

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

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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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 = R449A, R452A, R404A/R507 ; G = R134a, R513A ; H = R404A/R507 ; O = R448A, R449A, R452A, R404A/R507 ; P = R448A, R449A, R407A, R407A, R404A/507 ; Q = R452A, R404A/R507 ; X = R404A/R507, R134a, R513A, R407A, R407F, R448A, 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 V LZ
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

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
Microchannel condenser	yes		yes		yes
Fan speed controller	-	yes	yes		yes
Main switch (circuit breaker)	-	yes	yes		yes
Filter drier (flare connections)	yes		yes		yes
Sight glass	yes		yes		yes
Crankcase heater	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
Acoustic insulation	-		yes		yes
Condensing unit electronic controller	-		yes		yes
Network connectivity	-		yes		yes
Stack mounting	-		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	965 x 1406 x 481

Overview by range and refrigerant:

Min / Max Cooling capacity range [kW]	Optyma™ Slim Pack	Optyma™ Plus	Optyma™ Plus INVERTER
Medium temperature (MBP)			
R449A	0.8 - 10.2	0.7 - 14.9	1.7 - 8.3
R448A	3.3 - 10.2	3.3 - 14.9	1.7 - 8.3
R134a	0.6 - 6.6	1.7 - 10.2	-
R513A	0.6 - 7.0	1.7 - 10.3	-
R407A	3.3 - 9.9	3.3 - 14.6	1.7 - 8.4
R407F	3.5 - 10.2	3.5 - 15.5	1.8 - 9
R452A	1.4 - 10.4	1.4 - 15.3	-
R404A/507	0.9 - 10.3	0.7 - 16	1.8 - 9
Low temperature (LBP)			
R448A/R449A	-	2.3 - 6	-
R452A	0.4 - 3.3	0.4 - 6.1	-
R404A/507	0.4 - 3.6	0.5 - 6.2	-

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

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	
		+1°C - 18h		+1°C - 18h		+12°C - 18h									
		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	1270	8	1270	17	900	7	1030	9		
OP Plus with R449A	OP-MPBM018 / 024	1350	11	1350	11	1890	13	1890	30	1350	12	1530	16		
OP Plus INVERTER with R448A	OP-MPPM044	2500	20	2500	20	3400	20	3500	65	2500	20	2800	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.

Optyma™ Slim Pack

Light on refrigerant, heavy on efficiency

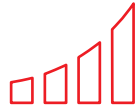
2.9 kg
Less refrigerant on bigger sizes for more savings

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.



High SEPR

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



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).



Optimized footprint for floor and wall mounting

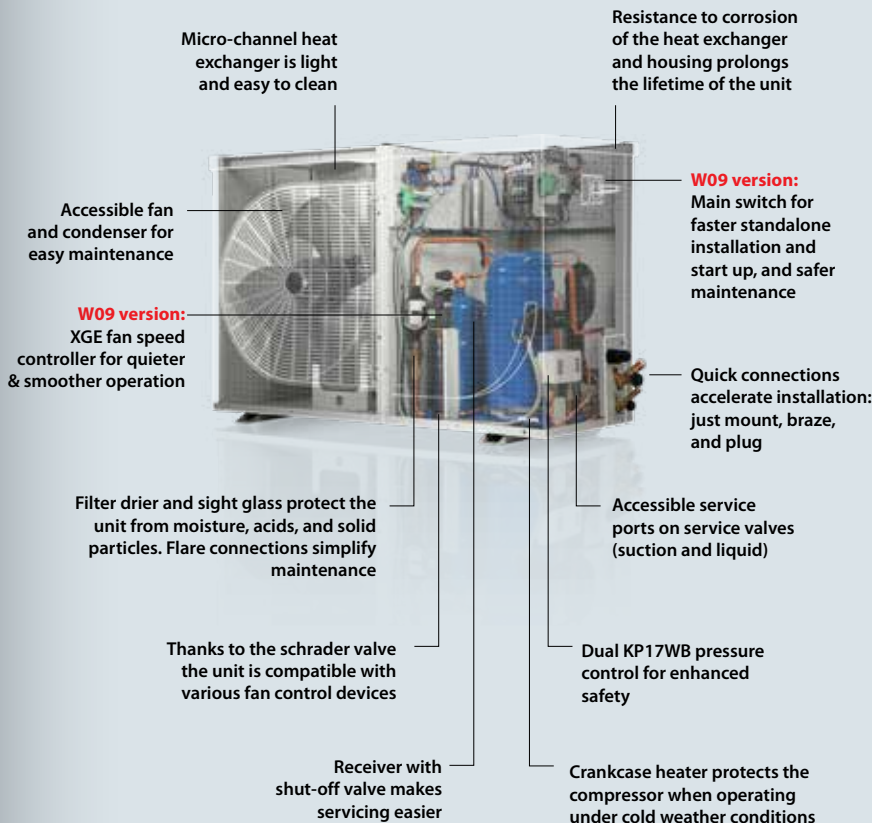
Thanks to its slim design and low weight, it is easy to transport and handle during installation – particularly for wall mounting.

