Sensor control
Gesellschaft für Sensorik und Automation mbH

APPLICATION
CERAMIC INDUSTRY

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PLASTICITY AND MOISTURE CONTROL SYSTEM

NOVATRONIC C3

For preparation and moulding lines for

- Brick and clinker works
- Roof tile works
- Production of hand-made bricks
- Technical ceramics
- Plant/garden ceramics
- Refractory ceramics
- Expanded clay

Modern PLC technology for the equipment of individual machines and lines with up to 5 control circuits

- Pan mills or sieve kneaders
- Single and double-shaft mixers
- Circular screen feeders
- Vacuum units

Your benefits

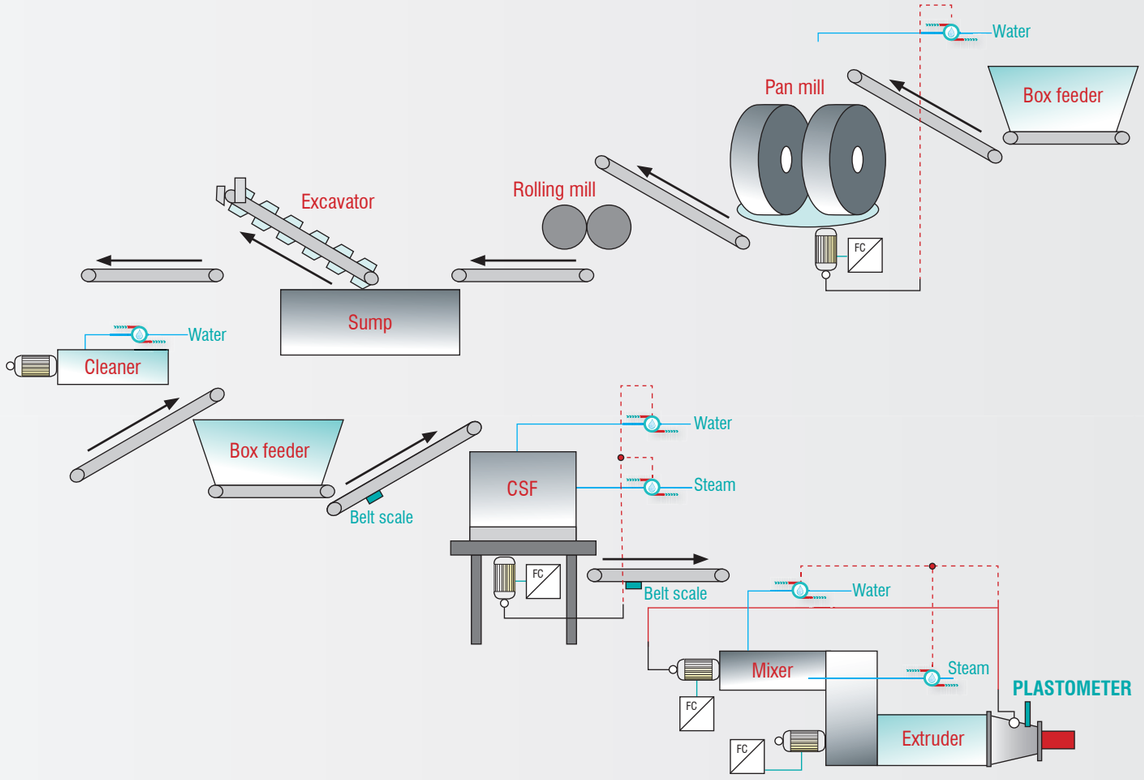
- Quality improvement
- Performance optimisation of the moulding process
- Energy saving at the dryer
- Reduction of working hours
- User-friendly (intuitive operating interface)
- Internal data exchange by interlinking
- High degree of availability by means of remote maintenance / diagnostic

NOVATRONIC C3

CONTROL
OF UP TO 5 PROCESSING MACHINES

The following parameters can be employed for controlling the plasticity by addition of cold/hot water and/or steam, as well as dry matter, also combined:

- Power consumption
- Flow pressure in pressing head
- Material moisture
- Material temperature
- Material throughput



Example: Typical preparation/moulding line

HARDWARE

The **NOVATRONIC C3** system can be supplied in a wall housing as well as in 19“ execution for installation in existing control cabinets. Regarding the PLC there is a choice possible between a Siemens S7 or a PLC from B&R Industrieelektronik. In the standard version a 12“ TFT touch display is used as a HMI.

SOFTWARE

- Multi-touch live image menues
- Presentation of the process data
- Intuitive user interface
- Measuring watchdog function

DATA BASE

The data obtained from the production process are filed in a data base and presented graphically for evaluation. In addition to the control parameters the following data can be stored in the data base:

- Water consumption [L]
- Water temperature [°C]
- Water throughput [Lh-1]
- Material consumption [kg]
- Effective power [Ws]
- Load profile [W]

Special customer-specific features can be integrated.

