

all under one roof

systemised solutions 4 your need



**KÜNDIG CONTROL SYSTEMS**  
The Gauge Manufacturer for Film Extrusion 

**D.R. Joseph**  
**INCORPORATED**

**EURO**  
**CHILLER**  
INTERNATIONAL COOLING

**bd**  
BD PLASTI

**GAMMATEC**  
calibration baskets



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[www.hemtech.in](http://www.hemtech.in)

# HEM TECHSYS PRIVATE LIMITED

Popularly known as **HEMTECH**

## About us

**HEMTECH** is a company established and run by Technocrats. **HEMTECH** is focussed in the field of Testing Instruments and Automation Systems for Polymer, Films & Laminates, Packaging, Pharma Packaging, Polymer Pipes, Textiles & Technical Textiles, Automotive Industries. **HEMTECH** works very closely with all reputed Institutes and Industries in the field and so have good exposure and experience in the respective fields.

**HEMTECH** is Committed to bring to you world's best and latest technology Instruments as Authorised Agent for world renown companies in their respective fields. **HEMTECH** also expanded activities by also establishing local manufacturing facility with near Imported Quality Value for Money Instruments for the Quality Conscious Indian and foreign customer. Thus **HEMTECH** has unique balance of world class imported Instruments and near Imported Quality best in class locally manufactured Instruments under the registered trademark brand of **HEMTECH**.

## Team

HEMTECH is a young and Dynamic team of

- **Electronics Engineers**
- **Mechanical Engineers**
- **Software Development Engineers.**
- **Instrumentation Engineers**
- **Electrical Engineers**

**Positive Attitude, Hard Work, Sincerity, Honesty and Team work** is the core strength of the team HEMTECH.

## Service

HEMTECH believes in COMPLETE services. Our team believes that Service starts even before selling the Instrument or System. At HEMTECH Services are package of



**Pre-Sales**



**Installation  
&  
Commissioning**



**Repairs  
&  
Maintenance**



**Training  
&  
Tech Support**



**Calibration**



**Retrofit  
&  
Computerisation**

## Divisions

We at HEMTECH believe that better focus gives better results. Hence, we have divided our company operation in divisions.

- **Sales Division** – Pre-Sales Service, Sales, Application Support , Liaison...
- **Service Division** – Installation & Commissioning, Training, Repairs & Maintenance, Technical Support , Calibration...
- **D & D Division** – Design, Development of Instruments, Electronics, software, Retrofits...
- **Manufacturing Division** – Manufacturing of Instruments, Accessories, SPM...
- **Testing Division** –Testing Facility for Industries on Commercial bases...

## Achievements

- ✓ National Award for Innovation in Technology - by Ministry of Chemical & Fertilisers 2011
- ✓ National Award for Innovation in Technology - by Ministry of Chemical & Fertilisers 2012
- ✓ Development of Instrument for Mozzarella Cheese Testing for Anand Agriculture University
- ✓ Development of Retrofit kit for Imported HOT TACK TESTER



## K-300 Rotomat KT

■ The K-300 thickness sensor is based on the capacitive measuring principle. The Rotomat KT ensures a quick profile refresh by its continuous rotation. It takes only 36 seconds on the standard sized scanners.

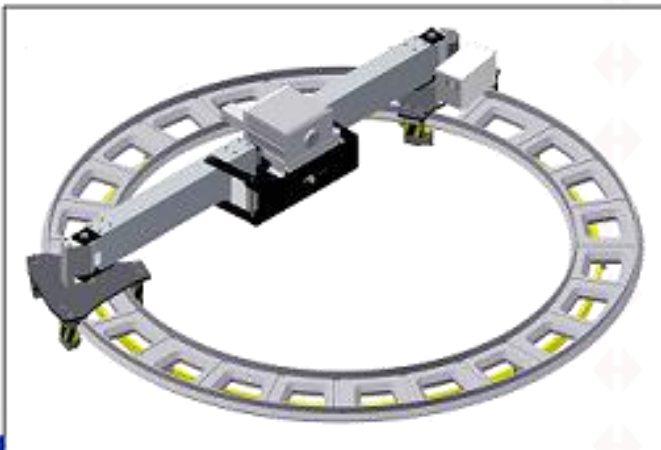
**Application:** The K-300 Rotomat KT can be used for a wide range of different films.



