

**K 2022  
INVITATION LETTER**

# LABTECH ENGINEERING

**Dear Sir/Madam,**

I am very pleased to invite you to visit our booth at the giant Kshow 2022 exhibition. We are located at booth #71C37 (please see the map on the last page for directions). Our booth has approximately 200 square meter area full of Labtech's modern and innovative machines which will run for demonstration.

The succeeding pages contain the detailed information on all the machines in our exhibition area.

We welcome you to pay us a visit and to see all our show machines running with polymers. We hope to see you there!

**Yours sincerely,**

**Peter Jurgensen**  
and all of us at Labtech Engineering

**LABTECH  
ENGINEERING**



**2022**

**19-26 OCTOBER 2022  
Düsseldorf, Germany**

**The World's No.1 Trade Fair  
for Plastics and Rubber**

**SEE YOU AT BOOTH  
#71C37  
IN HALL 7**



# Two-Roll Mill and Hydraulic Press integrated with **NEW** Amazing Lobot Color Matcher



Our Two-Roll Mill and Hydraulic Press are integrated with the NEW Advanced Amazing Lobot Color Matcher. During the exhibition, we will be simulating color matching and quality control of pigments mixed in an ABS stock with our two-roll mill fully operated by our new Robot, which we have named Lobot. It will operate as a human color matcher, processing the batch on the Two-Roll Mill and feeding it to the Hydraulic Press. This operation starts by the Lobot placing the plastic bag on the nip-gap of the of the Two-Roll Mill unit surface and the rolls melt the sample as the Teflon rolover device traverses horizontally until it becomes homogeneously mixed and the pigments are fully dispersed. When the Two-Roll Mill has completed the process, the Lobot transfers the sample to a mould and inserts it into the Hydraulic Press. When the Press cycle is complete, the Lobot takes the mould out and places it back on the table.

## COMPUTERIZED TWO-ROLL MILL

- Fully automatic version of the Two-Roll Mill Type LRM-SCR-150/BO-Lobot has an automatic batch rolover device, with a new built-in oil heating system where the oil is circulated in channels near the roll surface for a very high temperature precision over the entire roll surface
- The mill is equipped with a high-precision nip-gap distance measuring system which measures the gap directly on the roll shafts
- Running parameters such as nip gap distance, front and rear roll RPMs, and rolover device movements have visual status indicators and are controlled on the touchscreen

## HYDRAULIC PRESS

- 20 MT Hydraulic Press Type LP-S-20 has a platen size of 200 x 200 mm and is equipped with automatic cooling platen inserts
- Press plates are dual precision-grounded and hard-chromed with electric heating
- Automated Insert Cooling System is a time-saving feature which ensures the shortest possible cycle time. The cooling platen are automatically inserted on the mould as soon as the heating cycle is completed

# NEW High-Speed 3D Filament Line

**WITH A MAX SPEED OF UP TO 130 METERS/MIN**



▶ The Single Screw Extruder has a 40 mm screw diameter with an L/D ratio of 30 and having a 300°C max temperature. It is equipped with an Autoloader and Drying Hopper for a continuous production run, ensuring a fully moisture-free filament production.

The **NEW High-Speed One-Station Wind-Up Unit** enables a fast and easy changeover from one wind-up cassette to the another at a maximum high-speed of 130 meters/min with a perfect winding of filaments side by side

The **NEW Horizontal Filament Accumulator** has a multitude of filament wheels with a very long extension allowing for a large storage of filament, which is more than sufficient at the maximum speed of 130 meters/minute

The **NEW Triple Chamber Cooling and Calibration Bath** has the chambers placed side by side for minimum space. Each chamber is individually tempered which guarantees a fully homogeneous filament without any voids

The **NEW High-Speed Haul-Off Unit** is equipped with two sets of large high-wear resistant rubber rolls, replacing our earlier caterpillar belt system for optimum life endurance



# COMBI Co- and Counter-Rotating Twin-Screw Extruder Compounding Line with Pelletizing Line

Our **Co- and Counter-Rotating 26 mm Twin-Screw Extruder** is designed for processing a large variety of polymers including those that are heat sensitive such as PVC. The twin is supplied with a gearshift, which will change the rotation of the screw shafts from counter to co-rotating and two sets of screws are supplied for these applications. The extruder features our well-proven and leak-free clamshell barrel comprising of 4D modules, which are partially insulated against each other, allowing for a certain temperature variance which is very useful for processing of difficult polymers.



