

Hemtech Touch to Testing

Polymers

Films

Laminates

Packaging

Pipes

Automotive

Rubber

Textiles

Pharma

Medical Devices

Cosmetics

Food

.....

Product Guide

TENSILE

COMPRESSION

FLEXURAL

PEEL / BOND

SEAL

COF

WVTR

OTR

LEAK

TORQUE

GLOSS

HAZE

OPTICAL DENSITY

COLOR

HYDROSTATIC
PRESSURE IN PIPES

PIPE BURST

FALLING WEIGHT

THERMO CYCLING

RCP

CARBON BLACK
DISPERSION

NOTCH MILLING
MACHINE

.....



HEM TECHSYS
PRIVATE LIMITED

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 renowned 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



Polymer Testing Instruments

Universal Testing Machine UTM

Models Available from
10 Kg to 30 Ton Capacities

Microcontroller based
LCD Display & Keypad
Micro-stepping / Servo Drives
High Data Rate
Built in RS 232 Interface

Self Identification Loadcell
Accurate Force Measurement.
Wide Speed Range

Extensometer Options
Thermal Cabinet Options

hemWIZARD – WINDOWS based Software
for Control & Data Acquisition



Series 7
10 to 500 Kg



Series 16
500 to 5000 Kg



Series 25
10 to 30 Ton



**METHOD A METHOD A & B METHOD A & B
Weight lifter**

**Full featured Model
Method A & B + Rheology**



Melt Flow Indexer

Method A Manual Models to full featured
high-tech Models.

Excellent Precision
Accurate Temperature Control
Digital Piston Travel Measurement
Motorised Weight Lifting
Automatic Cutter

Automatic Weight Application
Increasing Weight Multi weight Testing
Decreasing Weight Multi weight Testing
Rheological studies & Calculations

Impact Tester

IZOD Impact Tester
CHARPY Impact Tester
IZOD + CHARPY Impact
Tester



**Unique Model
Single Hammer
Single Vice
For IZOD & CHARPY**

HDT / VICAT Tester

2, 3,4,6 Station Models

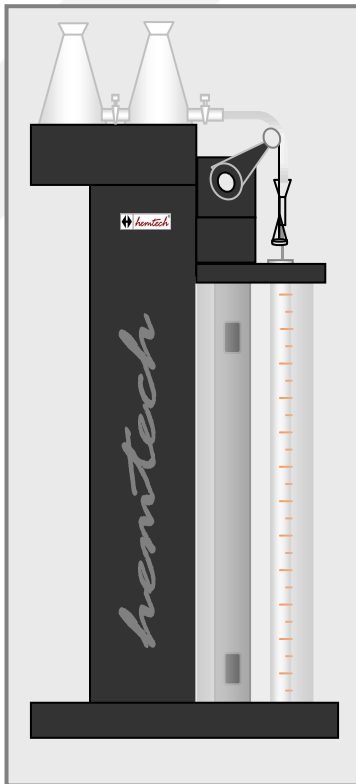
Simplest version to full featured Models

Precise Mechanics

Excellent Temperature Ramp control

Digital Display

Station Lifting Mechanism



DENSITY GRADIENT COLUMN



ESCR



MELTING POINT



LIMITED OXYGEN INDEX



MOISTURE BALANCE

Creep Tester



For Creep Testing of Polymeric Samples

UL94 Horizontal & Vertical Flammability Tester

Horizontal Burning Test and

20mm Vertical Burning Test

Imported Burner

Imported flow Meters



Film & Laminates Testing Instruments

Tensile Tester

Microcontroller based
LCD Display & Keypad
Micro-stepping / Servo Drives
High Data Rate
Built in RS 232 Interface

Self Identification Loadcell
Accurate Force Measurement.
Wide Speed Range

hemWIZARD – WINDOWS based
Software for Control & Data
Acquisition



Peel-Bond Tester

Microcontroller based
LCD Display & Keypad
Micro-stepping / Servo Drives
High Data Rate
Built in RS 232 Interface

Self Identification Loadcell
Accurate Force Measurement.
Wide Speed Range

hemWIZARD – WINDOWS based
Software for Control & Data Acquisition



Friction Tester

COF

Microcontroller based
LCD Display & Keypad
Micro-stepping / Servo
Drives
High Data Rate
Built in RS 232 Interface



hemWIZARD – WINDOWS
based Software for Control
& Data Acquisition

Heat Sealers

Microcontroller based
LCD Display & Keypad

True
Pressure Measurement
Dwell time Self Tuning



**Pressure Pulse based
Dwell time Control**

Balloon Burst Tester

Meets ASTM
Digital
Peak Hold

Restraining Plates



Tear Tester

Elmendorf type
Digital
Printer Option



Stiffness Tester

Analogue
Version



Falling Dart Impact Tester

Method A
Method B

Built In Vacuum
Pump
Pneumatic
Clamp
assistance

Automatic Dart
Release system



Thickness Tester

Desktop Model

Hand Held Model



Moisture Balance

Halogen heating
Accurate
Repeatable

**Models up to
Resolution
0.001% available**



GLOSS Meter



Tri-angle
(20,45 & 80 deg)

Single angles Models

OPTICAL DENSITY Meter



0 to 5.00 D
Accuracy : +/-0.02D

HAZE METER



Measures TRANSMITTANCE & HAZE
Confirms to Standard **ASTM D 1003**
Intearating Sphere Sensor

Ancillaries for Paper, Corrugated Sheet Testing Instruments



Bursting Strength Tester

Digital
Manual clamping

Optional Pneumatic clamping



90 Degree Peel Tester

Digital
Keeps Peel Angle Constant at 90 deg



Core Strength Tester

Digital
Paper Core

Optional
Fixtures for various sizes.



