example 034 = 34 cm ³
6	Compressor platform: such as VVL = variable speed scroll VLZ DX/DP/DS/DY/SC/CS/NTZ = Fixed Speed Recip Compressor MLZ and LLZ = Fixed speed Scroll Compressor
7	W05: Optyma™ Slim Pack W09: Optyma™ Slim Pack with fan speed controller and main switch P00: Optyma™ Plus P02: Optyma™ Plus with liquid injection P01: Optyma™ Plus INVERTER
8	Electrical code: G = 230V/1-phase compressor & fan E = 400V/3-phase compressor & 230V/1-phase fan

Selection examples for cold rooms

Make a precise selection with the Cold Room module in Coolselector 2 software.

Range	Model and cooling capacity by cold room type	Meat		Fish		Laboratories		Fruit & Vegetables +8°C - 18h		Fruit & Vegetables 0°C - 18h		Butter, Eggs, Cheese +5°C - 18h		Freezers -18°C - 16h	
		Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]	Cap. [W]	CR* [m³]
OP Slim Pack with R513A	OP-MSGM018 / 021 / 026	900	6	900	6	1 270	8	1 270	17	900	7	1 030	9		
OP Plus with R449A	OP-MPBM018 / 024	1 350	11	1 350	11	1 890	13	1 890	30	1 350	12	1 530	16		
OP Plus INVERTER with R448A	OP-MPPM044	2 500	20	2 500	20	3 400	20	3 500	65	2 500	20	2 800	35		
OP Slim Pack with R452A	OP-LSQM034													680	2

Data relate to +32°C ambient temperature; please refer to Danfoss for other working conditions. Cold room data: Temperature - Daily working hours. * Volume of cold room.

Danfoss Optyma™ bare/indoor condensing units

Robust. efficient and reliable condensing units. saving on service and maintenance costs and reducing energy consumption.



Benefits for the contractor

- Broad working envelope
- Multi lower-GWP refrigerants
- Larger units with microchannel condenser reducing the refrigerant charge and smaller units with fine & tube condenser
- Likely the most reliable hermetic reciprocating compressor on the market
- Economical EUR/kW value

Optyma™. **Light Commercial** up to ~1.5 kW

Complete line featuring a higher efficiency and a reduced footprint. also available with R290. making it the perfect choice for a greener installation. This solution is ideal for OEMs or end-users looking for compact products to fit in small systems. and optimal cooling performance and capacity.



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Benefits for the end-user

- Reliable solution
- Low energy consumption under changing working conditions
- Easy & simple condenser maintenance

Optyma™. **Commercial** from ~1.5 kW and up

Highly efficient new line with microchannel condenser. multiple lower-GWP refrigerants. and working up to 46°C. Easy to install and service. Quieter by up to 3 dB(A) thanks to 6-pole fan motor instead of 4-pole fan.



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Feature overview:

	Light Commercial			Light Commercial R290			Commercial
	A00	A01	A04	A09	A10	A11	A02
Ambient temperature	Up to 43°C			Up to 43°C			Up to 46°C
Hermetic reciprocating compressor	MPT. MLY. NL. SC. GS. FR. TL. NF			NLY. NBC. NPT. NS. NX			MTZ. NTZ
Unit base	Rails or base plate						Base plate
Condenser type	Fin & Tube (painted)						Microchannel
Fan	AC/EC	AC/EC	AC/EC	EC	EC	EC	AC 6 pole
Bracket & tube for pressostat mounting	-	yes	yes	yes	-	-	-
Dual KP pressure switch	-	-	yes	-	-	-	yes
Schrader valve	-	-	-	yes	yes	yes	-
Wired electrical box	yes	yes	yes	yes	yes	yes	yes
Mini HP/LP pressostat	-	-	-	-	yes	-	-
Power cord	-	-	yes	-	yes	-	-
Receiver	-	yes	yes	-	Combo drier + receiver	-	yes
Net weight in kg	14 chassis: Lighter: 14 Bigger: 42			4 chassis: Lighter: 14 Bigger: 41			5 chassis: Lighter single fan: 62 Bigger single fan: 158 Lighter dual fan: 134 Bigger dual fan: 212
Dimensions in mm (height x width x depth)	14 chassis: Smaller: 205 x 289 x 424 Larger: 350 x 445 x 613			4 chassis: Smaller: 226 x 286 x 513 Larger: 350 x 442 x 480			5 chassis: Smaller single fan: 545 x 630 x 650 Larger single fan: 836.5 x 1200 x 800 Smaller dual fan: 693.5 x 1500 x 870 Larger dual fan: 836.5 x 1500 x 870

Overview by range and refrigerant:

Min / Max cooling capacity (kW)	Light Commercial	Commercial
Medium temperature (MBP)		
R290	0.2 - 1.4	
R448A		2 - 20.5
R449A		2 - 20.5
R134a	0.1 - 1.6	1.3 - 13.1
R452A		2.2 - 20.6
R407A		1.9 - 19.1
R407C		1.8 - 19.1
R407F		2 - 20.1
R404A/507	0.3 - 1.7	2.2 - 21.7
Low temperature (LBP)		
R290	0.1 - 0.7	
R452A	0.1 - 0.3	0.8 - 6.1
R404A/507	0.1 - 0.9	0.9 - 6.6

MBP and LBP applications



- ✓ Industrial processes
- ✓ Milk cooling
- ✓ Cold rooms in fisheries, florists, etc.
- ✓ Commercial fridge and freezers, display cases, bottle coolers, serving tables

Designation

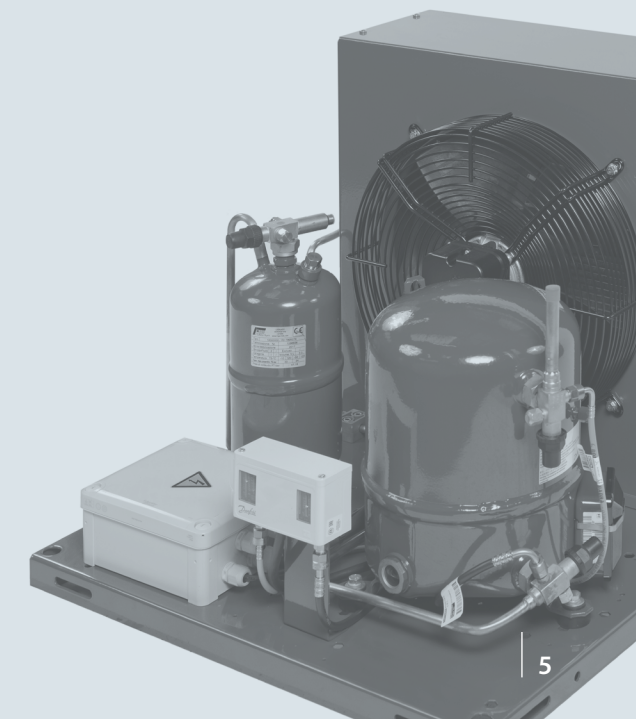
OP - LCQN 048 MT A02 E

1 2 3 4 5 6 7 8

OP = Optyma

1	Application: M = MBP ; L = LBP
2	Platform: C: Air-cooled condensing unit with single fan G: Air-cooled condensing unit with dual fan
3	Refrigerant: R: R134a, R513A, R404A/R507, R407C, R407A, R407F, R448A, R449A, R452A G: R134a, R513A H: R404A/R507 Q: R452A, R404A/R507 N: R290
4	Condenser design: C: Fin & Tube condenser, ambient temperature up to 43°C N: Microchannel condenser, ambient temperature up to 46°C

5	Compressor displacement: Example 048 = 48 cm ³
6	Reciprocating compressor platform: FR = FR NF = NF SC = SC GS = GS NX = NX NB = NBC NS = NS NY = NLY NP = NPT MP = MPT MY = MLY MX = MX NT = NTZ MT = MTZ TL = TL NL = NL
7	Version: A00, A01, A02, A04, A09, A10, A11. See table above for features within each version.
8	Electrical code: A: Compressor 230V/1P/50-60Hz, fan 230V/1P/50-60Hz G: Compressor 230V/1P/50Hz, fan 230V/1P/50Hz E: Compressor 400V/3P/50Hz, fan 230V/1P/50Hz



Optyma™ Slim Pack

Light on refrigerant. heavy on efficiency

Get it all with Optyma™ Slim Pack. It combines quiet operation and more value for money with an energy-efficient and compact solution.



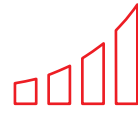
Quick and safe installation and service

Enjoy fast and easy installation with the main switch, service valves, and quick connections. Additionally, the easy-to-clean Microchannel condenser saves you time and effort on servicing.



Suitable for residential areas

It operates up to 7 dB(A) lower than other packaged units of the same capacity and the fan-speed controller further reduces the sound level by up to 4 dB(A).



High SEPR

All models in the range are highly efficient and well above EcoDesign 2018 thresholds, contributing to a reduction in energy costs.

Annual energy savings based on cost of energy:
FRANCE: 0.18 € / 1 KWH = 2 391 x 0.18 = 430 €
UK: 0.21 € / 1 KWH = 2 391 x 0.21 = 502 €
GERMANY: 0.23 € / 1 KWH = 2 391 x 0.23 = 550 €



Optimized footprint for floor and wall mounting

Thanks to its slim design and low weight, it is easy to transport and handle during installation – particularly for wall mounting.

High SEPR/COP for
550 €
annual electricity savings*

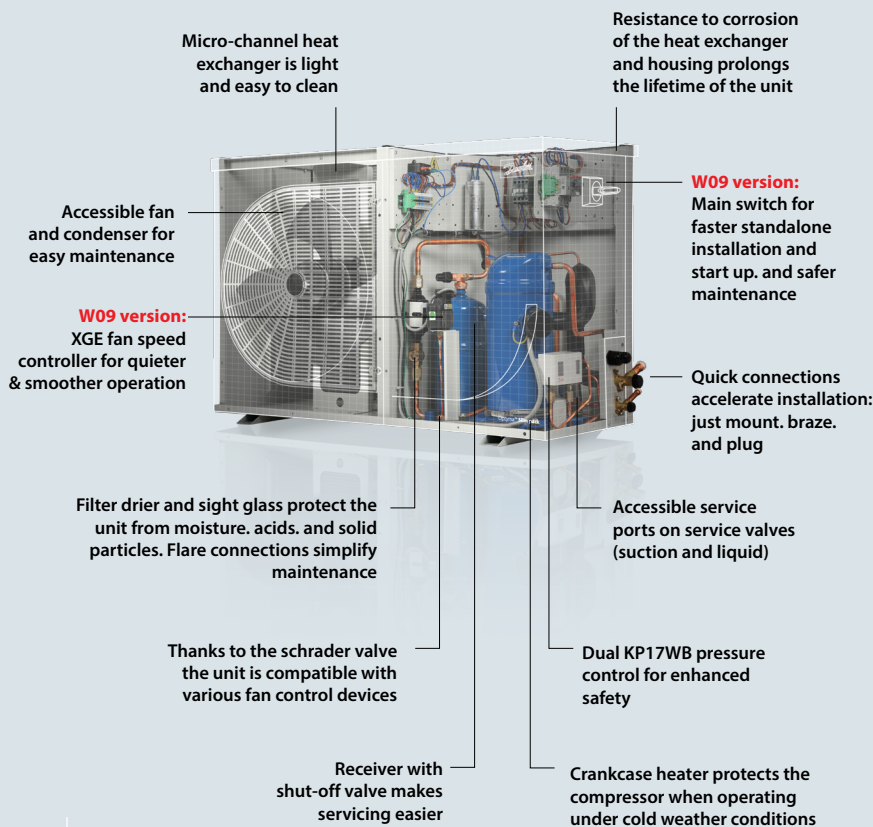
W09 FEATURES

- Preset fan-speed controller for quieter operation
- Main switch for faster stand-alone installation and start-up, and safer maintenance

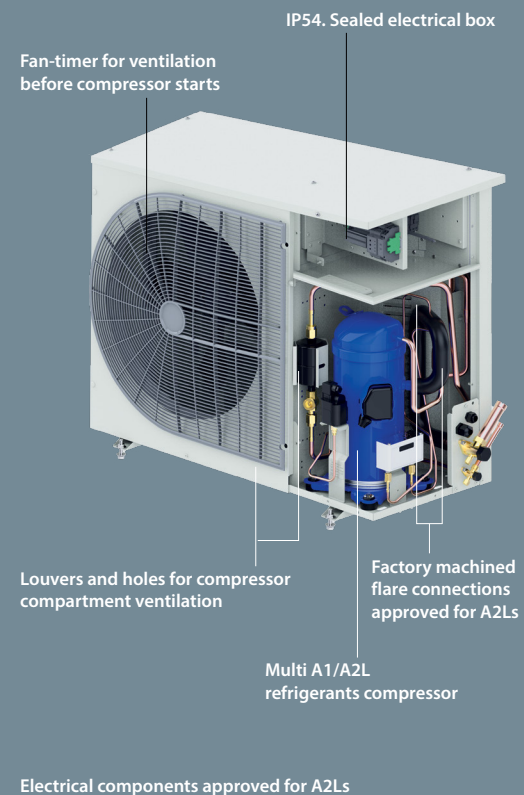


* Optyma™ Slim Pack MBP unit vs equivalent unit in the market. Savings by customer in Germany. Source Danfoss.

