



*Use of Natural Refrigeration
in Industrial Plants in Article 5
Countries by **Erich Wagner,**
Alfa Contracting GmbH*



ALFA Contracting GmbH (AC), established in 2001 is a company supplying engineering, design, equipment, installations, supervision and service for refrigeration plants **with large capacities.**

AC with its headquarter-office in **Germany** has entities in **Russia** (Moscow) and **Ukraine** (Kiew) and its activities are in the C.I.S. countries.

AC has executed the **largest refrigeration plant** for PJSC „**Myronivsky Hliboproduct**” (MHP) in Ladyzhin Vinnitsa region, Ukraine.



The „Vinnitsky Broiler” plant has a slaughter capacity of **24.000 birds** per hour and the installed refrigeration capacity is about **20 MW** supplying cold to several consumers

Refrigeration consumers at 100% products chilling	Load	Evaporation temperature				
		-41 °C	-30 °C	-8 °C	-5/-12 °C	
1 Spiral freezer No.7	kW	103	103			
2 Spiral freezer No.8-9	kW	123	246			
2 Spiral freezer No.10-11	kW	147	294			
20 Plate freezers (5 t/10h)	kW	80	1.600			
2 Blast freezer (10 t/10h fr.+10 to -18°C)	kW	170	340			
2 Horizontal plate freezers HK 28/15	kW	121	242			
1 Deep cold storage rooms (-20°C)	kW	450		450		
1 Processing rooms, cold storage rooms, brine tank chilling (Glycol -3/-7°C)	kW	125		125		
1 Cold storage rooms 0°C (Glycol -3/-7°C)	kW	320		320		
1 Universal storage room 0°C (-20°C)	kW	70		70		
1 Processing room + brine chilling (Glycol +3/-1°C)	kW	3.187			3.187	
1 Ice water for spin chillers	kW	4.762			4.762	
1 Cold water for air conditioning	kW	800			800	
Total / evaporation temperature:	kW		2.825	965	3.187	5.562
TOTAL of all:	kW		12.539			
Compressors in operation:						
3 Compound unit N3225LLSC-MBL (-41/+35°C)	kW	957	2.871			
2 Compressor unit N250VMD-HE (-30/+35°C)	kW	629		1.258		
2 Compressor unit N250VLD-LE (-8/+35°C)	kW	1.881			3.762	
3 Compressor unit N250VLD-LE (-5/+35°C)	kW	2.099				6.297
Reserve	kW		46	293	575	735



Refrigeration consumers		Load	Evaporation temperature				
at 100% products freezing			- 41 °C	-30 °C	-8 °C	- 5/-12 °C	
2	Box freezer (15 t/h from +6 to -18°C)	kW	1.700	3.400			
6	Spiral freezer No.1-6	kW	530	3.180			
6	Contact freezer No.1-6	kW	40	240			
10	Plate freezers (5 t/10h)	kW	80	800			
2	Blast freezer (10 t/10h fr.+10 to -18°C)	kW	170	340			
4	Horizontal plate freezers HK 28/15	kW	121	484			
1	Deep cold storage rooms (-20°C)	kW	645		645		
1	Processing rooms, cold storage rooms, brine tank chilling (Glycol -3/-7°C)	kW	125		125		
1	Cold storage rooms 0°C (Glycol -3/-7°C)	kW	180		180		
1	Universal storage room 0°C (-20°C)	kW	70		70		
1	Processing room + brine chilling (Glycol +3/-1°C)	kW	3.492			3.492	
1	Ice water for spin chillers	kW	4.762			4.762	
1	Cold water for air conditioning	kW	800			800	
Total / evaporation temperature:		kW		8.444	1.020	3.492	5.562
TOTAL of all:		kW	18.518				
Compressors in operation:							
9	Compound unit N3225LLSC-MBL (-41/+35°C)	kW	957	8.613			
2	Compressor unit N250VMD-HE (-30/+35°C)	kW	629		1.258		
2	Compressor unit N250VLD-LE (-8/+35°C)	kW	1.881			3.762	
3	Compressor unit N250VLD-LE (-5/+35°C)	kW	2.099			6.297	
Reserve		kW		169	238	270	735