180 Degree Peel Tester

Digital
Keeps Peel Angle Constant at 180 deg



Loop Tack Tester

Digital
For testing Adhesive Tapes



BOX Compression Tester

Digital
Pneumatically Operated
Accurate Force Measuring system

Different Models as per Platform size available.



Shear Adhesion Tester

2 stations to 30 stations models

Digital Timer
Battery Operated
Auto Hold
Test end sensing



Bottle Compression tester

For Top Load Test



Dynamic Shear Adhesion Tester

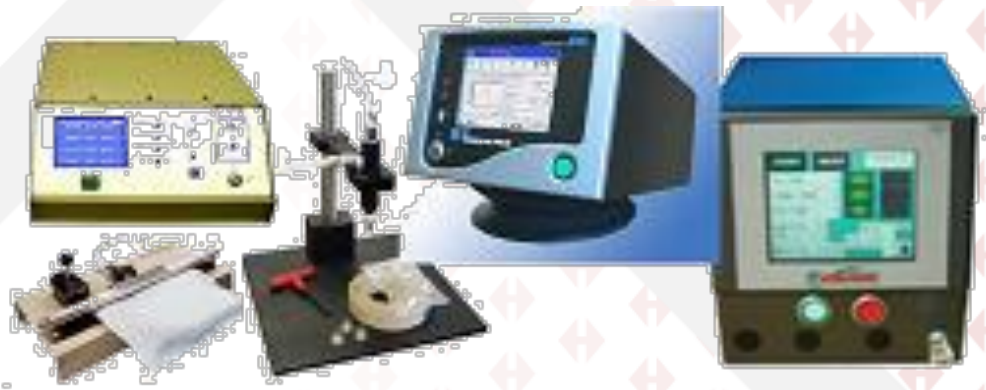
Package Testing Instruments

Automated Package Tester

Suitable for performing

Seal Strength Test
(Burst, Creep, Creep-to-Failure)
Porous & Non-Porous Flexible Packages

Leak Integrity Test
Leak Test for Non-Porous Flexible Packages



LEAK & LEAK / FLOW TESTERS



Pressure or Vacuum Decay Models

Suitable for performing
 ✓ Leak Test
 ✓ Leak / Flow Test
 ✓ Leak / Occlusion Test

NIST Traceable
 Resolution 0.0001 psi



NON DESTRUCTIVE LEAK TESTERS

Pressure or Vacuum Decay



Suitable for performing
 ✓ Induction sealed Bottles
 ✓ Blister Packs
 ✓ Vials
 ✓ Medical Devices



GAS ANALYSER

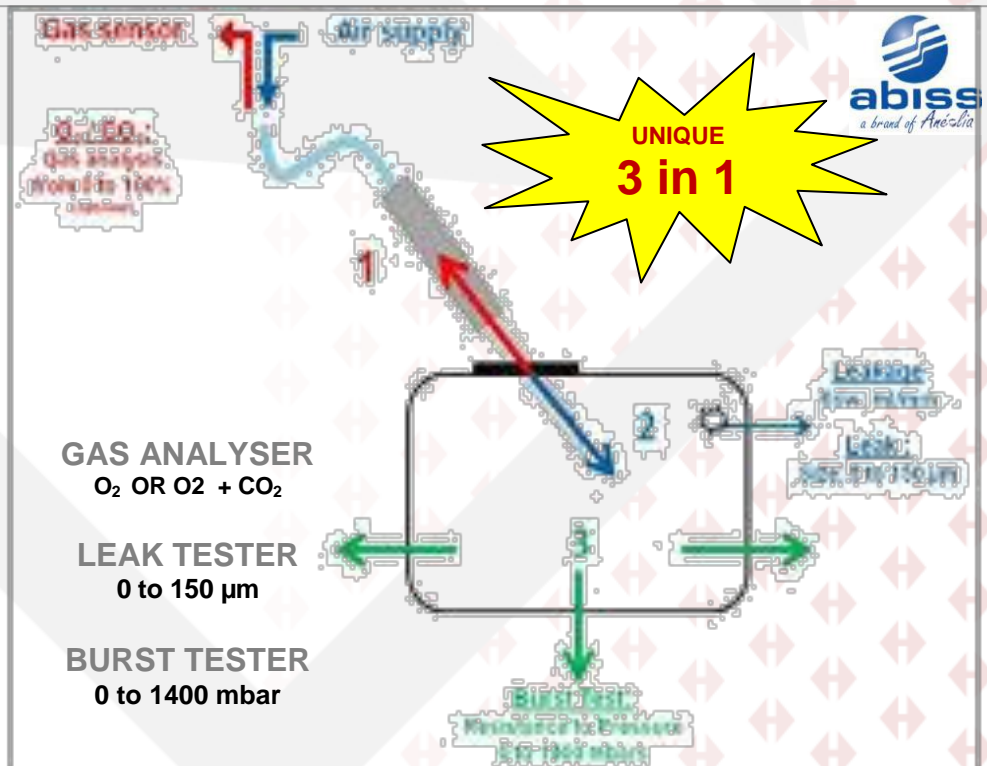


Handheld
 O₂ OR O₂ + CO₂ Analyser
 in Packages for Food & Pharma

LEAK TESTER



Models for measuring Leaks up to as low as **5 Micron**

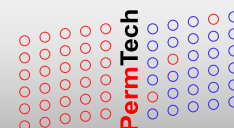


Permeability Testers For Films & Packages

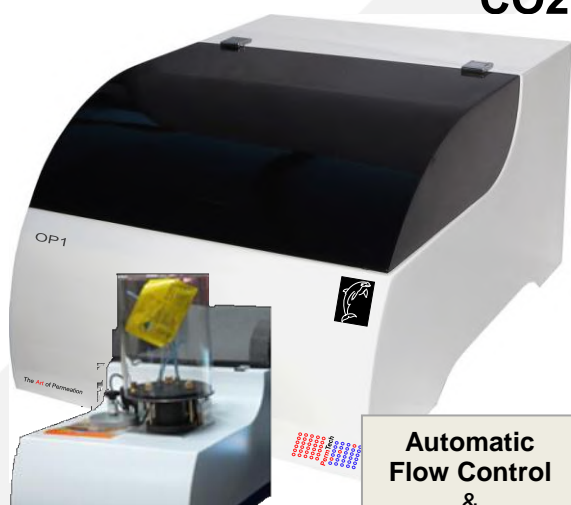
WVTR
OTR
CO2TR

Meets Latest Standards

WVTR : ASTM F 1249
OTR: ASTM D 3985,
F 2622
CO2TR : ASTM F2476



The Art of Permeation



Automatic
Flow Control
&
Pressure
Compensatio

Product Range :