## K-500 Rotomat KT

■ The K-500 thickness sensor is based on the capacitive measuring principle. The Rotomat KT ensures a quick profile refresh by its continuous rotation. It takes only 36 seconds on the standard sized scanners.

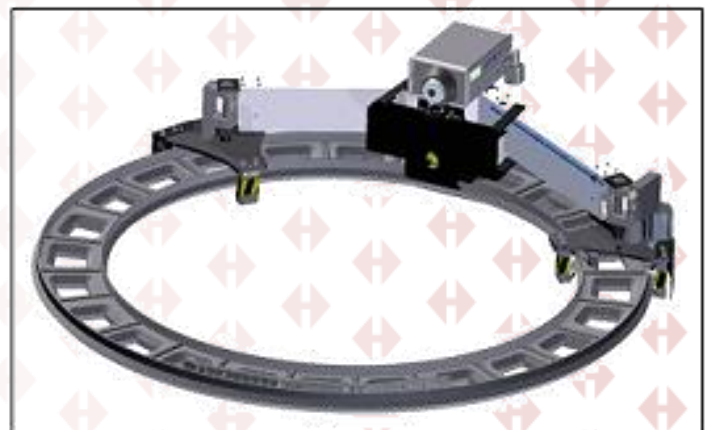
**Application:** The K-500 Rotomat KT can be used for a wide range of different films.



## KCF-700 Rotomat KT

■ This thickness measuring system is based on a capacitive measuring principle. By using an air-gap between film and measuring head, a production of sensitive films without scratches is ensured. The Rotomat KT ensures a quick profile refresh.

**Application:** The KCF-700 Rotomat KT is the ideal solution to measure sensitive films. (e.g. EVA)

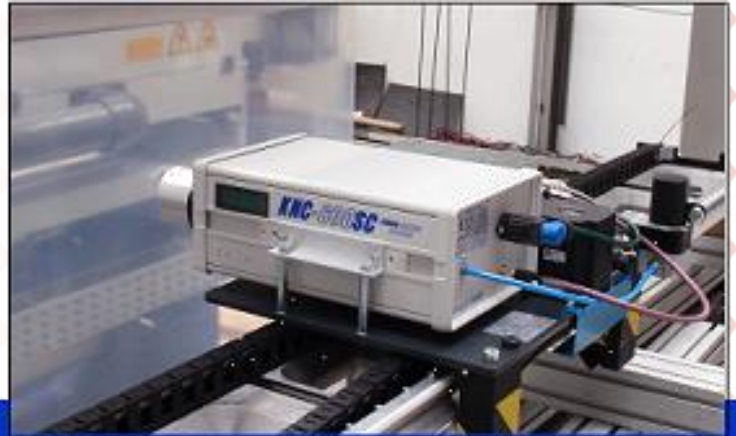




## KNC-600 Linear Scanner

■ A capacitive sensor measures the thickness of the flat film. By using an air-gap between film and measuring head, a production of sensitive films without scratches is ensured. The measuring characteristics are equal to the K-300.