CROSS LINKING

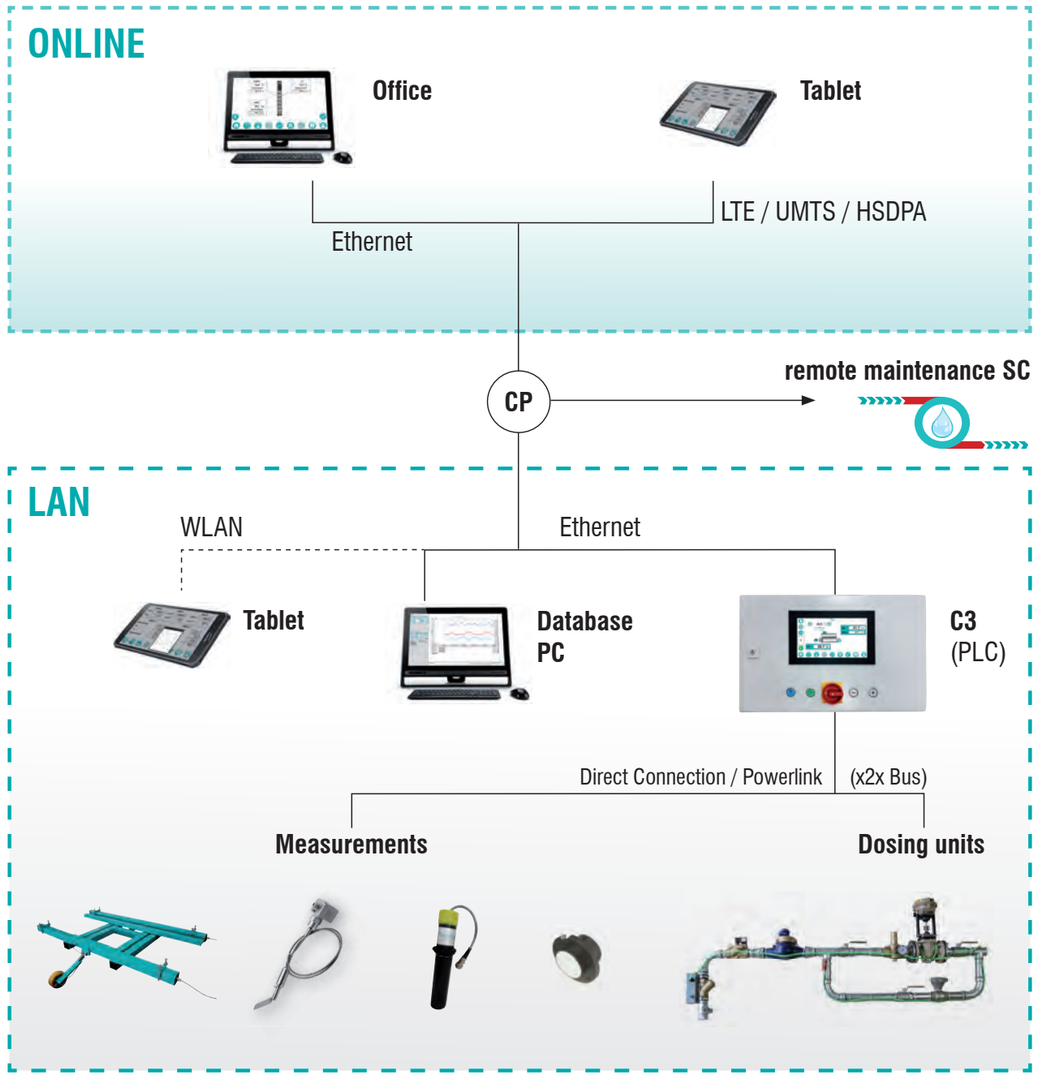
The **NOVATRONIC C3** can import all measured data into your company network.

- Data security
- Mobile HMIs / User interfaces
- Remote maintenance / diagnostic

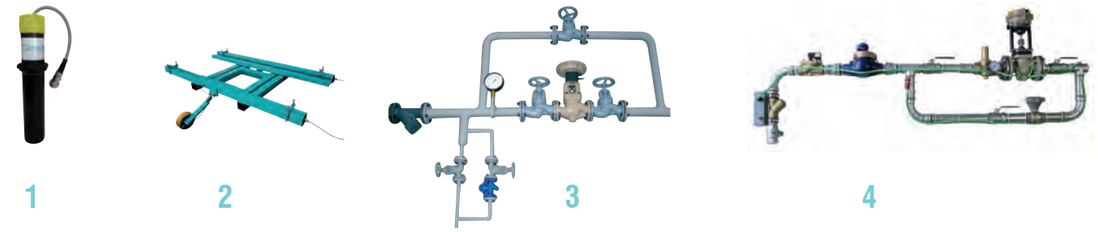
Cross Linking

With the **NOVATRONIC C3** it is possible all measured Data to import to your company network. About a secured VPN connection the data security is ensured. Thus, even the operation of the **NOVATRONIC C3** mobile or from the office possible.

With the **NOVATRONIC C3** we offer a remote service and diagnostic based on a broadband data connection for visual and acoustic communication between customers and service technicians.



EXTERNAL SENSORS AND ASSEMBLY GROUPS



1 ELECTRONIC PLASTOMETERS

Plastometers for detection of pressure value optional either with temperature sensor PT 100 and display station or with variously designed displays.

2 QUANTITY DETECTION

Belt-weighers can be integrated for the determination of material throughput. Existing weighing frames can also be integrated into the Novatronic C3 system. When the installation of a belt-weigher is impossible for technical reasons we can provide level switches for determination of throughput via belt speed and material height.

3 DOSING UNITS FOR STEAM

From DN 25 to DN 65 with electro-pneumatic proportional control valves for additions of 625 kg/h to 3750 kg/h at 8 bar.

- Supplied ready for installation

4 DOSING UNITS FOR WATER

- With impulse valves
- Throughput performance with piston stroke 1 mm
  at 1.0 bar 0 ... 500 l/h
  at 3.0 bar 0 ... 1000 l/h
- Throughput performance with piston stroke 2 mm
  at 1.5 bar 0 ... 1250 l/h
  at 3.0 bar 0 ... 2500 l/h

In case of problematic water supply and/ or large throughput volume electro-pneumatic proportional control valves are employed.

- Design size DN 15 - DN 50
- Throughput performance at 3 bar
  from 1800 l/h up to 15.500 l/h
- Supplied ready for installation

ADDITIONAL SENSORS AND ASSEMBLY GROUPS

- Measuring transducers for direct and alternating current
- Water meters
- Level measurement for monitoring material level in hoppers and containers
- Screen recorders
- Frequency converters
- Assembly groups / sensors to customer request