Standard range (W05) and upgraded range (W09)



Multi refrigerant range (W05 and W09)



Optyma™ Slim Pack (W05)

Refrigerants with a GWP level below 150

R454 – MBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
					Rated COP	Rated SEPR	
OP-MSTM008	1	114X7226	A1+A2L	0.63	1.84	-	B1
OP-MSTM009	1	114X7229	A1+A2L	0.70	1.82	-	B1
OP-MSTM012	1	114X7230	A1+A2L	1.16	1.81	-	B1
OP-MSTM014	1	114X7231	A1+A2L	1.20	1.71	-	B1
OP-MSTM018	1	114X7232	A1+A2L	1.32	1.65	-	B1
OP-MSTM021	1	114X7325	A1+A2L	1.44	1.62	-	B1
OP-MSTM022	1	114X7233	A1+A2L	1.86	1.97	-	B1
OP-MSTM026	3	114X7235	A1+A2L	2.23	2.15	-	B2
OP-MSTM026	1	114X7237	A1+A2L	2.45	2.20	-	B2
OP-MSIM034	3	114X7236	A1+A2L	2.46	1.67	-	B2
OP-MSTM034	1	114X7266	A1+A2L	3.40	1.71	-	B2
OP-MSTM034	3	114X7267	A1+A2L	3.47	2.50	-	B2
OP-MSTM034	1	114X7326	A1+A2L	2.74	2.42	-	B2
OP-MSTM038	1	114X7269	A1+A2L	4.21	1.70	-	B2
OP-MSIM044	3	114X7268	A1+A2L	4.31	2.29	-	B2
OP-MSIM044	1	114X7271	A1+A2L	4.40	2.41	-	B2
OP-MSIM046	3	114X7270	A1+A2L	4.47	2.28	-	B2
OP-MSIM046	1	114X7272	A1+A2L	5.21	2.40	-	B2
OP-MSIM057	3	114X7273	A1+A2L	5.22	-	3.73	B2
OP-MSIM057	1	114X7312	A1+A2L	6.78	-	3.47	B3
OP-MSIM068	3	114X7311	A1+A2L	6.85	-	3.83	B3
OP-MSIM068	1	114X7314	A1+A2L	7.66	-	4.27	B3
OP-MSIM080	1	114X7314	A1+A2L	7.66	-	3.51	B3
OP-MSIM080	3	114X7313	A1+A2L	7.91	-	4.24	B3
OP-MSIM099	3	114X7315	A1+A2L	9.36	-	3.86	B3
OP-MSIM108	3	114X7316	A1+A2L	9.99	-	3.79	B3

R455A – MBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
					Rated COP	Rated SEPR	
OP-MSTM008	1	114X7226	A1+A2L	0.68	1.88	-	B1
OP-MSTM009	1	114X7229	A1+A2L	0.82	1.89	-	B1
OP-MSTM012	1	114X7230	A1+A2L	1.24	1.88	-	B1
OP-MSTM014	1	114X7231	A1+A2L	1.31	1.80	-	B1
OP-MSTM018	1	114X7232	A1+A2L	1.46	1.70	-	B1
OP-MSTM021	1	114X7325	A1+A2L	1.61	1.61	-	B1
OP-MSTM022	1	114X7233	A1+A2L	1.99	1.89	-	B1
OP-MSTM022	1	114X7234	A1+A2L	2.36	2.07	-	B2
OP-MSTM026	3	114X7235	A1+A2L	2.43	1.95	-	B2
OP-MSTM026	1	114X7237	A1+A2L	2.84	1.77	-	B2
OP-MSIM034	1	114X7236	A1+A2L	2.86	1.82	-	B2
OP-MSIM034	3	114X7267	A1+A2L	3.72	2.46	-	B2
OP-MSTM034	3	114X7266	A1+A2L	3.72	2.54	-	B2
OP-MSIM038	1	114X7326	A1+A2L	3.09	1.72	-	B2
OP-MSIM038	1	114X7269	A1+A2L	4.59	2.23	-	B2
OP-MSIM044	3	114X7268	A1+A2L	4.67	2.39	-	B2
OP-MSIM044	1	114X7271	A1+A2L	4.77	2.22	-	B2
OP-MSIM046	3	114X7270	A1+A2L	4.82	2.37	-	B2
OP-MSIM046	3	114X7272	A1+A2L	5.74	-	3.60	B2
OP-MSIM057	1	114X7273	A1+A2L	5.66	-	3.47	B2
OP-MSIM057	3	114X7311	A1+A2L	7.42	-	4.17	B3
OP-MSIM068	1	114X7312	A1+A2L	7.53	-	4.04	B3
OP-MSIM068	3	114X7313	A1+A2L	8.56	-	4.11	B3
OP-MSIM080	1	114X7314	A1+A2L	8.41	-	3.67	B3
OP-MSIM099	3	114X7315	A1+A2L	9.36	-	3.70	B3
OP-MSIM108	3	114X7316	A1+A2L	9.99	-	3.77	B3

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Slim Pack (W09)

Refrigerants with a GWP level below 150

R454C – MBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
					Rated COP	Rated SEPR	
OP-MSTM008	1	114X7286	A1+A2L	0.63	1.84	-	B1
OP-MSTM009	1	114X7287	A1+A2L	0.70	1.82	-	B1
OP-MSTM012	1	114X7288	A1+A2L	1.16	1.81	-	B1
OP-MSTM014	1	114X7289	A1+A2L	1.20	1.71	-	B1
OP-MSTM018	1	114X7290	A1+A2L	1.32	1.65	-	B1
OP-MSTM021	1	114X7327	A1+A2L	1.44	1.62	-	B1
OP-MSTM022	1	114X7299	A1+A2L	1.86	1.97	-	B2
	1	114X7300		2.22	2.15		
OP-MSTM026	3	114X7301	A1+A2L	2.23	2.20	-	B2
	1	114X7302		2.45	1.67		
OP-MSIM034	3	114X7303	A1+A2L	2.46	1.71	-	B2
	1	114X7274		3.40	2.50		
OP-MSTM034	3	114X7275	A1+A2L	3.47	2.42	-	B2
OP-MSIM038	1	114X7328	A1+A2L	2.74	1.70	-	B2
	1	114X7277		4.21	2.29		
OP-MSIM044	3	114X7276	A1+A2L	4.31	2.41	-	B2
	1	114X7279		4.40	2.28		
OP-MSIM046	3	114X7278	A1+A2L	4.47	2.40	-	B2
	1	114X7280		5.21	-		
OP-MSIM057	3	114X7281	A1+A2L	5.22	-	3.47	B3
	1	114X7318		6.78	-	3.83	
OP-MSIM068	3	114X7317	A1+A2L	6.85	-	4.27	B3
	1	114X7320		7.66	-	3.51	
OP-MSIM080	3	114X7319	A1+A2L	7.91	-	4.24	B3
OP-MSIM099	3	114X7321	A1+A2L	9.36	-	3.86	B3
OP-MSIM108	3	114X7322	A1+A2L	9.99	-	3.79	B3

R1234yf – MBP

Model	Version	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**	
						COP	Housing
OP-MSSM026	W05	1	114X7248	A1 + A2L	1.31	1.95	B1
	W09		114X7304				
OP-MSSM030	W05	1	114X7249	A1 + A2L	1.42	1.83	B1
	W09		114X7305				

R455A – MBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
					Rated COP	Rated SEPR	
OP-MSTM008	1	114X7286	A1+A2L	0.68	1.88	-	B1
OP-MSTM009	1	114X7287	A1+A2L	0.82	1.89	-	B1
OP-MSTM012	1	114X7288	A1+A2L	1.24	1.88	-	B1
OP-MSTM014	1	114X7289	A1+A2L	1.31	1.80	-	B1
OP-MSTM018	1	114X7290	A1+A2L	1.46	1.70	-	B1
OP-MSTM021	1	114X7327	A1+A2L	1.61	1.61	-	B1
OP-MSTM022	1	114X7299	A1+A2L	1.99	1.89	-	B2
	1	114X7300		2.36	2.07		
OP-MSTM026	3	114X7301	A1+A2L	2.43	1.95	-	B2
	1	114X7302		2.84	1.77		
OP-MSIM034	1	114X7303	A1+A2L	2.86	1.82	-	B2
	3	114X7275		3.72	2.46		
OP-MSTM034	3	114X7274	A1+A2L	3.72	2.54	-	B2
OP-MSIM038	1	114X7328	A1+A2L	3.09	1.72	-	B2
	1	114X7277		4.59	2.23		
OP-MSIM044	3	114X7276	A1+A2L	4.67	2.39	-	B2
	1	114X7279		4.77	2.22		
OP-MSIM046	3	114X7278	A1+A2L	4.82	2.37	-	B2
	3	114X7280		5.74	-		
OP-MSIM057	1	114X7281	A1+A2L	5.66	-	3.47	B3
	3	114X7317		7.42	-	4.17	
OP-MSIM068	1	114X7318	A1+A2L	7.53	-	4.04	B3
	3	114X7319		8.56	-	4.11	
OP-MSIM080	1	114X7320	A1+A2L	8.41	-	3.67	B3
OP-MSIM099	3	114X7321	A1+A2L	10.14	-	3.70	B3
OP-MSIM108	3	114X7322	A1+A2L	10.90	-	3.77	B3

Optyma™ Slim Pack (W05)

Refrigerants with a GWP level below 150

R454C – LBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -35°C	EcoDesign**	
					COP	Housing
OP-LSVM014	1	114X7263	A1+A2L	0.34	0.88	B1
OP-LSVM016	1	114X7242	A1+A2L	0.35	0.87	B1
OP-LSVM026	1	114X7227	A1+A2L	0.52	0.87	B2
OP-LSVM034	1	114X7228	A1+A2L	0.83	0.96	B2
OP-LSVM048	3	114X7245	A1+A2L	0.76	0.90	B2
	1	114X7244		0.88	1.00	
OP-LSVM068	3	114X7247	A1+A2L	1.22	0.89	B2

R455A – LBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -35°C	EcoDesign**	
					COP	Housing
OP-LSVM014	1	114X7263	A1+A2L	0.38	0.89	B1
OP-LSVM016	1	114X7242	A1+A2L	0.43	0.90	B1
OP-LSVM026	1	114X7227	A1+A2L	0.58	0.93	B2
OP-LSVM034	1	114X7228	A1+A2L	0.90	0.98	B2
OP-LSVM048	1	114X7244	A1+A2L	0.94	0.98	B2
	3	114X7245		0.93	0.99	
OP-LSVM068	3	114X7247	A1+A2L	1.45	0.98	B2

Optyma™ Slim Pack (W09)

Refrigerants with a GWP level below 150

R454C – LBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -35°C	EcoDesign**	
					COP	Housing
OP-LSVM014	1	114X7295	A1+A2L	0.34	0.88	B1
OP-LSVM016	1	114X7296	A1+A2L	0.35	0.87	B1
OP-LSVM026	1	114X7297	A1+A2L	0.52	0.87	B2
OP-LSVM034	1	114X7298	A1+A2L	0.83	0.96	B2
OP-LSVM048	3	114X7283	A1+A2L	0.76	0.90	B2
	1	114X7282		0.88	1.00	
OP-LSVM068	3	114X7285	A1+A2L	1.22	0.89	B2

R455A – LBP

Model	Phases	Code no.	Refrigerant	Cooling capacity* in [kW] at evaporating temp. -35°C	EcoDesign**	
					COP	Housing
OP-LSVM014	1	114X7295	A1+A2L	0.38	0.89	B1
OP-LSVM016	1	114X7296	A1+A2L	0.43	0.90	B1
OP-LSVM026	1	114X7297	A1+A2L	0.58	0.93	B2
OP-LSVM034	1	114X7298	A1+A2L	0.90	0.98	B2
OP-LSVM048	1	114X7282	A1+A2L	0.94	0.98	B2
	3	114X7283		0.93	0.99	
OP-LSVM068	3	114X7285	A1+A2L	1.45	0.98	B2

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

For regular updates and detailed capacities, please refer to Coolselector®2 software coolselector.danfoss.com



* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R449A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**					
						COP	SEPR	Housing			
OP-MSTM008	W05	1	114X7226	A1+A2L	0.86	2.25	-	B1			
	W09		114X7286								
OP-MSOM009	W05	1	114X7108	A1	0.97	2.04	-	B1			
	W09		114X7133								
OP-MSTM009	W05	1	114X7229	A1+A2L	0.97	2.04	-	B1			
	W09		114X7287								
OP-MSOM012	W05	1	114X7109	A1	1.23	1.85	-	B1			
	W09		114X7134								
OP-MSTM012	W05	1	114X7230	A1+A2L	1.23	1.85	-	B1			
	W09		114X7288								
OP-MSOM014	W05	1	114X7110	A1	1.30	1.78	-	B1			
	W09		114X7135								
OP-MSTM014	W05	1	114X7231	A1+A2L	1.30	1.78	-	B1			
	W09		114X7289								
OP-MSTM018	W05	1	114X7232	A1+A2L	1.36	1.65	-	B1			
	W09		114X7290								
OP-MSTM021	W05	1	114X7325	A1+A2L	1.71	1.91	-	B2			
	W09		114X7327								
OP-MSTM022	W05	1	114X7233	A1+A2L	2.01	1.91	-	B2			
	W09		114X7299								
OP-MSTM026	W05	1	114X7234	A1+A2L	2.40	2.01	-	B2			
	W09		114X7300								
	W05	3	114X7235		2.41	2.06					
	W09		114X7301								
OP-MSTM034	W05	1	114X7237	A1+A2L	2.64	1.79	-	B2			
	W09		114X7302								
	W05	3	114X7236		2.69	1.84					
	W09		114X7303								
OP-MSXM034	W05	1	114X7061	A1	3.62	2.28	-	B2			
	W09		114X7195								
	W05		3						114X7062	3.61	2.22
W09	114X7196										
OP-MSIM034	W05	1	114X7267	A1+A2L	3.62	2.28	-	B2			
	W09		114X7275								
	W05		3						114X7266	3.61	2.22
W09	114X7274										
OP-MSTM038	W05	1	114X7326	A1	2.85	1.76	-	B2			
	W09		114X7328								
OP-MSXM044	W05	1	114X7161	A1	4.45	1.98	-	B2			
	W09		114X7211								
	W05		3						114X7162	4.50	2.10
	W09								114X7212		
OP-MSIM044	W05	1	114X7269	A1+A2L	4.45	1.98	-	B2			
	W09		114X7277								
	W05		3						114X7268	4.50	2.10
	W09								114X7276		