**Application:** The KNC-600 Linear Scanner is an online thickness gauge for cast film lines.



## K-300 CF Gauge

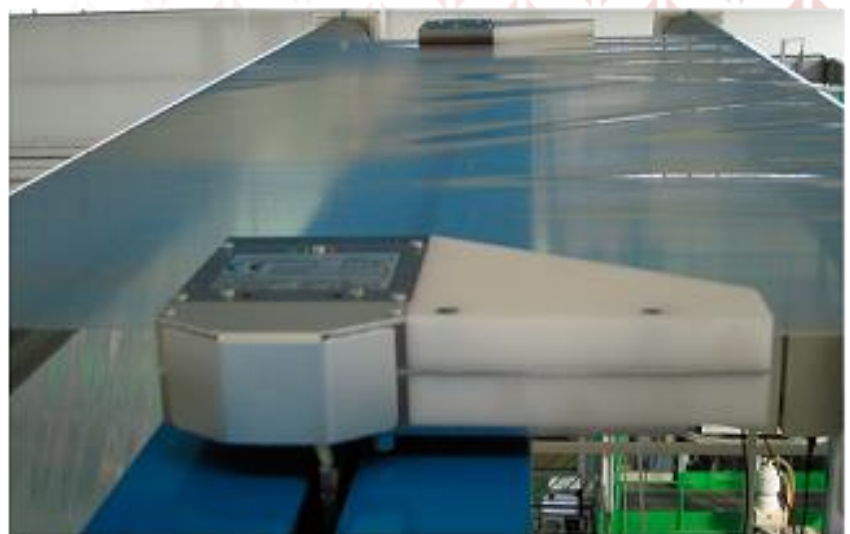
■ The K-300 CF Gauge is a simple and cost effective solution to upgrade existing lines. The compact device, which is mounted into the collapsing frame, has a built-in USB port for connection to the PC with the PROFILSTAR.NET or other visualization software. A wireless communication module is optional available.

**Application:** Online thickness gauge for manual die adjustment. Helps to improve film quality and save raw material at the same time.

## S-100 Twin

■ A capacitive measuring system. Any film can be measured except electrical conductive materials. Also, layflat and web position is measured with the same unit. The profile update depends on the rotation speed of the collapsing frame.

**Application:** S-100 TWIN has been developed for non-contact measurement of barrier films.



# PROFILSTAR.NET

The visualization tool for retrofitted blown film lines. Any online thickness gauge from Kündig Control Systems can be connected to the PROFILSTAR.NET. It displays linear and circle profile as well as the trend.

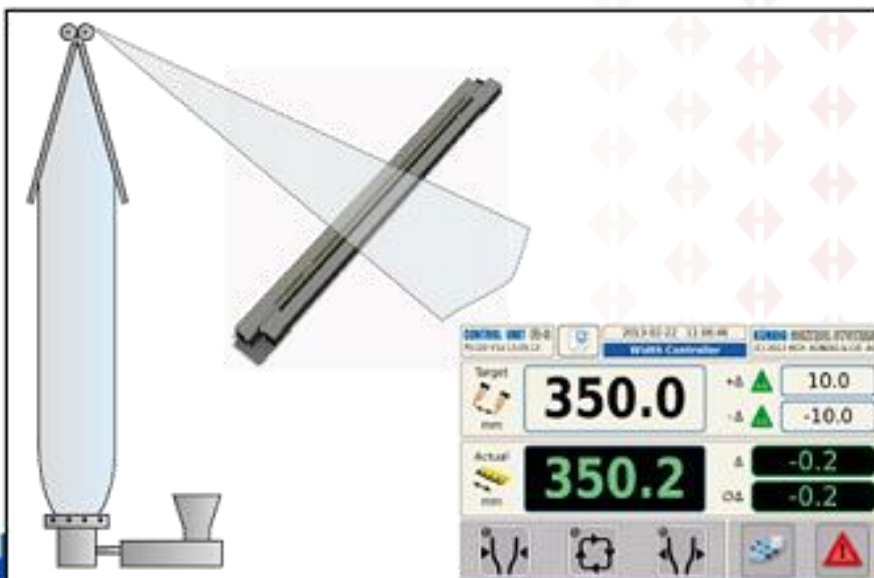
**Application:** Visualization system for online thickness gauges.



## FE-8 Layflat Control

■ Two optical sensors measure the layflat of the film. The non-contact measuring bars are mechanically adjustable in length, so that it can easily fit in the tower of the line. The control unit regulates the width of lines with or without IBC systems.

**Applications:** The automatic width control FE-8 is a self-sufficient system to retrofit existing lines, a small investment that assures you considerable savings of raw material and a very short payback period.