W09 FEATURES

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



Standard range (W05) and upgraded range (W09)



High SEPR/COP cuts energy costs

E.g. in a cold room where fruit & vegetables are stored and with 2.7 kW of cooling capacity.

Optyma™ Slim Pack MBP unit vs equivalent unit in the market*

Cooling cap.: 2.7 kW
Refrigerant: R134a



UNIT	Danfoss	Market
COP	2.18	1.70
USAGE	~ 8 245 kWh	~ 10 636 kWh

Annual energy consumption saved: 2 391 kWh

Savings based on cost of energy:

FRANCE: 0.11€ / 1 KWH = 2 391 x 0.11 = 263€
UK: 0.15€ / 1 KWH = 2 391 x 0.15 = 359€
GERMANY: 0.20€ / 1 KWH = 2 391 x 0.20 = 478€

478€ annual electricity savings made by your customer in Germany

* Source: Danfoss

Optyma™ Slim Pack

Refrigerants with a GWP level below 2500

R449A – MBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -10°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-MSYM009	W05	1	114X7108	0.80	1.89			31
	W09	1	114X7133					
OP-MSYM012	W05	1	114X7109	1.10	1.89			34
	W09	1	114X7134					
OP-MSYM014	W05	1	114X7110	1.15	1.60			29
	W09	1	114X7135					
OP-MSBM018	W05	1	114X7111	1.47	1.91			39
	W09	1	114X7136					
OP-MSBM024	W05	1	114X7097	1.85	2.08			33
	W09	1	114X7194					
OP-MSBM026	W05	1	114X7083	2.05	1.97			36
	W09	1	114X7190					
	W05	3	114X7093					
	W09	3	114X7192					
OP-MSBM034	W05	1	114X7084	2.55	1.92			37
	W09	1	114X7191					
	W05	3	114X7094					
	W09	3	114X7193					
OP-MSXM034	W05	1	114X7061	3.34	2.07			38
	W09	1	114X7195					
	W05	3	114X7062					
	W09	3	114X7196					
OP-MSXM044	W09	1	114X7211	4.19	1.98			38
	W09	3	114X7212					
OP-MSXM046	W05	1	114X7063	4.44	2.03			38
	W09	1	114X7197					
	W05	3	114X7064					
	W09	3	114X7198					
OP-MSXM057	W05	1	114X7065	5.28	1.84	3.15	11 624	38
	W09	1	114X7199					
	W05	3	114X7066					
	W09	3	114X7200					
OP-MSXM068	W05	1	114X7067	6.77	2.20	3.48	13 040	39
	W09	1	114X7201					
	W05	3	114X7068					
	W09	3	114X7202					
OP-MSXM080	W05	1	114X7069	7.80	2.14	3.49	16 095	39
	W09	1	114X7203					
	W05	3	114X7070					
	W09	3	114X7204					
OP-MSXM099	W05	3	114X7071	9.59	2.09	3.46	17 724	39
	W09	3	114X7205					
OP-MSXM108	W05	3	114X7072	10.17	1.96	3.31	19 632	39
	W09	3	114X7206					

