

ARMEC COOLING SYSTEM LIMITED

Dairy Industries

Want to reduce Milk Chilling cost ?



Expandable Skid mounted Ammonia Milk Chilling plant.

- ARMEC Chilling plant is **40 % Power saving** than Conventional I.B.T. Chilling Plant.
- Ready to Install, Portable, can be moved anywhere and also based on skid, so no need of foundation.
- Fully Automatic, No need of operator.
- Easy Operation, Maintenance Free, And 66 % Space saving then conventional IBT system.
- Oil return from oil separator is also automatic, so oil consumption is almost zero.
- Only 50 kg. Ammonia Gas Required.
- Three models with PC-2 Comp.15,000 , 20000 , 25000

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| I=ICE B=BANK T=TANK | E=ENERGY S=STORAGE T=TANK |
|--|--|
| Conventional IBT | ARMEC Made EST |
| Conventional IBT is connected with refrigeration plant. (Inside Coil.) | ARMEC EST is without Inside coil. |
| In conventional IBT normally top cover is made with wood, wood is poor insulating material And it is not complete sealed so heat losses And dust particles can take place. | ARMEC EST is completely closed and all Side puff insulation is there so no cooling losses is there. |
| Conventional IBT is fixed so you can't move that IBT. | ARMEC EST is movable, And you can install it at convenient place. |
| Conventional IBT requires Large space. | ARMEC EST requires very small space. (1/3 than conventional IBT.) |
| Every year conventional IBT's efficiency is reduces. | ARMEC EST will give constant performance. |
| Main reason for popularity of IBT is it stores energy at night or when power is there and gives energy when it requires. | ARMEC EST is run on Inverter principal It stores energy at night or when power is there and gives energy when it requires. |

ARMEC MADE EST
(Energy Storage Tank.)
(patented *)

Selection Chart

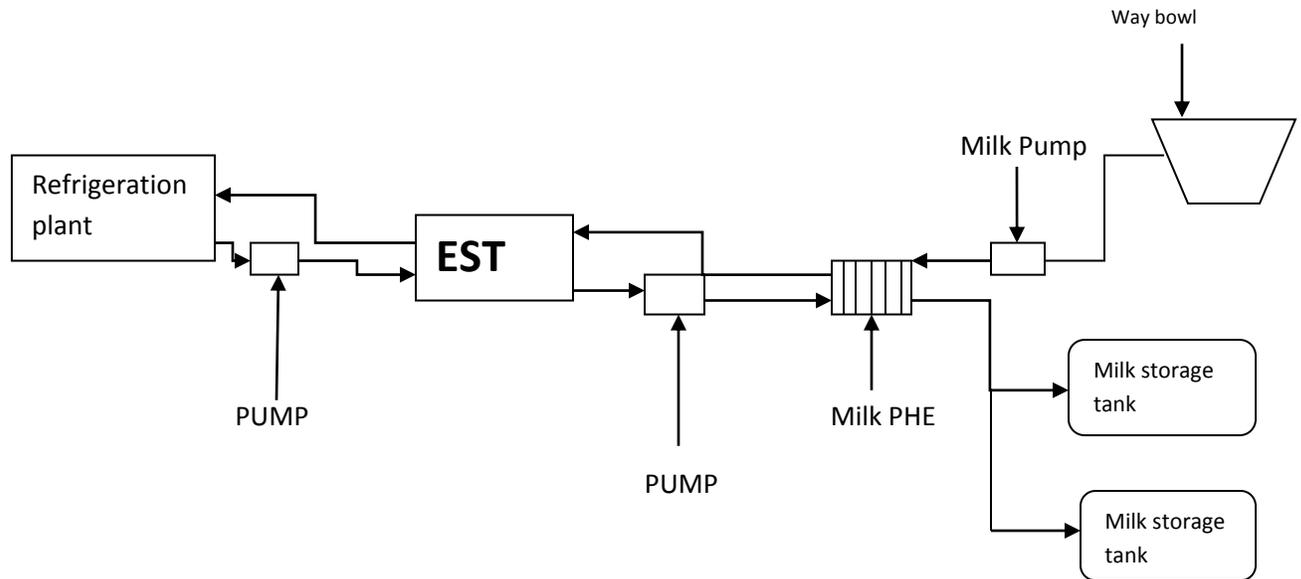
| ARMEC MODEL | COMPRESSOR | RPM | MILK COLLECTION MORNING-EVENING | MOTOR H.P | Advance IBT |
|-------------|------------|------|---------------------------------|-----------|----------------|
| AP-15000 | PC-2 | 800 | 7500+7500 | 20 | ARMEC MADE EST |
| AP-20000 | PC-2 | 1000 | 10000+10000 | 25 | ARMEC MADE EST |
| AP-25000 | PC-2 | 1250 | 12500+12500 | 30 | ARMEC MADE EST |
| AK-30000 | KC-2 | 600 | 15000+15000 | 40 | ARMEC MADE EST |
| AK-40000 | KC-2 | 800 | 20000+20000 | 50 | ARMEC MADE EST |
| AK-50000 | KC-2 | 1000 | 25000+25000 | 60 | ARMEC MADE EST |