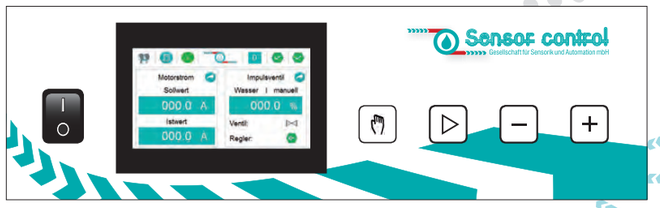
TRUST IN INNOVATION

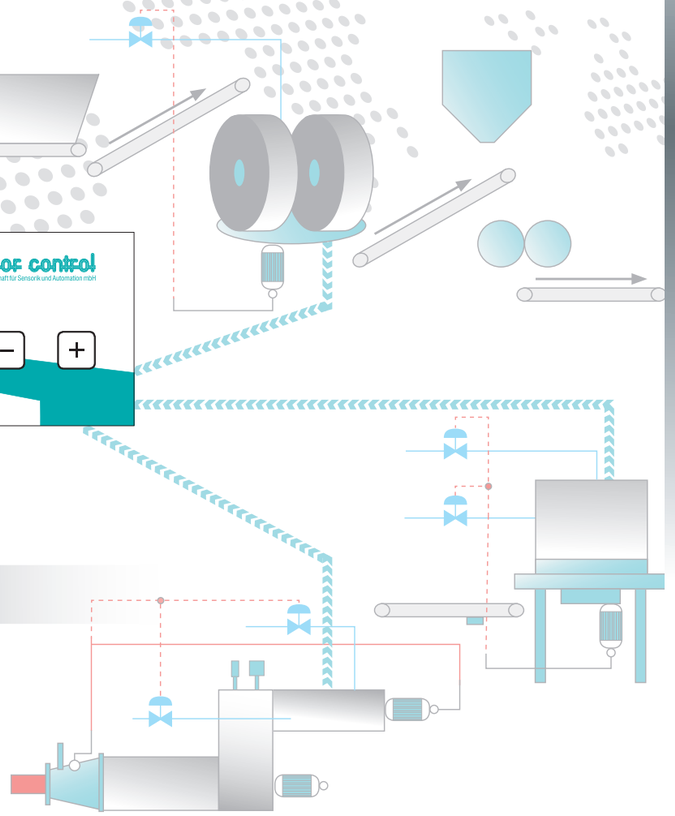
NOVATRONIC

CONTROL SYSTEMS

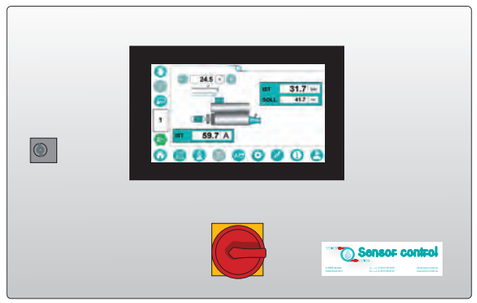
for preparation and shaping in the CLAY INDUSTRY

NOVATRONIC C2+





NOVATRONIC C3



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PLASTICITY AND MOISTURE CONTROL SYSTEM

NOVATRONIC C2+

FOR PREPARATION AND MOULDING LINES FOR

- Brick and clinker works
- Roof tile works
- Production of hand-made bricks
- Technical ceramics
- Plant/garden ceramics
- Refractory ceramics
- Expanded clay

CONTROL
OF PROCESSING MACHINE

The **NOVATRONIC C2+** can be used to evaluate following measured values:

- Power consumption
- Flow pressure in pressing head
- Material moisture
- Material temperature
- Belt scale

The processing is limited to 2 measured values.

ELECTRONIC PLASTOMETER

THE PROVEN SENSOR FOR PLASTICITY MEASUREMENT

For measuring mould pressure and clay temperature on extruders for ceramic products.

The plasticity sensor is a part of the **moisture- and plasticity control system NOVATRONIC** for preparation and shaping in ceramic production lines.

TECHNICAL DATA

Measuring range for pressure:

0... 25 bar / 0... 40 bar or in
Special measuring ranges between 4... 100 bar

Standard output signal: standard 4 - 20 mA
(also available in 0 - 10 V)

Measuring range for temperature:

Mineral-insulated resistance thermometer with Pt 100,
0... 100°C
Standard output signal: standard 4 - 20 mA

Plug:

5-pole, cable assembly, metal version
For first use, order plugs.

(other plug versions on request)

TYPES

- with and without displays according to our overview
- Shank diameter: 40 mm
- Adaptable to all extruder types
- robust, low-wear version

ELECTRONIC PLASTOMETER

OVERVIEW OF AVAILABLE VERSIONS

WITH NO DISPLAY

① 

PLASTOMETER
PRESSURE

② 

PLASTOMETER
PRESSURE / TEMPERATURE

WITH A DISPLAY ON THE MEASURING INSTRUMENT

③ 

PLASTOMETER
with one display
PRESSURE

④ 

PLASTOMETER
with two displays
PRESSURE / TEMPERATURE

⑤ 

PLASTOMETER
with a combined display
PRESSURE / TEMPERATURE

WITH AN EXTERNAL DISPLAY

⑥ 

PLASTOMETER SET
with one external display
PRESSURE

⑦ 

PLASTOMETER SET
with two external displays
PRESSURE / TEMPERATURE

	ITEM NUMBER	TYPE	DESCRIPTION
①	6AELP0401 / 955 2 004	49.011-242	only pressure 0…4 bar
	6AELP0601 / 955 2 006	49.011-242	only pressure 0…6 bar
	6AELP02501 / 955 2 025	49.011-242	only pressure 0…25 bar
	6AELP02500 / 955 2 925	49.011-010	only pressure 0…25 bar (0-10V)
	6AELP04001 / 955 2 040	49.011-242	only pressure 0…40 bar
	6AELP04000 / 955 2 940	49.011-010	only pressure 0…40 bar (0-10V)
	6AELP06001 / 955 2 060	49.011-242	only pressure 0…60 bar
	6AELP08001 / 955 2 080	49.011-242	only pressure 0…80 bar
	6AELP1001 / 955 2 100	49.011-242	only pressure 0…100 bar
②	6AELP0411 / 955 2 104	49.011-242	Pressure/temperature 0...4 bar
	6AELP0611 / 955 2 106	49.011-242	Pressure/temperature 0...6 bar
	6AELP02511 / 955 2 250	49.011-242	Pressure/temperature 0...25 bar
	6AELP02510 / 955 2 950	49.011-010	Pressure/temperature 0...25 bar (0-10V)
	6AELP04011 / 955 2 400	49.011-242	Pressure/temperature 0...40 bar
	6AELP04010 / 955 2 960	49.011-010	Pressure/temperature 0...40 bar (0-10V)
	6AELP06011 / 955 2 600	49.011-242	Pressure/temperature 0...60 bar
	6AELP08011 / 955 2 800	49.011-242	Pressure/temperature 0...80 bar
	6AELP10011 / 955 2 110	49.011-242	Pressure/temperature 0...100 bar
③	6AELP02502 / 955 2 125	49.012-242	Pressure/1 display 0...25 bar
	6AELP04002 / 955 2 140	49.012-242	Pressure/1 display 0...40 bar
④	6AELP02513 / 955 2 525	49.012-242	Pressure/temperature/2 displays 0...25 bar
	6AELP04013 / 955 2 540	49.012-242	Pressure/temperature/2 displays 0...40 bar
⑤	6AELP02514 / 955 2 825	49.012-242	Pressure/temperature/combined display 0...25 bar
	6AELP04014 / 955 2 840	49.012-242	Pressure/temperature/combined display 0...40 bar
⑥	6AELPS102515 / 955 2 625	49.012-242	Pressure/external display/15 m control line 0...25 bar
	6AELPS104015 / 955 2 640	49.012-242	Pressure/external display/15 m control line 0...40 bar
	6AELPS106015 / 955 2 660	49.012-242	Pressure/external display/15 m control line 0...60 bar
⑦	6AELPS302515 / 955 2 725	49.012-242	Pressure/temperature/2 external displays/2x 15 m control line 0...25 bar
	6AELPS304015 / 955 2 740	49.012-242	Pressure/temperature/2 external displays/2x 15 m control line 0...40 bar
	6AELPS306015 / 955 2 760	49.012-242	Pressure/temperature/2 external displays/2x 15 m control line 0...60 bar