Measuring Range

Test Range H₂O
0.002-100 g.m⁻².24h⁻¹.bar⁻¹ (unmasked)
0.04-2000 g.m⁻².24h⁻¹.bar⁻¹ (masked)

Test Range O₂
0.01-15000 cm³.m⁻².24h⁻¹.bar⁻¹ (unmasked)
0.2-80000 cm³.m⁻².24h⁻¹.bar⁻¹ (masked)

Test Range CO₂
0.25-18000 cm³.m⁻².24h⁻¹.bar⁻¹ (unmasked)
20-360000 cm³.m⁻².24h⁻¹.bar⁻¹ (masked)

WOCP1

3 in 1 Instrument

Only of its kind in World Market

WOP1 & WOP2

2 in 1 Instrument

Only of its kind in World Market

OP2+

Both side RH Control

Only of its kind in World Market

WP1 & WP2

Water Vapour Transmission Rate - WVTR

OP1 & OP2

Oxygen Transmission Rate - OTR

CP1 & CP2

Carbon Dioxide Transmission Rate - CO₂TR

OP1E - Economical

Oxygen Transmission Rate - OTR

- ✓ Fully Computer Controlled
- ✓ Single Cell or Two Cell Models
- ✓ Temperature Control 10 – 50 °C (+/- 0.1 °C)
- ✓ Humidity Control from 5 to 95% (+/- 1.5%)
- ✓ 100% Humidity Mode
- ✓ 0% Humidity Mode (for O₂ & CO₂)

- ✓ Allows sample thickness up to 2.5 mm
- ✓ Automatic Flow Control (10 – 75 ml/min)
- ✓ Unique Closure System—No need to cut samples !
- ✓ Data storage & Graph Storage for viewing later on
- ✓ LABVIEW based latest Software
- ✓ Latest USB Interface !

CARBP1

for Carbonated Beverage Bottles
Carbon Dioxide Transmission Rate
CO₂TR

***Gives result in an Hour
which normally takes weeks !!!***



HOT TACK TESTER

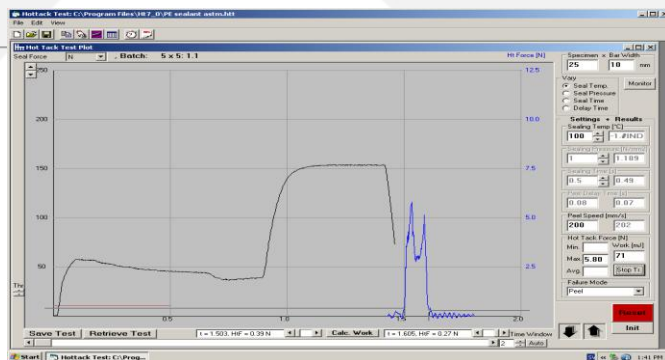


What is NEW !!!

- ✓ USB interface
- ✓ Windows 7 Operating system (Option for Win8 is available)
- ✓ Test software Wintack ver. 11
- ✓ Indication of Actual Sealing Temperature on the Instrument.
- ✓ Improved Hardware

Auto-Digital Pressure Regulation

- Controls**
- Sealing Temperature
 - Sealing Pressure
 - Dwell Time
 - Delay Time

