PUSH
ENGINEERING PVT. LTD.

Tons for Sure

(An ISO 9001: 2015 Certified Company)

BROCHURE

About Us

Established in the year 1996, we “Push Engineering Private Limited” are leading organization engaged in Design, manufacturing, exporting and supplying wide range of products like Flake Ice Plant, Tube Ice Plant, Flake Ice Machine, Tube Ice Machine, Chilled Water Plant, Automatic Ice Handling System, Ice Storage Room, Pressure Vessel package, Heat Exchanger, Screw Conveyor System For Ice conveying, Pneumatic System for Ice Conveying, Oil Separator, Day Tank etc. We evolved as a group offering total solutions that ranges from Concept to Commissioning, setting the trend for high quality and customized solutions at competitive prices.

Our Team

We are blessed with a talented workforce consisting of professionals from various domains of the industry. They are recruited on the basis of their knowledge, talent and experience in the domain. Our team members works in close coordination with each other in order to deliver the superior quality products to our valuable clients. In addition to this, we organize crucial seminars, workshops and training sessions for our professionals in order to increase their skills and knowledge.

Why Us?

We have been recognized by our clients due to our quality-centric approach, highly reliable product and prompt delivery of products.

Owing to the following reasons, we have gained huge success in the market:

- **Sophisticated infrastructural base**
- **Wide distribution network**
- **Ability to fulfil bulk orders**
- **Adroit team of professionals**
- **Timely delivery**
- **Ethical business policies**

Our Infrastructure

Our sophisticated infrastructure is constructed over a broad area of land. With the assistance of our wide infrastructural base, we have become competent to manufacture highly reliable products. Our infrastructure is handled by our competent team of professionals. Moreover we have installed modern machinery and tools in our production unit that enable us to manufacture highly reliable products within stipulated time frame.

Push Flake Ice Plant

Features

Capacity: 1 to 45 TPD (Tons / day) & multiple there off..

Type: 1 to 30 TPD skid mounted, containerized, site assembled any desired capacity. Factory assembled skid mounted units, reduces erection/ commissioning time at sites and also reduces installation space requirement at site.

Refrigerant: Ammonia (NH3), R-22, R404 A.

MOC: Ice freezing surface stainless steel/carbon steel

CE approved Flake Ice makers (If Required)

- **User Friendly**
- **High Refrigerating efficiency and energy –saving**
- **Safe and reliable : All parts are interchangeable**
- **Containerized plants, easy for transportation & shifting from one site to other**
- **Package include Ice maker, condenser, refrigerant receiver, compressor, motor & piping, electrical control panel for compressor & refrigeration controls.**
- **Compressor of reputed brands such as kirloskar, Frascold, Bitzer, bock, york etc. with motor of reputed brands like Crompton, Siemens, marathon, etc, oil separator (if required)**

STANDARD MODELS AVAILABLE:

Flake Ice Plant -With SS Ice Maker

Model	Nominal capacity in	IM Model	Evaporation Temp	Cutter Motor	Make up water circulation pump	Compressor Motor Power	Cooling water pump	Cooling tower fan motor	Total installed Power	Dimensions for skid mounted plant in 'm' Approx		
	TPD		°C	kW	kW	kW	kW	kW	kW	L	W	H
PE-FIP-A-05	05	PE 2 SS	(-) 20	0.75	0.37	18.5	1.5	0.75	21.87	6	2.2	2.8
PE-FIP-A-10	10	PE 4 SS	(-) 20	0.75	0.37	37	2.2	1.5	41.82	8	2	3.3
PE-FIP-A-15	15	PE 6 SS	(-) 25	1.1	0.37	55	3.7	1.5	61.67	8.5	2.3	3.5
PE-FIP-A-20	20	PE 8 SS	(-) 25	1.1	0.37	75	3.7	2.2	82.37	9	2.5	3.7
PE-FIP-A-25	25	PE 9 SS	(-) 30	1.1	0.37	110	5.5	2.2	119.17	9.3	3	4.2
PE-FIP-A-30	30	PE 6 SS x 2 Sets	(-) 25	2.2	0.74	110	5.5	2.2	120.64	9.5	4	4.2