Other pressure ranges on request.

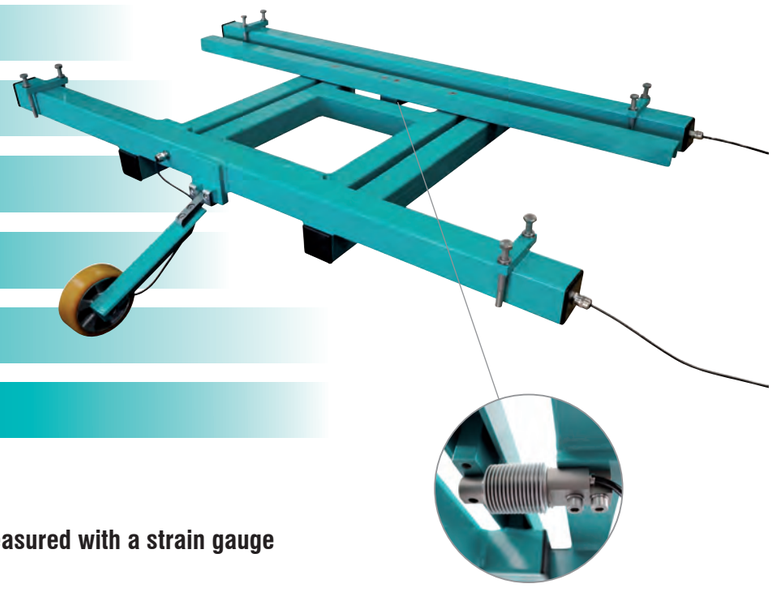
Type: 49.011-242 (4-20 mA version with 2 wire connection)
Type: 49.011-010 (0-10 V version)

CONVEYER BELT SCALE

CONTINUOUS BULK MATERIAL MEASUREMENT IN BELT CONVEYOR

The single-idler belt scale records the weight of the material on a load cell specific section of conveyor belt.

- Continuous weight recording
- Conveying rates between 45-800 t/h
- Belt widths from 500 to 1.350 mm
- Efficient data collection
- Easy installation
- Low installation depth



The weight of the conveyed material is measured with a strain gauge bending beam load cell.

The current belt speed is continuously recorded by the measuring wheel with the speed sensor. The flow rate [t/h] is then calculated from these two variables.

The evaluation of the signals and the calculation of all values is carried out via a PLC, which is integrated in a compact control cabinet. This unit is equipped with a Profinet interface as standard.

ASSEMBLY ON THE CONVEYOR BELT

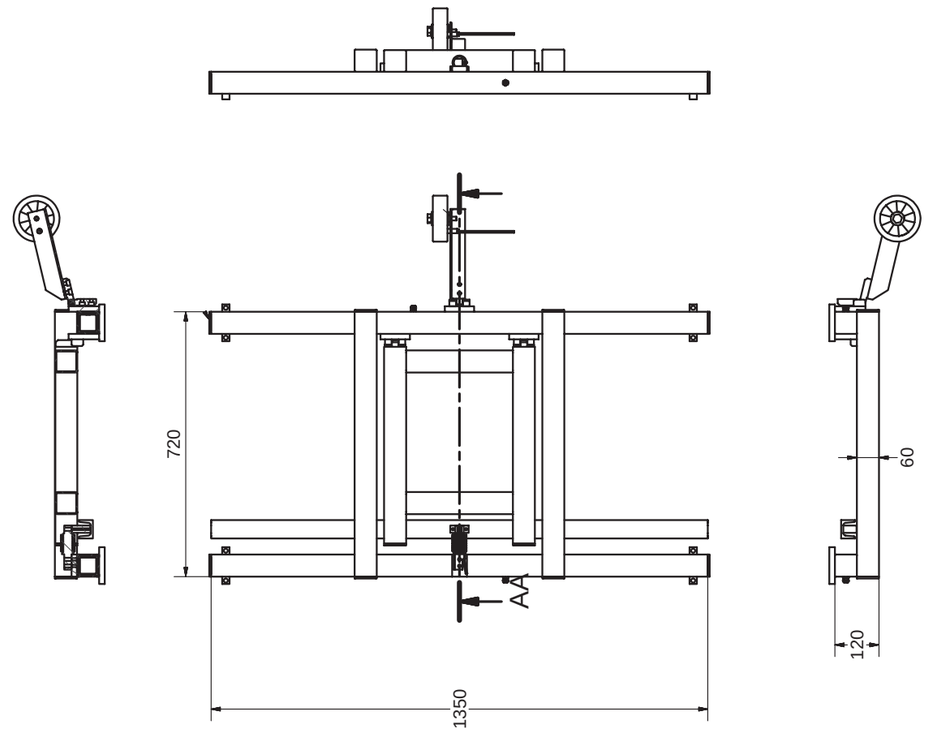
The scale can be used for universal application in almost every conveyor.

The belt scale can be easily mounted in belt conveyors. The support bars of the scale are easily screwed upon the conveyor.

Due to the standardized design, the belt scale construction can be adapted to different conveyor belt widths by shortening the bars.