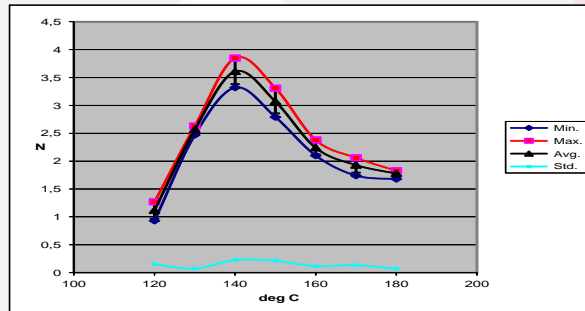


| Sl | SealTemp (C) | SealTime (min) | SealPress (MPa) | Delay (min) | HF Max (N) | HF Min (N) | HF Avg (N) | HF Std (N) | HF Max (MPa) | HF Min (MPa) | HF Avg (MPa) | HF Std (MPa) | HF Max (psi) | HF Min (psi) | HF Avg (psi) | HF Std (psi) | HF Max (kg) | HF Min (kg) | HF Avg (kg) | HF Std (kg) | HF Max (kgf) | HF Min (kgf) | HF Avg (kgf) | HF Std (kgf) |
|-----|--------------|----------------|-----------------|-------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| 100 | 100 | 0.50 | 0.32 | 0.26 | 130.4 | 0.17 | | | | | | | | | | | | | | | | | | |
| 105 | 105 | 0.50 | 0.32 | 0.26 | 130.0 | 0.20 | | | | | | | | | | | | | | | | | | |
| 110 | 110 | 0.50 | 0.32 | 0.26 | 130.0 | 0.22 | | | | | | | | | | | | | | | | | | |
| 115 | 115 | 0.50 | 0.32 | 0.27 | 130.0 | 0.62 | | | | | | | | | | | | | | | | | | |
| 120 | 120 | 0.50 | 0.32 | 0.26 | 130.0 | 0.62 | | | | | | | | | | | | | | | | | | |
| 125 | 125 | 0.50 | 0.32 | 0.26 | 130.0 | 0.73 | | | | | | | | | | | | | | | | | | |
| 130 | 130 | 0.50 | 0.32 | 0.26 | 130.0 | 2.44 | | | | | | | | | | | | | | | | | | |
| 135 | 135 | 0.50 | 0.32 | 0.26 | 130.0 | 2.24 | | | | | | | | | | | | | | | | | | |
| 140 | 140 | 0.50 | 0.32 | 0.26 | 130.0 | 2.32 | | | | | | | | | | | | | | | | | | |
| 145 | 145 | 0.50 | 0.32 | 0.26 | 130.0 | 3.74 | | | | | | | | | | | | | | | | | | |
| 150 | 150 | 0.50 | 0.32 | 0.26 | 130.0 | 2.92 | | | | | | | | | | | | | | | | | | |
| 155 | 155 | 0.50 | 0.32 | 0.26 | 130.0 | 4.90 | | | | | | | | | | | | | | | | | | |
| 160 | 160 | 0.50 | 0.32 | 0.26 | 130.0 | 9.27 | | | | | | | | | | | | | | | | | | |
| 165 | 165 | 0.50 | 0.32 | 0.24 | 130.0 | 6.06 | | | | | | | | | | | | | | | | | | |
| 170 | 170 | 0.50 | 0.32 | 0.24 | 130.0 | 6.62 | | | | | | | | | | | | | | | | | | |
| 175 | 175 | 0.50 | 0.32 | 0.24 | 130.0 | 7.96 | | | | | | | | | | | | | | | | | | |
| 180 | 180 | 0.50 | 0.32 | 0.24 | 130.0 | 7.81 | | | | | | | | | | | | | | | | | | |

| | | | | | |
|-----------|------------|-------------|------|-----------|--------------|
| Material: | TP | SealTemp: | Vary | 7 Groups: | 4 pcs./group |
| Batch Nr: | 1 | Seal Time: | 0.5 | | |
| Testpar: | AMC41109 | SealPress: | 0.5 | | |
| Operator: | nn | Delay time: | 0.20 | | |
| Created: | 2002-06-06 | PeelSpeed: | 200 | | |

| SealTemp | HF Max | | Avg. | Std. |
|----------|--------|------|------|--------|
| | Min. | Max. | | |
| 120 | 0.93 | 1.27 | 1.12 | 0.18 |
| 130 | 2.47 | 2.63 | 2.57 | 0.0735 |
| 140 | 3.32 | 3.85 | 3.61 | 0.228 |
| 150 | 2.79 | 3.31 | 3.07 | 0.214 |
| 160 | 2.1 | 2.38 | 2.24 | 0.118 |
| 170 | 1.74 | 2.06 | 1.93 | 0.136 |
| 180 | 1.68 | 1.83 | 1.78 | 0.0678 |

spec. width 25 mm



TORQUE TESTER

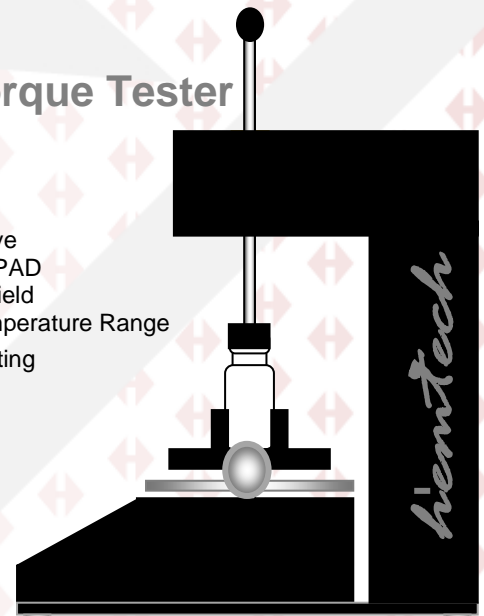
Manual torque Tester



Micro-controller based Digital Operating Console with Key pad & LCD Calibration facility

Motorised Torque Tester

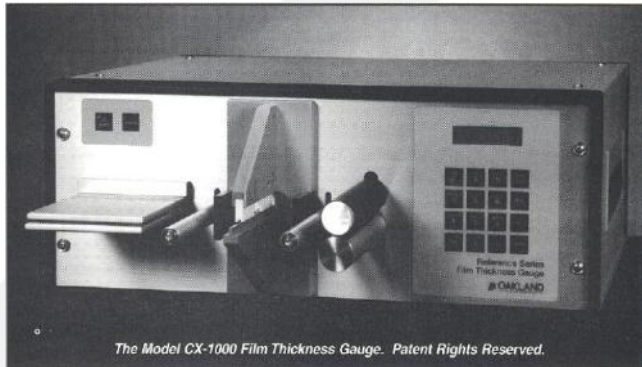
- ✓ Compact Size
- ✓ Constant Speed Drive
- ✓ LCD Display & KEYPAD
- ✓ Calibratable in the Field
- ✓ Wide Operating Temperature Range
- ✓ Non-destructive Testing
- ✓ RS-232 Port





