MAKING MODERN LIVING POSSIBLE

New Optyma ™ Dairy

Dedicated solution to milk cooling tanks

Just milk, drink and be merry!

Designed to meet the food chain and milk cooling requirements, Danfoss Optyma™ Dairy condensing units range offers a highly reliable, compact, cost effective and flexible solution which optimizes 800 to 11000 liters-milk cooling tanks. A smart way to increase your bottom line!



www.danfoss.com

OPTYMA™
DANFOSS CONDENSING UNITS

100% dedicated to milk coolers

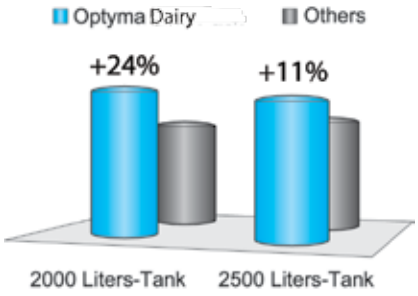
Reliability, efficiency and compactness will make the Danfoss Optyma™ Dairy condensing unit your favorite cooling solution in milk tanks.

Cost savings

Energy efficient and cost effective solution:

Up to 24% energy savings:

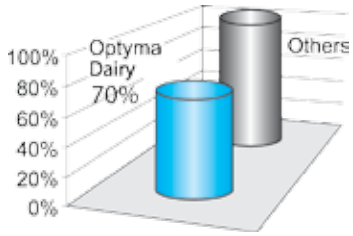
- The Optyma™ Dairy condensing units are highly energy efficient. Thanks to the smart Danfoss design and components, you will reach up to 24% higher COP compared to standard offerings available on the market.



COP comparison between Optyma Dairy and equivalent model

30-35% cost savings on refrigerant:

- The micro channel heat exchangers help to reduce refrigerant charge from 30 to 35%.
  This is highly efficient and cost effective but also environmentally friendly.
- The multi refrigerant capability of units equipped with scroll compressor saves on inventory.
- Reliable Danfoss compressor and micro channel heat exchanger reduce maintenance and improve uptime.
- Danfoss scroll technology guarantees vibrations free and quiet operation.



Refrigerant charge comparison between Optyma Dairy and equivalent model

Size

Dimensions: the perfect match

Our system has been designed to perfectly fit into milk tanks' size and to enable transportation of the entire system from factories to the end user without additional costs.



Reliability

High reliability for your customers satisfaction

With a milk temperature going from 35°C to 4°C in just a few hours, your challenge is to get quick pull down to ensure 100% quality and no loss, whether you are working indoor or outdoor standard conditions. Danfoss Optyma™ Dairy condensing units fulfill the need of your milk production and collection frequency in several ways:

- The Optyma™ Dairy condensing unit is developed to meet the European Norm for Food Processing Machinery EN13732 (Bulk Milk Coolers).
- The Danfoss heavy duty scroll technology makes the unit sturdy and reliable in the long run.
- 100% of the units is factory tested. This makes it safer for your factory assembly and reduces leak risks.
- Micro channel heat exchangers and housing are corrosion resistant.
- The housing is galvanized and painted to ensure a long lifetime and has passed the 400 hours salt spray test.

A Danfoss optimized solution:
The Optyma™ Dairy condensing unit is equipped with Danfoss components optimized to work together: compressor, controls, heat exchanger. A smart way to secure best performance and highest reliability.





A wide range of cooling capacities to cover all market's needs

Danfoss extensive offerings are a perfect fit for tanks from 800 to 11000 liters, 2 and 4 milking coolers.
Additional models available in 2012.