TECHNICAL DATA

Version: lacquered
Material load cell: stainless steel
Achievable accuracy: ± 0,03 %
Degree of protection load cell: IP 68
Mechanical overload capacity: max. 5 times the nominal load, based on the nominal conveying distance
Maximum flow rate: approx. 800 t/h
System accuracy: typically 1-2 % between 20 and 100 %
Operating temperature: -20 °C ... +50 °C
Band width spectrum: 500 - 1,350 mm, depending on the band width on site



MOISTURE SENSOR SC-7800

CAPACITANCE MEASUREMENT

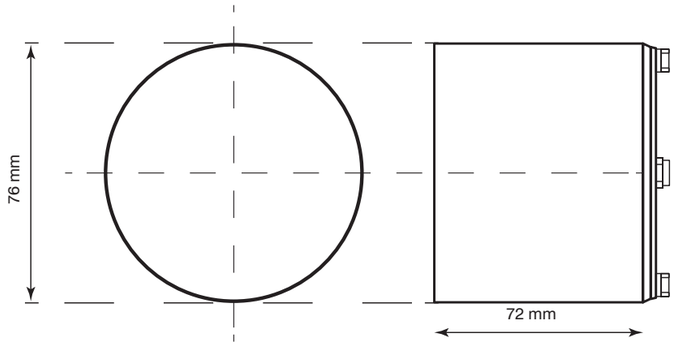
For the measurement of the moisture in bulk material to build in walls / bottoms of mixing and preparation machines, silos, bins and hopper.

High depth of penetration

Easy calibration

Fast integration in available control units

Preferably used for the preparation of mineral bulk materials



TECHNICAL DATA

PROTECTION OF ELECTRONIC

Overvoltage, reverse polarity and short-circuit of the output. All inputs and outputs are protected against disturbances with suppression filters.

MOUNTING OF THE SENSOR EDGE

- adjustable between 0-50 mm

MEASUREMENT RANGE & CALIBRATION

0 and % adjusting trimmer for calibrating the sensor. These allowone to adjust the measuring window of the probe to the desiredrange of moisture measurements for the material. Accessible only through a water tight screw on the sensor cover.

ENVIRONMENTAL CONDITIONS

Standard: up to+50°C
Optional: up to+80°C

PROBE FEEDING

- 24 V DC

DEGREE OF PROTECTION

- IP68

MATERIAL TEMPERATURE SENSOR

- PT100 (optional)

SENSOR WEAR PROTECTION

Standard: Plastic surface
Special-Ceramic: 3mm strong, extremely abrasion-resistant, brittle
Special-Rubber: Abrasion resistant, shock resistant
Teflon: Food-safe, low material adhesion

CONFORMANCE

- CE-Conform EMV89/336EWG

LIGHTNING PROTECTION

In open air installations, the sensor can be damaged by lightning. In addition to reducing the risk by observing the guide lines laid down in the standard, VDE 185, parts 1 and 2, it is necessary to equalize the potential between the sensor and the processing electronic unit. This is achieved by earthing the cable shielding at both ends.

SIGNAL OUTPUT

0-20 mA, 4-20 mA
Load resistance: 500 Ω 0,1%, TK = 25 ppm

CURRENT CONSUMPTION

- 70mA at 24 V power supply

PROBE CONNECTION

- 5-pin connector

TF 6-100

CONTACT TEMPERATURE SENSOR

The temperature sensors of the TF 6 series are used when ever it is reasonable to detect the temperature in the material instead of measuring it´s surface temperature.

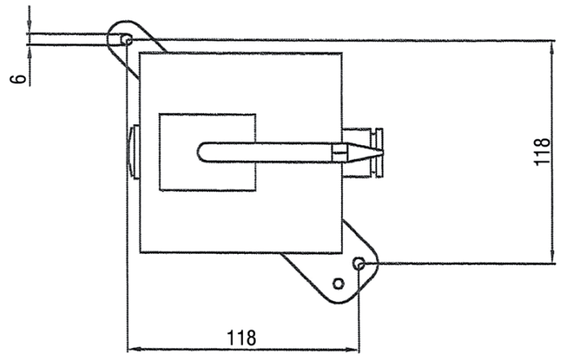
The TF 6 temperature sensor can be used in batch scales or silos, but also on belt conveyors as well.

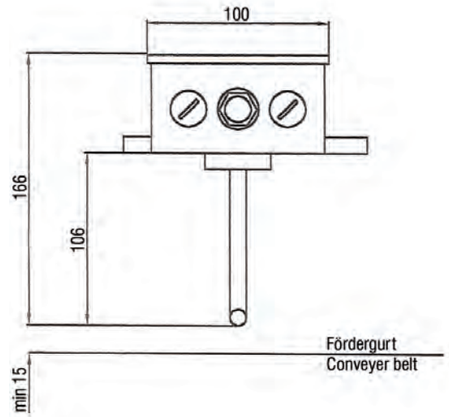
The holder of the thermo element is made of tempered stainless steel, guaranteeing best results even in longer measuring periods. On demand, we will also offer you the device with a ceramics covering.

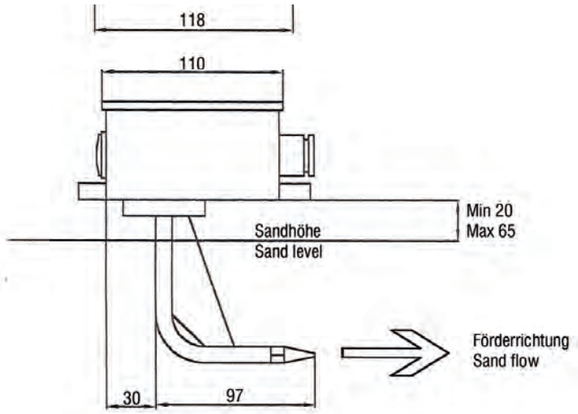
TECHNICAL DATA

Temperatur	**100°C**
Toleranz max.	**+/- 1,5%**
Thermoelement	**Pt 100**
Eichung	**0-100°C**
Ausgang	**4-20mA**

CONVEYOR INSTALLATION



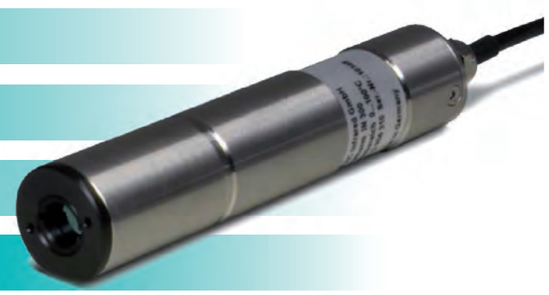




NON-CONTACT INFRARED TEMPERATURE SENSOR TF-300

2-WIRE TECHNIQUE FOR NON-CONTACT TEMPERATURE MEASUREMENT OF NON-METALLIC SURFACES BETWEEN -20°C AND 600°C

- Very small housing dimensions for easy installation, suitable for use in confined spaces
- 2-wire technique for current supply and temperature measurement at the same time
- Stainless steel housing
- Easy electrical and mechanical installation
- Suitable for food industry
- Ambient temperature up to 70°C without cooling



The TF 300 is a stationary pyrome- Typical applications are measurements on: ters for non-contact temperature measurement of non-metallic surfaces or painted, coated or anodized metals.