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

For regular updates and detailed capacities, please refer to Coolselector®2 software

coolselector.danfoss.com



Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R448A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**					
						COP	SEPR	Housing			
OP-MSTM008	W05	1	114X7226	A1+A2L	0.87	2.26	-	B1			
	W09		114X7286								
OP-MSTM009	W05	1	114X7229	A1+A2L	0.98	2.05	-	B1			
	W09		114X7287								
OP-MSOM009	W05	1	114X7108	A1	0.98	2.05	-	B1			
	W09		114X7133								
OP-MSTM012	W05	1	114X7230	A1+A2L	1.24	1.86	-	B1			
	W09		114X7288								
OP-MSOM012	W05	1	114X7109	A1	1.24	1.86	-	B1			
	W09		114X7134								
OP-MSTM014	W05	1	114X7231	A1+A2L	1.32	1.79	-	B1			
	W09		114X7289								
OP-MSOM014	W05	1	114X7110	A1	1.32	1.79	-	B1			
	W09		114X7135								
OP-MSTM018	W05	1	114X7232	A1+A2L	1.38	1.66	-	B1			
	W09		114X7290								
OP-MSTM021	W05	1	114X7325	A1+A2L	1.73	1.91	-	B2			
	W09		114X7327								
OP-MSTM022	W05	1	114X7233	A1+A2L	2.03	1.93	-	B2			
	W09		114X7299								
OP-MSTM026	W05	1	114X7234	A1+A2L	2.43	2.02	-	B2			
	W09		114X7300								
	W05	3	114X7235		2.44	2.07					
	W09		114X7301								
OP-MSTM034	W05	1	114X7237	A1+A2L	2.68	1.81	-	B2			
	W09		114X7302								
	W05	3	114X7236		2.73	1.86					
	W09		114X7303								
OP-MSXM034	W05	1	114X7061	A1	3.67	2.30	-	B2			
	W09		114X7195								
	W05		3						114X7062	3.65	2.24
W09	114X7196										
OP-MSIM034	W05	1	114X7267	A1+A2L	3.67	2.30	-	B2			
	W09		114X7275								
	W05		3						114X7266	3.65	2.24
W09	114X7274										
OP-MSTM038	W05	1	114X7326	A1	2.89	1.78	-	B2			
	W09		114X7328								
OP-MSXM044	W05	1	114X7161	A1	4.50	1.99	-	B2			
	W09		114X7211								
	W05		3						114X7162	4.56	2.11
	W09								114X7212		
OP-MSIM044	W05	1	114X7269	A1+A2L	4.50	1.99	-	B2			
	W09		114X7277								
	W05		3						114X7268	4.56	2.11
	W09								114X7276		

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**					
						COP	SEPR	Housing			
OP-MSXM046	W05	1	114X7063	A1	4.84	2.06	-	B2			
	W09		114X7197								
	W05		3						114X7064	4.80	2.14
W09	114X7198										
OP-MSIM046	W05	1	114X7271	A1+A2L	4.84	2.06	-	B2			
	W09		114X7279								
	W05		3						114X7270	4.80	2.14
W09	114X7278										
OP-MSXM057	W05	1	114X7065	A1	5.80	-	3.15	B2			
	W09		114X7199								
	W05		3						114X7066	5.73	3.36
W09	114X7200										
OP-MSIM057	W05	1	114X7273	A1+A2L	5.80	-	3.15	B2			
	W09		114X7281								
	W05		3						114X7272	5.73	3.36
W09	114X7280										
OP-MSXM068	W05	1	114X7067	A1	7.36	-	3.59	B3			
	W09		114X7201								
	W05		3						114X7068	7.37	3.78
W09	114X7202										
OP-MSIM068	W05	1	114X7312	A1+A2L	7.36	-	3.67	B3			
	W09		114X7318								
	W05		3						114X7311	7.29	3.84
W09	114X7317										
OP-MSXM080	W05	1	114X7069	A1	8.32	-	3.30	B3			
	W09		114X7203								
	W05		3						114X7070	8.37	3.67
	W09								114X7204		
OP-MSIM080	W05	1	114X7314	A1+A2L	8.32	-	3.35	B3			
	W09		114X7320								
	W05		3						114X7313	8.37	3.79
W09	114X7319										
OP-MSXM099	W05	3	114X7071	A1	10.27	-	3.68	B3			
	W09		114X7205								
OP-MSIM099	W05	3	114X7315	A1+A2L	10.27	-	3.74	B3			
	W09		114X7321								
OP-MSXM108	W05	3	114X7072	A1	10.88	-	3.52	B3			
	W09		114X7206								
OP-MSIM108	W05	3	114X7316	A1+A2L	10.88	-	3.57	B3			
	W09		114X7322								
	W05		1						114X7316	A1	4.50
W09	114X7211										
OP-MSXM099	W05	3	114X7071	A1	10.39	-	3.71	B3			
	W09		114X7205								
	W05		1						114X7315	A1+A2L	10.39
W09	114X7321										
OP-MSXM108	W05	3	114X7072	A1	11.01	-	3.55	B3			
	W09		114X7206								
OP-MSIM108	W05	3	114X7316	A1+A2L	11.01	-	3.60	B3			
	W09		114X7322								

Refrigerants flexibility across our ranges:



OP-MSXM057: The "X" letter means that this model is also compatible with multiple refrigerants such as R134a or R407F. This simplifies stock and logistics and reduces costs. Check our designation for the options.

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R134a – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MSSM026	W05	1	114X7248	A1+A2L	1.44	1.98	-	B2
	W09		114X7304					
OP-MSSM030	W05	1	114X7249	A1+A2L	1.60	1.86	-	B2
	W09		114X7305					
OP-MSXM034	W05	1	114X7061	A1	2.19	2.17	-	B2
	W09		114X7195					
	W05		114X7062					
OP-MSXM034	W05	3	114X7196	A1	2.16	2.25	-	B2
	W09		114X7267					
	W05		114X7061					
OP-MSIM034	W05	1	114X7266	A1+A2L	2.19	2.17	-	B2
	W09		114X7275					
	W05		114X7274					
OP-MSXM044	W05	1	114X7161	A1	2.75	2.01	-	B2
	W09		114X7211					
	W05		114X7162					
OP-MSXM044	W05	3	114X7212	A1	2.74	2.23	-	B2
	W09		114X7268					
	W05		114X7276					
OP-MSIM044	W05	1	114X7269	A1+A2L	2.74	2.23	-	B2
	W09		114X7276					
	W05		114X7277					
OP-MSXM046	W05	1	114X7063	A1	2.93	2.07	-	B2
	W09		114X7197					
	W05		114X7064					
OP-MSXM046	W05	3	114X7198	A1	2.92	2.33	-	B2
	W09		114X7198					
	W05		114X7271					
OP-MSIM046	W05	1	114X7279	A1+A2L	2.93	2.07	-	B2
	W09		114X7279					
	W05		114X7270					
OP-MSXM057	W05	1	114X7065	A1	3.54	1.90	-	B2
	W09		114X7199					
	W05		114X7066					
OP-MSXM057	W05	3	114X7200	A1	3.54	2.28	-	B2
	W09		114X7200					

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MSIM057	W05	3	114X7272	A1+A2L	3.54	2.28	-	B2
	W09		114X7280					
OP-MSXM068	W05	1	114X7273	A1+A2L	3.54	1.90	-	B2
	W09		114X7281					
OP-MSXM068	W05	1	114X7067	A1	4.43	2.11	-	B3
	W09		114X7201					
	W05		114X7068					
OP-MSXM068	W05	3	114X7202	A1	4.38	2.41	-	B3
	W09		114X7202					
	W05		114X7312					
OP-MSIM068	W05	1	114X7318	A1+A2L	4.43	2.16	-	B3
	W09		114X7318					
	W05		114X7311					
OP-MSXM080	W05	1	114X7317	A1	5.14	-	3.08	B3
	W09		114X7203					
	W05		114X7070					
OP-MSXM080	W05	3	114X7204	A1	5.09	-	3.43	B3
	W09		114X7204					
	W05		114X7314					
OP-MSIM080	W05	1	114X7320	A1+A2L	5.14	-	3.17	B3
	W09		114X7320					
	W05		114X7313					
OP-MSXM099	W05	3	114X7319	A1	6.29	-	3.89	B3
	W09		114X7071					
	W05		114X7205					
OP-MSIM099	W05	1	114X7315	A1+A2L	6.29	-	4.01	B3
	W09		114X7321					
OP-MSXM108	W05	3	114X7072	A1	6.64	-	3.80	B3
	W09		114X7206					
OP-MSIM108	W05	1	114X7316	A1+A2L	6.64	-	3.90	B3
	W09		114X7322					

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R513a – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	Eco Design (3)**		Housing
						COP	SEPR	
OP-MSSM026	W05	1	114X7248	A1+A2L	1.29	1.99	-	B2
	W09		114X7304					
OP-MSSM030	W05	1	114X7249	A1+A2L	1.59	1.86	-	B2
	W09		114X7305					
OP-MSXM034	W05	1	114X7061	A1	2.24	2.20	-	B2
	W09		114X7195					
	W05		114X7062					
OP-MSXM034	W05	3	114X7196	A1	2.26	2.25	-	B2
	W09		114X7196					
	W05		114X7267					
OP-MSIM034	W05	1	114X7266	A1+A2L	2.24	2.20	-	B2
	W09		114X7275					
	W05		114X7274					
OP-MSXM044	W05	1	114X7161	A1	2.81	1.95	-	B2
	W09		114X7211					
	W05		114X7162					
OP-MSXM044	W05	3	114X7212	A1	2.88	2.32	-	B2
	W09		114X7212					
	W05		114X7269					
OP-MSIM044	W05	1	114X7277	A1+A2L	2.81	1.95	-	B2
	W09		114X7277					
	W05		114X7268					
OP-MSXM046	W05	1	114X7064	A1	3.04	2.32	-	B2
	W09		114X7198					
	W05		114X7063					
OP-MSXM046	W05	3	114X7197	A1	2.98	1.98	-	B2
	W09		114X7197					
	W05		114X7271					
OP-MSIM046	W05	1	114X7279	A1+A2L	2.98	1.98	-	B2
	W09		114X7279					
	W05		114X7270					
OP-MSXM057	W05	1	114X7065	A1	3.65	2.06	-	B2
	W09		114X7199					
	W05		114X7066					
OP-MSXM057	W05	3	114X7200	A1	3.70	2.30	-	B2
	W09		114X7200					

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MSIM057	W05	1	114X7273	A1+A2L	3.65	2.06	-	B2
	W09		114X7281					
OP-MSXM068	W05	3	114X7272	A1	3.70	2.30	-	B3
	W09		114X7280					
	W05		114X7067					
OP-MSXM068	W05	1	114X7201	A1	4.55	2.30	-	B3
	W09		114X7201					
	W05		114X7068					
OP-MSXM068	W05	3	114X7202	A1	4.64	2.52	-	B3
	W09		114X7202					
	W05		114X7312					
OP-MSIM068	W05	1	114X7318	A1+A2L	4.55	2.36	-	B3
	W09		114X7318					
	W05		114X7311					
OP-MSXM080	W05	1	114X7069	A1	5.34	-	3.24	B3
	W09		114X7203					
	W05		114X7070					
OP-MSXM080	W05	3	114X7204	A1	5.40	-	3.82	B3
	W09		114X7204					
	W05		114X7314					
OP-MSIM080	W05	1	114X7320	A1+A2L	5.34	-	3.33	B3
	W09		114X7320					
	W05		114X7313					
OP-MSXM099	W05	3	114X7319	A1	5.40	-	4.02	B3
	W09		114X7319					
	W05		114X7071					
OP-MSXM099	W05	1	114X7205	A1	6.60	-	3.78	B3
	W09		114X7205					
OP-MSIM099	W05	3	114X7315	A1+A2L	6.60	-	3.88	B3
	W09		114X7321					
OP-MSXM108	W05	3	114X7072	A1	7.00	-	3.79	B3
	W09		114X7206					
OP-MSIM108	W05	1	114X7316	A1+A2L	7.00	-	3.88	B3
	W09		114X7322					

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R452A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Sound pressure level @ 10m dB(A)	Housing
						COP	SEPR		
OP-MSTM008	W05	1	114X7226	A1+A2L	0.82	2.26	-	31	B1
	W09		114X7286						
OP-MSTM009	W05	1	114X7229	A1+A2L	0.92	2.01	-	32	B1
	W09		114X7287						
OP-MSOM009	W05	1	114X7108	A1+A2L	0.92	2.01	-	32	B1
	W09		114X7133						
OP-MSOM012	W05	1	114X7109	A1+A2L	1.25	1.98	-	32	B1
	W09		114X7134						
OP-MSTM012	W05	1	114X7230	A1+A2L	1.25	1.98	-	32	B1
	W09		114X7288						
OP-MSOM014	W05	1	114X7110	A1+A2L	1.30	1.88	-	33	B1
	W09		114X7135						
OP-MSTM014	W05	1	114X7231	A1+A2L	1.30	1.88	-	33	B1
	W09		114X7289						
OP-MSTM018	W05	1	114X7232	A1+A2L	1.39	1.71	-	39	B1
	W09		114X7290						
OP-MSTM021	W05	1	114X7325	A1+A2L	1.59	1.67	-	39	B2
	W09		114X7327						
OP-MSTM022	W05	1	114X7233	A1+A2L	2.04	1.99	-	39	B2
	W09		114X7299						
OP-MSTM026	W05	1	114X7234	A1+A2L	2.41	2.17	-	39	B2
	W09		114X7300						
	W05	3	114X7235		2.37	1.94	-	39	
	W09		114X7301						
OP-MSTM034	W05	1	114X7237	A1+A2L	2.69	1.88	-	39	B2
	W09		114X7302						
	W05	3	114X7236		2.74	1.93	-	39	
	W09		114X7303						
OP-MSXM034	W05	1	114X7061	A1	3.54	2.11	-	40	B2
	W09		114X7195						
	W05	3	114X7062		3.51	2.11	-	40	
	W09		114X7196						
OP-MSIM034	W05	1	114X7267	A1+A2L	3.54	2.11	-	40	B2
	W09		114X7275						
	W05	3	114X7266		3.51	2.11	-	40	
	W09		114X7274						
OP-MSTM038	W05	1	114X7326	A1+A2L	2.90	1.84	-	39	B2
	W09		114X7328						
OP-MSXM044	W05	1	114X7161	A1	4.50	2.04	-	41	B2
	W09		114X7211						
	W05	3	114X7162		4.47	2.12	-	41	
	W09		114X7212						
OP-MSIM044	W05	1	114X7269	A1+A2L	4.50	2.04	-	41	B2
	W09		114X7277						
	W05	3	114X7268		4.47	2.12	-	41	
	W09		114X7276						

