Zumbach

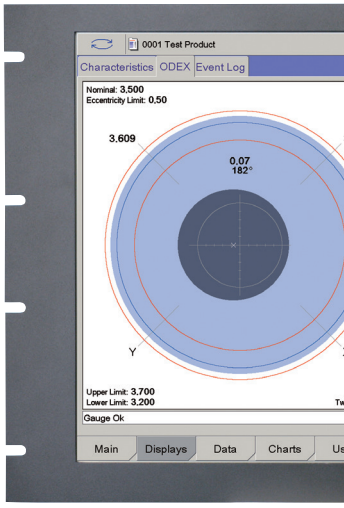
SWISS PRIME MEASURING SINCE 1957

CELLMASTER®

Universal Control Centre for Coax, Telephone and Data Cables including Category 6, 7 and Beyond

CELLMASTER • Expert in Communication Ca

No more enigmas in the extrusion of cellular (foam) and solid insulations

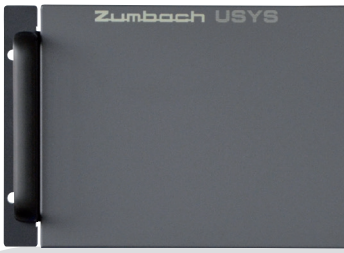


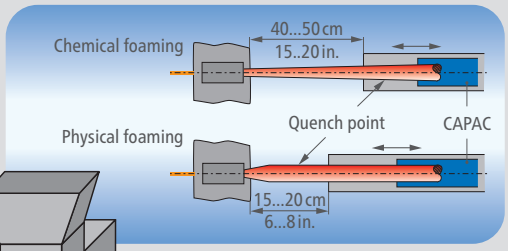
Higher Profits
- Faster start-up
- Higher output
- Scrap reduction
- Material savings
- Higher productivity

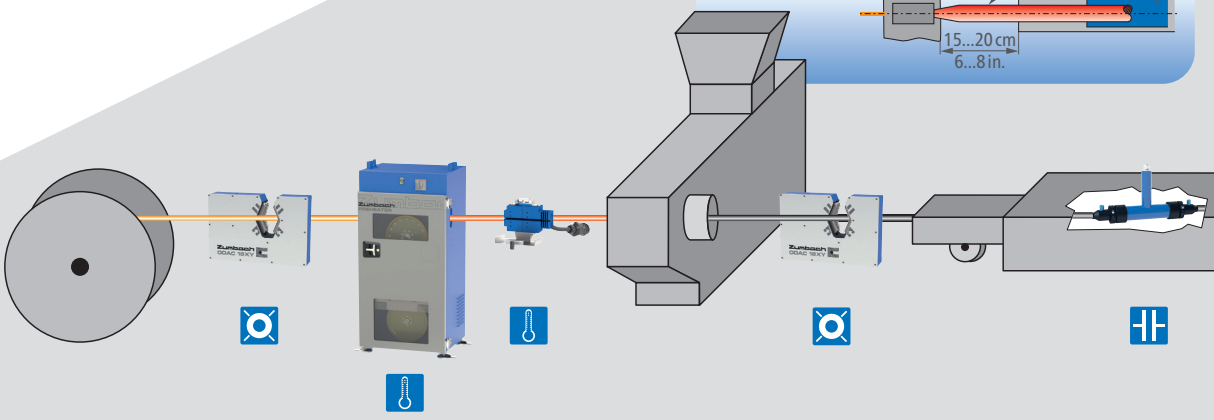
A Better Product
- Tighter specifications
- Consistent impedance/capacitance
- Better end product
- Enhanced quality image

Host Computer or PLC
Total control of CELLMASTER® through sophisticated up/downloading (OPC UA).

USYS Web Server • USYS Data Log • USYS Report Manager
Software kits for several tasks, e.g. data visualization on a PC, data collection from the CELLMASTER® processor and for saving the data in text or Excel files, communication via Ethernet, storing and recovering data on a local or remote disc and many other tasks.







High frequency preheating with PREHEATER
Inductive high frequency system guarantees uniform heat distribution within the conductor material.

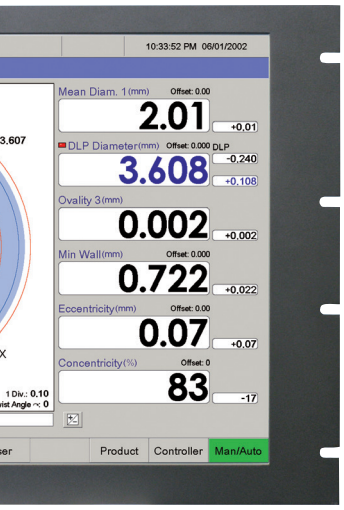
Diameter measurement with ODAC
Single, dual or triple plane diameter monitoring of bare wire.