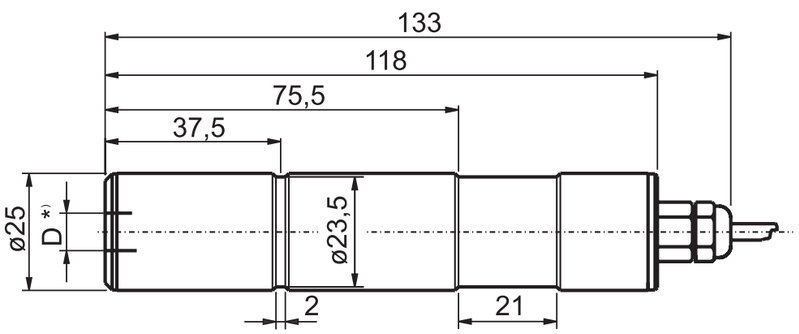
The very small housing dimensions enable the integration of the pyrometer into compact production machines, the 2-wire technique enables very easy electrical connection. The solid and robust design of the instrument guarantees high operational safety even in rough industrial environments.

TYPICAL APPLICATIONS / MEASUREMENTS ON

- Plastics
- Rubber
- Paper
- Ceramics
- Textiles
- Food
- Fluids
- Painted parts
- Asphalt
- Wood
- Glass
- Coated metals

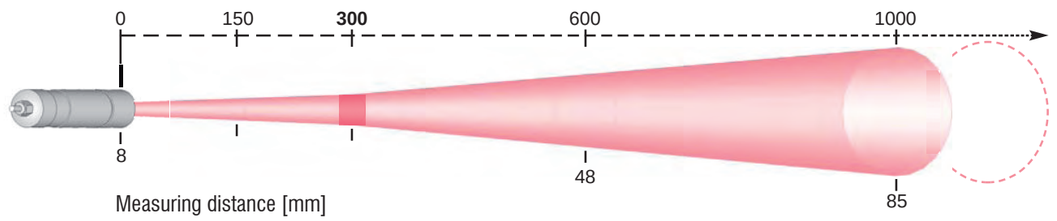
STANDARD DELIVERY

- TF with 2m cable
- inspection sheet
- User Guide



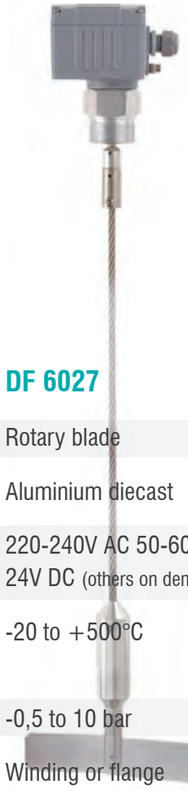
TECHNICAL DATA

MEASURING RANGES	0 ... 100°C 0 ... 500°C 0 ... 200°C 0 ... 600°C -20 ... 300°C
SPECTRAL RANGE	8 ... 14 μm
OPTICS	Ge-Linse
OUTPUT	4 ...20 mA, load independent current, temperature linear
MAX. LOAD	500 Ω at 24 V power supply
EMISSIVITY ε	0,4 ...1; adjustable
RESPONSE TIME t_{90}	300 ms
UNCERTAINTY	1,5% of measuring range / °C (ε =1, T_U=23°C)
REPEATABILITY	1% of measuring range
TEMPERATURE DEPENDENCE	0 ... 60%: 0,03% of measuring range per °C (23°C)
DISTANCE RATIO	15:1
POWER SUPPLY	24 V DC ± 25% stabilized, ripple < 50mV
AMBIENT TEMPERATURE	0 ... 70°C
STORAGE TEMPERATUR	-20 ... 70°C
HOUSING	stainless steel
PROTECTION CLASS	IP65 (DIN 40 050)
WEIGHT	215 g
CONNECTION CABLE	2 m length, fixed
CE-LABEL	according to EU directives about electromagnetic immunity



LEVEL MEASUREMENT IN THE CERAMIC INDUSTRY

	DF 6011	DF 6024	DF 6026
MESURING METHOD	Rotary blade	Rotary blade	Rotary blade
BODY	Aluminium diecast	Aluminium diecast	Aluminium diecast
POWER SUPPLY	220-240V AC 50-60Hz (others on demand)	220-240V AC 50-60Hz or 24V DC (others on demand)	220-240V AC 50-60Hz or 24V DC (others on demand)
TEMPERATURE RANGE	-20 to +70°C	-25 to +80°C	-25 to +500°C
PRESSURE	-0,5 to 1 bar	-0,5 to 10 bar	-0,5 to 10 bar
PROCESS CONNECTION	Winding or flange Different sizes	Winding or flange Different sizes	Winding or flange Different sizes
PROBE	Different sizes Stainless steel	Different sizes Stainless steel	Different sizes Stainless steel
MOUNTING POSITION	all positions	all positions	vertical position
BOOM LENGTH			
- ROPE	2000 mm	-	1500 mm
- SHAFT	-	2000 mm	-
DEGREE OF PROTECTION	IP 66	IP 66	IP 66
CERTIFICATE	ATEX / STAUB	ATEX / STAUB	ATEX / STAUB



	DF 6027	VF 6410	MF 6200
MESURING METHOD	Rotary blade	Vibration	Membrane
BODY	Aluminium diecast	Aluminium diecast	Aluminium diecast
POWER SUPPLY	220-240V AC 50-60Hz or 24V DC (others on demand)	20-200V AC / DC 24V DC (others on demand)	250V 6A AC potential-free change-over contact
TEMPERATURE RANGE	-20 to +500°C	-20 to +60°C (Environment) -20 to+80°C (Bulk)	potential-free change-over contact
PRESSURE	-0,5 to 10 bar	max. 10 bar	-30 to +200°C
PROCESS CONNECTION	Winding or flange Different sizes	G1¼", NPT 1	-
PROBE	Different sizes Stainless steel	Stainless steel	Membrane sensitivity adjustable 100-550g
MOUNTING POSITION	vertical position	all positions	all positions
BOOM LENGTH			
- ROPE	10000 mm	-	-
- SHAFT	-	-	-
DEGREE OF PROTECTION	IP 66	IP 66	IP 66
CERTIFICATE	ATEX / STAUB	ATEX / STAUB	-