Thickness Measuring Systems

Offline Film Profile Gauge – CX Series



Desk top
Offline
Upgradable

Capacitance Probe
Excellent Stability

RS 232 Interface
SOFTWARE

PATENTED TECHNOLOGY

**Unique REFERENCE SENSOR
Unique AUTOCAL system (CX 1020)**

**Thickness Calibration Facility
based on :**

- ✓ Thickness Measurement
- ✓ GSM

Micro Gauge Thickness Tester

**MX 1210
Auto Lifting of Sensor
Auto Film Advance system**



Desk top
Offline
Drive for Film

LVDT Sensor
Excellent Stability

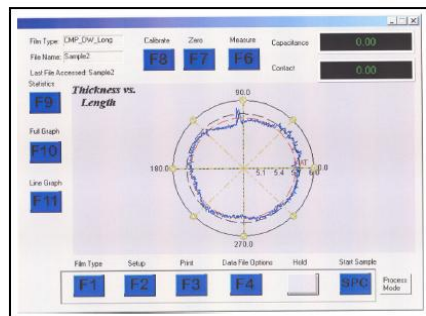
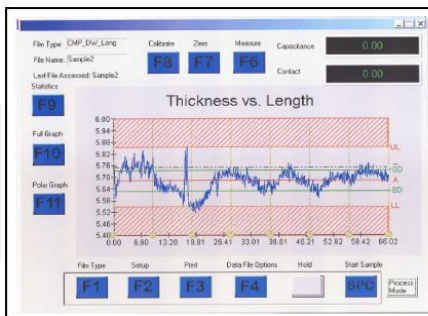
Optional
RS 232 Interface
SOFTWARE

**MX 1200
Auto Lifting of Sensor**



MX 1100

Software



WINDOWS based Advanced Software

- ✓ **Liner Profile View**
- ✓ **Polar Profile view**
- ✓ **Statistical Results (High, Low, Average, SD..)**
- ✓ **Reporting Facility**

RS 232 Port needed in PC

Opacity Tester



Shrinkage Tester



Pipe Testing Instruments

Hydrostatic Pressure Testing Systems

Meets or exceeds
ISO 1167
ASTM D 1598
ASTM D 1599



Most Economical but Accurate Model

5 stations
PC Operated
Full Featured system



Expandable to 20 stations

Minimum 5 stations
Touch Screen Control

Burst Module option



Latest Model Expandable to 200 stations Latest Technology

Minimum 5 stations
Touch Panel Operating Console
Ethernet communication

Has possibility to have Burst Module as option as well



Burst Tester

Dedicated Burst Tester
Pressure Range up to very large Pressures also.

Test Tanks

Excellent Temperature Accuracy
Excellent Uniformity of Temperature
Safety Features

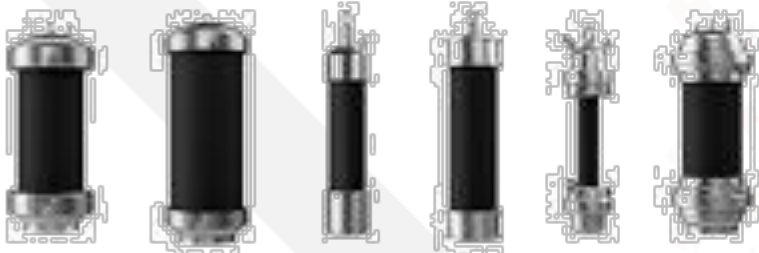


Test Ovens

Excellent Temperature Accuracy
Excellent Temperature Uniformity



Meets or exceeds
ISO 13479



End Closures

Excellent Precision
Easy to use

SCG Notch Milling

Excellent Precision
Fully Digital
'V' as well as Slot Cutter



Ring Stiffness Ring Flexibility Creep Ratio Testing System

Meets or exceeds
ISO 9967
ISO 9969
ISO 16968
ASTM D 2412



Fully Digital
Model up for testing up to
1600 mm



RCP Rapid Crack Propagation Tester

Meets or exceeds
ISO 13477

Electronic Controller
Excellent Precision
Safe Operation



Thermal Cycling

Up to 160 mm OD Pipes
Maximum 16 bar Test Pressure

Meets or exceeds
ISO 9967
ISO 9969
ISO 16968
ASTM D 2412
Test Chamber
Accessibility
from both side



Built in Sample
Rack

Tensioner with
Loadcell

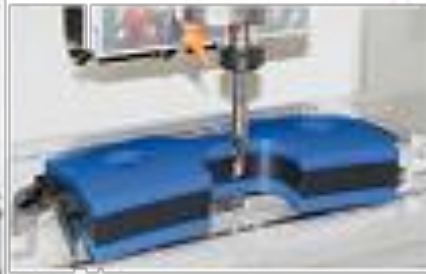
Computer Controlled
Graphical Indication
Data and Report facility



Milling Machine



- ✓ Pre-configured, optimised machining programs
- ✓ Protective doors with lock for operator safety
- ✓ Workbench included
- ✓ CNC-controlled positioning of the axes
- ✓ Compressed air for removing swarf and cooling the machined areas



Meets or exceeds
ISO 3127
EN 744
EN 1411
ASTM D 2444

Falling Weight Impact Tester

Staircase Method

Increasing Dropping Height per step

Round the Clock Method

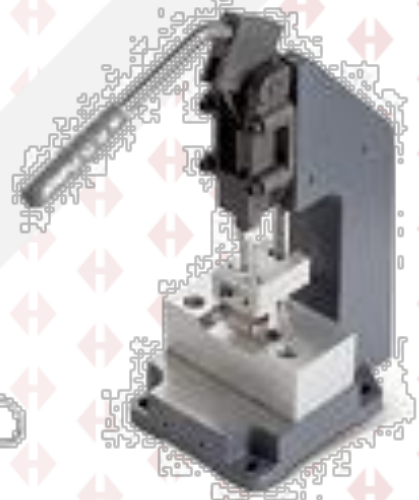
up to 25 strikes per minute from 2m height



Full Notch Creep Tester- FNCT

Individually operatable Stations
 Excellent Uniformity
 Touch Panel Control

Notch Device



Mounting Aid

Other Pipe Testing Instruments

Marking Gauge ISO 2505




A heavy-duty industrial marking gauge used for marking pipes. It features a large, flat base with a circular opening and a vertical column supporting a marking head with a scribe.