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R452A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Sound pressure level @ 10m dB(A)	Housing
						COP	SEPR		
OP-LSQM014	W05	1	114X7106	A1	0.40	0.98	-	41	B2
	W09		114X7129						
OP-LSVM014	W05	1	114X7263	A1+ A2L	0.40	0.98	-	41	B2
	W09		114X7295						
OP-LSQM018	W05	1	114X7107	A1	0.43	1.00	-	41	B2
	W09		114X7130						
OP-LSVM016	W05	1	114X7242	A1+ A2L	0.43	1.00	-	41	B2
	W09		114X7296						
OP-LSVM026	W05	1	114X7227	A1+ A2L	0.63	0.98	-	42	B2
	W09		114X7297						
OP-LSVM034	W05	1	114X7228	A1+ A2L	0.86	1.02	-	42	B2
	W09		114X7298						
OP-LSQM048	W05	1	114X7087	A1	1.02	1.14	-	42	B2
	W09		114X7181						
	W05	3	114X7088		0.99	1.09	-	42	
	W09		114X7182						
OP-LSVM048	W05	1	114X7244	A1+ A2L	1.02	1.14	-	42	B2
	W09		114X7282						
	W05	3	114X7245		0.99	1.09	-	42	
	W09		114X7283						
OP-LSQM067	W05	3	114X7091	A1	2.44	-	1.69	43	B3
	W09		114X7187						
	W05	1	114X7089		1.52	1.01	-	43	
	W09		114X7183						
OP-LSQM068	W05	3	114X7090	A1	1.52	1.17	-	43	B3
	W05		114X7184						
	W05		114X7092						
OP-LSVM068	W05	3	114X7247	A1+ A2L	1.52	1.17	-	43	B3
	W09		114X7285						
OP-LSQM084	W05	3	114X7092	A1	2.97	-	1.66	43	B3
	W09		114X7188						
OP-LSQM098	W05	3	114X7075	A1	3.46	-	1.67	43	B3
	W09		114X7189						

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Slim Pack

Refrigerants with a GWP level above 2500

R404A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MSTM008	W05	1	114X7226	A1+A2L	0.84	2.06	-	B1
	W09		114X7286					
OP-MSTM009	W05	1	114X7108	A1	0.92	2.01	-	B1
	W09		114X7133					
OP-MSOM009	W05	1	114X7229	A1+A2L	0.92	2.01	-	B1
	W09		114X7287					
OP-MSOM012	W05	1	114X7230	A1+A2L	1.22	1.83	-	B1
	W09		114X7288					
OP-MSTM012	W05	1	114X7109	A1	1.22	1.83	-	B1
	W09		114X7134					
OP-MSOM014	W05	1	114X7231	A1+A2L	1.28	1.73	-	B1
	W09		114X7289					
OP-MSTM014	W05	1	114X7110	A1	1.28	1.73	-	B1
	W09		114X7135					
OP-MSTM018	W05	1	114X7232	A1+A2L	1.35	1.64	-	B1
	W09		114X7290					
OP-MSTM021	W05	1	114X7325	A1+A2L	1.56	1.64	-	B2
	W09		114X7327					
OP-MSTM022	W05	1	114X7233	A1+A2L	2.02	1.87	-	B2
	W09		114X7299					
OP-MSTM026	W05	1	114X7234	A1+A2L	2.35	1.97	-	B2
	W09		114X7300		2.41	1.80		
	W05	3	114X7235			2.74	1.71	
	W09		114X7301		2.79		1.76	
OP-MSTM034	W05	1	114X7237	A1+A2L		2.74	1.71	-
	W09		114X7302					
	W05	3	114X7236		2.79	1.76	-	
	W09		114X7303					
OP-MSXM034	W05	1	114X7061	A1	3.50	2.09	-	B2
	W09		114X7195		3.42	2.13		
	W05	3	114X7062			3.42	2.13	
	W09		114X7196					
OP-MSIM034	W05	1	114X7267	A1+A2L	3.50	2.09	-	B2
	W09		114X7275		3.42	2.13		
	W05	3	114X7266			3.42	2.13	
	W09		114X7274					
OP-MSTM038	W05	1	114X7326	A1	2.97	1.69	-	B2
	W09		114X7328					
OP-MSXM044	W05	1	114X7269	A1+A2L	4.39	2.05	-	B2
	W09		114X7277		4.33	2.08		
	W05	3	114X7268			4.33	2.08	
	W09		114X7276					
OP-MSIM044	W05	1	114X7161	A1	4.39	2.05	-	B2
	W09		114X7211		4.33	2.08		
	W05	3	114X7162			4.33	2.08	
	W09		114X7212					

R404A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MSXM046	W05	1	114X7063	A1	4.60	2.00	-	B2
	W09		114X7197		4.54	2.04		
	W05	3	114X7064			4.54	2.04	-
	W09		114X7198					
OP-MSIM046	W05	1	114X7271	A1+2L	4.60	2.00	-	B2
	W09		114X7279		4.54	2.04		
	W05	3	114X7270			4.54	2.04	
	W09		114X7278					
OP-MSXM057	W05	1	114X7065	A1	5.31	-	2.95	B2
	W09		114X7199		5.30	3.05		
	W05	3	114X7066			5.30	3.05	
	W09		114X7200					
OP-MSIM057	W05	1	114X7273	A1+A2L	5.31	-	2.95	B2
	W09		114X7281		5.30	3.05		
	W05	3	114X7272			5.30	3.05	
	W09		114X7280					
OP-MSXM068	W05	1	114X7067	A1	7.25	-	3.73	B3
	W09		114X7201		7.24	3.81		
	W05	3	114X7068			7.24	3.81	
	W09		114X7202					
OP-MSIM068	W05	1	114X7311	A1+A2L	7.24	-	3.89	B3
	W09		114X7317		7.25	3.81		
	W05	3	114X7312			7.25	3.81	
	W09		114X7318					
OP-MSXM080	W05	1	114X7069	A1	8.32	-	3.38	B3
	W09		114X7203		8.40	3.73		
	W05	3	114X7070			8.40	3.73	
	W09		114X7204					
OP-MSIM080	W05	1	114X7314	A1+A2L	8.32	-	3.43	B3
	W09		114X7320		8.40	3.85		
	W05	3	114X7313			8.40	3.85	
	W09		114X7319					
OP-MSXM099	W05	3	114X7071	A1	9.70	-	3.41	B3
	W09		114X7205					
OP-MSIM099	W05	3	114X7315	A1+A2L	9.70	-	3.46	B3
	W09		114X7321					
OP-MSXM108	W05	3	114X7072	A1	10.37	-	3.35	B3
	W09		114X7206					
OP-MSIM108	W05	3	114X7316	A1+A2L	10.37	-	3.40	B3
	W09		114X7322					

Optyma™ Slim Pack

Refrigerants with a GWP level above 2500

R404A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-LSQM014	W05	1	114X7106	A1	0.45	1.04	-	B1
	W09		114X7129					
OP-LSVM014	W05	1	114X7263	A1+A2L	0.45	1.04	-	B1
	W09		114X7295					
OP-LSQM018	W05	1	114X7242	A1+A2L	0.49	1.08	-	B2
	W09		114X7296					
OP-LSVM016	W05	1	114X7107	A1	0.49	1.08	-	B2
	W09		114X7130					
OP-LSVM026	W05	1	114X7227	A1+A2L	0.64	0.97	-	B2
	W09		114X7297					
OP-LSVM034	W05	1	114X7228	A1+A2L	0.88	1.03	-	B2
	W09		114X7298					
OP-LSQM048	W05	1	114X7087	A1	1.00	1.02	-	B2
	W09		114X7181					
	W05	3	114X7088		1.02	1.14	-	
	W09		114X7182					
OP-LSVM048	W05	1	114X7244	A1+A2L	1.00	1.02	-	B2
	W09		114X7282					
	W05	3	114X7245		1.02	1.14	-	
	W09		114X7283					
OP-LSQM067	W05	3	114X7091	A1	2.62	-	1.66	B3
	W09		114X7187					
OP-LSQM068	W05	1	114X7089	A1	1.63	1.07	-	B3
	W09		114X7183					
	W05	3	114X7090		1.65	1.16	-	
	W09		114X7184					
OP-LSVM068	W05	3	114X7247	A1+A2L	1.65	1.16	-	B3
	W09		114X7285					
OP-LSQM084	W05	3	114X7092	A1	3.14	-	1.69	B3
	W09		114X7188					
OP-LSQM098	W05	3	114X7075	A1	3.64	-	1.73	B3
	W09		114X7189					

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Plus

Equipped for **quietness** and **top performance**

The same robust quality with added technology and smarter design. That's a seriously cool combination.



Quick and safe installation and service

It is another step forward in plug and play. It will not just save you valuable time in installation, set up and service, it will also reduce your customers' bill.



The best sound performance in the market

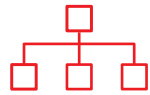
Due to its long-life compressor, acoustic insulation, component design as well as intelligent fan speed reduction during low capacity operation.



High SEPR

All models in the range are highly efficient and well above EcoDesign 2018 thresholds, contributing to a reduction in energy costs.

Annual energy savings based on cost of energy:
FRANCE: 0.18 € / 1 KWH = 4 192 x 0.18 = 755 €
UK: 0.21 € / 1 KWH = 4 192 x 0.21 = 880 €
GERMANY: 0.23 € / 1 KWH = 4 192 x 0.23 = 964 €



Connectivity

Contributes to considerable energy savings, making the Optyma™ Plus up to 20% more economical than an equivalent product.

High SEPR/COP for
964 €
annual electricity savings*



*Optyma™ Plus LBP unit vs equivalent unit in the market. Savings by customer in Germany. Source Danfoss.

Optyma™ Plus with liquid injection

Inject a little **simplicity** and **reliability** into your installations

The introduction of electronic liquid injection technology on LBP models enables precise temperature control of the application with an extended operating envelope.



Avoid system breakdown at hot ambient temperatures

The electronic liquid injection helps manage higher discharge temperatures, maintaining best-in-class operating conditions at up to 43°C ambient temperature.



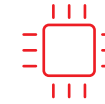
Reliable over time

The electronic management ensures that the right quantity of liquid is injected into the compressor and increases the system's reliability.



Streamline the refrigerant bottles

Choose one sustainable and economic refrigerant for positive and negative application temperatures: R448A or R449A.



Simple and pre-set safe modulation

The electronic module is pre-programmed to protect the compressor against high discharge temperatures - increasing the system's lifespan.



High efficiency to the top

In-field stacking cuts costs
With its unique load-bearing design, it's possible to stack units in the field. This cuts installation time, and saves on carpentry and brackets to reduce cost.

Compact cabinet speeds installation
New compact design makes it easier to handle when fitting in tight spaces, saving installation time.



Accessibility to speed up service
Easier and quicker accessibility to all components with new double door design - saves time during servicing, maintenance and repair.

Intelligent technology speeds start-up and enhances reliability
Preset parameters make it easier to get it right from the start. Fewer mistakes reduce the risk of damage and save time and money on repairs.

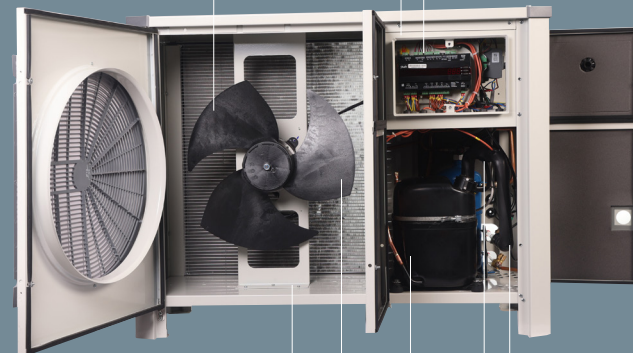
Multi refrigerant range (P00) additional feature



IP54. Sealed electrical box

Fan-timer for ventilation before compressor starts

Electronic controller pre-programmed with A2Ls



Louvers and holes for compressor compartment ventilation

Factory machined flare connections approved for A2Ls

Multi A1/A2L refrigerants compressor

Electrical components approved for A2Ls

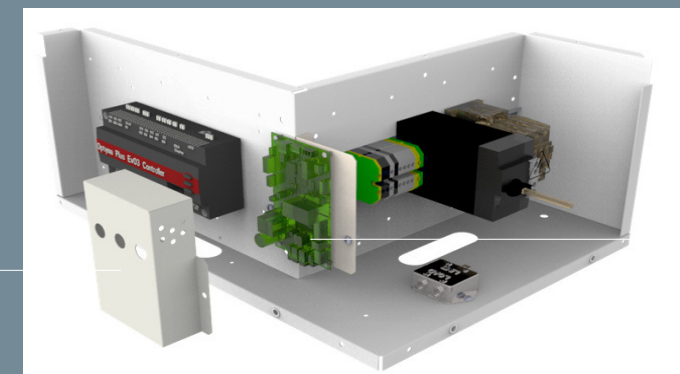


Stacking up to 2 units

Low temperature liquid injection



EEV: ETS6



Mounted touch protection cover

Self-managed module B+

Optyma™ Plus

Refrigerants with a GWP level below 150

R454C – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPTM008	P00	1	114X4107	A1+A2L	0.63	1.84	-	H1
OP-MPTM009	P00	1	114X4111	A1+A2L	0.70	1.82	-	H1
OP-MPTM012	P00	1	114X4113	A1+A2L	1.16	1.81	-	H1
OP-MPTM014	P00	1	114X4114	A1+A2L	1.20	1.71	-	H1
OP-MPTM018	P00	1	114X4115	A1+A2L	1.32	1.65	-	H1
OP-MPTM021	P00	1	114X4217	A1+A2L	1.44	1.62	-	H2
OP-MPTM022	P00	1	114X4237	A1+A2L	1.86	1.97	-	H2
OP-MPTM026	P00	1	114X4238	A1+ A2L	2.22	2.15	-	H2
	P00	3	114X4239		2.23	2.20		
OP-MPTM034	P00	1	114X4241	A1 +A2L	2.45	1.67	-	H2
	P00	3	114X4242		2.46	1.71		
OP-MPIM034	P00	3	114X4204	A1+A2L	3.40	2.50	-	H2
	P00	1	114X4205		3.47	2.42		
OP-MPTM038	P00	1	114X4218	A1+A2L	2.74	1.70	-	H2
OP-MPIM046	P00	1	114X4207	A1+A2L	4.40	2.28	-	H2
	P00	3	114X4206		4.47	2.40		
OP-MPIM057	P00	3	114X4208	A1+A2L	5.21	-	3.73	H2
	P00	1	114X4209		5.22	-	3.47	
OP-MPIM068	P00	1	114X4307	A1+A2L	6.78	-	3.83	H3
	P00	3	114X4306		6.85	-	4.27	
OP-MPIM080	P00	1	114X4312	A1+A2L	7.66	-	3.51	H3
	P00	3	114X4309		7.91	-	4.24	
OP-MPIM108	P00	3	114X4314	A1+A2L	9.99	-	3.77	H3
OP-MPIM125	P00	3	114X4409	A1+A2L	11.89	-	3.86	H4
OP-MPIM162	P00	3	114X4410	A1+A2L	14.34	-	3.31	H4