## FILMTEST

■ A complete thickness distribution is measured by a capacitive sensor. The average thickness is calculated depending on the length, width, weight and density of the film; therefore the system does not need calibration.



**Application:** The FILMTEST is generally used for a professional quality and assurance control. The results can be archived and kept in Database.

### Harmonic Analysis:

Our new software module for the FILMTEST can calculate and represent graphically the fundamental wave and the high harmonics of a thickness profile.



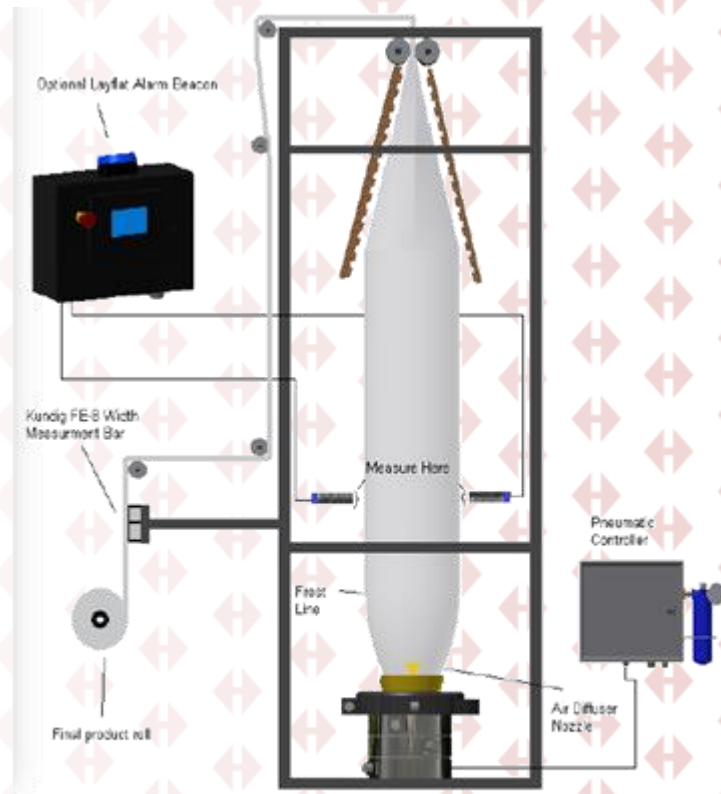
# Non-IBC Layflat Width Controller For Blown Film Lines

The majority of non-IBC die applications today currently have no automated layflat width control capability which means there is no effective way of controlling resin costs, or what we like to call *Runaway Resin*. Runaway resin is plastic that leaves your facility without generating a single penny of revenue, and worse yet, you must still pay to process that resin. **D. R. Joseph, Inc.** Provides LF-Sizer to control your resin costs by providing a fast, accurate and user-friendly layflat control system for non-IBC applications.

## Benefits of Implementing the LF-Sizer

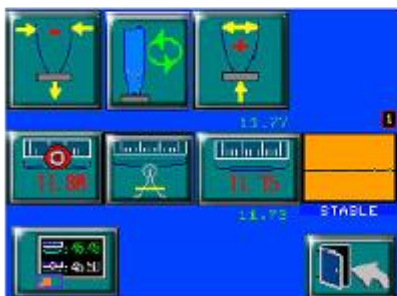
By measuring the bubble soon after the frost line, the system can achieve the proper bubble size without waiting for the film to pass through the top nip rollers and can perform even when running gusseted film. This greatly improves width control efficiency. The LF-Sizer provides the operator with a simple color touch screen interface that allows entry of the target layflat width.

A special air diffuser is also supplied to ensure rapid inflation does not unlock the bubble from the air ring during start-up. The separate 3 speed inflation control box has adjustable fast fill, slow fill and exhaust modes of operation. Once the bubble is on size, the LF-Sizer maintains that size at all times. For size changes, the operator simply enters a new target and the bubble is sized automatically.