Extruder screw RPM/line speed control
Control of screw RPM or line speed applies correct volume of extrudate at all times

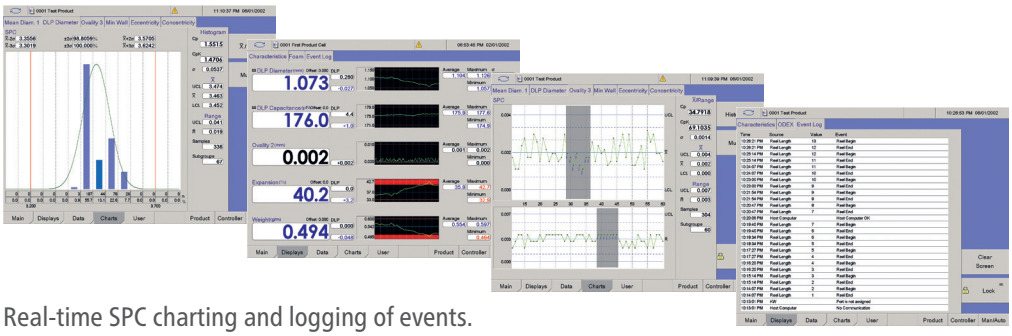
Position control of telescopic cooling trough
Second control loop adjusts trough position/quench point for fast corrections of cell size

Heat zone temperature control
Trimming of the set point optimises the process generating correct percentage of blow within the insulation material

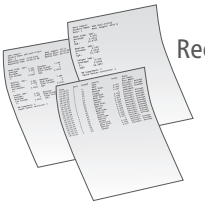
able Extrusion (Cellular or Solid Insulation)



The main screen shows detailed information of the data supplied from the individual gauges. By means of these displays, it is easy for the operator to have an overview of all current values of the measurements, the status of each peripherals, the general line status and more helpful information. Other important parameters such as expansion, capacitance, weight per length and many others can quickly and easily be accessed over the menu keys.



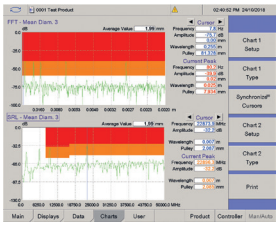
Real-time SPC charting and logging of events.



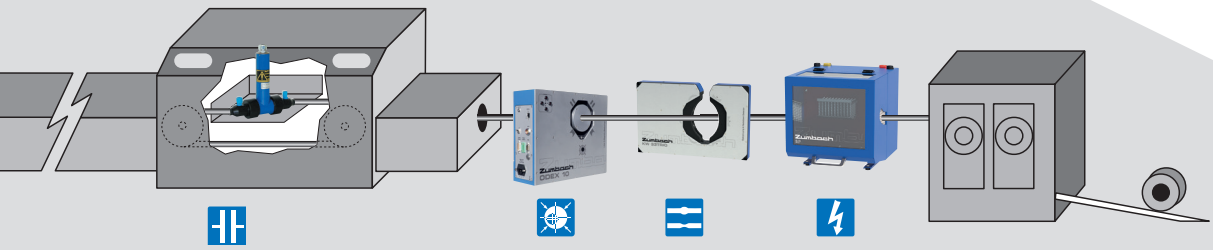
Reel reports, SPC statistics, lot, summary etc.

In-line Analysis (FFT) of Structural Return Loss (SRL)

Possible inputs directly from the measuring heads ODAC (diameter), CAPAC (capacitance) and ODEX (diameter), as well as analogue input. Max. 4 x signals simultaneously.



Degree of expansion: The quench point (defined by the position of the telescopic trough) is moved towards or away from the extruder in order to modify the degree of expansion of the product, allowing thus a fast and accurate control of the capacitance. Up to three zones of control are trimmed by a cascade control loop with the quench trough allowing the CELLMASTER system to cope even with substantial process fluctuations. Compatible to physical and chemical foaming technologies.



"Hot end" capacitance measurement with CAPAC HS
Dual Loop (DLP) control provides faster control response