R454C – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-LPVM016	P00	1	114X3110	A1+A2L	0.35	0.87	-	H1
OP-LPVM026	P00	1	114X3201	A1+A2L	0.52	0.87	-	H2
OP-LPVM034	P00	1	114X3202	A1+A2L	0.83	0.96	-	H2
OP-LPVM048	P00	3	114X3205	A1+A2L	0.76	0.90	-	H2
	P00	1	114X3204		0.88	1.00		
OP-LPVM068	P00	3	114X3207	A1+A2L	1.22	0.89	-	H2
OP-LPKM067	P02	3	114X3304	A1+A2L	2.23	-	1.68	H3
OP-LPKM084	P02	3	114X3305	A1+A2L	2.76	-	1.66	H3
OP-LPKM098	P02	3	114X3306	A1+A2L	3.16	-	1.61	H3
OP-LPKM120	P02	3	114X3405	A1+A2L	3.89	-	1.66	H3
OP-LPKM168	P02	3	114X3406	A1+A2L	5.01	-	1.68	H4

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	Eco Design (3)**		Sound pressure level @ 10m dB(A)
						COP	SEPR	
OP-MPSM026	P00	1	114X4243	A1+A2L	1.31	1.95	-	37
OP-MPSM030	P00	1	114X4244	A1+A2L	1.42	1.83	-	37

R455A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPTM008	P00	1	114X4107	A1+A2L	0.68	1.88	-	H1
OP-MPTM009	P00	1	114X4111	A1+A2L	0.82	1.89	-	H1
OP-MPTM012	P00	1	114X4113	A1+A2L	1.24	1.88	-	H1
OP-MPTM014	P00	1	114X4114	A1+A2L	1.31	1.80	-	H1
OP-MPTM018	P00	1	114X4115	A1+A2L	1.46	1.70	-	H1
OP-MPTM021	P00	1	114X4217	A1+A2L	1.61	1.61	-	H2
OP-MPTM022	P00	1	114X4237	A1+A2L	1.99	1.89	-	H2
OP-MPTM026	P00	1	114X4238	A1+A2L	2.36	2.07	-	H2
	P00	3	114X4239		2.43	1.95		
OP-MPTM034	P00	1	114X4241	A1 +A2L	2.84	1.77	-	H2
	P00	3	114X4242		2.86	1.82		
OP-MPIM034	P00	1	114X4205	A1+A2L	3.72	2.46	-	H2
	P00	3	114X4204		3.72	2.54		
OP-MPTM038	P00	1	114X4218	A1+A2L	3.09	1.72	-	H2
OP-MPIM046	P00	1	114X4207	A1+A2L	4.77	2.22	-	H2
	P00	3	114X4206		4.82	2.37		
OP-MPIM057	P00	3	114X4208	A1+A2L	5.74	-	3.60	H2
	P00	1	114X4209		5.66	-	3.47	
OP-MPIM068	P00	3	114X4306	A1+A2L	7.42	-	4.17	H3
	P00	1	114X4307		7.53	-	4.04	
OP-MPIM080	P00	1	114X4312	A1+A2L	8.41	-	3.67	H3
	P00	3	114X4309		8.56	-	4.11	
OP-MPIM108	P00	3	114X4314	A1+A2L	10.90	-	3.62	H3
OP-MPIM125	P00	3	114X4409	A1+A2L	13.49	-	3.94	H4
OP-MPIM162	P00	3	114X4410	A1+A2L	15.22	-	3.05	H4

R455A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-LPVM016	P00	1	114X3110	A1+A2L	0.43	0.90	-	H1
OP-LPVM026	P00	1	114X3201	A1+A2L	0.58	0.93	-	H2
OP-LPVM034	P00	1	114X3202	A1+A2L	0.90	0.98	-	H2
OP-LPVM048	P00	3	114X3205	A1+A2L	0.93	0.99	-	H2
	P00	1	114X3204		0.94	0.98		
OP-LPVM068	P00	3	114X3207	A1+A2L	1.45	0.98	-	H2
OP-LPKM067	P02	3	114X3304	A1+A2L	2.54	-	1.71	H3
OP-LPKM084	P02	3	114X3305	A1+A2L	3.06	-	1.67	H3
OP-LPKM098	P02	3	114X3306	A1+A2L	3.59	-	1.55	H3
OP-LPKM120	P02	3	114X3405	A1+A2L	4.40	-	1.70	H3
OP-LPKM168	P02	3	114X3406	A1+A2L	5.90	-	1.73	H4

For regular updates and detailed capacities, please refer to Coolselector®2 software

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Optyma™ Plus

Refrigerants with a GWP level below 2500

R449A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**	
						COP	SEPR
OP-LPOM067	P02	3	114X3371	A1	2.57	-	1.60
OP-LPKM067	P02	3	114X3304	A1+A2L	2.54	-	1.63
OP-LPOM084	P02	3	114X3372	A1	3.23	-	1.64
OP-LPKM084	P02	3	114X3305	A1+A2L	3.20	-	1.66
OP-LPOM098	P02	3	114X3373	A1	3.58	-	1.63
OP-LPKM098	P02	3	114X3306	A1+A2L	3.53	-	1.63
OP-LPOM120	P02	3	114X3485	A1	4.67	-	1.66
OP-LPKM120	P02	3	114X3405	A1+A2L	4.67	-	1.71
OP-LPOM168	P02	3	114X3486	A1	6.59	-	1.81
OP-LPKM168	P02	3	114X3406	A1+A2L	6.59	-	1.86

OP-Plus – R449A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPBM008	P00	1	114X4119	A1	0.86	2.25	-	H1
OP-MPBM009	P00	1	114X4120	A1	0.97	2.04	-	H1
OP-MPTM008	P00	1	114X4107	A1+A2L	0.86	2.25	-	H1
OP-MPTM009	P00	1	114X4111	A1+A2L	0.97	2.04	-	H1
OP-MPBM012	P00	1	114X4121	A1	1.23	1.85	-	H1
OP-MPBM014	P00	1	114X4122	A1	1.30	1.78	-	H1
OP-MPTM012	P00	1	114X4113	A1+A2L	1.23	1.85	-	H1
OP-MPTM014	P00	1	114X4114	A1+A2L	1.30	1.78	-	H1
OP-MPTM018	P00	1	114X4115	A1+A2L	1.36	1.65	-	H1
OP-MPTM021	P00	1	114X4217	A1+A2L	1.71	1.91	-	H2
OP-MPTM022	P00	1	114X4237	A1+A2L	2.01	1.91	-	H2
OP-MPTM026	P00	1	114X4238	A1+A2L	2.40	2.01	-	H2
	P00	3	114X4239		2.41	2.06		
OP-MPTM034	P00	1	114X4241	A1+A2L	2.64	1.79	-	H2
	P00	3	114X4242		2.69	1.84		
OP-MPXM034	P00	1	114X4261	A1	3.62	2.28	-	H2
	P00	3	114X4264		3.61	2.22		
OP-MPIM034	P00	1	114X4205	A1+A2L	3.62	2.28	-	H2
	P00	3	114X4204		3.61	2.22		
OP-MPTM038	P00	1	114X4218	A1+A2L	2.85	1.76	-	H2
OP-MPXM046	P00	1	114X4281	A1	4.78	2.04	-	H2
	P00	3	114X4284		4.74	2.12		
OP-MPIM046	P00	1	114X4207	A1+A2L	4.78	2.04	-	H2
	P00	3	114X4206		4.74	2.12		
OP-MPXM057	P00	1	114X4290	A1	5.73	-	3.12	H2
	P00	3	114X4293		5.66	-	3.33	
OP-MPIM057	P00	1	114X4209	A1+A2L	5.73	-	3.12	H2
	P00	3	114X4208		5.66	-	3.33	
OP-MPXM068	P00	1	114X4308	A1	7.27	-	3.56	H3
	P00	3	114X4311		7.29	-	3.75	
OP-MPIM068	P00	1	114X4307	A1+A2L	7.27	-	3.64	H3
	P00	3	114X4306		7.29	-	3.84	
OP-MPXM080	P00	1	114X4321	A1	8.32	-	3.30	H3
	P00	3	114X4324		8.37	-	3.72	
OP-MPIM080	P00	1	114X4312	A1+A2L	8.32	-	3.35	H3
	P00	3	114X4309		8.37	-	3.79	
OP-MPXM108	P00	3	114X4344	A1	10.88	-	3.52	H3
OP-MPIM108	P00	3	114X4314	A1+A2L	10.88	-	3.57	H3
OP-MPIM125	P00	3	114X4409	A1+A2L	13.01	-	3.75	H4
OP-MPXM125	P00	3	114X4414	A1	13.01	-	3.61	H4
OP-MPIM162	P00	3	114X4410	A1+A2L	16.04	-	3.41	H4
OP-MPXM162	P00	3	114X4434	A1	16.04	-	3.32	H4

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

OP-Plus – R448A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**	
						COP	SEPR
OP-LPOM067	P02	3	114X3371	A1	2.61	-	1.62
OP-LPKM067	P02	3	114X3304	A1+A2L	2.58	-	1.64
OP-LPOM084	P02	3	114X3372	A1	3.29	-	1.66
OP-LPKM084	P02	3	114X3305	A1+A2L	3.25	-	1.68
OP-LPOM098	P02	3	114X3373	A1	3.63	-	1.64
OP-LPKM098	P02	3	114X3306	A1+A2L	3.71	-	1.68
OP-LPOM120	P02	3	114X3485				

Optyma™ Plus

Refrigerants with a GWP level below 2500

R134a – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPSM026	P00	1	114X4243	A1+A2L	1.44	1.98	-	H2
OP-MPSM030	P00	1	114X4244	A1+A2L	1.60	1.86	-	H2
OP-MPXM034	P00	1	114X4261	A1	2.19	2.17	-	H2
		3	114X4264		2.16	2.25		
OP-MPIM034	P00	1	114X4205	A+A2L	2.19	2.17	-	H2
		3	114X4204		2.16	2.25		
OP-MPXM046	P00	1	114X4281	A1	2.93	2.07	-	H2
		3	114X4284		2.92	2.33		
OP-MPIM046	P00	1	114X4207	A1+A2L	2.93	2.07	-	H2
		3	114X4206		2.92	2.33		
OP-MPXM057	P00	1	114X4290	A1	3.54	1.90	-	H2
		3	114X4293		3.54	2.28		
OP-MPIM057	P00	1	114X4209	A1+A2L	3.54	1.90	-	H2
		3	114X4208		3.54	2.28		
OP-MPXM068	P00	1	114X4308	A1	4.43	2.11	-	H3
		3	114X4311		4.38	2.41		
OP-MPIM068	P00	1	114X4307	A1+A2L	4.43	2.16	-	H3
		3	114X4306		4.38	2.47		
OP-MPXM080	P00	1	114X4321	A1	5.14	-	3.08	H3
		3	114X4324		5.09	-	3.50	
OP-MPIM080	P00	1	114X4312	A1+A2L	5.14	-	3.17	H3
		3	114X4309		5.09	-	3.61	
OP-MPXM108	P00	3	114X4344	A1	6.64	-	3.80	H3
OP-MPIM108	P00	3	114X4314	A1+A2L	6.64	-	3.90	H3
OP-MPXM125	P00	3	114X4414	A1	7.98	-	3.40	H4
OP-MPXM162	P00	3	114X4434	A1	10.25	-	3.46	H4
OP-MPIM125	P00	3	114X4409	A1+A2L	7.98	-	3.40	H4
OP-MPIM162	P00	3	114X4410	A1+A2L	10.25	-	3.46	H4