## FEATURES:

- ▶ Co- and Counter-Rotating Twin-Screw Extruder with 26 mm screw diameter and 40 L/D type LTECC26-40 has a new barrel cover design with removable 4D panels made from mirror polished stainless steel sheets
- ▶ Water Cooling Bath type LW-100 has an eco-friendly closed-loop water circulation system, nylon brush and vacuum dryer
- ▶ Strand Pelletizer type LZ-120HP/VS has digital controls for feed rates up to 70 m/min and digitally adjustable pellet lengths from 1.0 to 6.0 mm
- ▶ Fully computerized controls



Main Feeder Gravimetric Hopper with Single-Screw

Side Feeder Gravimetric Hopper with Double-Screw



Extruder Barrel Module and Screw Elements

## NEW C-Type 3-Layer Co-Extrusion Cast Film Line



Our **NEW Heavy-Duty C-type Chill Roll** attachment support has an upward configuration rolling stack design. The C-type chill roll attachment have two of the rollers in a 45-degree upward position which allows for a substantial increase in the substrates contact to the rolls for a much improved cooling and tempering of the polymer film. This, in turn, enables increase speed of the web and it is also very suitable for production of thin films.

## FEATURES:

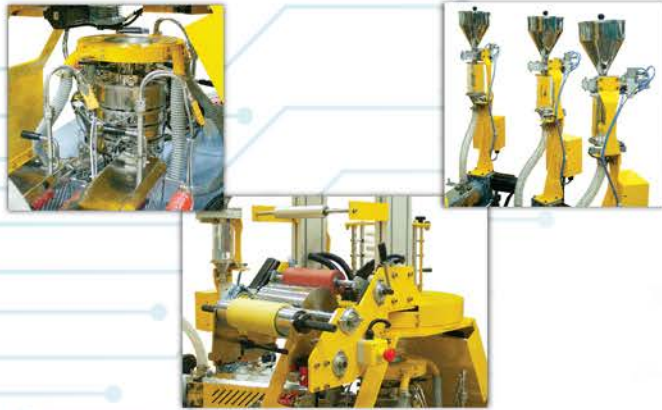
- ▶ 3 units of 25 mm, 30 L/D Single-Screw Extruders with 5.0 kW Vector Motors
- ▶ Equipped with a 450 mm standard flat die which is connected to a 3-layer feedblock
- ▶ Chill roll attachment consists of 3 rolls in C-type position for an optimum film contact against the roll
- ▶ Front, middle and rear rolls have diameters of 175 mm, 350 mm and 250 mm
- ▶ Fully integrated computerized control system installed in a Control Cabinet with a 10.4-inch large PLC touchscreen for gravimetric weighing hopper





# NEW Mini Five-Layer COEX Blown Film Line

Our **NEW Mini 3 & 5 Layers CO-EX Blown Film** is practical co-extrusion of multilayer blown film with a compact design easily fitted in most laboratories. This line is a suitable offer for developing new multilayer film compositions and for evaluation of additives like colorants, fillers and film performance inhibitors.



## FEATURES:

- ▶ 5 units of mini-sized Single-Screw Extruders with 16 mm screw length and 30 L/D ratio and a maximum heating temperature of 300°C
- ▶ Computerized Loss-in-Weight Hopper Feeders consisting of a see-through hopper with stainless steel feed hoppers incorporated with a precision load cell for accurate sensing of the hopper weight
- ▶ Multilayer Film Blowing Pancake Die assembly with an exchangeable die lip diameter of up to 40 mm max
- ▶ Compact Oscillating Film Tower which greatly minimizes the effects of film gauge variations for quality film rolls
- ▶ Collapsing A-frame Tower made of polished teak wood slats to smoothly guide delicate films
- ▶ Computerized touchscreen control with easy-to-understand graphics
- ▶ Equipped with a surface wind-up system consisting of a rubber lay-on roll, a polishing roll and a 3-inch free-rolling air shaft

# NEW Mini Three-Layer Cast Film Line

Our **NEW Mini Three Layers Co-Ex Cast Film** is the latest development of our range of mini sized laboratory machines, offering an economic alternative to a fully functional co-ex chill roll line.



