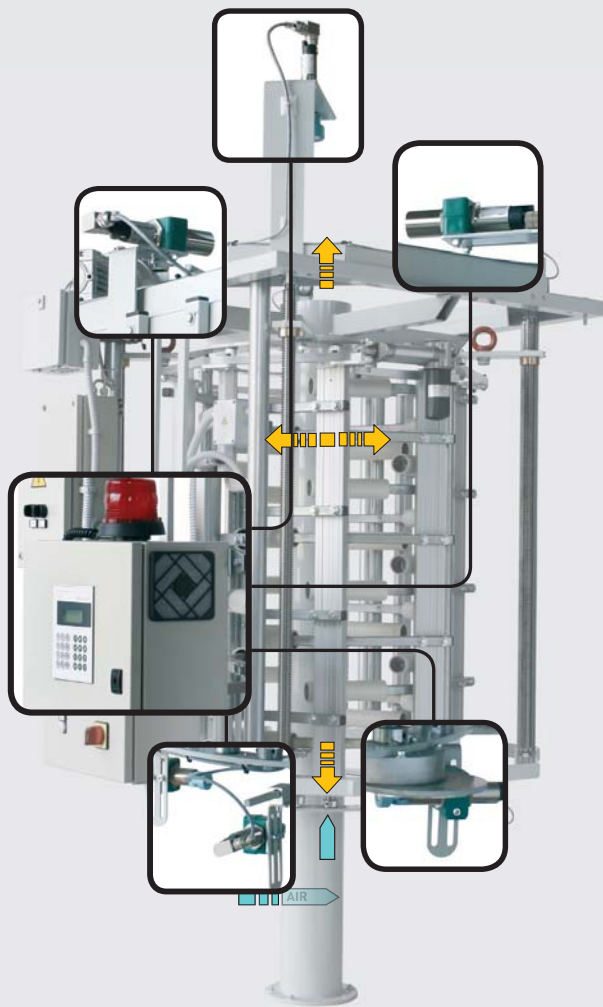


KALIBRO

AUTOMATIC CAGE CONTROL SYSTEM



Suitable for blown film lines:

- already provided with IBC;
- with stationary or rotating die;
- also for gusseted film.

MEASURING SYSTEM AND ACCURACY

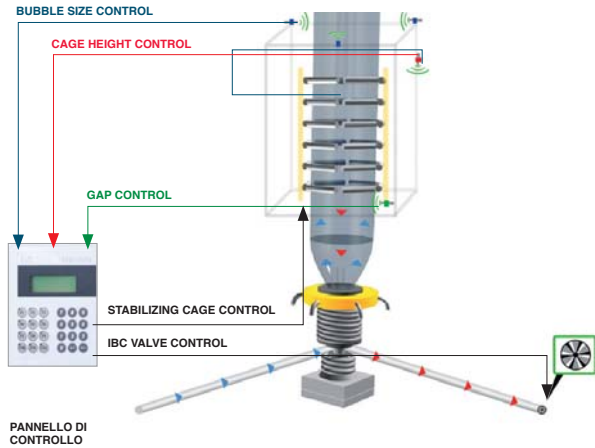
- Ultrasonic sensors for stable and repeatable measurement
- Measurement resolution 0.1 mm
- Display resolution 1 mm
- Control accuracy ± 2 mm (for lay-flat up to 1800 mm).

ADVANTAGES

- Ideal in case of:
 - frequent lay-flat size changes (on-the-fly);
 - low line speed;
 - personnel with limited experience.
- Simple to use: just set the lay-flat set point and tolerance targets.
- Save time and reduce waste during start-up and size changes.
- Lower tolerances and much better control than with manual adjustments.
- Constant lay-flat stability, all through the production process.
- Supplies process information needed to validate the production lot as required by quality assurance.



SYSTEM OPERATING MODE AND FUNCTIONS



- Measurement and control, by ultrasonic sensors:
 - of the bubble diameter;
 - of the distance between the bubble and the cage (gap);
 - of the calibration cage height;
 - of the cage opening.
- Just setting a new lay-flat, the system performs automatically the width size change:
 - adjusting the cage height to suit the BUR value;
 - adjusting the cage opening to suit the width set-point;
 - opening the IBC valve to inflate or deflate the bubble up to the right size;
 - the bubble diameter, hence also the lay-flat width, are kept stable by constantly controlling the gap and the IBC valve opening.
- Continuous display of the lay-flat measurement.
- Reaches and maintains the lay-flat set value.
- Prevents lay-flat variations due to changes of the environment temperature (day / night).
- Manual and automatic operating mode.

MAIN FEATURES

- High speed iris valve for controlling the cooling air flow.
- Control panel with operator HMI (touch screen B/W 5.7").
- Process alarms and diagnostics in plain text.
- Statistical reporting for product quality assurance.



COMMUNICATION INTERFACES FOR REMOTE CONTROL AND DATA ACQUISITION

- OPC via Ethernet (one entry-point)
- OPC via CanBus (one entry-point or multi entry-point)
- ModBus TCP/IP (one entry-point)
- RS485/422 ModBus (one entry-point or multi entry-point)
- Profibus (one entry-point or multi entry-point)
- CanBus (one entry-point or multi entry-point)



- KALIBRO is also available in the following versions:
 - **IBC Control**, only for bubble size control (keeps the gap between the bubble and the calibration cage);
 - **W-Scan**, only for lay-flat monitoring.