LEVEL MEASUREMENT

CONTINUOUS LEVEL MEASUREMENT OF BULK MATERIALS

	Guided Microwave MW-20	Ultrasonic Sensor US-20
MESURING METHOD	radar	ultrasonic
POWER SUPPLY	12-30V DC	18-36V DC
AUSGANG	4 ... 20mA	4 ... 20mA
MEASURING RANGE	up to 20 m, rod or rope probe	up to 20 m
BULK MATERIAL TEMPERATURE	-20°C to +150°C	up to 70°C
ATEX	Staub EX	Staub EX
DEGREE OF PROTECTION	IP 66	IP 67
PROCESS CONNECTION	numerous process connections von Gewinde G 1“ bis Flansch	numerous process connections von Gewinde G 1“ bis Flanschsch
	Further information on request	Further information on request

HUMIDITY TRANSMITTER LF

QUICK - STABLE - ROBUST

Humidity transmitter for applications in laboratory and climate control, drying technology, wood pro-cessing industry, food industry, building industry, agriculture, printing and paper industry, ani-mal feed industry, biotechnology and pharmaceutical industry

- relative air humidity 0 ..... 100%
- Optionally selectable moisture indicators
- dew point -55 to +60°C
- absolute air humidity 0 to 130 g/m³
- material equilibrium moisture content

YOUR BENEFITS

- Long durability thanks to a strong industrial design
- High long-term stability and repeat accuracy
- Little time and effort for installation
- Standard outputs 4 to 20 mA for moisture and temperature with all LF types
- USB und ethernet outputs available in different types

TECHNICAL SPECIFICATIONS

LF 60 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER
Temperature range -20°C to +60°C

- calibration +/- 0,3°C (+10 to +60°C)
- calibration +/- 2% (10 to 90%)
- plastic tube Ø 12 x 100 mm

LF 90 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER
Temperature range -20°C to +90°C

- calibration +/- 0,3°C (+10 to +60°C)
- calibration +/- 2% (10 to 90%)
- stainless steel tube Ø 12 x 125 mm

LF 120 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER
Temperature range -20°C to +120°C

- calibration +/- 0,3°C (+10 to +60°C)
- calibration +/- 2% (10 to 90%)
- stainless steel tube Ø 12 x 500 mm

LF 150 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER
Temperature range -20°C to +150°C

- calibration +/- 0,3°C (+10 to +60°C)
- calibration +/- 2% (10 to 90%)
- stainless steel tube Ø12 x 750 mm

LF 180 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER
Temperature range -20°C to +180°C

- calibration +/- 0,3°C (+10 to +60°C)
- calibration +/- 2% (10 to 90%)
- sensor head 1 meter cable,
  incl. stainless steel sinter sensor cap
- sensor head Ø 12 mm

LF-ETHERNET 60 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER with ethernet interface
Temperature range -20°C to +60°C

- calibration +/- 0,3°C (+10 to +60°C),
- calibration+/- 2% (10 to 90%)
- output of moisture and temperature with ethernet (RJ45 socket)
- power supply 5VDC 300mA with USB Mini B socket
- protection class of electronic housing IP 65
- plastic tube Ø 12 x 100 mm

LF-USB 60 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER with USB interface
Temperature range -20°C to +60°C

- plastic sensor tube Ø 12 x 100 mm with filter

LF-ETHERNET 90 DIGITAL HUMIDITY TEMPERATURE TRANSMITTER mit Ethernet Schnittstelle
Temperature range -20°C to +90°C

- stainless steel sensor tube Ø 12 x 400 mm

OPTIONS

- Display
- relay output for moisture
- RS232 interface
- USB interface
- Bluetooth (together with USB interface)
- Ethernet
- Profinet interface
- Modbus interface

EXTENSIONS / ACCESSORIES

- Calibration equipment for instrument for probe
- Certified calibration ampoules - set of 5, 50% r.h.
- Certified calibration ampoules - set of 5,
  2 x 35% rel.h., 1 x 50% rel.h., 2 x 80% rel.h.
- Plastic sensor cap, white, with or without filter
- Stainless steel sinter sensor cap
- Drip-catcher for LF-T transmitter
- Bronze sinter sensor cap
- screening / calibration of the LF-Series
- Factory calibration certificate Protocol documenting the adjustment at delivery for air humidity meters

MOISTURE ANALYZER IR 35

THE LABORATORY SCALE FOR MOISTURE MEASUREMENT

Metal heating elements

German technology

3-year warranty

TECHNICAL DATA

Sample heating	Infrared heating using metal heating elements
Readability	0,01 %
Temperature range	40°C to 160°C
Analysis mode	Fully automatic timer settings 0,1 - 99min
Readouts	% moisture, % dry weight, % RATIO, residue in g
Weighing capacity	35 g
Accuracy of measurement	1 mg
Reproducibility	initial sample weight approx. 1 g ± 0.2
Data interface	RS-232C, for data transmission to a printer or a computer
Accessories	Disposable sample pans, data printer

WATER- AND DAMP DOSING UNITS

DOSING UNITS FOR WATER

- throughput with piston lifting 1 mm
  at 1.0 bar 0…. 500 l / h, at 3.0 bar 0…. 2500 l / h
- throughput with piston lifting 2 mm
  at 1.5 bar 0….. 1250 l / h, with 3.0 bar 0… 2500 l / h
- connection ¾”
- ready-to-install assembled

Water dosing unit with dosing valve
DEW 2500/1-2

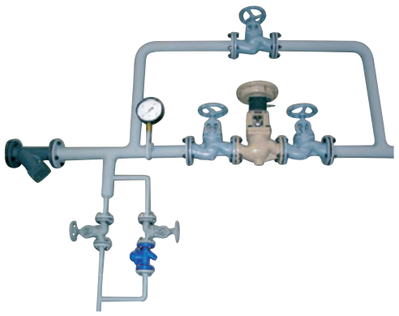
By sensitive water lines and / or high throughput electro-pneumatically proportional regulating valves preferred

