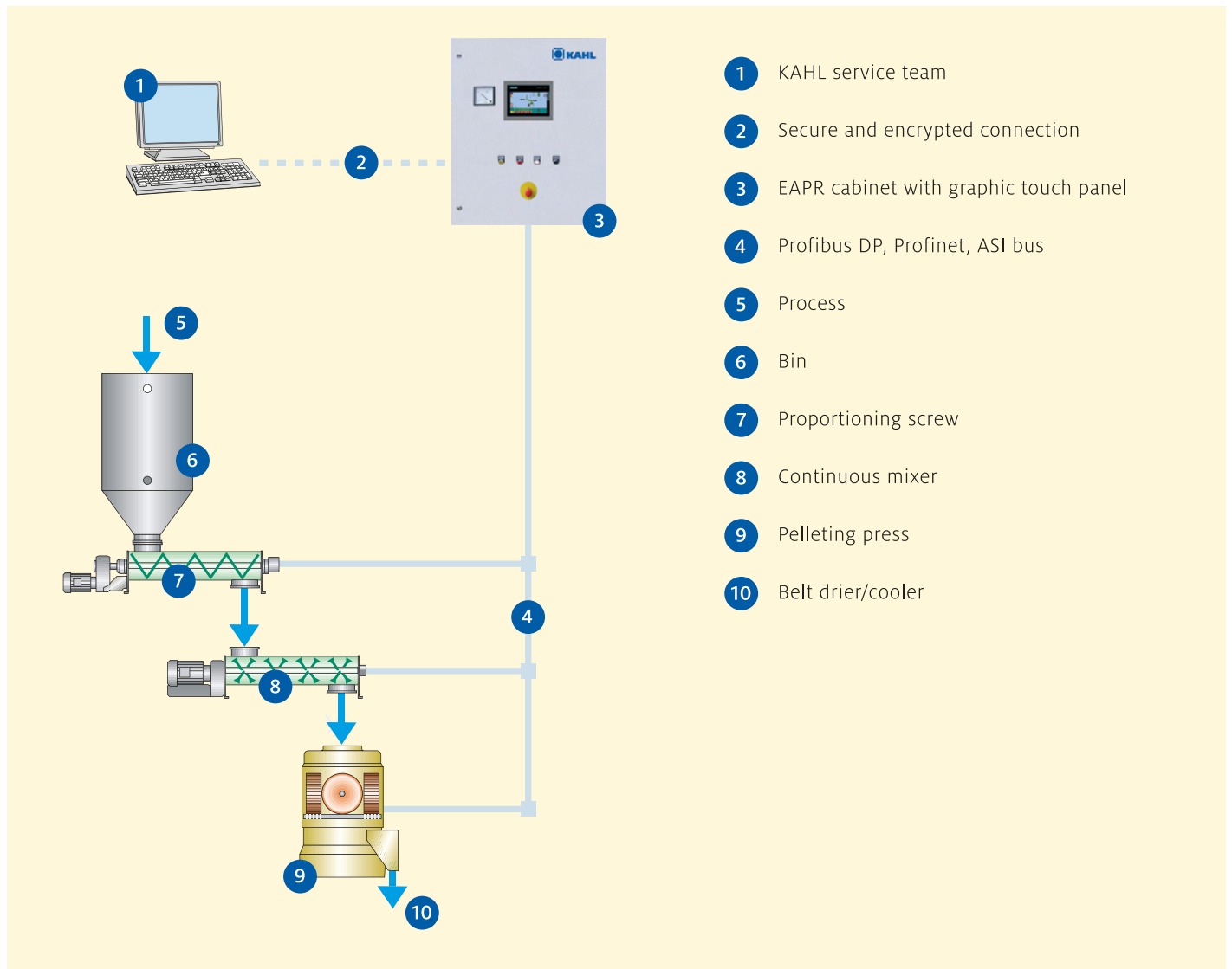


EAPR AND DISTAMAT AUTOMATIC PELLETING PRESS CONTROL SYSTEM

CONTROLLING – VISUALIZING – OPERATING
OF KAHL FLAT DIE PELLETING PRESSES

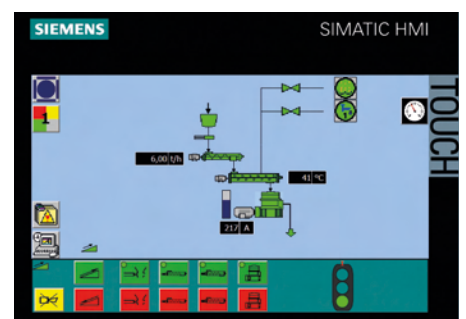


- 1 KAHL service team
- 2 Secure and encrypted connection
- 3 EAPR cabinet with graphic touch panel
- 4 Profibus DP, Profinet, ASI bus
- 5 Process
- 6 Bin
- 7 Proportioning screw
- 8 Continuous mixer
- 9 Pelleting press
- 10 Belt drier/cooler

The EAPR is the pelleting press control system for an optimum, automatic operation of the flat die pelleting presses of the company KAHL. It consists of a local control cabinet with a graphic touch panel (TP) and a PLC with step 7 CPU as central components.