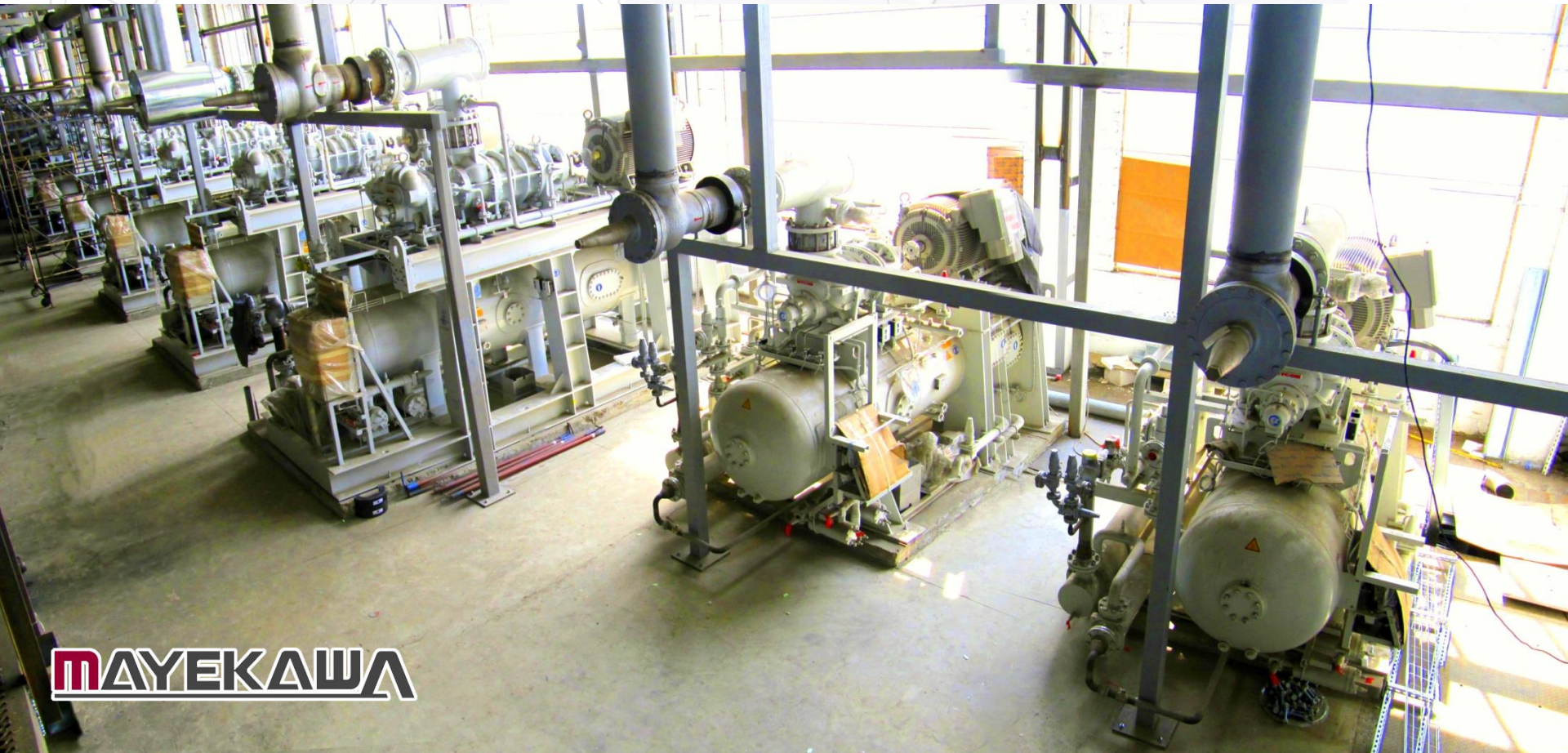
← Additional heat utilization: warm water +45°C approx. to 4MW