The design which makes the difference:

1. **Heat exchanger and housing resistance to corrosion prolonges the lifetime of the unit**
2. **Micro channel heat exchanger enhances unit performance and saves on energy**
3. **Accessible fan and condenser for easy maintenance**
4. **Accessible pre-wired electrical junction panel enables easy servicing**
5. **Safety cartridge pressure switches HP & LP**
6. **Filter drier and sight glass protect from moisture, acids and solid particles**
7. **Receiver with shut off valve makes servicing easier**
8. **Crankcase heater protects compressor when operating during cold weather conditions**
9. **Quick connections accelerate installation: just mount, braze and plug.**
10. **Accessible service ports on service valves (suction and liquid)**





Optional equipment:

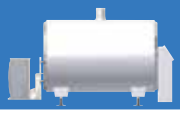
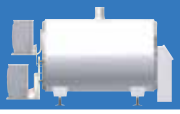
- Special electrical box
- Fan speed controller
- Solenoid valve

Models available with scroll and reciprocating compressors

Make your choice!

Select the Optyma™ Dairy model which best fits your needs

Type	Compressor	Hp	Phases	R404A Performance* in (W) at ambient 32°C at evaporating temperature				COP at ambient 32°C evaporating 0°C	Dimensions in mm W x D x H (Weight in kg)
				-5°C	0°C	+5°C	+10°C		
MPUD034ML	MLZ015	2,5	1/3	4 244	4 949	5 712	6 523	3,02	1106x464x695 (74)
MPZD048MT	MTZ028	2,5	1/3	4 716	5 685	6 733	7 851	2,43	1106x464x695 (66)
MPUD046ML	MLZ021	3	1/3	5 576	6 431	7 356	8 353	2,66	1106x464x695 (74)
MPZD060MT	MTZ036	3	1/3	5 812	6 845	7 925	9 045	2,14	1106x464x695 (68)
MPUD068ML	MLZ030	4	1/3	9 178	10 716	12 393	14 206	3,41	1106x464x830 (96)
MPUD080ML	MLZ038	5	1/3	10 635	12 366	14 249	16 286	3,14	1106x464x830 (96)
MPUD093ML	MLZ042	6	1	11 719	13 680	15 860	18 271	2,81	1106x464x830 (96)
MPUD093ML	MLZ045	6	3	12 335	14 280	16 372	18 612	2,85	1106x464x830 (96)
MPUD107ML	MLZ048	6,5	3	13 184	15 218	17 423	19 808	2,78	1106x464x830 (96)

Milkings and tank volume (liters)		Condensing unit model		
		Configuration		
2 milkings	4 milkings	with one unit 	with 2 units 	Cooling capacity (kW) - R404A Evaporating temperature 0°C Ambient 32°C
800 liters	1600 - 1750 liters	MPUD034 MPZD048		4,95 5,69
1000 - 1200 liters	2000 liters	MPUD046 MPZD060		6,43 6,84
1500 - 1750 liters	2500 - 3500 liters	MPUD068	MPUD034 MPZD048	9,90 10,72 11,37
2000 liters	4000 - 4500 liters	MPUD080	 MPUD046 MPZD060	12,37 12,86 13,69
2500 liters	5000 liters	MPUD093		14,28
2800 liters	5500 liters	MPUD107		15,22
3000 - 3500 liters	6000 - 7000 liters		MPUD068	21,43
4000 liters	8000 liters		MPUD080	24,73
4500 - 5000 liters	9000 - 10000 liters		MPUD093	28,56
5500 liters	11000 liters		MPUD107	30,44

Rating conditions:
Superheat 10 K - Subcooling inside the limits of the condensing unit
MTZ: Reciprocating compressor – MLZ: Scroll compressor
*Values refer to 3 phases units

Designation

Optyma	Application	Package	Refrigerant	Condenser size	Swept volume	Compressor platform	Version	Voltage code
OP	M	P	U	D	034	ML	W01	E

Optyma
Condensing unit

Application
M: MBP

Package
P: Packaged unit

Refrigerant
U: R22/R134a/R404A
Z: R404A/R134a/R507/R407C
M: R22

Condenser size
D: standard ambient conditions 0/46°C

Swept volume in CC

Compressor platform
ML: MLZ (scroll)
MT: MT/MTZ (reciprocating)

Version
D: customized unit
W: standard version
01: standard equipement

Voltage codes
G: 230V-1ph compressor & fan
E: 400V-3ph compressor & 230V-1ph fan

For more information, please contact your Danfoss sales office

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