Flake Ice Plant -With CS Ice Maker

PE-FIP-A-05	05	PE 2 CS	(-) 20	0.75	0.37	18.5	1.5	0.75	21.87	6	2.2	2.8
PE-FIP-A-10	10	PE 4 CS	(-) 20	0.75	0.37	37	2.2	1.5	41.82	8	2	3.3
PE-FIP-A-15	15	PE 5 CS	(-) 25	1.1	0.37	55	3.7	1.5	61.67	8.5	2.3	3.5
PE-FIP-A-20	20	PE 6 CS	(-) 25	1.1	0.37	75	3.7	2.2	82.37	9	2.5	3.7
PE-FIP-A-25	25	PE 9 CS	(-) 22	1.1	0.37	75	3.7	2.2	82.37	9.3	3	4.2
PE-FIP-A-30	30	PE 9 CS	(-) 27	1.1	0.37	110	5.5	2.2	119.17	9.5	4	4.2
PE-FIP-A-40	40	PE 6 CS x 2 Sets	(-) 25	2.2	0.74	132	7.5	3.7	146.14	10.5	5.5	4.2

Push Flake Ice Maker

Design Parameters
- Fresh water inlet = +30°C
- Evaporation / Condensing Temp = -20°C / +40°C
- Cooling water inlet / outlet temp = +32°C / +36°C.

Refrigerant: Ammonia
- Evaporation Temp, Feed water temp, type of refrigerant, compressor, influences the capacity of the machine.

Capacity : 1 to 45 TPD (Tons day)

Model : PE 0.5 to 9

Refrigerant : Ammonia (NH3), R-22, 404 A.

MOC : Ice Freezing Surface - Stainless Steel / Carbon Steel.

Features
- Available in 10 models with capacities between 1 and 45 tons of ice, use multiple units for higher capacity.
- Makes ice from fresh water, seawater or other liquids.
- Choice between carbon steel or stainless steel freezing surface is available.
- Manufactured with stainless steel water makeup tank and ice removal tools as standard equipment.
- **CE approved Flake Ice makers** (If Required)

Model	Production capacity (TPD)		Cutter Motor	Make up water circulation pump	Total installed Power	Dimensions for skid mounted plantin in 'mm' Approx		
	CS	SS	kW	kW	kW	L	W	H
PE 0.5	1	1	0.25	0.18	0.43	990	630	780
PE 1	2	2	0.75	0.37	1.12	990	630	780
PE 2	5 - 10	5 - 7	0.75	0.37	1.12	1915	1400	1720
PE 3	7 - 14	7 - 10	0.75	0.37	1.12	1985	1400	2080
PE 4	9 - 16	7 - 11	0.75	0.37	1.12	1985	1400	2280
PE 5	11 - 20	9 - 14	0.75	0.37	1.12	1985	1400	2550
PE 6	15 - 27	12 - 18	1.1	0.37	1.47	2569	1644	2600
PE 7	16 - 30	13 - 20	1.1	0.37	1.47	2569	1644	2750
PE 8	20 - 36	16 - 24	1.1	0.37	1.47	2569	1644	3100
PE 9	21 - 38	17 - 26	1.1	0.37	1.47	2569	1644	3300

Economy
- Makes sub-cooled ice with better cooling power than any other ice maker
- Continuous ice harvesting with no defrosts cycles
- Converts all feed water to ice, eliminate waste • Saves space with compact design. • Minimal Maintenance.

Notes:
- Specifications subject to change owing to our constant endeavour for product improvement
- Minimum head space required for all models 500 mm to 800 mm
- This ice maker can produce ice only when connected to other components of refrigeration plant
- Evaporation temperature, feed water temperature, type of refrigerant, influences the capacity of the machine
- Models also available with other refrigerants

Push Tube Ice Plant

Capacity : 5 to 60 Tons/ day

Refrigerant : Ammonia (NH3), Freon.

Material Of Construction : All Parts in Contact with Water & Ice in Stainless steel .
• Shell in Carbon steel or stainless steel.

Feature
• Low power consumption
• PLC based operation, hence require less man power for operation
• Skid mounted, less space requirement
• Easy installation and maintenance