ATMO
UN sphere
technology summit
natural solutions



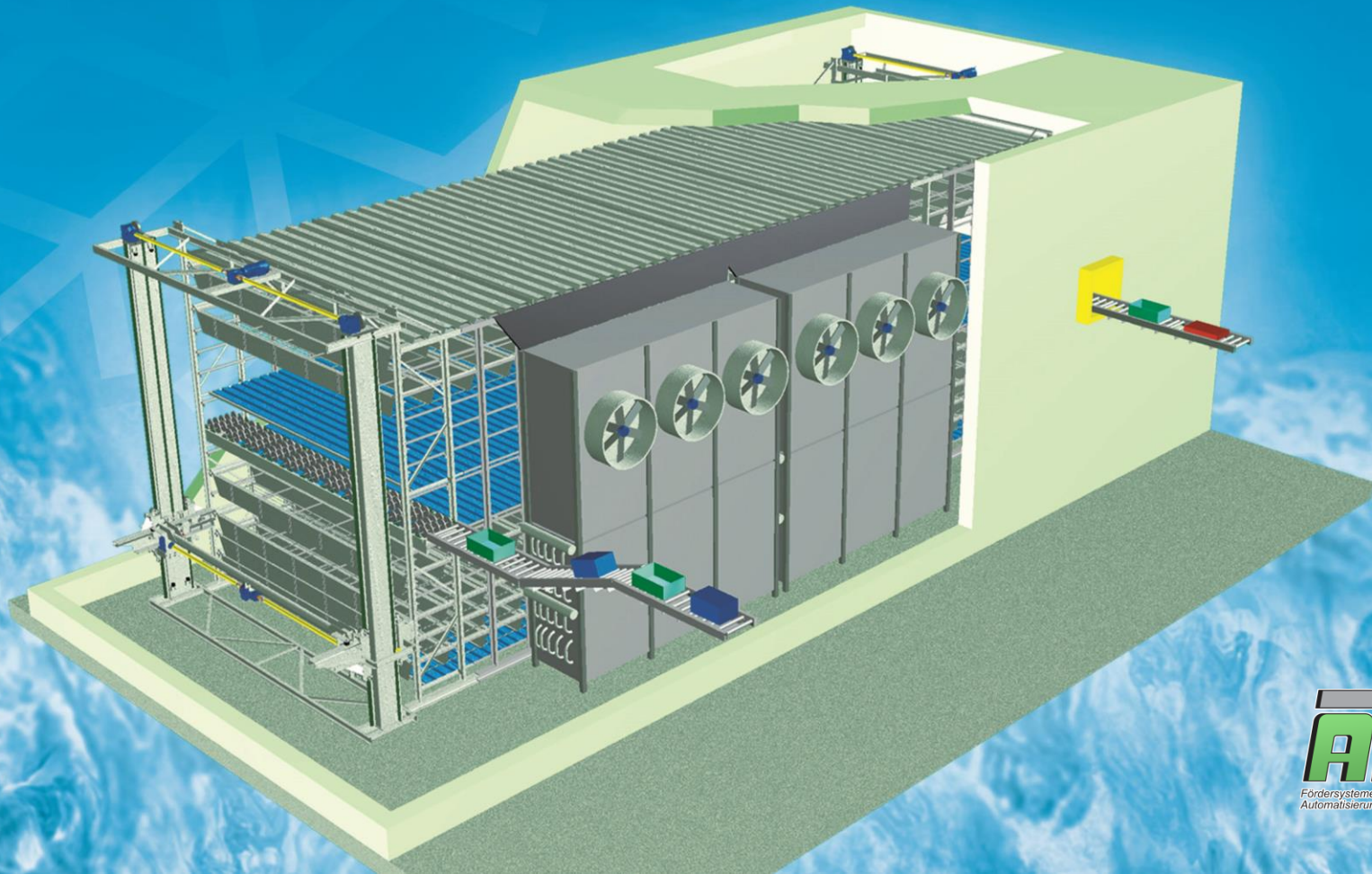
100m compressor hall
with 16 compressors