R448A – MBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -10°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-MSXM034	W05	1	114X7061	3.35	2.07			38
	W09	1	114X7195					
	W05	3	114X7062					
	W09	3	114X7196					
OP-MSXM044	W05	1	114X7161	4.19	1.98			38
	W09	1	114X7211					
	W05	3	114X7162					
	W09	3	114X7212					
OP-MSXM046	W05	1	114X7063	4.45	2.03			38
	W09	1	114X7197					
	W05	3	114X7064					
	W09	3	114X7198					
OP-MSXM057	W05	1	114X7065	5.29	1.84	3.15	11 634	38
	W09	1	114X7199					
	W05	3	114X7066					
	W09	3	114X7200					
OP-MSXM068	W05	1	114X7067	6.78	2.20	3.48	13 054	39
	W09	1	114X7201					
	W05	3	114X7068					
	W09	3	114X7202					
OP-MSXM080	W05	1	114X7069	7.81	2.14	3.49	16 109	39
	W09	1	114X7203					
	W05	3	114X7070					
	W09	3	114X7204					
OP-MSXM099	W05	3	114X7071	9.60	2.09	3.46	17 740	39
	W09	3	114X7205					
OP-MSXM108	W05	3	114X7072	10.18	1.96	3.31	19 649	39
	W09	3	114X7206					

Did you know?

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.

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

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

R134a – MBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -10°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-MSGM012	W05	1	114X7099	0.64	1.71			31
	W09	1	114X7207					
OP-MSGM015	W05	1	114X7100	0.72	1.64			32
	W09	1	114X7208					
OP-MSGM018	W05	1	114X7101	0.86	1.61			32
	W09	1	114X7131					
OP-MSGM021	W05	1	114X7102	1.03	1.74			32
	W09	1	114X7132					
OP-MSGM026	W05	1	114X7103	1.28	1.80			31
	W09	1	114X7209					
OP-MSGM033	W05	1	114X7104	1.66	2.02			36
	W09	1	114X7210					
OP-MSXM034	W05	1	114X7061	2.16	2.25			38
	W09	1	114X7195					
	W05	3	114X7062					
	W09	3	114X7196					
OP-MSXM044	W05	1	114X7161	2.74	2.23			38
	W09	1	114X7211					
	W05	3	114X7162					
OP-MSXM046	W05	1	114X7063	2.92	2.33			38
	W09	1	114X7197					
	W05	3	114X7064					
OP-MSXM057	W05	1	114X7065	3.54	2.28			38
	W09	1	114X7199					
	W05	3	114X7066					
	W09	3	114X7200					
OP-MSXM068	W05	1	114X7067	4.38	2.37			39
	W09	1	114X7201					
	W05	3	114X7068					
OP-MSXM080	W05	1	114X7069	5.09	2.26	3.43	10 684	39
	W09	1	114X7203					
	W05	3	114X7070					
	W09	3	114X7204					
OP-MSXM099	W05	3	114X7071	6.29	2.46	3.83	10 365	39
	W09	3	114X7205					
OP-MSXM108	W05	3	114X7072	6.64	2.40	3.74	11 205	39
	W09	3	114X7206					

R513A – MBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -10°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-MSGM012	W05	1	114X7099	0.66	1.68			31
	W09	1	114X7207					
OP-MSGM015	W05	1	114X7100	0.74	1.61			32
	W09	1	114X7208					
OP-MSGM018	W05	1	114X7101	0.88	1.57			32
	W09	1	114X7131					
OP-MSGM021	W05	1	114X7102	1.06	1.69			32
	W09	1	114X7132					
OP-MSGM026	W05	1	114X7103	1.36	1.82			31
	W09	1	114X7209					
OP-MSGM033	W05	1	114X7104	1.76	2.03			36
	W09	1	114X7210					
OP-MSXM034	W05	1	114X7061	2.25	2.25			38
	W09	1	114X7195					
	W05	3	114X7062					
	W09	3	114X7196					
OP-MSXM044	W05	1	114X7161	2.87	2.31			38
	W09	1	114X7211					
	W05	3	114X7162					
OP-MSXM046	W05	1	114X7063	3.04	2.31			38
	W09	1	114X7197					
	W05	3	114X7064					
OP-MSXM057	W05	1	114X7065	3.70	2.29			38
	W09	1	114X7199					
	W05	3	114X7066					
	W09	3	114X7200					
OP-MSXM068	W05	1	114X7067	4.65	2.48			39
	W09	1	114X7201					
	W05	3	114X7068					
OP-MSXM080	W05	1	114X7069	5.41	2.54	3.82	10 745	39
	W09	1	114X7203					
	W05	3	114X7070					
	W09	3	114X7204					
OP-MSXM099	W05	3	114X7071	6.60	2.43	3.71	11 388	39
	W09	3	114X7205					
OP-MSXM108	W05	3	114X7072	7.01	2.36	3.73	12 036	39
	W09	3	114X7206					