R513A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPSM026	P00	1	114X4243	A1+A2L	1.29	1.99	-	H2
OP-MPSM030	P00	1	114X4244	A1+A2L	1.59	1.86	-	H2
OP-MPXM034	P00	1	114X4261	A1	2.24	2.20	-	H2
		3	114X4264		2.26	2.25		
OP-MPIM034	P00	1	114X4205	A1+A2L	2.24	2.20	-	H2
		3	114X4204		2.26	2.25		
OP-MPXM046	P00	1	114X4281	A1	2.98	1.98	-	H2
		3	114X4284		3.04	2.32		
OP-MPIM046	P00	1	114X4207	A1+A2L	2.98	1.98	-	H2
		3	114X4206		3.04	2.32		
OP-MPXM057	P00	1	114X4290	A1	3.65	2.06	-	H2
		3	114X4293		3.70	2.30		
OP-MPIM057	P00	1	114X4209	A1+A2L	3.65	2.06	-	H2
		3	114X4208		3.70	2.30		
OP-MPXM068	P00	1	114X4308	A1	4.55	2.30	-	H3
		3	114X4311		4.64	2.52		
OP-MPIM068	P00	1	114X4307	A1+A2L	4.55	2.36	-	H3
		3	114X4306		4.64	2.59		
OP-MPXM080	P00	1	114X4321	A1	5.34	-	3.24	H3
		3	114X4324		5.40	-	3.89	
OP-MPIM080	P00	1	114X4312	A1+A2L	5.34	-	3.33	H3
		3	114X4309		5.40	-	4.02	
OP-MPXM108	P00	3	114X4344	A1	7.00	-	3.79	H3
OP-MPIM108	P00	3	114X4314	A1+A2L	7.00	-	3.88	H3
OP-MPXM125	P00	3	114X4414	A1+A2L	8.45	-	3.91	H4
OP-MPXM162	P00	3	114X4434	A1	8.45	-	3.66	H4
OP-MPIM125	P00	3	114X4409	A1+A2L	10.32	-	3.30	H4
OP-MPIM162	P00	3	114X4410	A1	10.32	-	3.16	H4

Optyma™ Plus

Refrigerants with a GWP level below 2500

R452A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-MPTM008	P00	1	114X4107	A1+A2L	0.82	2.26	-	H1
OP-MPBM008	P00	1	114X4119	A1	0.82	2.26	-	H1
OP-MPTM009	P00	1	114X4111	A1+A2L	0.92	2.01	-	H1
OP-MPBM009	P00	1	114X4120	A1	0.92	2.01	-	H1
OP-MPTM012	P00	1	114X4113	A1+A2L	1.25	1.98	-	H1
OP-MPBM012	P00	1	114X4121	A1	1.25	1.98	-	H1
OP-MPTM014	P00	1	114X4114	A1+2L	1.30	1.88	-	H1
OP-MPTM018	P00	1	114X4115	A1+A2L	1.39	1.71	-	H1
OP-MPBM014	P00	1	114X4122	A1	1.30	1.88	-	H2
OP-MPTM021	P00	1	114X4217	A1+A2L	1.59	1.67	-	H2
OP-MPTM022	P00	1	114X4237	A1+A2L	2.04	1.99	-	H2
OP-MPTM026	P00	1	114X4238	A1+A2L	2.41	2.17	-	H2
		3	114X4239		2.37	1.94		
OP-MPTM034	P00	1	114X4241	A1+A2L	2.69	1.88	-	H2
		3	114X4242		2.74	1.93		
OP-MPXM034	P00	1	114X4261	A1	3.54	2.11	-	H2
		3	114X4264		3.51	2.11		
OP-MPIM034	P00	1	114X4205	A1+A2L	3.54	2.11	-	H2
		3	114X4204		3.51	2.11		
OP-MPTM038	P00	1	114X4218	A1+A2L	2.90	1.84	-	H2
		3	114X4281		4.73	2.04		
OP-MPXM046	P00	1	114X4284	A1	4.71	2.12	-	H2
		3	114X4284		4.71	2.12		
OP-MPIM046	P00	1	114X4207	A1+A2L	4.73	2.04	-	H2
		3	114X4206		4.71	2.12		
OP-MPXM057	P00	1	114X4290	A1	5.85	-	3.31	H2
		3	114X4293		5.77	-	3.51	
OP-MPIM057	P00	1	114X4209	A1+A2L	5.85	-	3.31	H2
		3	114X4208		5.77	-	3.51	
OP-MPXM068	P00	1	114X4308	A1	7.09	-	3.40	H3
		3	114X4311		7.09	-	3.59	
OP-MPIM068	P00	1	114X4307	A1+A2L	7.09	-	3.47	H3
		3	114X4306		7.09	-	3.67	
OP-MPXM080	P00	1	114X4321	A1	8.23	-	3.32	H3
		3	114X4324		8.20	-	3.62	
OP-MPIM080	P00	1	114X4312	A1+A2L	8.23	-	3.38	H3
		3	114X4309		8.20	-	3.68	
OP-MPXM108	P00	3	114X4344	A1	10.88	-	3.55	H3
OP-MPIM108	P00	3	114X4314	A1+A2L	10.88	-	3.60	H3
OP-MPIM125	P00	3	114X4409	A1	13.27	-	3.77	H4
OP-MPXM125	P00	3	114X4414	A1	13.27	-	3.63	H4
OP-MPIM162	P00	3	114X4410	A1	16.17	-	3.34	H4
OP-MPXM162	P00	3	114X4434	A1	16.17	-	3.25	H4

R452A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	EcoDesign**		Housing
						COP	SEPR	
OP-LPVM016	P00	1	114X3110	A1 A2L	0.43	1.00	-	H1
OP-LPQM017	P00	1	114X3118	A1	0.43	1.00	-	H1
OP-LPVM026	P00	1	114X3201	A1+A2L	0.63	0.98	-	H2
OP-LPVM034	P00	1	114X3202	A1+A2L	0.86	1.02	-	H2
OP-LPQM048	P00	1	114X3225	A1	1.02	1.14	-	H2
		3	114X3233		0.99	1.09		
OP-LPVM048	P00	1	114X3204	A1+A2L	1.02	1.14	-	H2
		3	114X3205		0.99	1.09		
OP-LPVM068	P00	3	114X3207	A1+A2L	1.52	1.17	-	H2
		3	114X3241		1.52	1.01		
OP-LPQM068	P00	3	114X3249	A1	1.52	1.17	-	H2
		3	114X3249		1.52	1.17		
OP-LPQM096	P00	3	114X3357	A1	1.78	-	1.02	H3
OP-LPOM067	P02	3	114X3371	A1	2.44	-	1.72	H3
OP-LPKM067	P02	3	114X3304	A1+A2L	2.42	-	1.75	H3
OP-LPOM084	P02	3	114X3372	A1	2.97	-	1.69	H3
OP-LPKM084	P02	3	114X3305	A1+A2L	2.94	-	1.70	H3
OP-LPOM098	P02	3	114X3373	A1	3.46	-	1.69	H3
OP-LPKM098	P02	3	114X3306	A1+A2L	3.41	-	1.70	H3
OP-LPOM120	P02	3	114X3485	A1	4.51	-	1.77	H4
OP-LPKM120	P02	3	114X3405	A1+A2L	4.51	-	1.83	H4
OP-LPOM168	P02	3	114X3486	A1	6.39	-	1.83	H4
OP-LPKM168	P02	3	114X3406	A1+A2L	6.39	-	1.87	H4

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

Optyma™ Plus

Refrigerants with a GWP level above 2500

R404A – MBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	Eco Design (3)**		
						COP	SEPR	Housing
OP-MPTM008	P00	1	114X4107	A1+A2L	0.84	2.06	-	H1
OP-MPBM008	P00	1	114X4119	A1	0.84	2.06	-	H1
OP-MPBM009	P00	1	114X4120	A1	0.92	2.01	-	H1
OP-MPTM009	P00	1	114X4111	A1+A2L	0.92	2.01	-	H1
OP-MPTM012	P00	1	114X4113	A1+A2L	1.22	1.83	-	H1
OP-MPBM012	P00	1	114X4121	A1	1.22	1.83	-	H1
OP-MPBM014	P00	1	114X4122	A1	1.28	1.73	-	H1
OP-MPTM014	P00	1	114X4114	A1+A2L	1.28	1.73	-	H1
OP-MPTM018	P00	1	114X4115	A1+A2L	1.35	1.64	-	H1
OP-MPTM021	P00	1	114X4217	A1+A2L	1.56	1.64	-	H2
OP-MPTM022	P00	1	114X4237	A1+A2L	2.02	1.87	-	H2
OP-MPTM026	P00	1	114X4238	A1+A2L	2.39	1.75	-	H2
		3	114X4239	A1+A2L	2.41	1.80	-	H2
OP-MPTM034	P00	1	114X4241	A1+A2L	2.74	1.71	-	H2
		3	114X4242	A1+A2L	2.79	1.76	-	H2
OP-MPXM034	P00	1	114X4261	A1	3.50	2.09	-	H2
		3	114X4264	A1	3.42	2.13	-	H2
OP-MPIM034	P00	1	114X4205	A1+A2L	3.50	2.09	-	H2
		3	114X4204	A1+A2L	3.42	2.13	-	H2
OP-MPTM038	P00	1	114X4218	A1+A2L	2.97	1.69	-	H2
OP-MPXM046	P00	1	114X4281	A1	4.60	2.00	-	H2
		3	114X4284	A1	4.54	2.04	-	H2
OP-MPIM046	P00	1	114X4207	A1+A2L	4.60	2.00	-	H2
		3	114X4206	A1+A2L	4.54	2.04	-	H2
OP-MPXM057	P00	1	114X4290	A1	5.31	-	2.95	H2
		3	114X4293	A1	5.30	-	3.05	H2
OP-MPIM057	P00	1	114X4209	A1+A2L	5.31	-	2.95	H2
		3	114X4208	A1+A2L	5.30	-	3.05	H2
OP-MPXM068	P00	1	114X4308	A1	7.25	-	3.73	H3
		3	114X4311	A1	7.24	-	3.81	H3
OP-MPIM068	P00	1	114X4307	A1+A2L	7.25	-	3.81	H3
		3	114X4306	A1+A2L	7.24	-	3.89	H3
OP-MPXM080	P00	1	114X4321	A1	8.32	-	3.38	H3
		3	114X4324	A1	8.40	-	3.77	H3
OP-MPIM080	P00	1	114X4312	A1+A2L	8.32	-	3.43	H3
		3	114X4309	A1+A2L	8.40	-	3.85	H3
OP-MPXM108	P00	3	114X4344	A1	10.37	-	3.35	H3
OP-MPIM108	P00	3	114X4314	A1+A2L	10.37	-	3.40	H3
OP-MPIM125	P00	3	114X4409	A1	12.90	-	3.63	H4
OP-MPXM125	P00	3	114X4414	A1	12.90	-	3.50	H4
OP-MPIM162	P00	3	114X4410	A1	16.11	-	3.33	H4
OP-MPXM162	P00	3	114X4434	A1	16.11	-	3.24	H4

R404A – LBP

Model	Version	Phases	Code no.	Refrigerant group	Cooling capacity* in [kW] at evaporating temp. -10°C	Eco Design (3)**		
						COP	SEPR	Housing
OP-LPVM016	P00	1	114X3110	A1 A2L	0.49	1.08	-	H1
OP-LPQM017	P00	1	114X3118	A1	0.49	1.08	-	H1
OP-LPVM026	P00	1	114X3201	A1+A2L	0.64	0.97	-	H2
OP-LPVM034	P00	1	114X3202	A1+A2L	0.88	1.03	-	H2
OP-LPQM048	P00	1	114X3225	A1	1.00	1.02	-	H2
		3	114X3233	A1	1.02	1.14	-	H2
OP-LPVM048	P00	1	114X3204	A1+A2L	1.00	1.02	-	H2
		3	114X3205	A1+A2L	1.02	1.14	-	H2
OP-LPQM068	P00	1	114X3241	A1	1.63	1.07	-	H2
		3	114X3249	A1	1.65	1.16	-	H2
OP-LPVM068	P00	3	114X3207	A1+A2L	1.65	1.16	-	H2
OP-LPQM096	P00	3	114X3357	A1	1.75	1.01	-	H3
OP-LPOM067	P02	3	114X3371	A1	2.62	-	1.69	H3
OP-LPKM067	P02	3	114X3304	A1+A2L	2.62	-	1.73	H3
OP-LPOM084	P02	3	114X3372	A1	3.14	-	1.71	H3
OP-LPKM084	P02	3	114X3305	A1+A2L	3.14	-	1.74	H3
OP-LPOM098	P02	3	114X3373	A1	3.64	-	1.75	H3
OP-LPKM098	P02	3	114X3306	A1+A2L	3.64	-	1.79	H3
OP-LPOM120	P02	3	114X3485	A1	4.52	-	1.65	H4
OP-LPKM120	P02	3	114X3405	A1+A2L	4.52	-	1.70	H4
OP-LPOM168	P02	3	114X3486	A1	5.88	-	1.68	H4
OP-LPKM168	P02	3	114X3406	A1+A2L	5.88	-	1.72	H4

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling OK Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C

For regular updates and detailed capacities, please refer to Coolselector®2 software

coolselector.danfoss.com



Optyma™ Plus INVERTER

Capacity modulation in a simple and adaptive package

Combines our market-leading expertise in condensing unit design with the unique benefits of stepless inverter scroll technology. The result is energy consumption reduced by up to 30% with better food preservation.



Quick and safe installation and service

Preset parameters and Modbus communication makes start-up and maintenance of the condensing unit effortlessly quick and easy.



Accurate temperature control

Accurate temperature control and low in-rush current result in a more stable storage temperature and longer product shelf life.



High SEPR: 3.97 – certified by ASERCOM

All models in the range are highly efficient and well above EcoDesign 2018 thresholds, contributing to a reduction in energy costs.



Extended capacity

Stepless compressor modulation - able to slow down and speed up from 30 to 100 RPS to save energy and match load fluctuations very accurately. The inverter drive incorporates smart logic to increase reliability during operation.

