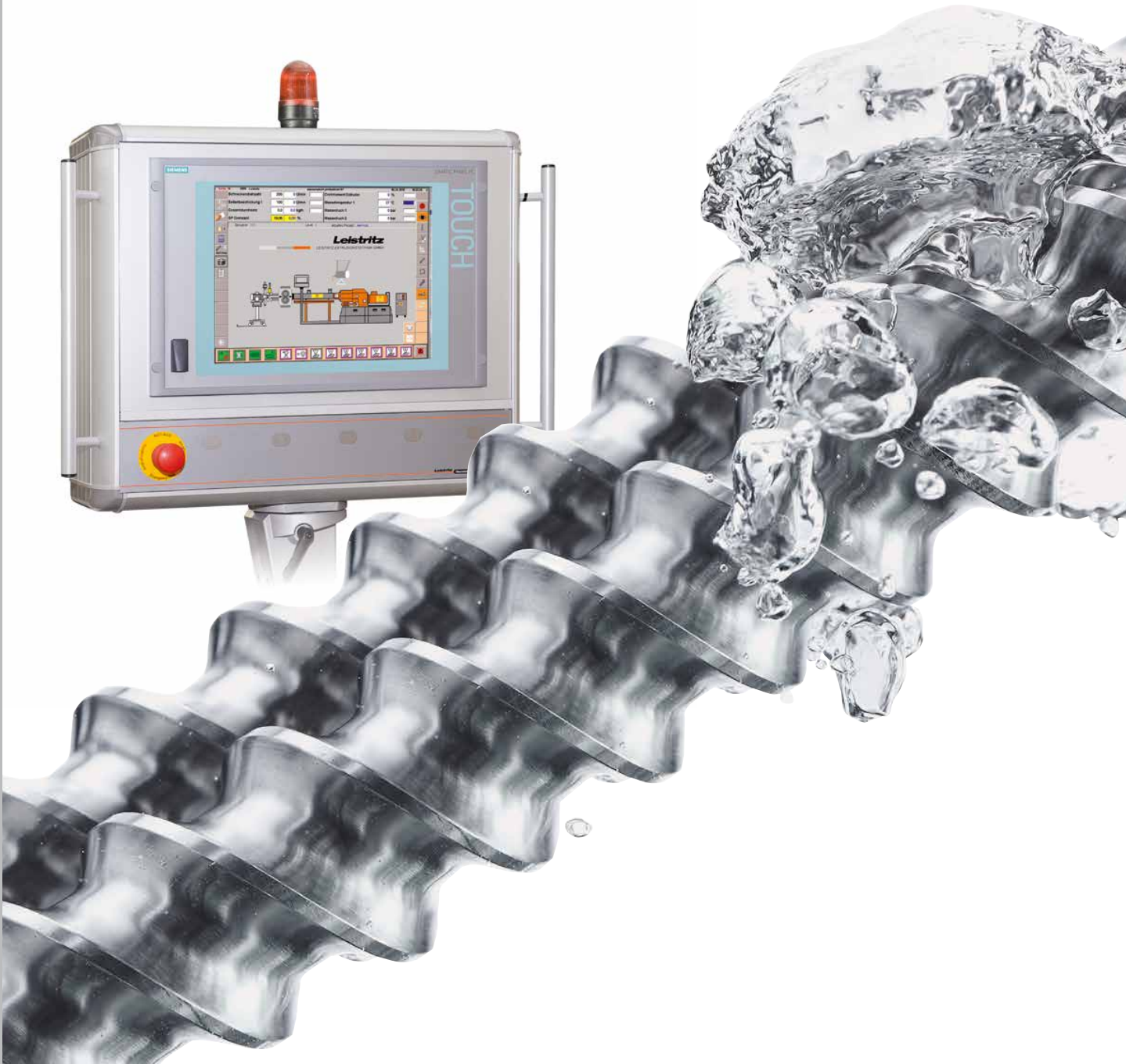


Leistritz

LEISTRITZ EXTRUSIONSTECHNIK GMBH

refreshing
extrusion
technology

AUTOMATION



Intelligent Control

Economic and optimum interaction of material feeding, extruder and downstream equipment distinguishes the Leistritz controls from others. With the data gathered and entered at the HMI (human machine interface) the whole extrusion process can be monitored, controlled, documented and analysed.