## Benefits of Implementing the LF-Sizer

- Improves saleable production hours by eliminating bubble loss due to pin holes.
- Avoiding width deviation material returns
- Eliminates or reduces trim on sheeting applications
- Ability to control overall width on gusseted tube production
- Automated start-ups and faster changeovers
- Significantly tightens the width control capability, reducing scrap
- Includes management trends to validate machine and operator performance
- Available Integration with Data Collection System
- Simple Plug and Play Installation, functional within hours



The LF-Sizer home screen displays the Target and Actual Layflat Values



LF-Sizer Layflat trends can be viewed in 10 min., 1 hour and 12 hour periods with a zoom feature



LF-Sizer Statistical reporting

# IBC Control

## 3rd Generation Automated IBC Control System For Blown Film Lines

### D. R. Joseph, Inc.

provides the latest in Internal Bubble Cooling (IBC) Control Systems.

Latest 3<sup>rd</sup> Generation IBC system can improve production rates 25 to 50% when adding IBC control to a blown film line, and 8-15% in production over competing IBC systems on the market. The 3<sup>rd</sup> Generation System guarantees such rates by providing extremely tight layflat control, optimizing your systems inlet and outlet airflow, and allowing for higher exchange rates while maintaining precision control of your layflat.

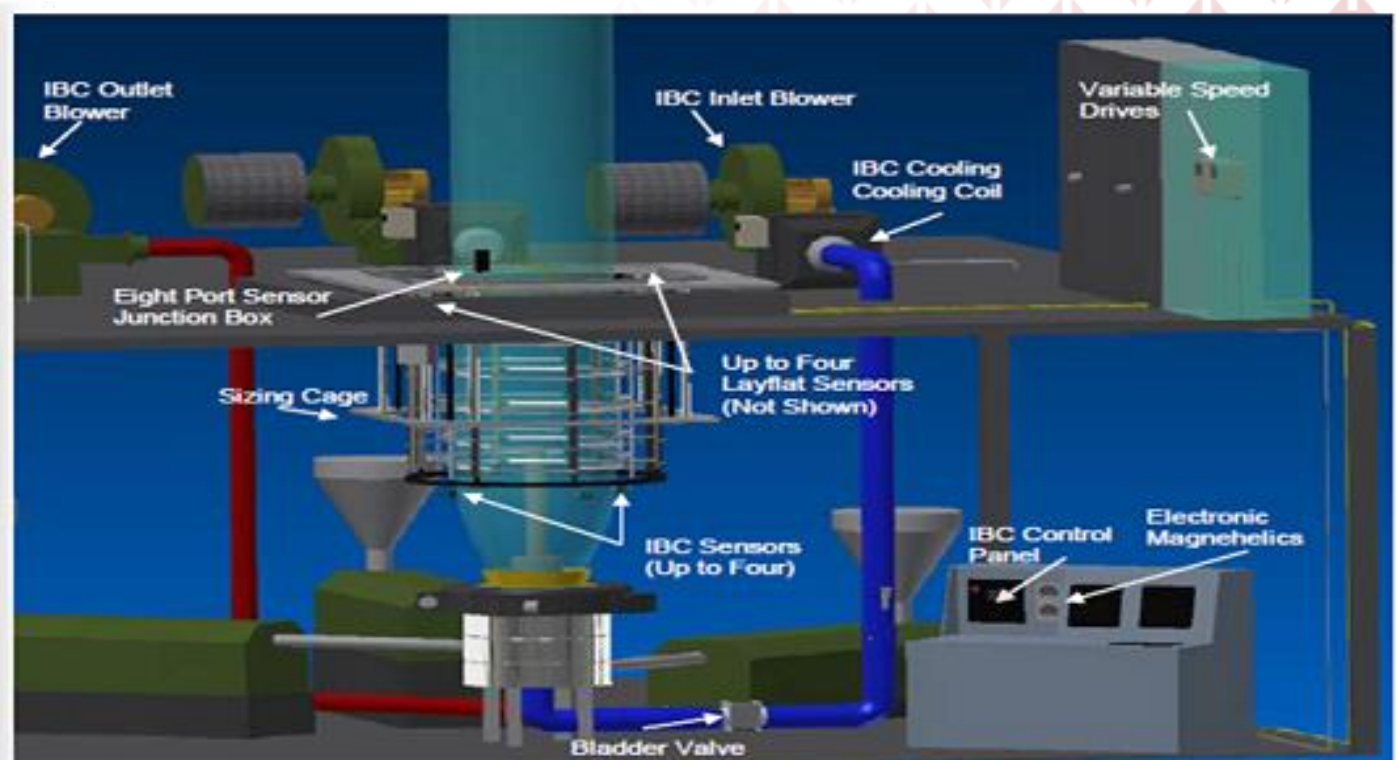
### Performance & Benefits

- Improved Rate & Quality
- High & Low Stalk Bubbles
- ROI: 12 Months or Less
- Retrofit Virtually Any Blown Film Die
- Tightest Layflat Tolerances
- Operating Costs Reduced
- Reliable Operation
- Run Multiple Resin Blends
- Statistical Reporting
- Tri-Mode IBC/non-IBC



### Ease of Use

- Automatic Valve Calibration
- Auto Blower Balance
- Automated Start-Up
- Automatic Cage Control
- Automatic Layflat Control
- Operator Friendly
- Bubble Break Detection
- Ducting Failure Detection
- Remote Diagnostics
- Remote Control Operation
- Easy Installation
- Online System Tutors



