



Always the right choice

At Danfoss, we believe some of the refrigeration industry's most pressing challenges present an opportunity to do what we do best: engineer innovative refrigeration components that help address the energy, environmental and food safety concerns of you, our customers.

Learn how Danfoss can help you develop competitive, future proof refrigeration units for your customers today.

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Reduced installation & handling cost

The new lightweight scroll compressor weighs up to 50% less than equivalent competitors' semi-hermetic models and is lighter than competing scroll & hermetic piston designs. In addition, the mounting and connections (both mechanical & electrical) are common throughout the family - minimizing freight, handling & supporting material cost.

The new Danfoss MLZ Scroll Compressor Engineered for refrigeration

Danfoss is committed to providing high-quality, high-performance compression technology solutions for refrigeration applications around the world. From milk tanks and supermarkets to cold rooms and ice makers, we seek sustainable solutions to our customers' energy, environmental, and food safety challenges. Take our latest compressor, the MLZ Scroll compressor: a scroll compressor family engineered for refrigeration.

Why is this important? It's simple: Refrigeration is different... while A/C is about comfort, refrigeration is about process and food safety, requiring very high reliability. The operating envelope for refrigeration is different, and the duty cycle is more demanding, involving changing operating conditions, pump down-cycles, transient conditions, multiple evaporators, etc. And operating conditions are different from application to application. They even differ with the varying ambient

temperatures in which the equipment operates. This makes it very difficult to maintain performance.

With this in mind, the engineers at Danfoss labs designed the MLZ. It delivers gains in energy efficiency and reliability, in refrigeration applications and operating conditions.

Lowest energy consumption, in application:

The combination of an energy efficient motor and a scroll wrap optimized for refrigeration applications, delivers the highest efficiency in fixed speed, normal operation.

The dedicated solution

- Higher efficiency:
High efficiency motor and refrigeration scroll wrap design reduces energy costs.

- More reliable:
Fewer parts, unique manufacturing system and patented overload protection system reduces downtime.

- Lower noise:
Compliant scroll design with check valve design means less cost for low noise applications.



Improved Uptime

Reliability is built into this compressor family, from the self-aligning, compliant scroll design to the Teflon coated or carbon bearings, to the reduced complexity manufacturing process (30% fewer parts and press-fit manufacturing). In addition, the patented HOOP overload protection design insures excellent motor protection while eliminating nuisance trips, and the oil injection system insures adequate lubrication in varying operating conditions.

Silent

The MLZ Scroll compressor is quiet by design: the basic scroll's smooth continuous compression, the elimination of the suction and discharge valves, the press fit design, and the unique disc check valve design ensures quiet, vibration free operation.

The right solution for your specific application

Refrigeration applications may appear to be similar, but they have different demands and needs for performance – which can be met by Danfoss MLZ scroll compressors. At the end of the day, it will help your brands to differentiate themselves in the marketplace – while helping your customers reduce costs, meet regulatory requirements and improve their business.

The MLZ addresses real world application challenges impacting energy efficiency, reliability, and noise – and solves them, because it is engineered for refrigeration.



Danfoss MLZ Scroll compressors is ideal for applications like these:

- Cold Rooms
- Storage rooms
- Milk tanks
- Ice Cream machines
- Electronic cooling
- Air Dryer
- Ice cube makers
- Cooling Processes

