



Genuine for over 60 years!

**FRIGOR TEC**  
Cooling to the point



# GRANIFRIGOR™ – ecological grain conservation

[www.frigortecamericas.com](http://www.frigortecamericas.com)





GRANIFRIGOR™	GC 40 Europe	GC 60 / 80 Europe Tropic	GC 140 Europe
<b>Cooling performance in 24 hours</b> <sup>1) 2)</sup> [MT/day]	30 – 60	55 – 120	140 – 220
<b>Chilled air fan</b>			
Volume flow [cfm] <sup>3)</sup>	1,400	1,700	4,500
Pressure [inWC] maximum <sup>5)</sup>	13	14	19
<b>Refrigerating capacity compressor</b> [kW/Ton] <sup>6) 7)</sup>	10 / 3	20 / 6    25 / 7	32 / 9
<b>Electrical data</b> <sup>9)</sup>			
Output (average) [kW]	4,2	9	16
Max. current consumption [A]	18	32    23	56
Electrical connection <sup>4)</sup> [A]	32	32	63
<b>Connections</b>			
Ø Connection cold air hose [in]	12	12	12
Condensation water drain average [gal/h]	1.5	4	5
Ø Condensation water drain hose [in]	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>
<b>Dimensions</b> [L x W x H [in]] / <b>weight</b> [lb]			
chassis with tyres	136 x 53.2 x 68.9 / 1,323	141 x 52.0 x 74.0 / 1,543	143 x 53.4 x 89.2 / 2,094
with swivelling casters	80.7 x 37.4 x 61.8 / 1,213	87.8 x 39.0 x 66.7 / 1,433	99.2 x 44.5 x 82.1 / 1,896

All specifications are valid for 460 V-3 Ph-60 Hz

- 1) Grain cooling to 50 °F
- 2) At an average ambient temperature (day's median) of 68 °F, an average relative humidity (ambient air) of 52 %, an average grain moisture of 16 % up to maximum capacity under favourable conditions and at 10.2 inWC counterpressure
- 3) At 10.2 inWC counter pressure
- 4) acc. CEE
- 5) Higher pressures are available upon request
- 6) Europe versions at an evaporation temperature of 32 °F and a condensation temperature of 86 °F
- 7) Subtropic/Tropic/Desert versions at an evaporation temperature of 50 °F and a condensation temperature of 104 °F
- 8) HP version (high pressure)
- 9) HYGROMAT™ is included as a standard feature  
Wheat = 36.74 Bu/t    Barley = 45.93 Bu/t  
Corn = 39.37 Bu/t    Rice = 49 Bu/t

Subject to change.

## GRANIVENT™:

The GRANIVENT™ is ideal for immediate aeration when the harvest is stored. The subsequent cooling by a GRANIFRIGOR™ ensures that the grain is protected from insects and moulds.

- Suitable for tower silos and flat storage
- Hygrostat and thermostat for safe aeration
- Robust and sound-proof





<b>GC 180 Europe</b>	<b>GC 220 / 240</b> Europe Subtropic Tropic			<b>GC 310 / 320</b> Europe Subtropic Tropic			<b>GC 450 Desert</b>	<b>GC 600</b> Europe
<b>170 – 280</b>	<b>220 – 370</b>			<b>310 – 520</b>			<b>340 – 560</b>	<b>600 – 1000</b>
6,400	7,400			11,000			15,000	20,000
24 / 32 <sup>B)</sup>	24 / 32 <sup>B)</sup>			24 / 32 <sup>B)</sup>			24	24
43 / 12	63 / 18	82 / 23	105 / 30	82 / 23	105 / 30	160 / 46	165 / 47	133 / 38
20	28	30	35	34	37	53	75	65
63	96	100	92	120	125	118	215	203
63	100			125			250	250
16	16			24	24	16	24	24
8	9 - 10			12 - 17			26	26
<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>			<sup>3</sup> / <sub>4</sub>			<sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>
150 x 65.0 x 90.0 / 2,535	130 x 61.0 x 96.5 / 3,638			146 x 71.3 x 100 / 4,409			156 x 83.9 x 114 / 6,114	156 x 83.9 x 114 / 6,114
106 x 52.0 x 84.6 / 2,337	116 x 61.0 x 88.6 / 3,307			133 x 71.3 x 94.9 / 4,189			147 x 83.9 x 106 / 6,063	147 x 83.9 x 106 / 6,063