Cutting Saw ISO 1167
ISO 2505
ISO 3127



A large industrial cutting saw with a vertical blade and a horizontal table. It is designed for cutting large pipes and has a sturdy metal frame with four legs.

Granulator
ISO 1133
ISO 1183
ASTM D 1505




A granulator machine used for testing pipe granules. It consists of a hopper at the top, a central cutting mechanism, and a collection tray at the bottom.

Spiral Pipe Cutter
ASTM F 1281
ASTM F 1282



A spiral pipe cutter with a hand crank and a spiral cutting edge. It is used for cutting pipes at an angle.

Outside Caliper Gauge
ISO 3126



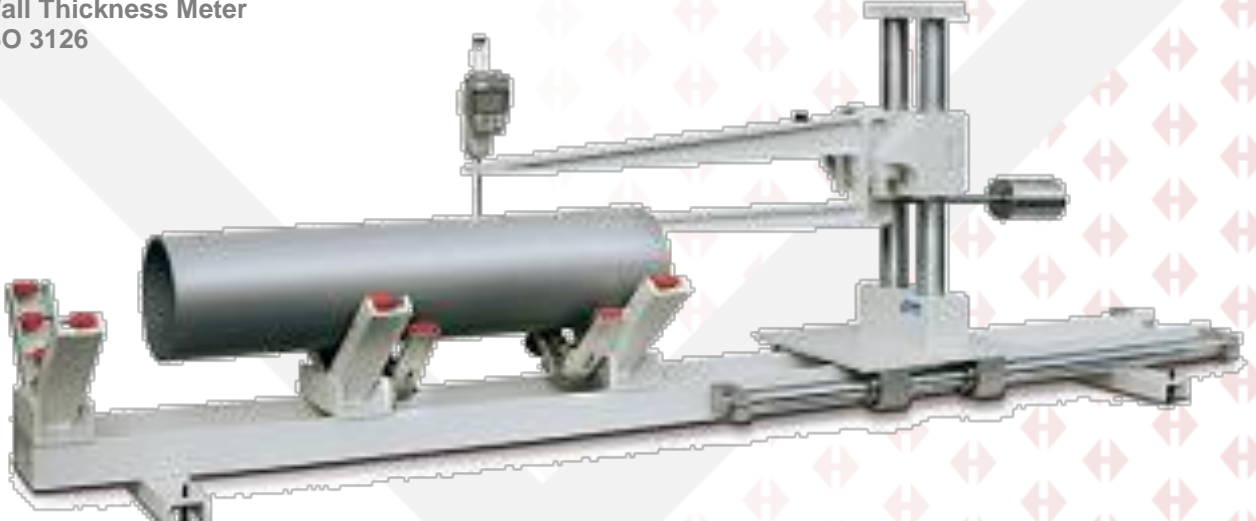
An outside caliper gauge with a circular dial and a chain. It is used for measuring the outer diameter of pipes.

Circometer
ISO 3126



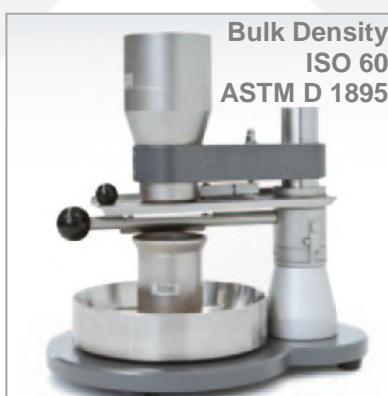
A circometer with a flexible measuring band and a dial. It is used for measuring the circumference of pipes.

Wall Thickness Meter
ISO 3126



A wall thickness meter used for measuring the thickness of pipe walls. It features a long horizontal base with a vertical column and a measuring head that can be moved along the pipe.

Other Pipe & Polymer Testing Instruments



Instruments to test

- ✓ Density – ISO 1183
- ✓ MFI – ISO 1133
- ✓ OIT – ISO/TR 10837 or EN 728
- ✓ Carbon Black Content – ISO 6964
- ✓ Carbon Black Pigment Distribution – ISO 18553
- ✓ Volatile Content – ISO 12099
- ✓ Water Content – ISO 12118
- ✓ Heat Reversion – EN 743
- ✓ Internal Pressure Test – ISO 1167, ASTM D 1598
- ✓ Thermal Stability – ISO 1167
- ✓ Thermal Cycling Test – EN 12293, ISO 10508
- ✓ Resistance to Rapid Crack Propagation – ISO 13477
- ✓ Resistance to slow Crack Growth – ISO 13479
- ✓ Tensile Test – ISO 6259, 527, ASTM D 638
- ✓ Creep Ratio – ISO 9967
- ✓ Bulk Density – ISO R60
- ✓ Pourability (Powder Flow Speed) – ISO 6168, ASTM D 1895
- ✓ VICAT Softening Temperature – EN 727
- ✓ Resistance to Dichloromethane – EN 580
- ✓ Impact Resistance – EN744, EN 1411, ISO 9854
- ✓ Ring Stiffness – ISO 9969
- ✓ Ring Flexibility – EN 1446
- ✓ Congo Red Method – ISO 182
- ✓ K-Value – ISO 1628
- ✓ Oven Test – ISO 12091
- ✓ Dynamic Pressure Test – EN 12295
- ✓ Vacuum Test – EN 12294
- ✓ Pull Out Test – EN 712
- ✓ Leak Tightness Test – EN 713
- ✓ Degree of Cross Linking – EN 579, ISO 10147
- ✓ Adhesion Test – ASTM F 1281
- ✓ Peel Test – ASTM F 1281
- ✓ Ring Test – ASTM F 1281
- ✓ Burst Pressure Test – ASTM D 1599
- ✓ Sieving Analysis
- ✓ Milling Machine – Sample Preparation