Main Operator Screen



Blower Controls



Cage Control Screen



Layflat Trend Line



## Manual, Semi Automatic & Automatic Screen Changers

For Quality Conscious Customer and Blown Film Line Manufacturers, we brought in India the world's most reputed **SCREEN CHANGERS** from BD Plast, Italy.

BDL lever type screen changers



Simple and reliable, the manual BDL screen changers offer the opportunity to improve performance, at minimal cost especially on small and medium size extrusion and coextrusion lines. Available with filtering areas from  $\varnothing$  20 to  $\varnothing$  120 mm, units are equipped with a self activating sealing system that allows a safe and leakproof use, up to 800 bar working pressure. The actuation lever, manoeuvrable on three sides ensures a quick movement of the sliding plate.

More than a natural evolution of the BDL, the BDLG stands for an extremely clean design, result of careful engineering, granting excellent compactness. Available with filtering areas from  $\varnothing$  45 to  $\varnothing$  250 mm, represents a high quality choice among the manually operated screen changers. The movement of the sliding plate is given through a series of gear wheels, driven by a simple reversible ratchet which allows to minimize the overall dimensions of actuation. The favourable reduction ratio makes the movement of the plate smooth and effortless, even with large filtering areas.

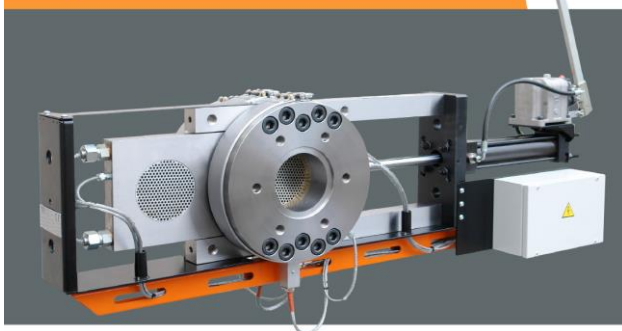
### Alos, CARTRIDGE TYPE

An innovative version of the BDLG type, with cartridge filtering elements, represents a revolution of the normal approach to this type of machine. Less bulky than a normal static cartridge filter, reduces replacement costs and machine downtime, making demanding maintenance even less. Available in sizes 60, 75 and 90 and compatible with extruders from  $\varnothing$  45 to  $\varnothing$  100 mm, BDCG is in effect a screen changer, equipped with two filter cartridges positioned on the sliding plate. The filter replacement is fast and machine downtime is minimized.