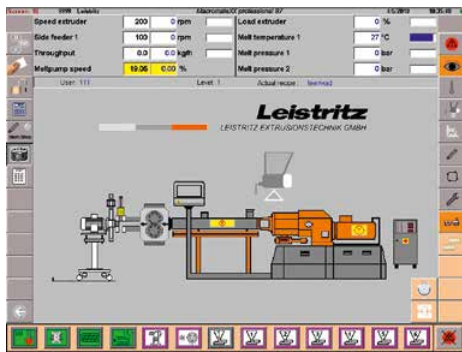
Control / Display	Discrete Controllers	MacromateXX basic S7	MacromateXX professional S7
Screen size	-	10.4"	15"
Touchscreen	-	✓	✓
Keyboard/Mouse	-	-/-	external
Large display of selectable values	-	4	max. 15
Large bar graphs	-	4	none
Temperature control with single controllers	✓	-	-
Security levels	-	3 password levels	3 password levels
Available languages*	-	CN, DE, GB, FR, IT, PL, PT, RU, ES, CZ, HU	CN, DE, GB, FR, IT, NL, PL, RU, SE, ES, CZ, TR, HU
Display of graphic fonts	-	✓	✓
Data			
Trend graphs	-	25	max. 72
Documentation of process data (ISO 9000)	-	USB-Stick	USB-Stick
Formulation database	-	internal CF-Card	internal CF-Card
Decentral automation	-	✓	✓
Process functions			
Number of temperature zones	variable	19	8 - max. 32
Number of drives	variable	4	max. 8
Week timer	-	-	✓
Integrated heating and leakage current monitoring	-	-	✓
Automatic start-up	-	-	✓

* shortcuts = international country code in it (ISO)

Depending on machine and customer requirements, we offer various control systems made with Siemens hardware and individually programmed by us - ranging from conventional (Basic control) to PC based models (MacromateXX basic S7 and MacromateXX professional S7).

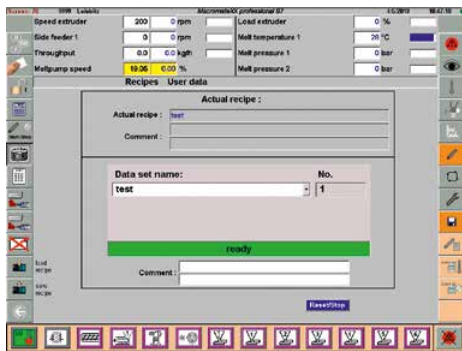


Control / Display	Discrete Controllers	MacromateXX basic S7	MacromateXX professional S7
Integration of other equipments			
Gravimetric feeder	-	-	8 - 16 (depends on supplier)
Volumetric feeder	-	2	2
Melt pump	-	-	✓
Pelletizer	-		
- strand		✓	✓
- air		✓	✓
- water ring		-	✓
- underwater		-	✓
Melt filter	-	-	✓
Side feeder	-	2	2
Side degassing	-	✓	✓
Vacuum pump	-	✓	✓
Material conveying and silage systems	-	-	✓ (opt.)
Maintenance and filing methods			
Operating system	-	Windows CE	Windows XP embedded
Remote servicing	-	project oriented	via internet („Teamviewer“)
Ethernet access	-	✓	✓
USB ports	-	2	5
Master computer	-	project oriented	project oriented
Update medium	-	USB-Stick	CF-Card
Data storage without hard drive	-	SD	CF-Card
Hardware			
System of protection	IP52	IP65	IP65



Start-up screen

This screen displays all line components and their operating condition. It is shown every time after booting the system. All other screens can be accessed from this screen by simply touching the according image of the extrusion line.



Formulation database

All machine parameters such as temperature setpoints are gathered here. They can be stored on a USB stick. The file names can be chosen freely. Consequently, the line can be set easily to a formulation run previously.