Film Profile Measuring Systems

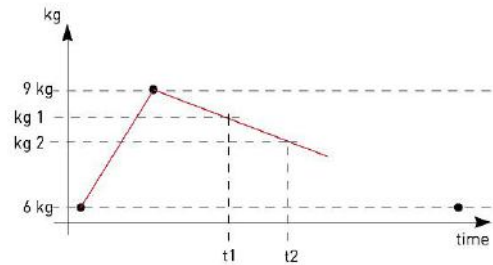
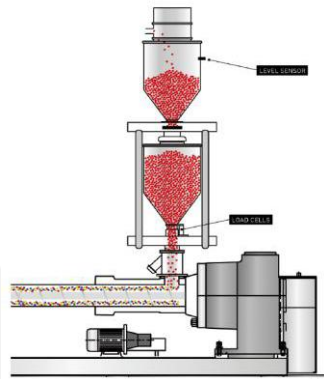
KÜNDIG CONTROL SYSTEMS
The Gauge Manufacturer for Film Extrusion **SWISS MADE**

| ONLINE THICKNESS GAUGE | | |
|---|--|---|
| | | |
| <p>K-300 Rotomat KT Contact type Gauge Blown Film</p> | <p>KNC-400 Rotomat KT Non-Contact type Gauge Blown Film</p> | <p>KNC-600 Linear Scanner Non-Contact type Gauge Cast Film</p> |
| | | |
| <p>K-300 CF Mounted on collapsing Frame Blown Film</p> | <p>S-100 Layflat & Web Position</p> | <p>FE - 7 Layflat Control</p> |
| | | |

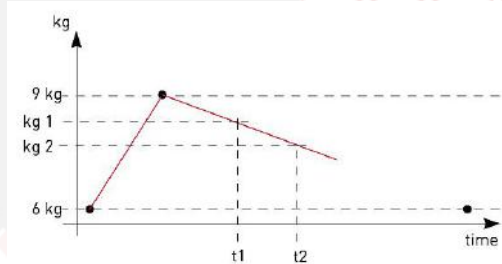
Dosing Systems Yield & Profile Control Systems



Dosing & Extrusion Control

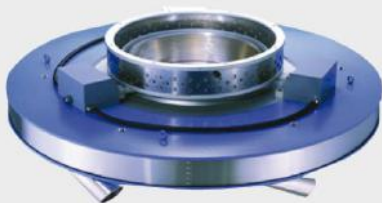


$$\frac{kg\ 1 - kg\ 2}{\Delta t} = kg/h$$



$$\frac{kg\ 1 - kg\ 2}{\Delta t} = kg/h$$

Profile control – Air Ring



IBC & NON-IBC Layflat Control Systems

D. R. Joseph
INCORPORATED

IBC Control Systems

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 (see page 3)



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



LF-Sizer non-IBC Width Control

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



Blown Film Line Equipments and Parts

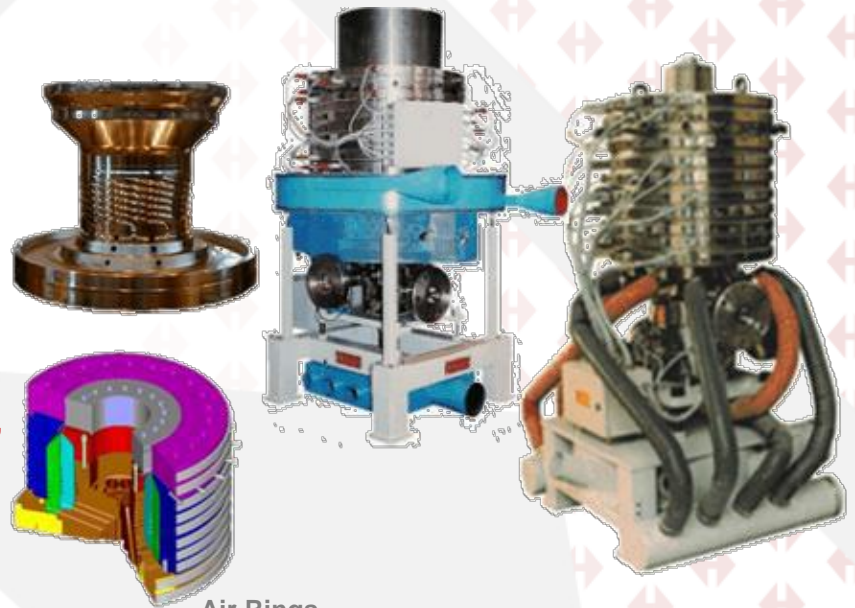
TECHFLOW
DESIGN & MANUFACTURING

For Quality Conscious Customer and Blown Film Line Manufacturers, we have complete range of good Quality Value for Money Equipments and Accessories.

From Die to Winder.

Dies

- ✓ Single to 11 layers
- ✓ Polyurethane, polystyrene foam, HMWHD, HDPE, and many more
- ✓ Up to 82 inch die diameters
- ✓ Internal bubble cooling (Option)
- ✓ All guaranteed to $\pm 5\%$ gauge control
- ✓ Rotating and stationary



Patented Stackable / Coex

Techflow's patented "Dual Spiral System" under Canadian Patent # 2,308,128 & United States Patent # 6,343,919