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

Optyma™ Slim Pack

Refrigerants with a GWP level above 2500

R404A – MBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -10°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-MSYM009	W05	1	114X7108	0.91	1.99			32
	W09	1	114X7133					
OP-MSYM012	W05	1	114X7109	1.24	2.01			34
	W09	1	114X7134					
OP-MSYM014	W05	1	114X7110	1.28	1.69			29
	W09	1	114X7135					
OP-MSBM018	W05	1	114X7111	1.67	1.93			39
	W09	1	114X7136					
OP-MSBM024	W05	1	114x7097	2.07	2.07			33
	W09	1	114X7194					
OP-MSBM026	W05	1	114X7083	2.29	1.95			36
	W09	1	114X7190					
	W05	3	114X7093					
	W09	3	114X7192					
OP-MSBM034	W05	1	114X7084	2.82	1.89			37
	W09	1	114X7191					
	W05	3	114X7094					
	W09	3	114X7193					
OP-MSXM034	W05	1	114X7061	3.40	2.11			38
	W09	1	114X7195					
	W05	3	114X7062					
	W09	3	114X7196					
OP-MSXM044	W05	1	114X7161	4.31	2.07			38
	W09	1	114X7211					
	W05	3	114X7162					
	W09	3	114X7212					
OP-MSXM046	W05	1	114X7063	4.51	2.03			38
	W09	1	114X7197					
	W05	3	114X7064					
	W09	3	114X7198					
OP-MSXM057	W05	1	114X7065	5.25	1.76	3.01	11 803	38
	W09	1	114X7199					
	W05	3	114X7066					
	W09	3	114X7200					
OP-MSXM068	W05	1	114X7067	7.18	2.31	3.73	12 731	39
	W09	1	114X7201					
	W05	3	114X7068					
	W09	3	114X7202					
OP-MSXM080	W05	1	114X7069	8.35	2.29	3.71	16 158	39
	W09	1	114X7203					
	W05	3	114X7070					
	W09	3	114X7204					
OP-MSXM099	W05	3	114X7071	9.65	2.04	3.37	18 672	39
	W09	3	114X7205					
OP-MSXM108	W05	3	114X7072	10.32	2	3.31	20 330	39
	W09	3	114X7206					

R404A – LBP

Model	Version	Phases	Code no.	Cooling capacity in [kW] at evaporating temp. -35°C	Rated COP	SEPR	Annual electricity consumption [kWh]	Sound pressure level @10m dB(A)
OP-LSQM014	W05	1	114X7106	0.44	1.03			29
	W09	1	114X7129					
OP-LSQM018	W05	1	114X7107	0.48	1.07			29
	W09	1	114X7130					
OP-LSQM026	W05	1	114X7085	0.65	1.01			36
	W09	1	114X7179					
OP-LSQM034	W05	1	114X7086	0.83	0.98			37
	W09	1	114X7180					
OP-LSQM048	W05	1	114X7087	1.00	1.13			40
	W09	1	114X7181					
	W05	3	114X7088					
	W09	3	114X7182					
OP-LSQM074	W05	1	114X7095	1.43	1.07			44
	W09	1	114X7185					
	W05	3	114X7096					
OP-LSQM068	W05	1	114X7089	1.63	1.14			40
	W09	1	114X7183					
	W05	3	114X7090					
OP-LSQM067	W05	3	114X7184	2.60	1.19	1.65	13 276	40
	W09	3	114X7187					
OP-LSQM084	W05	3	114X7092	3.11	1.21	1.67	15 715	42
	W09	3	114X7188					
OP-LSQM098	W05	3	114X7075	3.61	1.24	1.72	17 766	43
	W09	3	114X7189					

Did you know?

From 1st January 2020, R404A is banned in new installations in Europe. Only recycled refrigerant is allowed for servicing.

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