**GRANIFRIGOR™ – advantages:**

- Low power consumption
- Fully automatic control Siemens S7 (DDC)
- State-of-the-art refrigeration technology
- Guaranteed dry, cool air
- Easy operation
- Silent
- 24/7/365 service
- Many additional options available
- Suitable for high outside temperatures
- Remote control with a smartphone or tablet via an app for Android or iOS [App](#)
- Remote control with a PC or notebook (Windows) [App](#)
- Large filters
- Robust industrial construction
- Quality inspection with test run at factory



**GC 460 / 500**  
Subtropic Tropic

**GC 560 Tropic**

**GC 650 / 700**  
Europe Tropic Desert

**GC 1000**  
Tropic Desert

460 - 750

560 - 900

600 - 1,100

900 - 1,500

15,000  
24

15,000  
24

15,500  
24

31,000  
16

175 / 50    225 / 64

270 / 77

175 / 50    320 / 90    320 / 90

470 / 134

69    78  
210    186  
250

85  
214  
250

71    95    105  
285    300    300  
330

140  
400  
400

24    24

24

24

32

17 - 26

32

40

66

3/4

3/4

3/4

3/4

156 x 83.9 x 114 / 6,114  
147 x 83.9 x 106 / 6,063

156 x 83.9 x 114 / 7,055  
147 x 83.9 x 106 / 6,504

173 x 83.9 x 114 / 8,708  
165 x 83.9 x 106 / 7,936

228 x 83.9 x 114 / 11,464  
201 x 83.9 x 114 / 10,802

**FrigorTec is certified according to DIN EN ISO 9001 : 2015.**

**FrigorTec is member of:**

- Grain Elevator and Processing Society (GEAPS)
- University of Arkansas Rice Processing Program
- Society for the Support of the German Milling School Braunschweig e.V., München / Germany
- Rationalisation Curatorship for Agriculture, Rendsburg / Germany
- School of vocational education in Agribusiness Burg Warberg e.V., Warberg / Germany
- Corn exchange, Luzern / Swiss
- ALB, Stuttgart / Germany
- BVA, Berlin / Germany

TÜV acceptance testing in at factory.

An additional test at the installation site is usually not required for the operation of the GRANIFRIGOR™.



# Prevent the spoiling of your harvest – the ecological and effective way!

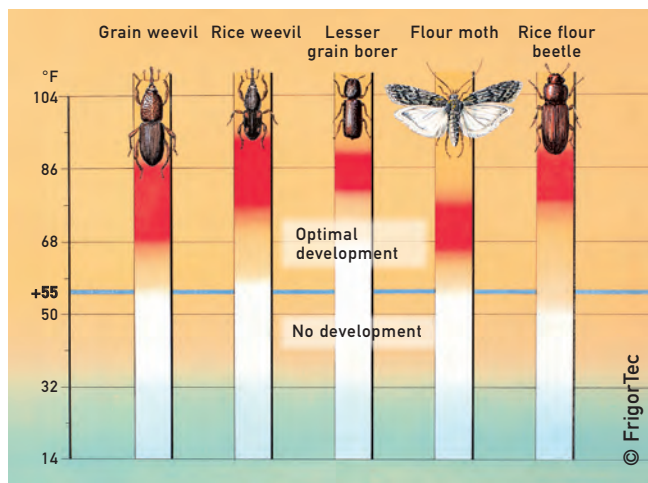
**Spontaneous heating of the grain often causes great damage. Systematic hygiene regulations and the call for natural treatment of the produce grain without chemical substances are standards that must be attained. We have the solution for all these demands: GRANIFRIGOR™.**

The GRANIFRIGOR™ cooling device is immediately used to cool down grain after the harvest and independent of the weather conditions. This effective method prevents the spoiling of freshly harvested grains, which spontaneously heats up because of its cellular respiration. Carbon dioxide, water and heat are released by this respiration – with extensive consequences: Loss of dry substance as well as the development of insects, microbes and mildew. Spontaneous heating depends on the grain's moisture content and temperature. The principle is also valid for oil seeds like rapeseed (canola).