Performance data

| Refrigerant | Model | 50Hz | | | | | | | | | |
|-------------|--------|---|--------------|--|--------------|---|--------------|---|--------------|--|--------------|
| | | Cold Room -10° C Evap/ 40° C Condensing; RGT= 20° C; SC= 0° C | | Ice Machine -6,7° C Evap/ 40° C Condensing; RGT= 20° C; SC= 0° C | | Air Dryer 0° C Evap/ 40° C Condensing; RGT= 20° C; SC= 0° C | | Milk Cooling Tank 4° C Evap/ 45° C Condensing; RGT= 20° C; SC= 0° C | | EN -10° C Evap/ 45° C Condensing; RGT= 20° C; SC= 0° C | |
| | | Capacity (W) | COP (W/W) | Capacity (W) | COP (W/W) | Capacity (W) | COP (W/W) | Capacity (W) | COP (W/W) | Capacity (W) | COP (W/W) |
| R404A | MLZ015 | 3800 | 2,4 | 4400 | 2,8 | 5500 | 3,65 | 5800 | 3,4 | 3450 | 1,9 |
| | MLZ019 | 4800 | 2,5 | 5500 | 2,8 | 6900 | 3,6 | 7300 | 3,4 | 4400 | 2,0 |
| | MLZ021 | 5100 | 2,5 | 5800 | 2,8 | 7400 | 3,6 | 7700 | 3,4 | 4700 | 2,05 |
| | MLZ026 | 6400 | 2,5 | 7300 | 2,9 | 9200 | 3,6 | 9700 | 3,4 | 5900 | 2,1 |
| | MLZ030 | 7700 | 2,6 | 8700 | 2,9 | 11000 | 3,7 | 11600 | 3,45 | 7100 | 2,1 |
| | MLZ038 | 9200 | 2,6 | 10400 | 2,9 | 13200 | 3,7 | 13900 | 3,5 | 8500 | 2,1 |
| | MLZ045 | 11100 | 2,7 | 12500 | 3,0 | 15900 | 3,8 | 16600 | 3,6 | 10200 | 2,2 |
| | MLZ048 | 12100 | 2,65 | 13700 | 3,0 | 17200 | 3,8 | 18300 | 3,6 | 11100 | 2,15 |
| | MLZ058 | 14400 | 2,6 | 16300 | 2,9 | 20600 | 3,7 | 21800 | 3,5 | 13200 | 2,15 |
| R22 | MLZ066 | 16500 | 2,6 | 18600 | 2,9 | 23500 | 3,7 | 24800 | 3,5 | 15200 | 2,2 |
| | MLZ076 | 19000 | 2,65 | 21400 | 3,0 | 27100 | 3,7 | 28600 | 3,5 | 17500 | 2,2 |
| | MLZ015 | 3700 | 2,55 | 4200 | 2,9 | 5400 | 3,8 | 5900 | 3,63 | 3450 | 2,1 |
| | MLZ019 | 4400 | 2,6 | 5100 | 3,0 | 6500 | 3,8 | 7100 | 3,7 | 4100 | 2,2 |
| | MLZ021 | 4600 | 2,9 | 5400 | 3,0 | 6900 | 3,7 | 7500 | 3,6 | 4400 | 2,4 |
| | MLZ026 | 5800 | 3,1 | 6800 | 3,3 | 8800 | 4,1 | 9600 | 4,0 | 5600 | 2,6 |
| | MLZ030 | 6800 | 2,9 | 8000 | 3,2 | 10300 | 3,9 | 11300 | 3,8 | 6400 | 2,5 |
| | MLZ038 | 8000 | 2,7 | 9400 | 3,1 | 12100 | 3,8 | 13200 | 3,7 | 7500 | 2,3 |
| | MLZ045 | 10000 | 2,8 | 11700 | 3,2 | 15000 | 4,0 | 16300 | 3,9 | 9400 | 2,4 |
| MLZ048 | 10800 | 2,7 | 12700 | 3,1 | 16400 | 4,0 | 17800 | 3,9 | 10300 | 2,2 | |
| MLZ058 | 12600 | 2,7 | 14800 | 3,1 | 19300 | 4,1 | 21300 | 4,0 | 11500 | 2,3 | |
| MLZ066 | 14800 | 2,9 | 17300 | 3,3 | 22300 | 4,1 | 24500 | 4,0 | 14200 | 2,5 | |
| MLZ076 | 16700 | 3,0 | 19700 | 3,3 | 25600 | 4,1 | 28200 | 4,0 | 16100 | 2,5 | |