Best SEPR with stepless modulation reduces energy consumption by up to

30%



Optyma™ Plus INVERTER

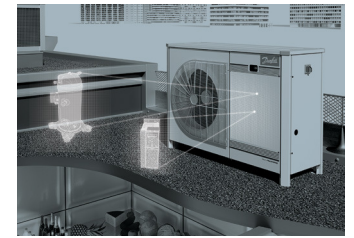
Model	Code no.	Rotation per second (RPS)	Cooling capacity* in [kW] at evaporating temperature -10°C			EcoDesign**			Housing
			R448A	R449A	R404A	SEPR R447A	SEPR R449A	SEPR R404A	
OP-MPPM028VVL	114X4302	30	1.92	1.90	1.87	3.81	3.76	3.51	H3
		75	4.70	4.65	4.61			-	
		100	5.98	5.92	6.00			-	
OP-MPPM035VVL	114X4316	30	2.40	2.37	2.36	3.68	3.64	3.80	H3
		75	5.76	5.70	5.71				
		100	7.33	7.26	7.29				
OP-MPPM044VVL	114X4334	30	3.07	3.04	3.03	4.14	4.10	3.80	H3
		75	7.19	7.11	7.18				
		100	9.14	9.04	9.13				
OP-MPPM065VVL	114X4317	30	4.24	4.17	4.31	4.17	4.14	3.97	H3+
		75	9.81	9.65	9.92				
		100	12.56	12.37	12.71				

* Conditions EN 13215 (mid point): +32°C ambient temp. superheat 10K. Subcooling 0K Rated

** COP/ SEPR (SEPR for higher cooling cap. than 5kW) at EcoDesign rating conditions: +32°C ambient. Subcooling 0 K. RGT20°C



For regular updates and detailed capacities, please refer to Coolselector®2 software coolselector.danfoss.com



Designed for ultimate efficiency

Stepless capacity modulation

From 30 to 100 rps modulation leads to 20-30% higher energy efficiency compared to fixed-speed condensing units.

Simple commissioning

Preset drive parameters with dedicated refrigeration software.

Future-proof

Working with lower GWP refrigerants such as R448A and R449. Also compatible with R407A/F and R404A.



Danfoss compressor and drive package

Dedicated to refrigeration with years of market application and validation.

Simple plug-and-play installation

Safe, simple and hassle-free installation with tried-and-tested components.

Full intelligent control through the Optyma™ Plus Controller

Control, alarm management, day & night operation, can connect to ADAP-KOOL® software, etc.

High SEPR/COP cuts energy costs

E.g. in a cold room where meat is stored and with 9 kW of cooling capacity.

Optyma™ Plus INVERTER MBP unit vs mechanically modulated technology*

UNIT	Danfoss	Market
Cooling cap.: 9 kW		
Refrigerant: R407F		
SEPR	3.97	2.50
USAGE	~ 14 000 kWh	~ 21 600 kWh

Annual energy consumption saved: 7 600 kWh

Savings based on cost of energy:

FRANCE: 0.18 € / 1 KWH = 7 600 x 0.18 = 1 368 €

UK: 0.21 € / 1 KWH = 7 600 x 0.21 = 1 596 €

GERMANY: 0.23 € / 1 KWH = 7 600 x 0.23 = 1 748 €

1 748€ annual electricity savings made by your customer in Germany

* Source: Danfoss

About Variable Speed technology

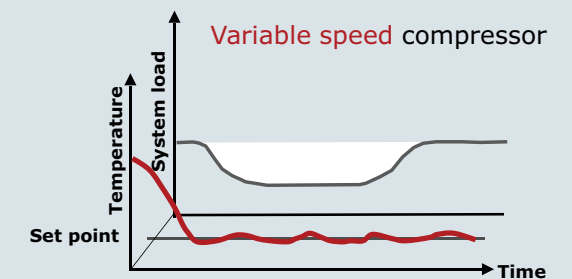
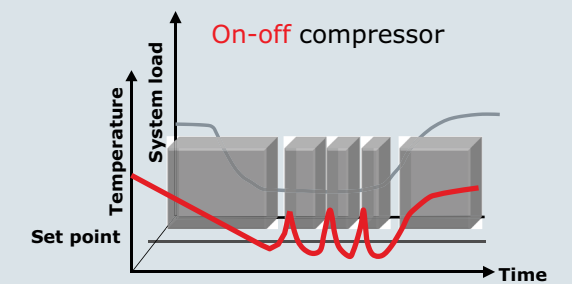
Refrigeration systems are usually designed for peak demand, which represents only a small percentage of actual operational time. Such oversizing leads to efficiency losses and extra costs for oversized equipment. Capacity modulation is a way to match cooling capacity to cooling demand.

There are several ways to modulate the cooling capacity in refrigeration systems. The most commonly used are on-off cycling, hot gas bypass, manifold configurations of multiple compressors, mechanical modulation and variable speed technology.

The variable speed method varies refrigerant flow by actually changing the speed of the compressor. An inverter compressor uses a variable frequency drive – also known as an inverter drive – to slow down or speed up the motor that drives the compressor. This is where inverter compressors bring most savings compared to alternative technologies.

Currently, three different market trends are converging to create growing demand for efficient and sustainable solutions:

- Application requirements (accurate temperature and humidity levels)
- Energy efficiency & environmental impact
- Intelligent systems and reliability



Optyma™. Light Commercial – up to ~1.5 kW

Specially designed for key commercial applications such as glass door merchandisers, bottle coolers, chilled food or ice cream cabinets. To meet the latest guidelines while satisfying tomorrow's consumer needs. Danfoss compressors use the environmentally friendly R290 propane as a refrigerant.



R290 unit



Faster and safer installation and maintenance

Schrader valve for easy charging of refrigerant, pre-wired e-box, ACB mini pressostat and ATEX class N fan motor for enhanced safety.



R290 natural refrigerant

The major environmental benefits are obtained combining the use of the R290 with the design criteria of highly efficient compressors and EC fan motor.



Serviceability and compactness

Combo of drier and receiver in one piece, making it the ideal fit for compact systems and providing higher serviceability.



Universal

Most units are designed with rail concept, allowing easy condensed water evacuation, high airflow, and reduced height to fit display cabinets. Suited for high ambient temperatures thanks to EC fan ATEX class N.

Energy efficient, environmentally friendly and safe hydrocarbons

Hydrocarbons such as propane R290 have excellent thermodynamic properties, and in this respect they are as good as or better than HFC or HCFC refrigerants in most applications. When they are used responsibly and relevant norms are followed, hydrocarbons can be employed in a variety of refrigeration and air conditioning applications. Hydrocarbons can deliver high energy efficiency and have zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP).



Relevant norms & standards when working with hydrocarbon refrigerants:

ATEX 94/9/EC Directive
Specifies the requirements for equipment intended for use in potentially explosive atmospheres (both electrical and mechanical). Organizations in EU must follow the directive to protect employees from explosion risk in areas with an explosive atmosphere.

Pressure Equipment Directive 97/23/EC (PED)
The directive provides a legislative framework for pressurized equipment and assemblies.

EN378 1-4
EN378 defines "best practice" for design, operation and maintenance. It is a harmonised standard, which ensures that all essential requirements in the PED are fulfilled.

ISO 5149 1-4
The international safety standard defines "best practices" very similarly to EN378, but without referring to EU law.

IEC 60335: International Standard
Specifies all requirements for small hermetically sealed household appliances (supports the EU Low Voltage Directive (2006/95/EC). It deals with the safety of electrical appliances for household and similar purposes.

Optyma™. Light Commercial – up to ~1.5 kW

Refrigerants with a GWP level below 2500

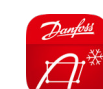
R290 – MBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP
OP-MCNC003	A09	1	114F1202	0.24	1.88
	A10	1	114F1203		
	A11	1	114F1201		
OP-MCNC004	A09	1	114F1205	0.34	1.88
	A10	1	114F1206		
OP-MCNC006	A09	1	114F1308	0.46	1.94
	A10	1	114F1309		
	A11	1	114F1307		
OP-MCNC008	A09	1	114F1411	0.64	2.03
	A10	1	114F1412		
	A11	1	114F1410		
OP-MCNC009	A09	1	114F1414	0.72	2.02
	A10	1	114F1415		
	A11	1	114F1413		
OP-MCNC011	A09	1	114F1417	0.83	1.93
	A10	1	114F1418		
	A11	1	114F1416		
OP-MCNC014	A09	1	114F1420	0.95	1.66
	A10	1	114F1421		
	A11	1	114F1419		
OP-MCNC016	A09	1	114F1623	1.11	1.79
	A10	1	114F1624		
	A11	1	114F1622		
OP-MCNC018	A09	1	114F1626	1.30	1.84
	A10	1	114F1627		
	A11	1	114F1625		
OP-MCNC020	A09	1	114F1629	1.45	1.79
	A10	1	114F1630		
	A11	1	114F1628		

R452A – LBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -35°C	Rated COP
OP-LCQC004	A01	1	114X1221	0.12	0.81
OP-LCQC006	A01	1	114X1337	0.13	0.84
OP-LCQC008	A01	1	114X1341	0.19	0.88
OP-LCQC012	A01	1	114X1449	0.28	0.96
OP-LCQC012	A01	1	114X1569	0.33	0.98
OP-LCQC014	A01	1	114X1573	0.37	0.95

*Conditions EN 13215 (dew point): +32°C ambient temp., superheat 10K, subcooling 0K
Rated COP & SEPR at EcoDesign rating conditions: +32°C ambient, subcooling 0 K, RGT20°C



For regular updates and detailed capacities, please refer to Coolselector®2 software coolselector.danfoss.com

R290 – LBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -35°C	Rated COP
OP-LCNC004	A09	1	114F0202	0.12	1.04
	A10	1	114F0203		
	A11	1	114F0201		
OP-LCNC006	A09	1	114F0205	0.15	1.06
	A10	1	114F0206		
OP-LCNC008	A09	1	114F0308	0.20	1.08
	A10	1	114F0309		
	A11	1	114F0307		
OP-LCNC011	A09	1	114F0411	0.31	1.15
	A10	1	114F0412		
	A11	1	114F0410		
OP-LCNC016	A09	1	114F0414	0.42	1.15
	A10	1	114F0415		
	A11	1	114F0413		
OP-LCNC023	A09	1	114F0417	0.52	1.03
	A10	1	114F0418		
	A11	1	114F0416		
OP-LCNC034	A09	1	114F0620	0.69	1.18
	A10	1	114F0621		
	A11	1	114F0619		

R513A – MBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP
OP-MCGC003	A00	1	114X0104	0.13	1.08
	A01	1	114X0105		
	A04	1	114X0107		
OP-MCGC004	A00	1	114X0108	0.15	1
	A01	1	114X0109		
OP-MCGC005	A00	1	114X0111	0.18	1.11
	A01	1	114X0112		
	A04	1	114X0115		
OP-MCGC006	A00	1	114X0200	0.28	1.51
	A01	1	114X0201		
OP-MCGC006	A00	1	114X0203	0.29	1.49
	A04	1	114X0228		
OP-MCGC007	A00	1	114X0216	0.30	1.43
	A01	1	114X0217		
OP-MCGC008	A00	1	114X0224	0.35	1.45
	A01	1	114X0225		
	A04	1	114X0227		
OP-MCGC007	A00	1	114X0244	0.35	1.48
	A01	1	114X0204		
OP-MCGC008	A00	1	114X0204	0.39	1.56
	A01	1	114X0205		
OP-MCGC010	A00	1	114X0223	0.41	1.41
	A04	1	114X0223		
OP-MCGC008	A00	1	114X0352	0.41	1.48
	A01	1	114X0336		
OP-MCGC011	A00	1	114X0337	0.46	1.41
	A01	1	114X0337		
	A04	1	114X0339		
OP-MCGC012	A00	1	114X0340	0.52	1.41
	A01	1	114X0341		
	A04	1	114X0343		
OP-MCGC015	A00	1	114X0448	0.65	1.45
	A01	1	114X0449		
OP-MCGC021	A00	1	114X0568	0.88	1.41
	A01	1	114X0564		
OP-MCGC021	A00	1	114X0565	0.86	1.41
	A01	1	114X0567		
OP-MCGC026	A01	1	114X0773	1.32	1.77
OP-MCGC034	A01	1	114X0781	1.65	1.73

Optyma™. Light Commercial – up to ~1.5 kW

Refrigerants with a GWP level below 2500 Refrigerants with a GWP level above 2500

R134a – MBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP
OP-MCGC003	A00	1	114X0104	0.13	1.08
	A01	1	114X0105		
	A04	1	114X0107		
OP-MCGC004	A00	1	114X0108	0.15	1
	A01	1	114X0109		
	A04	1	114X0111		
OP-MCGC005	A00	1	114X0112	0.18	1.11
	A01	1	114X0113		
	A04	1	114X0115		
OP-MCGC006	A00	1	114X0200	0.28	1.51
	A01	1	114X0201		
	A04	1	114X0203		
OP-MCGC006	A00	1	114X0228	0.29	1.49
OP-MCGC007	A00	1	114X0216	0.30	1.43
	A01	1	114X0217		
OP-MCGC008	A00	1	114X0224	0.35	1.45
	A01	1	114X0225		
	A04	1	114X0227		
OP-MCGC007	A00	1	114X0244	0.35	1.48
OP-MCGC008	A00	1	114X0204	0.39	1.56
	A01	1	114X0205		
OP-MCGC010	A04	1	114X0223	0.41	1.41
OP-MCGC008	A00	1	114X0352	0.41	1.48
OP-MCGC011	A00	1	114X0336	0.46	1.41
	A01	1	114X0337		
	A04	1	114X0339		
OP-MCGC012	A00	1	114X0340	0.52	1.41
	A01	1	114X0341		
	A04	1	114X0343		
OP-MCGC015	A00	1	114X0448	0.65	1.45
	A01	1	114X0449		
	A04	1	114X0451		
OP-MCGC021	A00	1	114X0568	0.88	1.41
OP-MCGC021	A00	1	114X0564	0.86	1.41
	A01	1	114X0565		
	A04	1	114X0567		
OP-MCGC026	A01	1	114X0773	1.32	1.77
OP-MCGC034	A01	1	114X0781	1.65	1.73

R404A – MBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP
OP-MCHC004	A00	1	114X0301	0.32	1.60
	A01	1	114X0302		
	A04	1	114X0303		
OP-MCHC006	A00	1	114X2316	0.50	1.41
	A01	1	114X2317		
	A04	1	114X2319		
OP-MCHC007	A00	1	114X2424	0.66	1.55
	A01	1	114X2425		
	A04	1	114X2427		
OP-MCHC010	A00	1	114X0403	0.85	1.74
	A01	1	114X0404		
	A04	1	114X0405		
OP-MCHC013	A00	1	114X0406	1.00	1.70
	A01	1	114X0407		
	A04	1	114X0408		
OP-MCHC015	A01	1	114X2649	1.27	1.60
	A04	1	114X2651		
OP-MCHC018	A01	1	114X0702	1.45	1.76
	A04	1	114X0703		
OP-MCHC021	A01	1	114X2765	1.72	1.74
	A04	1	114X2767		