## FEATURES:

- ▶ 3 units of mini-sized single-screw extruders with 16 mm screw diameter and 30 L/D ratio and a maximum heating temperature of 300°C
- ▶ Hoppers with 3-liter capacity and can also be equipped with optional loss-in-weight feeders
- ▶ Three-layer feedblock connected to a flat die pointing downwards and with a 125 mm lip width
- ▶ Vertically adjustable chill roll with a diameter of 145 mm and a width of 150 mm





## NEW Mini Single-Layer Blown Film Line

Our **NEW Mini Single-Layer Blown Film** is the another development of our compact mini-designed lab lines taking up little floor space offering an economic alternative for a quality control line of masterbatches.



### FEATURES:

- ▶ Mini-sized Single-Screw Extruder with 16 mm screw diameter, a 30 L/D ratio and a maximum heating temperature of 300°C
- ▶ 3-liter hopper with sliding valve
- ▶ Equipped with a spiral mandrel with an annular die lip diameter of 25 mm giving a maximum bubble film diameter of 115 mm
- ▶ Adjustable stabilizing cage with 4 level of Teflon roller arms
- ▶ Nip roll width of 200 mm consisting a rubber and a chromed steel roll, driven by a servo motor and laid on to each other mechanically
- ▶ Servo-motor driven wind-up
- ▶ Fully computerized controls on a 7-inch touchscreen
- ▶ In spite of a very small screw design, the extruder is able to fully disperse masterbatches



## NEW Mini Single-Layer Cast Film Line

### FEATURES:

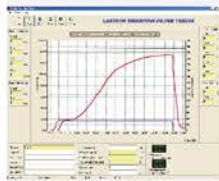
- ▶ Mini-sized Single-Screw Extruder with 16 mm screw diameter and 30 L/D ratio and a maximum heating temperature of 300°C
- ▶ Flat die pointing vertically downward with a 90-degree adapter and with a width of 125 mm
- ▶ The chill roll has a diameter of 145 mm and a width of 150 mm. It has undergone hardening, chroming and mirror polishing processes
- ▶ Gap between the chill roll and the die above can be adjusted vertically to reduce the neck-in of the film extruded from the die
- ▶ A rubber roll pushes the film towards the chill roll to avoid the film from slipping
- ▶ Rubber haul-off nip-rolls give a very steady and even pull of the film and thin sheet from the chill roll

Our **NEW Mini Single-Layer Cast Film** line offers an economic alternative to produce thin film and sheets in various polymers.





# Compact Filter Tester in full conformity to the International Standard DIN Norm EN-13900-5 as well as ISO 23900-5 Filter Test Standard



The unit has an on-board high capacity PC and all running parameters can be easily keyed-in on the practical keyboard. All data can be stored on board as well as downloaded to an external PC. The large screen shows the pressure build-up in real time and will automatically show the Delta P filter pressure value after the test is completed.

The pressure sensor is connected to a pressure control instrument that in turn will regulate the extruder screw speed to ensure that it delivers a steady flow of polymer at a constant pressure. This inlet pressure can be set digitally on the control panel. A second transducer is placed in front of the filter and will monitor the pressure build-up.



The filter tester head with the gear pump has a very streamlined design which enables very easy and fast cleaning from one batch to another. The head is connected to our 20 mm single-screw extruder which has a new nice and user friendly touchscreen controlling all parameters.