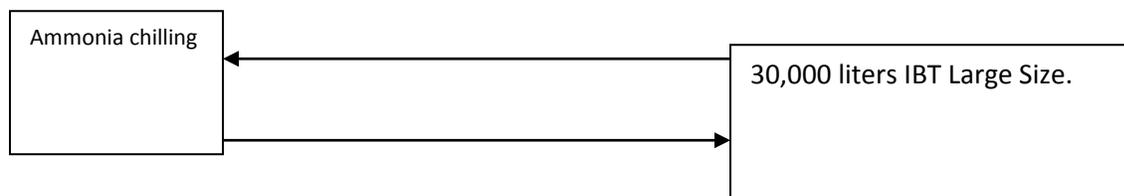
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Changodar, Dist. Ahmedabad (Gujarat) INDIA.
Phone: 07926621571, 07926631572
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- 1) Charging of multiple EST is possible.
For example when one EST is Discharging It takes 3-4 Hours At that time charging of other EST can be done (alternately).
- 2) When Milk is less we can use only one EST and Can complete milk chilling.
- 3) Right now in conventional chilling plant we have to chill whole IBT even milk is less. So held in Huge Amount of power losses Because of that per liter milk chilling cost is increases.
- 4) 10,000 liters of EST can Chill 30,000 liters of milk at a time.



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Subject: - Per liter Milk Chilling Cost

Dear, Sir

We have made Energy consumption comparison Chart between Conventional IBT chilling plant and Armec Made Advance IBT/EST chilling plant. Please have a look and give your Expert opinion.