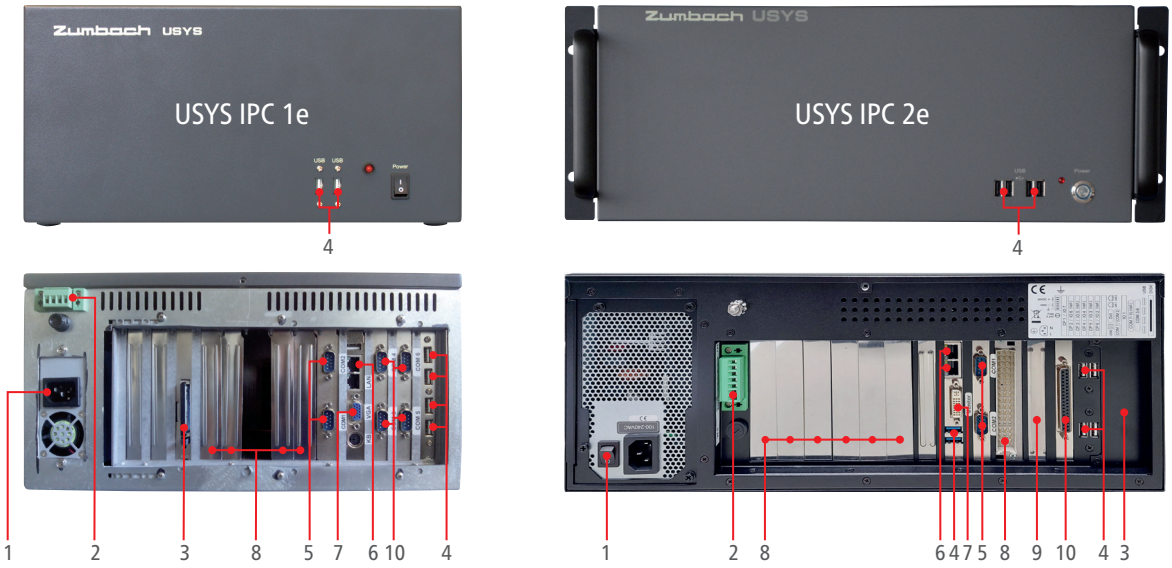
Cold end capacitance measurement with CAPAC HS
Can be used as primary probe or in combination with "hot end" gauge. Provides accurate capacitance readings and quench point control.
- "Minimum drag" high speed measuring tube
- Immune to water chemistry and conductivity

Eccentricity/concentricity and diameter with ODEX
- Eccentricity/concentricitiy measurement ensures concentric application of the insulation material
- Cold end diameter measurement

Spark Tester
- Reliable DC or AC test for faults in the insulation
- Product specific test voltage can be downloaded to the Spark Tester by CELLMASTER

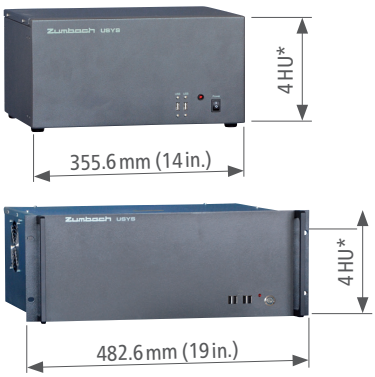
KW Fault Detectors
Photometric detectors, able to detect lumps, neckdowns, and other surface defects.

REAR PANEL FEATURES



1 Mains connector with integrated mains filter
2 Output 24 VDC, 0.2 AT
3 Flash disk
4 4 USB ports IPC 1e and 6 USB ports IPC 2e (for touch screen, printer, mouse, keyboard, USB stick)
5 Host computer / PLC. Up- / Download RS-232, label / tag printer.
Reel end summary printed onto self-adhesive labels (contents configurable by user).
6 1 Ethernet port USYS IPC 1e and 2 Ethernet port USYS IPC 2e
7 Connector for screen USYS IPC 1e: VGA, USYS IPC 2e: DVI-I
8 PCIe slots: – 4 at USYS IPC 1e
– 7 at USYS IPC 2e
Supporting an array of input/output PCB's needed to interface the system to the "outside world".
Alarm/analog outputs expansion features tolerance pre-alarm, SPC trend alarm or to connect ODAC or CAPAC.
9 The multi-port RS-422 expansion board is available for the connection up to 8 RS devices on the USYS IPC 2e
(4 on the USYS IPC 1e) (Spark Testers, KW fault detectors, ODEX, CAPAC, remote displays). 2 PCIe slots at USYS IPC 2e.
10 "Multi-Port"-RS-422 is available at the USYS IPC 1e for the connection of up to 4 RS instruments
(Spark Testers, KW, ODEX, CAPAC, remote displays)

DIMENSIONS / MAIN DATA



		USYS IPC 1e mm	USYS IPC 1e inch	USYS IPC 2e mm	USYS IPC 2e inch
Width	without 19" housing	355.6	14	430	16.9
	with 19" housing	–	–	510	20.1
Depth	without 19" housing	279.4	11	452.7	17.8
	with 19" housing	–	–	500	19.7
Height	without 19" housing	177	7	177	7
	with 19" housing	–	–	217	8.5

* 1 HU = Height Unit
= 44.25 mm (1.75 in.)

Power
100...240 VAC (auto-select), 47...63 Hz

Operating temperature
0...50° C (32...120° F)

Weight
– USYS IPC 1e: approx. 17.2 kg (38 lbs)
– USYS IPC 2e: approx. 15 kg (33.1 lbs);
without 19" housing

• Technical specifications are subject to change without notice

CE USYS IPCe units meet the current CE standards regarding overall performance and EMC (Electro Magnetic Compatibility).

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