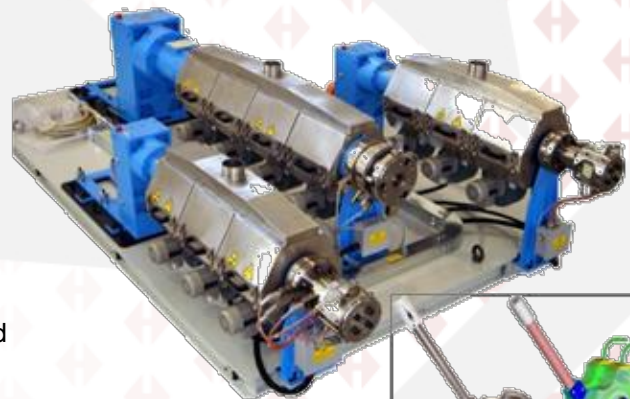


Air Rings

- ✓ Low pressure design to reduce heat generation
 - ✓ Adjustable forming cone
 - ✓ Magnahelic gauge
 - ✓ Temperature gauge
 - ✓ Special Aluminium Casting construction for maximum stability
 - ✓ Mounting brackets
- Optional Features:
- ✓ Insulated Plenums
 - ✓ Dual Lip sets available interchangeable with plenum
 - ✓ Anodized lips
 - ✓ Custom Mounting Brackets

Extruders

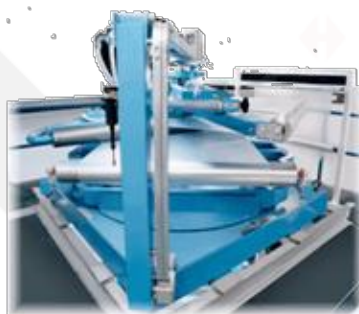
- ✓ Outside temperature of shroud will not exceed 39°C/100°F
- ✓ Single blower barrier heat/cool system divided into multiple barrel zone (Size Dependant)
- ✓ Each barrier zone includes high efficiency ceramic heaters with a patented system that ensures a temperature control of $\pm 1^\circ\text{C}$
- ✓ Significant power consumption savings
- ✓ Zones individually divided by an integrated insulated shroud, easily removed for maintenance



Screen Changer



Cage



Haul Off



Haul Off



Winder

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.

BDLG ratchet type screen changers



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.

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



Laboratory Extrusion Lines

MONOLAYER BLOWN FILM LINE

The smallest and simplest machine, Suitable for tests of colour master batches and recycled materials, Back screw extraction system for the fastest cleaning and material change.

- 20 mm. Single screw extruder,
- 30 LD,
- 3 kW motor,
- Stationary Die Head with 30 mm Die Lip diameter,
- Dual Flow type Air Ring,
- Nip Rollers,
- Winder width 250 mm.



MULTILAYER LAB BLOWN FILM LINES

Available in different Configurations Extruders 20, 25, or 30 mm. Screw diameters, From 3 to 5 layers with standard Die head type, up to 9 layers using Special type die heads.

DUO

The smallest "MULTILAB" solution, combines a blown film line and A pelletizing line with same extruder, with a very fast system change



D25 BLOWN FILM LINE

Small monolayer blown film line For Lab use or production of small dimensions films. 25 mm. Single screw extruder. Rotating Die Head or Rotating Nip Rollers.



CAST FILM LINE

Laboratory Cast Film extrusion Lines. Film Width 50 mm to 1 meter 1 to 5 Layers Manual or Automatic Die Heads



SINGLE SCREW LAB EXTRUDER



TWIN SCREW LAB EXTRUDER



SHEET AND FOIL EXTRUSION LINES

Extruders from 25 TO 50 mm. Screw. Flat Film Width up to 1 Meter, 1 to 5 Layers



Our Extended Family (Partial List of Valued Customers)

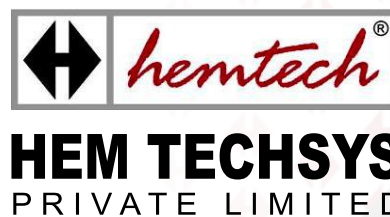
| | | | |
|----------------------|--------------------|---------------------|-----------------------|
| AMCOR | GAIL | MANTRA | SAFAL |
| APPL | GHODAVAT FOOD | MARVEL | SEKHANI |
| ADRDE | GLENMARK | MEHATA FLEX | SHAILLY ENGINEERING |
| ASHIRVAD PIPES | HOLISTER | MERIL ENDOSURGERY | SHANKAR PACKAGIN |
| ASTRAL | HUTAMAKI | MONTAGE GLOBAL | SHEFIELD POLYMERS |
| AXEL POLYMERS | IDEX | MULTIFLEX | SHIVA TEX |
| BALAJI WAFERS | IDMC | MULTI FILMS | SHRINATH ROTO PACK |
| BENTLAY FITTINGS | IISC | NAVAMI | SHUBHAM EXTRUSION |
| BHANSALI ENGINEERING | IOCL | NAVRANG POLY FILMS | SIDMAK LABORATORIES |
| C K ZIPPERS | INJECTOPLAST | ORIFLAME | SPOT ON COATINGS |
| CAPITOL FIBRES | ION EXCHANGE | OSWAL EXTRUSIONS | STRONG STRAPS |
| CAPRI COATINGS | IPR | PACKAGING INDIA | SUNPHARMA |
| CAVIN KARE | ITC | PAPER PRODUCTS | SUPREME |
| CHIRIPAL FILMS | JESONS | LIMITED | SWAPNIL AGRO |
| CIPET | KALPENA INDUSTRIES | PARIKH PACKAGING | SWISS PACK |
| CLARIENT | KJR FILMS | PARLE | THIAGRAJA UNIVEERSITY |
| CONSTANTIA | LARPM | PARRY | TUFLEX |
| DRDE | LAXMI SNACKS | PLATICHEMIX | UFLEX |
| EASTER | LOHIA | POSITIVE PACKAGING | ULTIMATE FLEXIBLES |
| ECOPLAST | M C COLLEGE | RAJASHREE POLYPACK | VIKAS GLOBAL |
| EPC | M J BIOPHARMA | REAL NAMKEEN | WIRE & FABRIK |
| GABA | M S UNIVERSITY | RELIANCE INDUSTRIES | YESH LAMI PRINT |

International Customers

J F Packaging – Srilanka
 F I P C O – Oman
 Sun Pharma De Mexico - Mexico



"Total Customer Satisfaction Through Quality Services"



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