Data provided for 400V/3Ph/50Hz

| Refrigerant | Model | 60Hz | | | | | | | | | |
|-------------|--------|---|-----------------|---|-----------------|---|-----------------|---|-----------------|--|-----------------|
| | | Ice Machine 20° F Evap/ 105° F Condensing; RGT= 65° F; SC= 0° F | | Cold Room 25° F Evap/ 105° F Condensing; RGT= 65° F; SC= 0° F | | Air Dryer 32° F Evap/ 105° F Condensing; RGT= 65° F; SC= 0° F | | Milk Cooling Tank 40° F Evap/ 110° F Condensing; RGT= 65° F; SC= 0° F | | ARI 20° F Evap/ 120° F Condensing; (ARI MT Conditions) | |
| | | Capacity (Btu/hr) | EER (Btu/Wh) | Capacity (Btu/hr) | EER (Btu/Wh) | Capacity (Btu/hr) | EER (Btu/Wh) | Capacity (Btu/hr) | EER (Btu/Wh) | Capacity (Btu/hr) | EER (Btu/Wh) |
| R404A | MLZ015 | 17600 | 9,3 | 19500 | 10,4 | 22300 | 12,1 | 24500 | 12,6 | 14500 | 6,2 |
| | MLZ019 | 22600 | 9,7 | 25000 | 10,7 | 28500 | 12,2 | 31600 | 12,7 | 19400 | 7,0 |
| | MLZ021 | 24000 | 9,8 | 26500 | 10,7 | 30300 | 12,3 | 33500 | 12,8 | 20600 | 7,0 |
| | MLZ026 | 30000 | 9,6 | 33000 | 10,6 | 37800 | 12,1 | 41800 | 12,6 | 25800 | 7,0 |
| | MLZ030 | 35200 | 9,8 | 38900 | 10,8 | 44400 | 12,3 | 49200 | 12,9 | 30300 | 7,1 |
| | MLZ038 | 42000 | 9,8 | 46400 | 10,9 | 52900 | 12,4 | 58800 | 12,9 | 36300 | 7,1 |
| | MLZ045 | 51300 | 10,0 | 56300 | 11,0 | 64300 | 12,6 | 71400 | 13,1 | 44100 | 7,2 |
| | MLZ048 | 55800 | 9,9 | 61800 | 11,0 | 70300 | 12,5 | 77800 | 13,1 | 48200 | 7,2 |
| | MLZ058 | 65900 | 9,5 | 72800 | 10,6 | 83200 | 12,2 | 93100 | 12,7 | 57000 | 7,0 |
| R22 | MLZ066 | 76100 | 9,7 | 83700 | 10,5 | 95700 | 11,9 | 105800 | 12,4 | 65500 | 7,2 |
| | MLZ076 | 87300 | 9,7 | 96100 | 10,6 | 109800 | 12,0 | 122600 | 12,4 | 75500 | 7,8 |
| | MLZ015 | 17700 | 9,3 | 19600 | 10,4 | 22400 | 12,2 | 24600 | 12,7 | 14550 | 7,0 |
| | MLZ019 | 21100 | 9,6 | 23700 | 10,5 | 27400 | 11,9 | 31100 | 12,7 | 19500 | 7,3 |
| | MLZ021 | 22400 | 10,4 | 25200 | 11,5 | 29100 | 13,1 | 33100 | 13,9 | 20700 | 8,1 |
| | MLZ026 | 28000 | 10,7 | 31200 | 11,7 | 36000 | 13,2 | 40900 | 13,9 | 25700 | 8,1 |
| | MLZ030 | 37200 | 10,5 | 37500 | 11,5 | 43300 | 13,1 | 49200 | 13,9 | 30700 | 8,1 |
| | MLZ038 | 39300 | 10,6 | 44100 | 11,5 | 51000 | 13,0 | 57800 | 13,8 | 36300 | 8,2 |
| | MLZ045 | 48500 | 10,8 | 54300 | 11,9 | 62500 | 13,6 | 70900 | 14,4 | 44200 | 8,3 |
| MLZ048 | 52600 | 10,8 | 58600 | 11,9 | 68300 | 13,6 | 77300 | 14,4 | 48300 | 8,3 | |
| MLZ058 | 61200 | 10,3 | 68400 | 11,5 | 79800 | 13,3 | 91200 | 14,3 | 55500 | 7,9 | |
| MLZ066 | 70300 | 10,7 | 79600 | 11,8 | 91700 | 13,4 | 104800 | 14,3 | 65500 | 8,3 | |
| MLZ076 | 82900 | 10,6 | 92200 | 11,8 | 104600 | 13,5 | 119700 | 14,3 | 76000 | 8,3 | |

Data provided for 460V/3Ph/60Hz