**Since we know how grain “functions”, the GRANIFRIGOR™ operates according to two successful principles:**

1. Prompt cooling to below +15 °C once the grain has been stored: This puts insects into diapause so they don't multiply (see illustration below).

In addition the development of mildew is effectively prevented, respiration losses are minimised, and drying expenditures are also reduced by the drying effect of cooling.



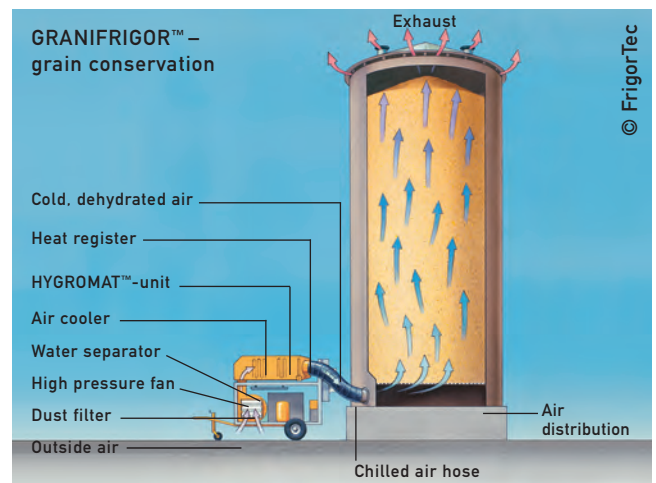
Insects that are dangerous to grain can develop at a temperature starting at 55 °F. GRANIFRIGOR™ cools the grain to below 55 °F and thereby ensures optimal freshness and quality of the harvest.

2. No ventilation with unconditioned ambient air:

Grain is hygroscopic. This means that depending on the temperature an equilibrium develops between the moisture content of the grain and the relative humidity of the ambient air. Moisture is absorbed if dry grain is exposed to the humid air. The grain begins to spoil. That's why aeration with fans is completely dependent on weather conditions. Furthermore, the ambient temperature during harvest time is usually much too high.

## Mode of operation:

The fan of a GRANIFRIGOR™ grain cooler sucks in ambient air (see illustration below). This air is cooled by an air conditioner (evaporator) to the desired temperature. The following HYGROMAT™ unit warms the cold air again automatically. This lowers the relative humidity and adapts to the conditions of the grain. No moistening can occur, which would be damaging. This cooled and dried air is blown into the air distribution of the warehouse or the silo system and is forced through the grain. Then the air is released outwards through the exhaust vents of the storage facility. The exhaust air carries the absorbed heat and moisture.



The GRANIFRIGOR™ process was developed by FrigorTec GmbH (formerly product division of Axima and Sulzer Escher Wyss) in co-operation with the University of Düsseldorf and the Bundesforschungsanstalt für Getreide (Federal Grain Research Institute) in Detmold and has been manufactured since 1963.

# Factory



All products are developed, constructed and made by FrigorTec. Every device passes a quality inspection with test runs before delivery. FrigorTec solutions are sold in over 90 countries through the worldwide distribution network.

## SERVICE (24/7)



Our service keeps the units maintained and ensures the spare parts supply - worldwide. [service@frigortecamericas.com](mailto:service@frigortecamericas.com)

Grain cooling units  
**GRANIFRIGOR™**

Crane air conditioning  
units **CRANEFRIGOR™**

Standard cooling units  
**STANDARDFRIGOR**

FrigorTec  
**SERVICES**

Insect heat treatment  
**DEBUGGER**

Hay dryer  
**AGRIFRIGOR™**

**Distributor:**

**FRIGOR TEC**  
Cooling to the point

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