MAYEKAWA

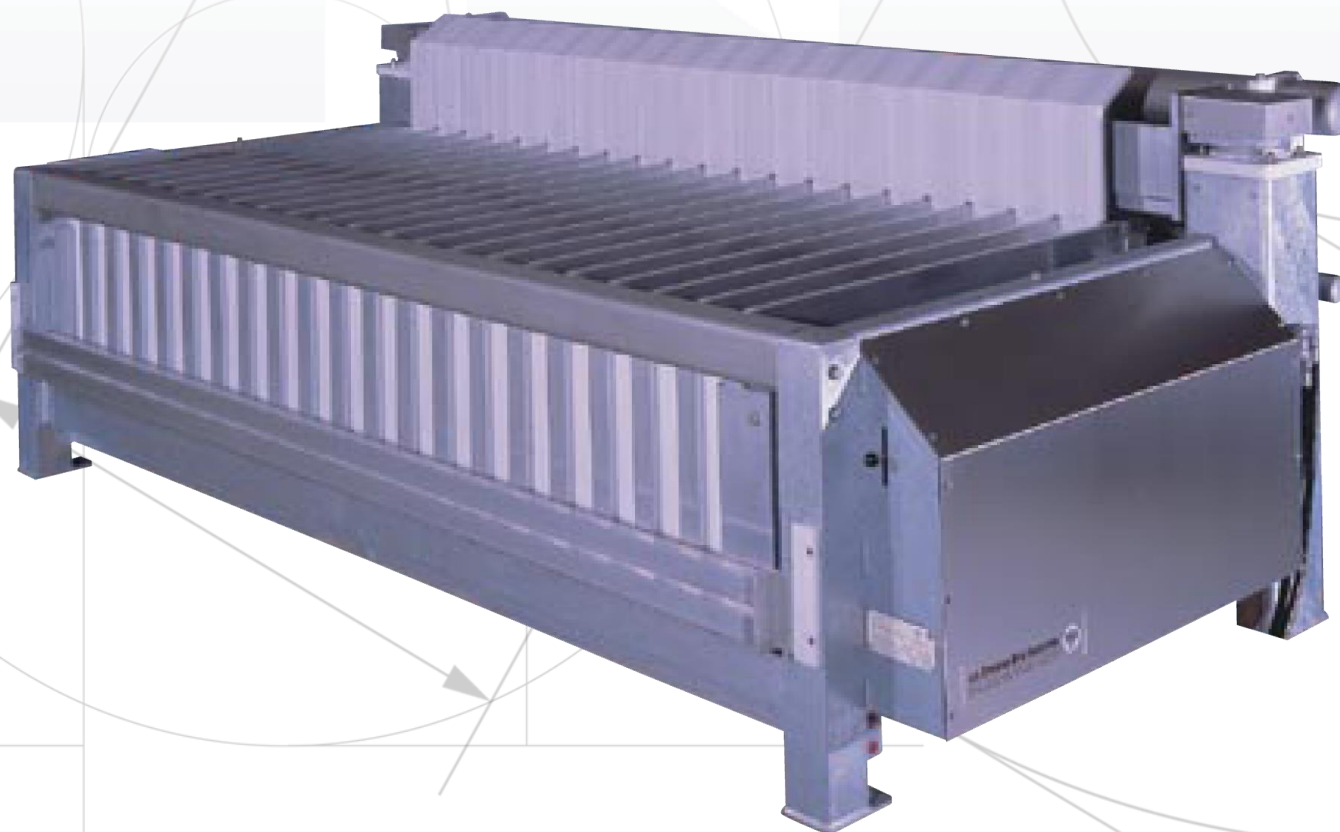


2 carton freezers with 15 t_h freezing capacity each





20 vertical plate freezers





4 horizontal plate freezers

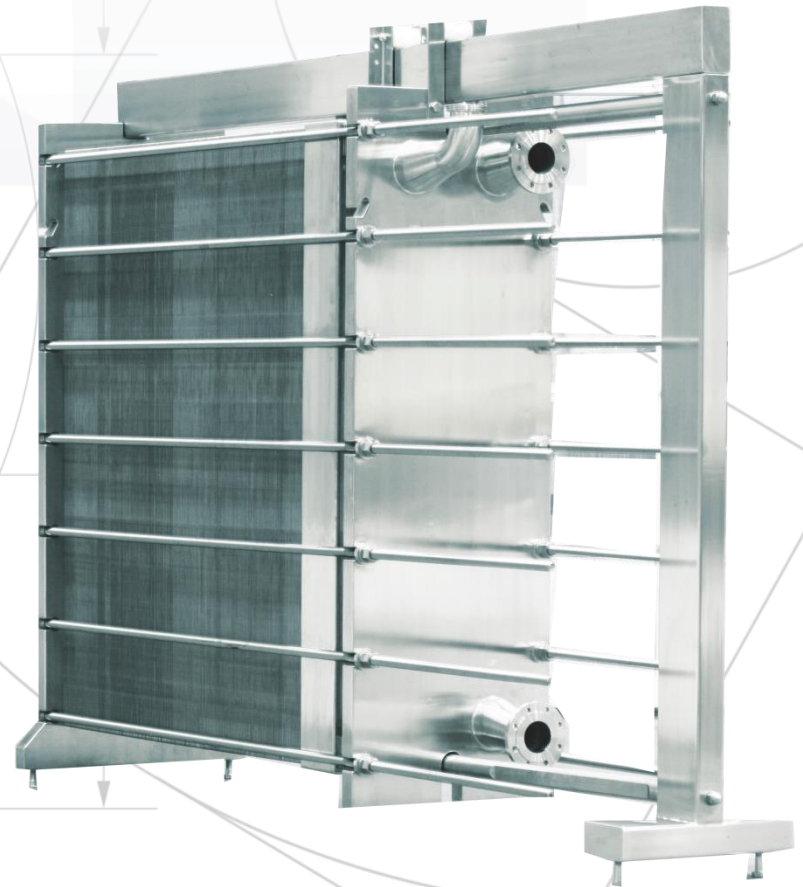




other applications



blast & spiral freezers



water, glycol, brine chillers



ATMO
UN sphere
technology summit
natural solutions



5 evaporative condensers



Baltimore Aircoil



AC's cooperation with MHP has already started in the year 2004 and is based on common reliability, trust and also readiness during day and night for services and ideas, for solving any demands and problems on installed plants.

We look back to fulfilled installations for **MHP** for the poultry farm „**Nasha Ryaba**”™ and the meat processing plant „**Legko**”™ and look forward to new joined projects.





 **ATMO**
sphere
technology summit
natural solutions
3 - 4 June 2013 in Vienna

Thank you very much
for your attention



ALFA Contracting GmbH

Engineering Consulting Contracting Agency Acquisition Management Trade