R404A – LBP

Model	Version	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -35°C	Rated COP
OP-LCHC004	A00	1	114X1208	0.09	0.80
	A01	1	114X1209		
	A04	1	114X1211		
OP-LCQC004	A01	1	114X1221	0.12	0.89
OP-LCHC006	A00	1	114X1216	0.15	0.80
	A01	1	114X1217		
	A04	1	114X1219		
OP-LCQC006	A01	1	114X1337	0.18	0.93
OP-LCHC007	A00	1	114X1328	0.19	0.89
	A01	1	114X1329		
	A04	1	114X1331		
OP-LCQC008	A01	1	114X1341	0.20	0.89
OP-LCHC008	A00	1	114X1304	0.20	0.87
	A01	1	114X1301		
	A04	1	114X1302		
OP-LCHC012	A00	1	114X1440	0.28	0.84
	A01	1	114X1441		
	A04	1	114X1443		
OP-LCHC012	A00	1	114X1444	0.31	0.83
OP-LCQC012	A01	1	114X1449	0.29	0.94
OP-LCHC015	A00	1	114X1548	0.34	0.81
	A01	1	114X1549		
	A04	1	114X1551		
OP-LCQC012	A01	1	114X1569	0.35	0.97
OP-LCQC014	A01	1	114X1573	0.40	0.95
OP-LCHC018	A00	1	114X1556	0.42	0.95
	A01	1	114X1557		
	A04	1	114X1559		
OP-LCHC021	A00	1	114X1600	0.47	0.97
	A01	1	114X1601		
	A04	1	114X1602		
OP-LCHC026	A01	1	114X1673	0.63	0.95
OP-LCHC034	A01	1	114X1781	0.89	1
	A04	1	114X1783		

*Conditions EN 13215 (dew point): +32°C ambient temp. superheat 10K. subcooling 0K
Rated COP & SEPR at EcoDesign rating conditions: +32°C ambient. subcooling 0 K. RGT20°C

For regular updates and detailed capacities, please refer to Coolselector®2 software coolselector.danfoss.com



Optyma™. Commercial – from ~1.5 kW

Refrigerants with a GWP level below 2500

R449A – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	2.06	1.93		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.68	1.93		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.57	2.09		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.06	2.13		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.58	1.96		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.27	1.96	2.79	45
OP-MCRN086	3	114X5737	6.32	2.17	3.20	53
OP-MCRN096	3	114X5739	6.92	2.15	3.16	52
OP-MCRN108	3	114X5740	7.83	2.13	3.01	52
OP-MGRN108	3	114X5743	7.83	2.17	3.08	52
OP-MCRN121	3	114X5744	8.77	2.05	2.89	51
OP-MGRN121	3	114X5746	8.77	2.08	2.95	51
OP-MCRN136	3	114X5747	10.01	1.97	2.74	51
OP-MGRN136	3	114X5749	10.01	2	2.79	51
OP-MGRN171	3	114X5750	12.78	2.06	3.01	56
OP-MGRN215	3	114X5753	16.45	2.09	2.99	55
OP-MGRN242	3	114X5754	18.43	2.04	2.86	54
OP-MGRN271	3	114X5757	20.56	1.99	2.74	53

R448A – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	2.06	1.93		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.68	1.93		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.57	2.09		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.06	2.13		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.58	1.96		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.27	1.96	2.79	45
OP-MCRN086	3	114X5737	6.32	2.16	3.19	53
OP-MCRN096	3	114X5739	6.92	2.15	3.16	52
OP-MCRN108	3	114X5740	7.83	2.13	3.01	52
OP-MGRN108	3	114X5743	7.83	2.17	3.08	52
OP-MCRN121	3	114X5744	8.77	2.05	2.89	51
OP-MGRN121	3	114X5746	8.77	2.08	2.95	51
OP-MCRN136	3	114X5747	10.01	1.97	2.74	51
OP-MGRN136	3	114X5749	10.01	1.99	2.78	51
OP-MGRN171	3	114X5750	12.78	2.06	3.01	56
OP-MGRN215	3	114X5753	16.45	2.09	2.99	55
OP-MGRN242	3	114X5754	18.43	2.03	2.86	54
OP-MGRN271	3	114X5757	20.56	1.98	2.74	53

R134a – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	1.29	1.82		45
	1	114X5722				
OP-MCRN038	3	114X5724	1.62	1.94		43
	1	114X5723				
OP-MCRN048	3	114X5726	2.01	1.85		43
	1	114X5728				
OP-MCRN054	3	114X5729	2.34	1.77		43
	1	114X5731				
OP-MCRN060	3	114X5732	3.01	1.92		43
	1	114X5734				
OP-MCRN068	3	114X5735	3.43	2.03		45
OP-MCRN086	3	114X5737	4.05	2.13		53
OP-MCRN096	3	114X5739	4.09	2.04		52
OP-MCRN108	3	114X5740	4.73	2.09		52
OP-MGRN108	3	114X5743	4.73	2.16		52
OP-MCRN121	3	114X5744	5.33	2.08	2.71	51
OP-MGRN121	3	114X5746	5.33	2.14	2.80	51
OP-MCRN136	3	114X5747	6.74	2.31	2.55	51
OP-MGRN136	3	114X5749	6.37	2.20	2.55	51
OP-MGRN171	3	114X5750	7.82	1.90	2.68	56
OP-MGRN215	3	114X5753	9.74	2.08	2.91	55
OP-MGRN242	3	114X5754	12.06	2.08	2.76	54
OP-MGRN271	3	114X5757	13.13	2.11	2.79	53

R407C – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	1.84	1.89		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.44	1.90		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.29	2.05		43
	1	114X5728				
OP-MCRN054	3	114X5729	3.85	2.12		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.39	1.97		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.10	1.98	2.71	45
OP-MCRN086	3	114X5737	5.96	2.14	2.89	53
OP-MCRN096	3	114X5739	6.42	2.15	3	52
OP-MCRN108	3	114X5740	7.40	2.15	3.01	52
OP-MGRN108	3	114X5743	7.40	2.19	3.08	52
OP-MCRN121	3	114X5744	8.23	2.02	2.79	51
OP-MGRN121	3	114X5746	8.23	2.06	2.84	51
OP-MCRN136	3	114X5747	9.21	1.94	2.67	51
OP-MGRN136	3	114X5749	9.21	1.97	2.72	51
OP-MGRN171	3	114X5750	11.62	1.96	2.81	56
OP-MGRN215	3	114X5753	15.42	2.08	2.90	55
OP-MGRN242	3	114X5754	16.67	1.99	2.76	54
OP-MGRN271	3	114X5757	19.14	1.97	2.71	53

*Conditions EN 13215 (dew point): +32°C ambient temp. superheat 10K. subcooling 0K
Rated COP & SEPR at EcoDesign rating conditions: +32°C ambient. subcooling 0 K. RGT20°C
Values refer to 3-phase units

Optyma™. Commercial – from ~1.5 kW

Refrigerants with a GWP level below 2500

R407A – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	1.94	1.84		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.55	1.98		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.56	2.06		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.05	2.13		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.61	2		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.28	2.03	2.57	45
OP-MCRN086	3	114X5737	6.40	2.27	3.08	53
OP-MCRN096	3	114X5739	6.76	2.20	2.94	52
OP-MCRN108	3	114X5740	7.79	2.13	2.81	52
OP-MGRN108	3	114X5743	7.79	2.17	2.87	52
OP-MCRN121	3	114X5744	8.53	2.09	2.76	51
OP-MGRN121	3	114X5746	8.53	2.13	2.82	51
OP-MCRN136	3	114X5747	9.64	2.01	2.64	51
OP-MGRN136	3	114X5749	9.64	2.01	2.64	51
OP-MGRN171	3	114X5750	12.59	2.05	2.83	56
OP-MGRN215	3	114X5753	15.64	2.05	2.83	55
OP-MGRN242	3	114X5754	17.84	2.03	2.74	54
OP-MGRN271	3	114X5757	19.19	1.94	2.58	53

R407F – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	2.04	1.82		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.67	1.94		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.76	2.05		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.27	2.11		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.84	1.97		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.53	2	2.80	45
OP-MCRN086	3	114X5737	6.72	2.25	3.27	53
OP-MCRN096	3	114X5739	7.09	2.17	3.16	52
OP-MCRN108	3	114X5740	8.17	2.10	2.99	52
OP-MGRN108	3	114X5743	8.17	2.13	3.05	52
OP-MCRN121	3	114X5744	8.93	2.06	2.87	51
OP-MGRN121	3	114X5746	8.93	2.09	2.92	51
OP-MCRN136	3	114X5747	10.11	1.94	2.67	51
OP-MGRN136	3	114X5749	10.11	1.97	2.71	51
OP-MGRN171	3	114X5750	13.26	2.03	3.13	56
OP-MGRN215	3	114X5753	16.41	2.03	2.99	55
OP-MGRN242	3	114X5754	18.70	2	2.86	54
OP-MGRN271	3	114X5757	20.11	1.91	2.67	53

R452A – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	2.28	2		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.98	2.01		43
	1	114X5723				
OP-MCRN048	3	114X5726	3.71	2.04		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.27	2.10		43
	1	114X5731				
OP-MCRN060	3	114X5732	4.69	1.89		43
	1	114X5734				
OP-MCRN068	3	114X5735	5.58	1.95	2.75	45
OP-MCRN086	3	114X5737	6.89	2.22	2.88	53
OP-MCRN096	3	114X5739	7.54	2.21	2.90	52
OP-MCRN108	3	114X5740	8.53	2.19	2.84	52
OP-MGRN108	3	114X5743	8.53	2.22	2.90	52
OP-MCRN121	3	114X5744	9.56	2.11	2.77	51
OP-MGRN121	3	114X5746	9.56	2.14	2.81	51
OP-MCRN136	3	114X5747	10.20	1.99	2.58	51
OP-MGRN136	3	114X5749	10.03	1.97	2.57	51
OP-MGRN171	3	114X5750	14.02	2.15	3.10	56
OP-MGRN215	3	114X5753	17.57	2.12	3.10	55
OP-MGRN242	3	114X5754	19.03	1.98	3.01	54
OP-MGRN271	3	114X5757	20.60	1.89	2.71	53

R452A – LBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -35°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-LCQN048	3	114X5758	0.87	1.03		42
	1	114X5759				
OP-LCQN068	3	114X5761	1.48	1.14		40
	1	114X5762				
OP-LCQN096	3	114X5764	1.73	1.04		51
OP-LGQN096	3	114X5766	2.14	1.30	1.70	51
OP-LCQN108	3	114X5768	2.66	1.32	1.88	47
OP-LGQN108	3	114X5769	2.66	1.37	1.95	47
OP-LGQN136	3	114X5771	3.28	1.26	1.69	47
OP-LCQN136	3	114X5772	3.28	1.23	1.65	47
OP-LGQN215	3	114X5774	4.73	1.11	1.63	55
OP-LGQN271	3	114X5776	6.14	1.17	1.66	55

*Conditions EN 13215 (dew point): +32°C ambient temp. superheat 10K. subcooling 0K
Rated COP & SEPR at EcoDesign rating conditions: +32°C ambient. subcooling 0 K. RGT20°C
Values refer to 3-phase units

For regular updates and detailed capacities,
please refer to Coolselector®2 software
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Optyma™. Commercial – from ~1.5 kW

Refrigerants with a GWP level above 2500

R404A – MBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -10°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-MCRN030	3	114X5721	2.22	1.88		45
	1	114X5722				
OP-MCRN038	3	114X5724	2.92	2.02		43
	1	114X5723				
OP-MCRN048	3	114X5726	4.02	2.08		43
	1	114X5728				
OP-MCRN054	3	114X5729	4.56	2.15		43
	1	114X5731				
OP-MCRN060	3	114X5732	5.17	2.01	2.85	43
	1	114X5734				
OP-MCRN068	3	114X5735	6.15	2.15	2.77	45
OP-MCRN086	3	114X5737	7.39	2.36	3.34	53
OP-MCRN096	3	114X5739	7.81	2.29	3.14	52
OP-MCRN108	3	114X5740	9.03	2.22	3.07	52
OP-MGRN108	3	114X5743	9.03	2.25	3.13	52
OP-MCRN121	3	114X5744	9.91	2.18	3.03	51
OP-MGRN121	3	114X5746	9.91	2.21	3.08	51
OP-MCRN136	3	114X5747	11.21	2.07	2.83	51
OP-MGRN136	3	114X5749	11.21	2.09	2.87	51
OP-MGRN171	3	114X5750	14.25	2.09	3.02	56
OP-MGRN215	3	114X5753	17.73	2.09	3.03	55
OP-MGRN242	3	114X5754	20.20	2.07	2.91	54
OP-MGRN271	3	114X5757	21.72	1.97	2.74	53

R404A – LBP

Model	Phase	Code no.	Cooling capacity* in kW at evaporating temp. -35°C	Rated COP	SEPR	Sound pressure level @10m dB(A)
OP-LCQN048	3	114X5758	0.92	1.09		42
	1	114X5759				
OP-LCQN068	3	114X5761	1.54	1.04		40
	1	114X5762				
OP-LCQN096	3	114X5764	1.72	1		51
OP-LGQN096	3	114X5766	2.07	1.21	1.6	51
OP-LCQN108	3	114X5768	2.50	1.21	1.68	47
OP-LGQN108	3	114X5769	2.50	1.25	1.74	47
OP-LGQN136	3	114X5771	3.14	1.16	1.70	47
OP-LCQN136	3	114X5772	3.14	1.13	1.66	47
OP-LGQN215	3	114X5774	4.98	1.12	1.62	55
OP-LGQN271	3	114X5776	6.66	1.17	1.62	55

*Conditions EN 13215 (dew point): +32°C ambient temp. superheat 10K. subcooling 0K
Rated COP & SEPR at EcoDesign rating conditions: +32°C ambient. subcooling 0 K. RGT20°C
Values refer to 3-phase units



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