BDLG ratchet type screen changers



BDP manually operated hydraulic screen changers



The BDP screen changers type are characterized by simple design, ergonomics and rationality with which they were designed. They represent the hydraulic evolution of the manual screen changers and are suitable for the processing of highly sensitive polymers due to the specific temperature control of each filter holder. If necessary, for space or place reasons, the manual pump can be mounted separately. Available with filtering masses from  $\varnothing$  45 to  $\varnothing$  160 mm are equipped with a cable channel in the bottom that conveys the power cables and thermocouples in a junction box, located next to the hydraulic cylinder. This prevents dangerous overheating of the electrical system, ensuring maximum reliability.

The hydraulic screen changers BDO FT series are characterized by simple design, ergonomics and rationality with which they were designed. Thanks to a uniform and efficient heating system, are suitable for the processing of highly sensitive polymers. The operation in combination with a quick change hydraulic power unit allows the replacement of the filtering media while the extruder is running. Available with filtering masses from  $\varnothing$  45 to  $\varnothing$  160 mm. units are equipped with a cable channel in the bottom that conveys the power cables and thermocouples in a junction box located next to the hydraulic cylinder. This prevents dangerous overheating of the electrical system, ensuring maximum reliability. The many possible configurations allow a wide use of these models, where a perfect flow continuity, during screen replacement, is not an essential requirement.

BDO FT hydraulic screen changers from  $\varnothing$  45 to  $\varnothing$  160





## Calibration Cages - Primary & Support

For Quality Conscious Customer and Blown Film Line Manufacturers, we brought in India the world's most reputed CALIBRATION CAGE from GAMMATEC, Italy.



### Calibration basket with Low Inertia Interchangeable Cantilever Rollers:

- For High Quality applications
- No more marks or scratches on the film
- Increase of the line speed
- Increased film thickness uniformity
- Optimized cooling of the bubble
- Layflat range more than 4.5:1 for high versatility

### Ready for any kind of IBC system:

- Ultrasonic Sensors on arm
- Ultrasonic Sensors fixed on frame
- Pneumatic Systems (Frematic)
- Different optional parts to hold other sensors for the bubble control

### Available with or without frame for vertical adjustment:

- RA models: with motorized vertical adjustment (strokes from 500mm to 3000mm)
- FM models: stationary, without vertical adjustment

### Oscillating models:

- Available in RARC construction, with basket oscillation 360° around the bubble

### Diameter adjustment:

- Motorized as standard supply
- Manual available on request

### Versions with different coverings around bubble circumference:

- Version with 4 arms per level
- Version with 8 arms per level
- Version with 12 arms per level

### Guiding levels:

Nr. 2 - 3 - 4 - 5 - 6 levels available to meet desired basket height

### Sizes available (max. Lay Flat Width mm.)

Monoblock:  
400-600-800-1150-1450-1750-1950-2150-2350-2550-2750-3000-3080

In sections:  
3200-3500-3800-4100-4400-4700-5000-5500  
6000-6500-7000-7500-8000-9000-10000-11000-12500



**BIG CAGE  
UP TO  
25 METER  
FOIL**

## ROLLERS

Different guiding solution available for different applications:

New generation Low Inertia Rollers with:

- Insulating wool-felt sleeves
- Silicone, solid or foamed (FDA appr.)
- Carbon fibre (also with No-Stick coating)
- Segmented rollers in different materials
- Other customized solutions available



# Chiller

Latest Technology & Efficient Chiller from the world Leader EUROCHILLER, Italy.

## ABF



**ABF** is a monoblock chiller producing cold air. Thanks to its unique technology it allows to obtain an air temperature being particularly precise ( $\pm 0,1^{\circ}\text{C}$ ) and constant throughout the year. Using directly the gas to produce cold air, its performances are one and a half time higher than those provided by a BRA which produces cold air using the water coming from a chiller: the result is a remarkable energy saving.

### Main features:

- Higher performances with lower energy consumption
- Precise temperature control
- Possibility to change the air temperature
- Constant cooling capacity even under harsh environmental conditions (45/50°C)
- Compact sizes
- Increased production up to 30%
- Payback of the investment in a few months

**ABF INVERTER** integrates the features already utilised in the **ABF** system with a few technical advantages, further increasing its performances and energy saving.