## FEATURES:

- ▶ Our **Compact Filter Tester** with on-board industrial PC featuring touchscreen as well as a very convenient keyboard where all test parameters can be easily entered
- ▶ Clear graphic illustration of the entire filter test where screens can be printed or downloaded to an external PC
- ▶ 3 cc gear pump driven by a servo motor which ensures a very even resin flow and high torque over the entire RPM range
- ▶ Equipped with our designed filter test head which has a very easy system for changing filters
- ▶ Colored touchscreen control of all extruder parameters and with nice and clear graphic illustrations
- ▶ Controls for manual as well as fully automatic operation of the entire machine

## Ultra-Micro Single-Screw Pelletizing Line

Our **Ultra-Micro Single-Screw Extruder Pelletizing Line** is designed to be ideally suited for running very small sample sizes for R&D and QC applications. This line is complete with strand cooling bath, a puller station, followed by pelletizing unit.

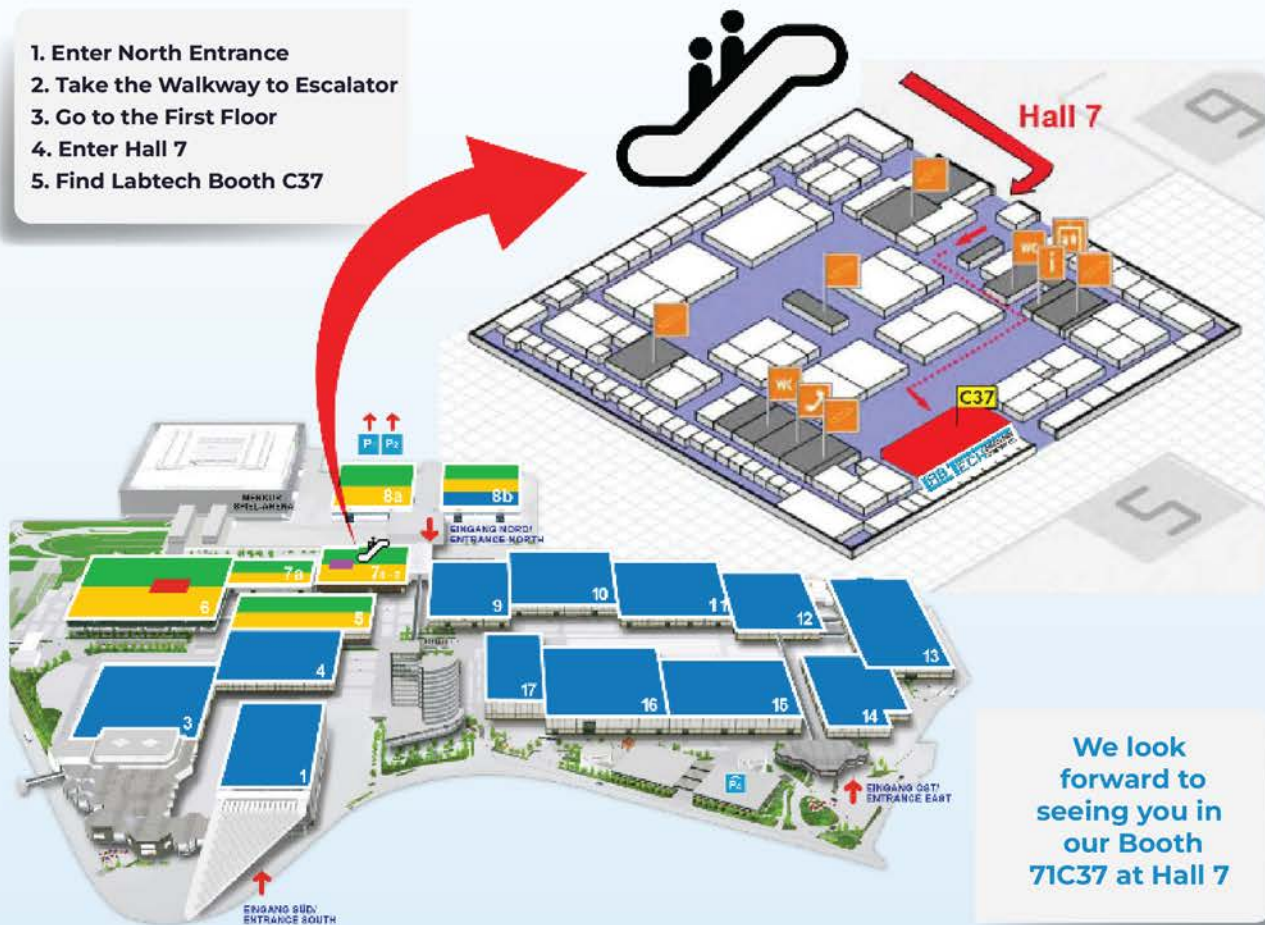
- ▶ The Ultra Micro Single-Screw Extruder type LUME8-30/C has a conical screw for processing small pellet sizes
- ▶ The extruder barrel has 2 heating zones operating at a maximum processing temperature of 300°C for stainless steel barrel and 130°C for transparent acrylic barrel
- ▶ The extruder is allowed to process at an interchangeable stainless steel and transparent acrylic-top barrel cover and hopper which is secured in a cover holder when either is not in use
- ▶ Transparent polycarbonate water bath with a 1.5-liter capacity is equipped with pump for circulation of cooling water
- ▶ Driven rubber in-feed roll and side-cut rotary blades assembly has a maximum feed rate of 1.3 m/min
- ▶ Shelf for container catches pelletized materials below discharge chute
- ▶ Fully computerized, user-friendly controls for an intuitive operating experience





