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.

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 to 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 cube makers
- Ice Cream machines
- Electronic cooling
- Air Dryer
- 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 Condensin g; 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
	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
R22	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
	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
R22	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