**ABF INVERTER** grants saving of up to 50% compared to the standard chiller + air/water heat exchanger system and up to 35% if compared to the previous **ABF** line.

3 versions for the cooling of one (**INVERTER UNO**) two (**DUE INVERTER**) or three (**TRE INVERTER**) temperatures.

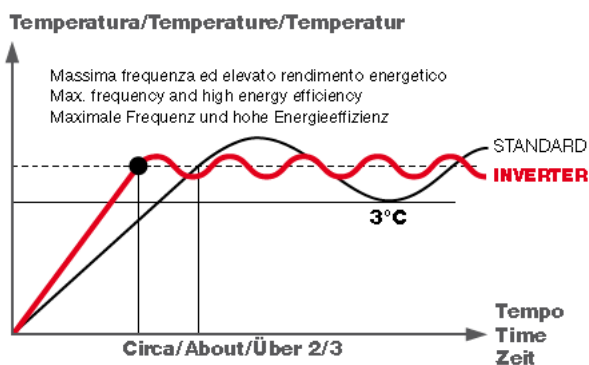
### Main features:

- Inverter control: continual adjustment of the compressor capacity
- Display of the working frequency of the compressor
- Electronic valve for the control of the HGBP system
- Electronic expansion valves for the proportional control
- Heat exchanger fitted with hydrophilic fins to let condensate slide more easily
- Air bowers with highly efficient distributors and ducts
- Easy removal of air filters with double surface
- Footprints reduced up to 30%

## ABF INVERTER



## Excellent Control



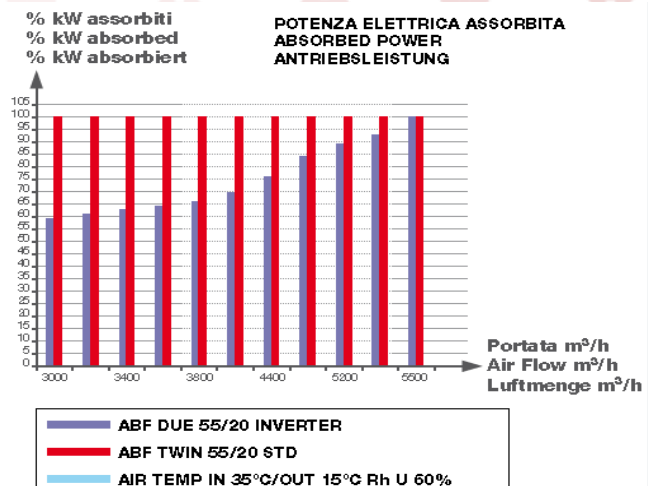
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EINGESTELLTE TEMPERATUR

### INVERTER CONTROL OF COOLING CAPACITY

The **INVERTER** technology allows the continual control of the compressor, making the most of its energy performances and adjusting them to the different requirements of the process.

**ABF INVERTER** is more flexible in supplying the cooling performance than a traditional **ABF**; it also allows the process air to reach the set temperature in a shorter time (about 2/3) if compared to the model without **INVERTER**.

## Energy Saving



**ABF INVERTER** is economical: energy savings up to 30% compared to the standard **ABF**, adjusting the power consumption according to the actual requirements, without unnecessary waste of energy.





**APEKSHA INSTRUTEK**, is a company established to serve Indian market with localisation of important and hi-tech Automation Systems for Extrusion Line Automation.

**X-PERT Series** of Film Extrusion Line Automation Systems from **APEKSHA INSTRUTEK** is first step for Film Extrusion Line Automation. The series of Systems are planned under the **X-PERT Series**.

**Refer to the X-PERT Series Brochure for more information**

Systemised Solutions **4** Your Need

Authorised Agent

**HEM TECHSYS**  
PRIVATE LIMITED



**"Total Customer Satisfaction Through Quality Services"**



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