Model	Nominal capacity in	Evaporation Temp	Cutter Motor	Make up water circulation pump	Chilled water pump	Compressor Motor Power	Cooling water pump	Cooling tower fan motor	Total installed Power	Dimensions for skid mounted plant in 'm' Approx		
	TPD	˚C	kW	kW	kW	kW	kW	kW	kW	L	W	H
PE-TIP-A-05	05	(-) 10	1.1	0.37	0.37	18.5	1.5	0.75	22.6	6	2.2	2.4
PE-TIP-A-10	10	(-) 10	1.1	0.75	0.37	30	2.2	1.1	36.9	8	2.2	4.2
PE-TIP-A-15	15	(-) 10	1.1	0.75	0.37	45	3.7	2.2	53.1	8.5	2.3	4.2
PE-TIP-A-20	20	(-) 10	1.1	0.75	0.37	55	3.7	2.2	63.1	9	2.5	4.2
PE-TIP-A-25	25	(-) 10	1.1	0.75	0.37	75	5.5	2.2	84.9	9.3	3	4.2
PE-TIP-A-30	30	(-) 10	1.1	2.2	0.37	90	5.5	2.2	102.9	9.5	4	4.2
PE-TIP-A-40	40	(-) 10	1.1	2.2	0.37	110	7.5	3.7	123.4	10.5	5.5	4.8
PE-TIP-A-50	50	(-) 10	1.5	3.7	0.37	132	11	5.5	150.9	11	6	6
PE-TIP-A-60	60	(-) 10	1.5	3.7	0.37	160	15	7.5	180.4	11	6.5	6
PE-TIP-A-70	70	(-) 10	1.5	3.7	0.37	200	15	7.5	228	11	6.5	6

Normal Design Parameters:
• Fresh water inlet: + 30°C • Evaporation / Condensing Temperature: (-) 10°C / + 40°C
• Cooling water inlet/ Outlet Temperature: +32°C / +36°C • Refrigerant: Ammonia, R 404A, R22

Notes:
• Specifications subject to change owing to our constant endeavor for product improvement
• Evaporation temperature, feed water temperature, type of refrigerant influences the capacity of the machine.
• For other details contact us

Push Tube Ice Maker

Capacity: 5 to 60 Tons/day

Refrigerant: Ammonia (NH3), Freon

Material of Construction: All parts in contact with water & Ice in Stainless Steel Shell in carbon steel or stainless steel

Feature

- Available in 10 standard models with various capacities. Multiple units can be used for higher capacities.
- PLC program based operation • Robust • Precisely Engineered
- Optimum Performance • Less Maintenance
- Low running cost and longer service life
- Produces crystal clear Ice Tubes • Good cutting makes good ice shape

Normal Design Parameters:

- Fresh water inlet: + 30°C • Evaporation / Condensing Temperature: (-) 10°C / + 40°C • Cooling water inlet/ Outlet Temperature: +32°C / +36°C
- Refrigerant: Ammonia, R 404A, R22

TECHNICAL SPECIFICATIONS

Model	Nominal Ice production Capacity	Motor Power	Overall Dimensions		
	TPD	kW	L (m)	W (m)	H (m)
PE- TIM - 05	5	1.1	1.2	1.2	2.4
PE- TIM - 10	10	1.1	1.2	1.2	4.2
PE- TIM - 15	15	1.1	1.2	1.2	4.2
PE- TIM - 20	20	1.1	1.85	1.25	4.5
PE- TIM - 25	25	1.1	1.85	1.25	4.5
PE- TIM - 30	30	1.1	2.4	2.3	4.5
PE- TIM - 40	40	1.1	2.4	2.3	4.8
PE- TIM - 50	50	1.5	2.4	2.3	4.8
PE- TIM - 60	60	1.5	2.5	3	5
PE- TIM - 70	70	1.5	2.4	3	6

Push Chilled Water Plant

Specification

Capacity : 30 TR to 300 TR & Multiples there off

Type: Shell &Tube vertical chillers • Plate Heat Exchanger (PHE)

Shell & Tube Horizontal Refrigerant: Ammonia, R404A, R22

Features:

- Chilled Water Plants are available in 7 standard models
- Chilled brine & chilled process solution units are customized according to the required capacities
- Available in Flooded, DX Evaporator
- Chillers are manufacture in reputed make C.S Tubes (as standard) & can also be offered in S.S
- SKID mounted unit / containerized unit, saves installation time on site & can be shifted easily from site to site
- Chiller Package includes chiller, condenser, refrigerant receiver, compressor, motor & piping, electrical control panel for compressor & refrigeration controls.
- Compressor of reputed brands such as BITZER, york, Kirloskar, Bock with motor of reputed brands like Crompton, Siemens, Marathon etc, oil separator (If required)

Vertical Ammonia Chillers:

Vertical Chillers to get chilled temperature down to 3° C in different models

VERTICAL CHILLED WATER PLANT

Model	Nominal capacity in	Compressor Motor Power	Total installed Power	Dimensions for skid mounted plant in 'm' Approx		
	TR	kW	kW	L (m)	W (m)	H (m)
PE-VC-A-30	30	37	37	7	5.5	4.4
PE-VC-A-50	50	55	55	7.9	6.4	4.4
PE-VC-A-75	75	75	75	10	6.5	4.8
PE-VC-A-100	100	110	110	13	6.5	6
PE-VC-A-150	150	132	132	14.5	7.3	6.2
PE-VC-A-200	200	200	200	14.7	7.3	6.5
PE-VC-A-250	250	250	250	15	7.5	6.2

HORIZONTAL CHILLED WATER PLANT

	TR	kW	kW	L (m)	W (m)	H (m)
PE-HC-A-30	30	37	37	7	5.5	4.4
PE-HC-A-50	50	55	55	7.9	6.4	4.4
PE-HC-A-90	90	75	75	10	6.5	4.8
PE-HC-A-100	120	110	110	13	6.5	6
PE-HC-A-150	160	132	132	14.5	7.3	6.2
PE-HC-A-200	240	200	200	14.7	7.3	6.5
PE-HC-A-250	300	250	250	15	7.5	6.2

Design Parameters:

• Fresh water inlet/chilled water outlet temp =+30° C /+3° C. • Evaporation/Condensing Tem = -2° C/+40° C

• Cooling water inlet / outlet temp = +32° C /+36° C. • Refrigerant: Ammonia • Also available with refrigerant R404A, R-22.

Horizontal Ammonia Chillers:

• Horizontal chillers to get +5° C or +7° C water, tailor made as per customers requirements.

Push PHE Chillers

Design Parameters:

- Chilled water inlet/ outlet temp =+12° C /+7° C.
- Evaporation/Condensing Tem = +2° C/+40° C
- Cooling water inlet / outlet temp = +32° C /+36° C.
- Same models can give outlet water temp of +5° C with about 9% lesser TR
- Also available with refrigerant R404A, R-22.
- Plate heat exchanger (PHE) chillers to get instant water 2° C water from fresh water.
- Above capacities are also available with use of reputed make PHE's.

Push Automatic Ice Handling System

Types

- Rectangular Link conveyors (also known as Parallel Rakes)
- Triangular Link conveyors (Pendular Rakes)
- Pneumatic conveying systems

System Selection

PUSH helps its clients to select the system suitable to their need based on the following data:-

- Desired capacity of ice storage (Tons)
- Delivery Rate required (Tons/hr)
- Cycle time for use of ice (minutes)
- Distance to be conveyed outside the storage room (meters)
- Elevation of actual use point w.r.t. ice storage /Ground Level.

ICE RAKE

Capacity (Ton)	SC Dia & Size	Inside Clear Room Size (mm) Approx					Ice delivery rate TPH
		Total Length	Effective Length	Width	Total Height	Effective Height	
10	9" (T.S)	7725	7054	2150	2200	1300	8 to 30
25	9" (T.S)	12032	12000	2352	2690	1500	8 to 30
50	9" (T.S)	9000	8339	3500	4640	3000	8 to 30
60	9" (T.S)	9440	8739	4440	4500	3000	8 to 30
70	12" (T.S)	10170	9340	4390	6164	4500	8 to 30
80	12" (T.S)	11875	11000	4400	4500	3000	8 to 30
100	12" (T.S)	11800	11150	5400	4500	3000	8 to 30
120	12" (T.S)	14500	13649	5500	5600	2900	8 to 30
150	12" (T.S)	12815	11874	5950	5000	3900	8 to 30
200	12" (T.S)	17050	16108	5950	5000	3900	8 to 30

Note

- Triangular rakes will have approx. 50% storage capacity with room sizes same as above.
- Triangular rakes are advisable up to 60 Ton storage capacity.
- Push Containerized Ice Storage Room

Sizes

- Range from 30 Ton to 200 Ton each & multiples thereof or make as per customers requirement.

Features

- We can provide cooling unit in the room to maintain the temperature of the stored ice.
- We build or install our Ice rakes suitable to any sizes.
- We provide mechanical screw conveyors outside the storage room to deliver the ice to any desired location.
- Manual ice handling is also possible in our ice storage room design.

Application Industry

Chemicals - Dyes, Pigment & Chemical manufacturing.

Food Industry - Fisheries, Hatcheries, Sea Food, meat, poultry etc.

Heavy Construction- Concrete Cooling (Nuclear Power Houses, Dam Construction & Express Highways).

Amusement Parks - Snow World.

Corporate office

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