

Automatic Pelleting Press Control System

Control – regulation – visualisation – operation of KAHL flat die pelleting presses

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

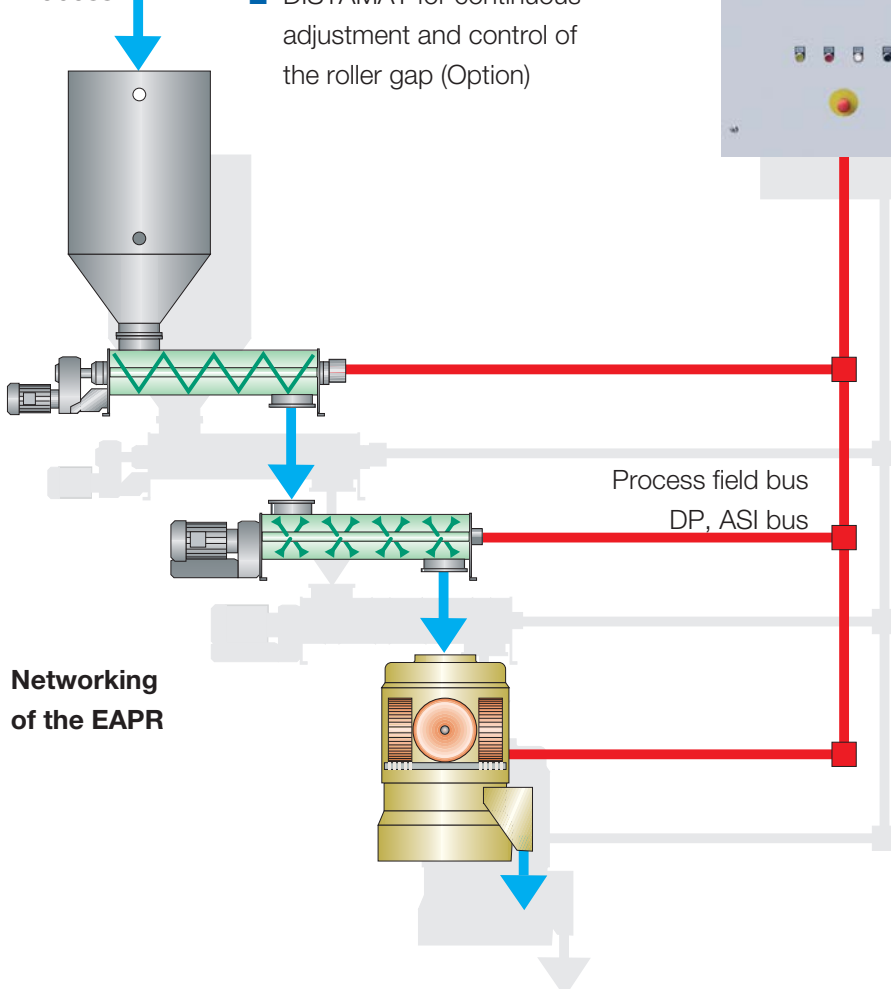
The EAPR controls and regulates all the relevant process parameters.

- 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 work
- DISTAMAT for continuous adjustment and control of the roller gap (Option)



EAPR operator panel

Process



EAPR cabinet with graphic operator panel

Modem connection



KAHL service team

Pelleting presses



The programme of KAHL pelleting presses comprises 12 different sizes from presses for small-scale productions to high-capacity presses.

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 pre-selected process parameters
- Minimized downtime
- Control and regulation of:
 - the pelleting press
 - the proportioning screw
 - the mixer
 - the cooler (option)
 - the preceding and following conveying elements (option)
 - auxiliaries
- Regulation
 - load-dependent regulation of the pelleting press
 - throughput regulation t/h
 - regulation of steam or a liquid (e.g. water, molasses)
 - up to two further liquids in the mixer (optional)

Operation

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

Alarm processing

- Fault and alarm indications on the OP
- Logging of alarms and faults
- Output to printer (option)

Modem service and hot line (option)

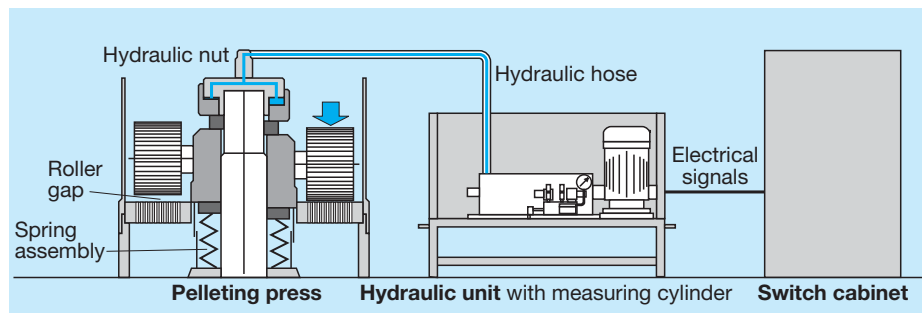
- Remote maintenance of the PLC control
- Fast and inexpensive assistance by the KAHL service team in case of problems with automation and process technology

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

Further options

- Control unit for control room
- Process visualization and operator's station on PC basis
- Integration into existing automation and process control systems
- Registration of process data via field bus systems (process bus DP, ASI bus)
- Supplementation by cooler control system, supply and discharge system up to a complete automation of the works
- 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 roller). This is ensured by the DISTAMAT – the 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 pre-selection of the roller gap. Depending on the deviation from the setpoint value, 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 program 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 with a PLC with Step 7 CPU and operator panel (OP) will be delivered. Furthermore the Distamat includes a special hydraulic unit with the required measuring sensors.

Function of the Distamat

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

Operation

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

Alarm processing

- Fault and alarm indications on the OP
- Logging of alarms and faults
- Output to printer (option)

Modem service and hot line (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



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