The EAPR controls and regulates all the relevant process parameters.

- Optimum operation of the pelleting press
- Low manpower requirements
- High availability due to the use of proven quality components
- Optional field bus system saves installation costs
- DISTAMAT for continuous adjustment and control of the roller gap (option)



▲ EAPR Touch Panel

EAPR AND DISTAMAT

THE EAPR CONTROLS AND REGULATES ALL THE RELEVANT PROCESS PARAMETERS. ITS ENTIRE SCOPE OF FUNCTIONS IS REPRESENTED IN THE FOLLOWING OVERVIEW:

AUTOMATION OF THE PELLETING LINE

- Fully automatic operation according to the preselected process parameters
- Minimized downtimes
- Control and monitoring of:
 - pelleting press
 - proportioning screw
 - mixer
 - cooler (optional)
 - upstream and downstream conveying elements (optional)
 - auxiliaries
- Regulation systems
 - load-dependent control of the pelleting press
 - throughput regulation t/h
 - regulation of steam or a liquid (such as water, molasses)
 - up to two more liquids in the mixer (optional).

OPERATION

- The visualization at the graphic touch panel (TP) provides a rapid overview of the operating state of the pelleting line.
- Preselection of the process parameters at the TP
- Simple adjustment and optimization of controller parameters and timers of the PLC control at the TP without knowledge of programming.

ALARM PROCESSING

- Error and alarm messages on the TP
- Logging of alarms and faults
- Output to printer (option)

MODEM SERVICE AND HOTLINE (OPTION)

- Remote maintenance of the PLC control
- Fast and inexpensive assistance by the KAHL service team in case of problems with automation and process technology

- Video monitoring of the machines and video conferencing via internet with the KAHL service team

FURTHER OPTIONS

- Control unit for control room
- PC-based process visualization and operator's station
- Integration into existing automation and process control systems
- Process data recording via fieldbus systems (Profibus DP, Profinet, ASI bus)
- Supplementation by cooler control system, supply and discharge system up to a complete factory automation
- DISTAMAT

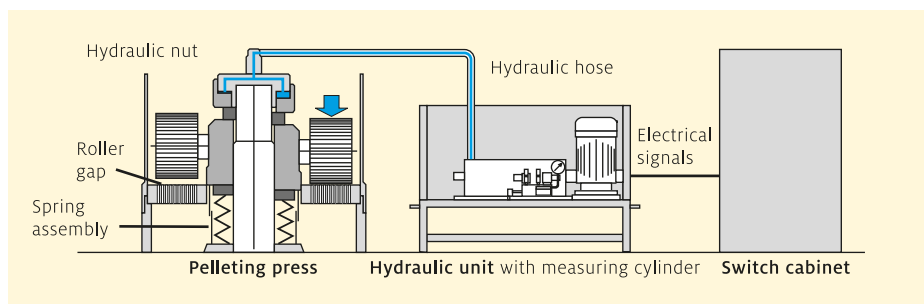
DISTAMAT: THE AUTOMATIC DISTANCE CONTROL ENSURING CONSTANT ROLLER GAP PROVIDES AN OPTIMUM PELLET QUALITY AND INCREASES THE SERVICE LIVES OF PAN GRINDER ROLLERS AND DIE

A high pellet quality requires a constant roller gap (distance between die and pan grinder rollers). This is ensured by the DISTAMAT.

AUTOMATIC DISTANCE CONTROL

- Continuous adjustment and control of the roller gap
- Higher, more constant pellet quality
- Minimized wear of the die
- Simple retrofitting of existing pelleting press control system
- Automatic unblocking of the pelleting press (option)

The DISTAMAT ensures a continuous preselection of the roller gap. Depending on the setpoint deviations, the pressure of the hydraulic system of the pelleting press is controlled in such a way that the roller gap is kept constant. Apart from the higher and more constant pellet quality which is achieved, the direct contact of die and pan grinder rollers which usually results from a product shortage is avoided. Thus service lives of pan grinder roller and die are considerably increased. By means of alternating lifting and lowering of the pan grinder rollers, the optional unblocking programme causes



an automatic unblocking in case of an overfilling of the pelleting press.

As an optional extra of the EAPR, the DISTAMAT is integrated into the EAPR control cabinet. If it is installed subsequently, a separate control cabinet is supplied with a PLC with Step 7 CPU and operator panel (OP). Furthermore the DISTAMAT includes a special hydraulic unit with the required measuring sensors.

FUNCTION OF THE DISTAMAT

- Continuous preselection of the roller gap
- Constant roller gap due to hydraulic pressure control
- Automatic unblocking of the pelleting press (option)

OPERATION

- Preselection of the process parameters at the TP
- Simple adjustment and optimization of controller parameters and timers of the PLC control at the TP without knowledge of programming.
- Re-adjustment and calibration of the measuring system directly from the TP

ALARM PROCESSING

- Error and alarm messages on the TP
- Logging of alarms and faults
- Output to printer (option)

MODEM SERVICE AND HOTLINE (OPTION)

- Remote maintenance of the PLC control
- Fast and inexpensive assistance by the KAHL service team in case of problems with automation and process technology
- KAHL Service Team