| PER LITER CHILLING COST ANALYSIS | | | | | | | | | |
|----------------------------------|-----------------|-----------|---------------|------------------|------------------------|----------------------|-----------|---------------|-------------|
| IBT | | | | ADVANCED IBT/EST | | | | | |
| I.B.T. | | LPD | 10000 | 5000 | ARMEC ADVANCED IBT/EST | | LPD | 10000 | 5000 |
| S.NO | PARTICULAR | AMOUNT | COST/LIT. RS. | | S.NO | PARTICULAR | AMOUNT | COST/LIT. RS. | |
| | CAP.UTILISATION | | 100% | 50% | | CAP.UTILISATION | | 100% | 50% |
| 1 | COST | 2300000.0 | | | 1 | COST | 2000000.0 | | |
| 2 | CIVIL WORK | | | | 2 | CIVIL WORK | 0 | | |
| A | COMPRESSOR | 50000.0 | | | A | COMPRESSOR | 0 | | |
| B | RECEIVER | 50000.0 | | | B | RECEIVER | 0 | | |
| C | IBT | 100000.0 | | | C | IBT | 0 | | |
| D | CONDENSOR TANK | 300000.0 | | | D | CONDENSOR TANK | 0 | | |
| | TOTAL | 500000.0 | | | | TOTAL | 0.0 | | |
| | GRAND TOTAL | 2800000.0 | | | | GRAND TOTAL | 2000000.0 | | |
| 3 | MAINTANANCE | | | | 3 | MAINTANANCE | | | |
| A | LABOUR | 10000.0 | | | A | WATER SOFTNING CHEM. | 5000.0 | | |
| B | OIL | 30000.0 | | | B | OIL | 0.0 | | |
| C | GAS | 10000.0 | | | C | GAS | 0.0 | | |
| | TOTAL | 50000.0 | 0.01 | 0.03 | D | TOTAL | 5000.0 | 0.001 | 0.003 |
| 4 | OPERATOR | | | | 4 | OPERATOR | | | |
| | 2*6000 | 12000.0 | 0.04 | 0.08 | | NOT REQUIRED | 0.0 | 0 | 0 |
| 5 | ELECTRICITY | | | | 5 | ELECTRICITY | | | |
| | RUNING HOUR 20 | 20 | | | | RUNING HOUR 8 | 8 | | |
| A | COMP. 20HP | 2200 | | | A | COMP. 20HP | 880 | | |
| B | IBTAGITATOR 5HP | 550 | | | B | C.TOWER PUMP 3 HP | 132 | | |
| C | CON D.PUMP 5HP | 550 | | | C | C.TOWER FAN 2 HP | 88 | | |
| | TOTAL | 3300 | 0.33 | 0.50 | | TOTAL | 1100 | 0.11 | 0.11 |
| TOTAL COST/LIT | | | 0.38 | 0.60 | TOTAL COST/LIT | | | 0.11 | 0.11 |

ARMEC COOLING SYSTEM LIMITED

Introduction Letter

REF: ASO/01/12

Kind Attn: Procurement/Project/Purchase/Maintenance

Sub:Vender registration (40 % power saving Ammonia refrigeration plant.)

Dear Sir ,

With reference to above subject dairy industries are in very critical situation and day by day fuel costs (diesel cost and electricity) are increasing which are not in our In dairy industry refrigeration takes care of major power consumption, so even if 20 % is saving then it is worth it is very big amount of saving. Nowa days there is essential demand of efficient refrigeration plant and there is also need to have less maintence, without operator, and power saving refrigeration plat.

ARMEC COOLING SYSTEM have specialty in designing of Less maintenance, without operator, 40 % power saving and skid mounted refrigeration system specially for chilling center/collection center.

Please find attached catalog.

Thanks and regards,

ARMEC CUSTOMER CARE.

ARMEC COOLING SYSTEM LIMITED

Chemical industry



Refrigeration system is heart of any chemical industry and it takes care of major and calculated amount of power consumption. If 40% of power saving is there it takes care of huge amount of power saving. ARMEC COOLING SYSTEM LTD has done many innovations in refrigeration plant for chemical industry. ARMEC's all plants are skid mounted so they don't require any type foundation and ARMEC's Chiller's are also expandable.

As we know property rates are very high, but ARMEC chiller's requires very less space compared to conventional refrigeration system. It is portable, so it can be moved anywhere.

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We like to tell you about our new patented product EST.

| Hot well/ cold well system or IBT (Ice bank tank system) | ARMEC made EST system |
|--|--|
| Foundation is required for the tanks. | No need of foundation. |
| Two tanks are required. | Only one tank is required. |
| Large floor space is required. | 1/3 rd floor space required compared to hot well/cold well system. |
| Full time operator required. | No need of operator (fully automatic). |
| The Main reason for popularity of hot well cold well is it Stores buffer energy. | ARMEC EST store buffer energy because of that we can reduces refrigeration plant size. So capital investment is very less. |
| Conventional IBT is connected with refrigeration plant (Inside Coil). | ARMEC EST is without inside coil. |
| Conventional IBT is fixed, so you can't move Anywhere. | ARMEC EST is portable and can be moved anywhere and can be installed at convenient place. |
| IBT's Efficiency reduces gradually. | ARMEC EST gives constant efficiency. |
| Conventional Hot well cold well or IBT's storage capacity is fixed. | Capacity can be increased by adding another EST. |

Advantages of our chilling plant

- It saves up to 40% power in comparison to conventional refrigeration plant.
- Factory tested, Portable and ready to install.
- Fully automatic.
- No need of operator.
- ARMEC chilling plants are skid mounted so no need of Foundation.
- Easy operating, maintenance free and 66% space saving compared to IBT system.
- Oil return from oil separator is also automatic.
- Can be expanded as per the need and load.
- Very less Gas quantity required.