Large display

On this screen, the analogue values of the machine are shown in large letters. Up to 15 values can be displayed in these fields.

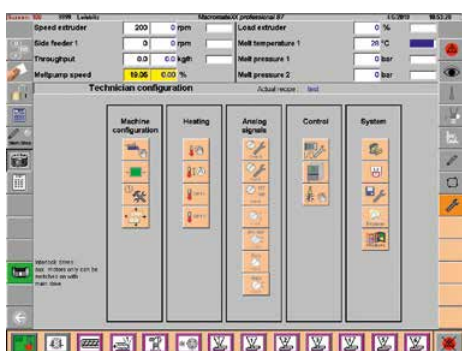


Permanent area

Up to eight values can be displayed permanently across all screens in a freely adjustable display area on top of the screen. The operator selects the parameters and their display scales.

Touch fields

Three different key groups are placed here: functions, on/off button, screen selection buttons. The operator can switch for example between languages, perform log in/off (with display of password level) or turn on/off devices.



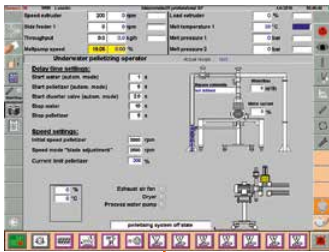
Technician configuration

On this screen pre-settings for the system are made by responsible operating personnel. New devices can easily be added or old ones removed. The operator designs his line layout all by himself. No further programming is necessary.

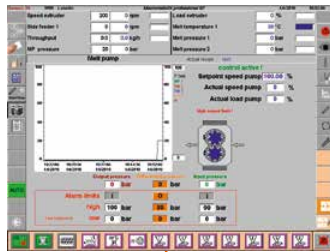
Specific Line Configuration

The screens of the control panel are pre-configured to the layout of the actual extrusion line. Only the relevant parts of the extrusion line are displayed. The exact control of the melt pump is essential particularly for direct extrusion applications for films and plates. Leistritz has developed a special control algorithm, which makes any process work.