# MAP for LABTECH ENGINEERING BOOTH LOCATION

1. Enter North Entrance
2. Take the Walkway to Escalator
3. Go to the First Floor
4. Enter Hall 7
5. Find Labtech Booth C37



We look forward to seeing you in our Booth 71C37 at Hall 7

## Contact Persons at our Booth:

**Peter Jurgensen**  
President

**Porhchai Sinsokudomchai**  
Managing Director

**Ekachai Luangthichaiwanit**  
Assistant Managing Director

**Bas Roekarsa**  
Export Sales Manager

**Charade Balba**  
Deputy Sales Manager

**Eakchai Jiamsawad**  
Local Sales Manager

**Lisa Jurgensen**  
Sales Representative Georgia/USA

**Alain Antoine**  
Labtech Engineering Europe

**Carlo Bologna**  
Labtech Representative for Italy

**Michel Becker**  
Labtech Engineering Europe

**Caroline Bauwens**  
Back Office Labtech Engineering Europe

**Georg Schallar**  
Labtech Europe Representative for Austria

**Jan Kral / Martin Lefan**  
Labtech Representative for the Czech Republic, Slovakia, Lithuania, Estonia, Latvia, Moldova, Ukraine, Belarus

**Cecilia Nilsson**  
Labtech Representative for Denmark, Norway, Sweden

**Yury Mogilnikov**  
**Alexander Ovsyannikov**  
Labtech Representative for Russia

## Labtech Engineering Co., Ltd.

Bangpoo Industrial Estate, 818 Moo 4, Soi 14B,  
Sukhumvit Road, Prakasa, Muang,  
Samutprakarn 10280, Thailand  
Tel. No : 66-2-709 6959, Fax: 66-2-710 6488 and 89  
Email Address : labtech@labtechengineering.com  
Website : www.labtechengineering.com

**Alberto Morquillas / Juan Echarri**  
Labtech Representative for Spain

**Janet Rendle / Dean Brant**  
Labtech Representative for UK

**Dr. Hans-Michael Petri**  
Labtech Representative for Brazil

**Felipe Castrillon**  
Labtech Representative for Colombia

**Daniel Florenthal**  
Labtech Representative for Israel

**Ronel Isles / Anton Carstens**  
Labtech Representative for South Africa

**Yigit Demirel**  
Labtech Representative for Turkey

**Oliver Wolf**  
Labtech Representative for New Zealand

**Norman Pirzada**  
Labtech Representative for Pakistan

**Anh Kiet**  
Labtech Representative for Vietnam

**Yoshikatsu Nakai**  
Labtech Representative for Japan

**Howard Choi**  
Labtech Representative for South Korea