ARMEC COOLING SYSTEM LIMITED

Plastic Industry



ARMEC cooling system is a leader in plastic industry. ARMEC has designed fully automatic, skid mounted units, about two decades ago and it was first who ever launched such type of revolutionary concept. Since 1977 ARMEC group has given 4 patents to India. ARMEC has also designed 40% power saving skid mounted, expandable ammonia chilling units which was very first in India. As we all know chilling plant is the heart of the plastic industry. 40% of power saving is a very big amount of saving.

ARMEC have very huge experience in refrigeration field and it has designing excellence in chilling units. Due to this reason ARMEC chillers have many silent features.

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Silent features of our product in various industries are shown below:

1) Multilayer Industries

Silent Features of Our Chilling Plant in This Industry

- Maintain the proper film gauge to obtain the required film size
- Chill the air as per requirement
- Maintain a uniform distribution of properties of plastic material.
- Increase the production up to 25%
- Maintain the ratio of plasticizing capacity.



2) Plastic injection and molding industry (Plastic Industry)

Silent Features of Our Chilling Plant in This Industry

- Increase the production
- Maintain the total cycle time
- Increase the life of machine/mould
- Maintain a fine finish of the product
- Reduction in the wastage of raw material
- Reduce cycle time (Low cycle time)
- Accuracy in process control
- Lower the production cost



3) Tape line industry (Plastic Industry) / Lamination Industry

Silent Features of Our Chilling Plant in This Industry

- Obtain superior strength and quality
- High production of tape
- Maintain production ratio
- Increase the life of grooved feed
- Tape will not split



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Silent Features of Our Chilling Plant in This Industry

- Obtain superior bonding
- No scaling problem in roller
- Increase in production
- Economical power consumption

4) Pipe/profile industries

Silent Features of Our Chilling Plant in This Industry

- Increase the production up to 25%
- Economical in production cost
- Increase the life of sizer
- Single setting line speed
- Perfect ID and OD
- The part of ISI certification
- Obtain the fine finishing of products
- Reduction in wastage of raw material
- Reduction in power cost



5) Blow molding industries

Silent Features of Our Chilling Plant in This Industry

- Increase the production up to 35%.
- Economical in production cost.
- One step ahead in the competition Era
- Maintain the total cycle time
- Reduce cycle time (low cycle time)
- Increase the life of machine/mould.
- Maximum space requirement 4ft x 4ft.
- Obtain the fine finishing of products.
- Reduction in wastage of raw material.
- Accuracy in process control reduction in power cost
- Cool the articles in side by chilled air.



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Pharmaceutical industry



As we know, processes in pharmaceutical industries have to be controlled very precisely and so the temperature. This is why ARMEC has designed special chillers for the pharmaceutical industry.

For this we have specially developed Water cooled and air cooled chiller.

Advantages of our chilling plant

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- No need of operator.
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Food & Beverages



Storing the foods and beverages at low temperatures prolongs the shelf life of many foods. In general, low temperatures reduce the growth rates of microorganisms and slow many of the physical and chemical reactions that occur in foods. The life of many foods and beverages can be increased by storage at temperatures below 4° C .

We also strive to save our clients' money and promote efficiency, so product costs can be kept as low as possible. So, ARMEC has designed special 40% power saving refrigeration plants for the Food and Beverages Industry which will reduce your refrigeration cost. We understand the importance of future expansion in current production quantity, so we have designed 30% expandable plants for this industry.