- size DN 15 - DN 50
- throughput at 3,0 bar from 1800 l / h to 15.500 l / h
- ready-to-install assembled

Water dosing unit with electro-pneumatic valve
WDU - complete piping

DOSING UNITS FOR DAMP

From DN 25 to DN 65 with electro-neumatically proportional regulating valves for additions at 8 bar from 625 kg / h to 3750 kg / h
- ready-to-install assembled

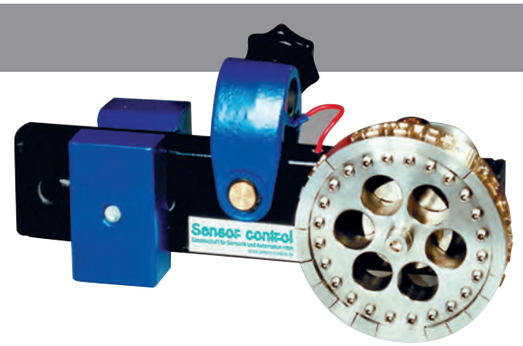


Steam dosing unit with electro-pneumatic valve
DDU - complete piping

MARKING METHODS

MARKING ROLLERS

The proven Type 85 and Type 94 marking rollers can be used to mark clay column products.



Characteristics Type 85

The economic simple solution with segments made of brass. Used for individual engravings, such as Arabian letters and individual marks.

Merkmale Typ 94

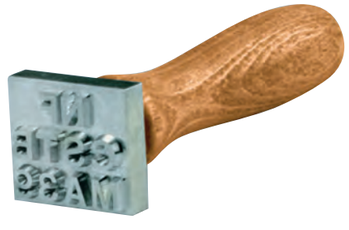
- long life
- the marking elements can be individually designed
- non-sticking due to electrical separation
- the marking elements are easily exchangeable
- marking segments made of stainless steel
- bearing roll made of stainless steel
- bearing bracket made of plastic

NON-STICKING VOLTAGE TRANSMITTER

For each marking roll a non-sticking voltage transmitter is delivered. This will be connected to 230V/50Hz and transmitts a harmless voltage which is in agreement with the regulations on low voltages. The marking roll and power supply unit are connected by a two-core cable. When placing orders the column temperature has to be stated in the order sheet.

MANUAL STAMP

This kind of manual marking is used in the earthenware industry when marking sleeves or sheets. The manual marking method is used also in the fine ceramics and chinaware industries.



QUESTIONNAIRE

for the instrumentation of the plasticity control in a preparation / shaping in the heavy clay industry with a NOVATRONIC control system. These information are necessary and basis for the preparation of a quotation, manufacturing and configuration for an ordered system.

Customer:

Adress:

Plant:

Phone: Telefax:

Contact person:

Manufactured products:

(for example roof tiles, bricks, etc.)

For the instrumentation provided product line:

hourly output:

1. MACHINERY EQUIPMENT

DOUBLE SHAFT MIX

Type:

Motor data:

Current range:

controlled with frequency inverter ◯ Ja ◯ Nein

DC or AC, by frequency inverter output signal for the current consumption with advice of the measuring range in A

0/4 … 20 mA DC or 0 …10 V DC = 0 …….. ? A

= A

SIEBRUNDBESCHICKER

Type:

Motor data :

Current range:

controlled with frequency inverter ◯ Ja ◯ Nein

DC or AC, by frequency inverter output signal for the current consumption with advice of the measuring range in A

0/4 … 20 mA DC or 0 …10 V DC = 0 …….. ? A

= A

SINGLE SHAFT MIXER

Type:

Motor data:

Current range:

controlled with frequency inverter ◯ Ja ◯ Nein

Gleich- oder Wechselstrom, bei Frequenzumformer Ausgangssignal für die Stromaufnahme mit Angabe des Messbereiches in A

0/4 … 20 mA DC oder 0 …10 V DC = 0 …….. ? A

= A

KOLLER / MILL

Type:

Motor data:

Current range:

controlled with frequency inverter ◯ Ja ◯ Nein

Gleich- oder Wechselstrom, bei Frequenzumformer Ausgangssignal für die Stromaufnahme mit Angabe des Messbereiches in A

0/4 … 20 mA DC or 0 …10 V DC = 0 …….. ? A

= A

SCREW PRESS / EXTRUDER

Type:

Motor data:

Current range:

controlled with frequency inverter ◯ Ja ◯ Nein

Pressure:

Pressure temperature:

2. ADDITIVES

Water: Steam: Dry materials:

DOSING WATER

Water min.: Water max.:

Water pressure:

Pipe diameter in inches:

Water origin: ◯ Silo ◯ Well - Pump ◯ Public network

DOSING STEAM

Steam quantity min.: Steam quantity max.:

Steam pressure (bar) min.: max.:

Steam temperature:

Pipe diameter in inches:

DOSING DRY SUBSTANCES

Kind:

Type:

Drive in KW:

3. MOISTURE CONTROL

Moisture before regulation:

min (% atro)

max (% atro)

desired moisture (% atro)

atro = absolut dry

4. WEIGHTING

Additonal connection of a belt scale

0/4 … 20 mA DC or 0 …10 V DC = 0 …….. ? t / h

= t / h

5. SET POINT

Additional connection for an external set point for the pressure by PLC

0/4 … 20 mA DC or 0 …10 V DC = 0 …….. 25 bar / 40 bar

= bar

6. OIL PRESSURE (bar) by dies lubrication

Min.: max.:

(only if cascade control or stiff extrusion)

7. OTHER CUSTOMER REQUIREMENTS FOR THE SYSTEM

8. WHAT IMPROVEMENTS OVER THE CURRENT SITUATION, ONE SHOULD USE THE NOVOTRONIC CONTROL SYSTEM WILL BE SCORED?

- We also offer humidity control systems for continuous mixers, cooling units, cooling / unpacking drums and Pre-moistening sections on belts. Please give us technical information/drawings for an offer.
- Level indicators for your silos and containers are also part of our range of services. Please provide your specification.
- We also modernize your mixer control based on the Siemens S7 series. Please give us your specifications for an offer.

Produktkatalog_Einsatzgebiet KERAMIK_englisch_06 -2022

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