Underwater pelletiser



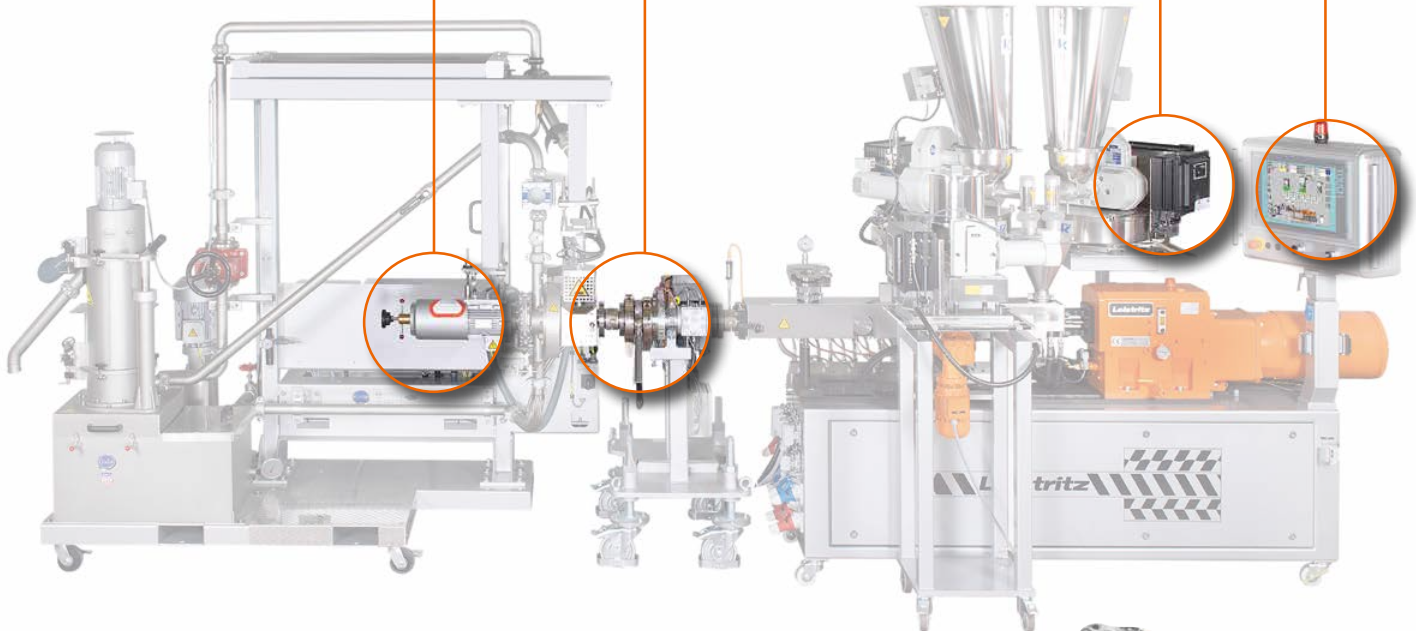
Melt pump



Feeder control



MacromateXX professional S7



Service Features in Automation Technology

- electrical planning of the whole extrusion line
- implementation of other common line components according to customer requests
- integration of all upstream and downstream line components
- optimum control and monitoring of all extruder components
- use of Siemens hardware guarantees a huge support network
- global spare parts service
- remote servicing via „Teamviewer“



- the ideal tool for the analysis of machine and process data

The Leistritz Chart Pilot is a software invented by Leistritz which enables all users of the MacromateXX S7 professional control systems to visualize their process data on an office PC system. The software imports the measurement data, archives it and assists the user in creating graphs to analyze the process data.

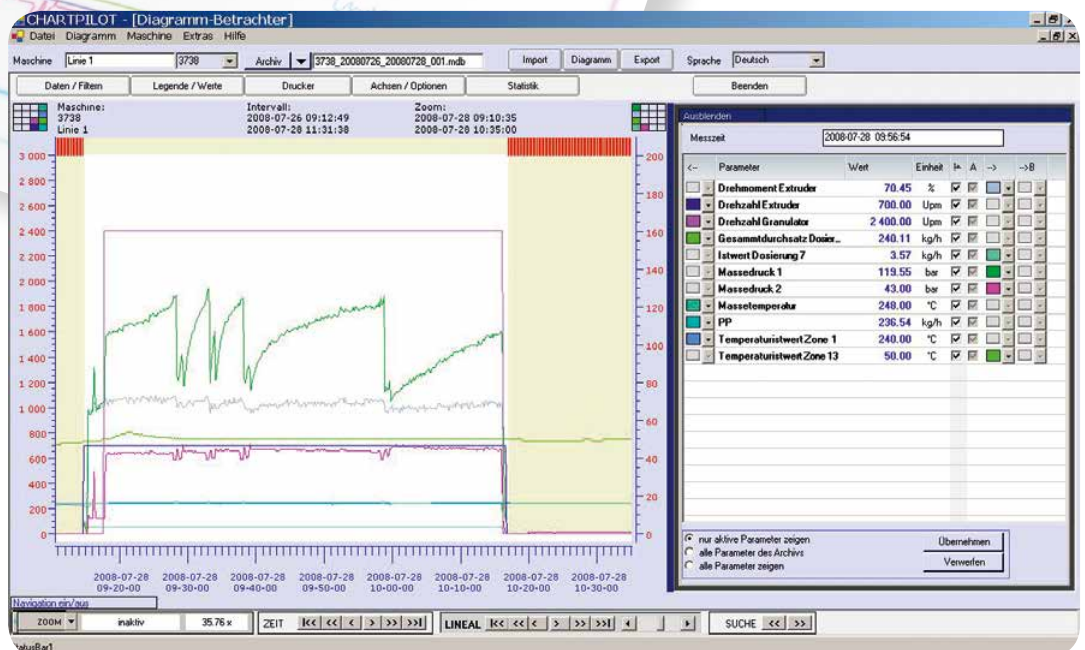
With the Leistritz Chart Pilot one can

- import and archive machine measurement data
- display measurement data as graphs and print them
- select measurement data by self defined conditions
- export measurement data e.g. to MS Excel
- display of fault messages
- network compatible (several PCs can access the same database)



Hardware requirements:

- PC Pentium III processor or faster
- Windows XP, Windows Vista, Windows 7
- Minimum internal storage: 256 MB
- Minimum required disc space: 50 MB
- Minimum resolution: 1024 x 768

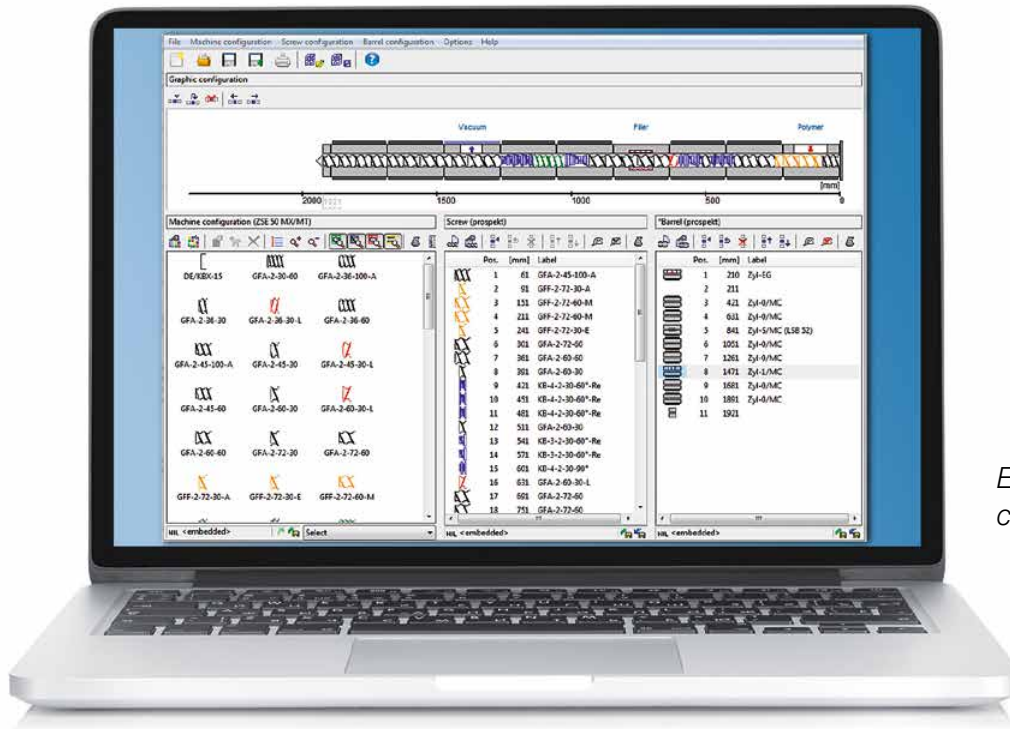


Analysis screen in the Chart Pilot

- Configuration of screws and barrels of a Leistritz extruder by means of a pre-defined kit

This software enables users to set up their own processing unit – step by step. The screw and barrel data necessary for setting up the geometry are stored in the program and are used via drag & drop. The result is an individually designed screw geometry.

The Leistritz screw converter also allows issuing screw configurations with a pressure module. Furthermore, the user is given the possibility of entering material data or inserting comments.



Example of a screw configuration

System requirements:

- USB interface for dongle *
- Intel® Pentium® 4 or AMD Athlon® 64 processor
- Microsoft Windows 7 with Service Pack 1, Windows 8 and Windows 8.1
- Minimum 1 GB RAM
- 120 MB free space on your hard disc for software installation
- Screen with a resolution with at least 1,280 x 800 with 16 bit colour depth
- DVD-ROM drive

* Licences are limited to one user. After registration the user receives a dongle and the software.

Benefit from these advantages:

- Easy, intuitive handling
- Visual presentation of screw geometry
- Facilitates printing of geometry
- Pre-defined screw/barrel kit
- Facilitates issuing of parts list

Leistritz

LEISTRITZ GROUP

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