

# HASLER

**PRODUCT**  
INFORMATION

Checks the real kiln production and allows to calculate the raw meal / clinker ratio



## Smart Apron Scale

Apron conveyor  
Belt Scale



100%  
DIGITAL

- Accuracy  $\pm 1\%$
- Two SFT™ 100% digital load cells with very high resolution (1:1'000'000)
- Essential information for the determination of the clinker production
- Universal design for all apron conveyor types
- High performances

**HASLER**

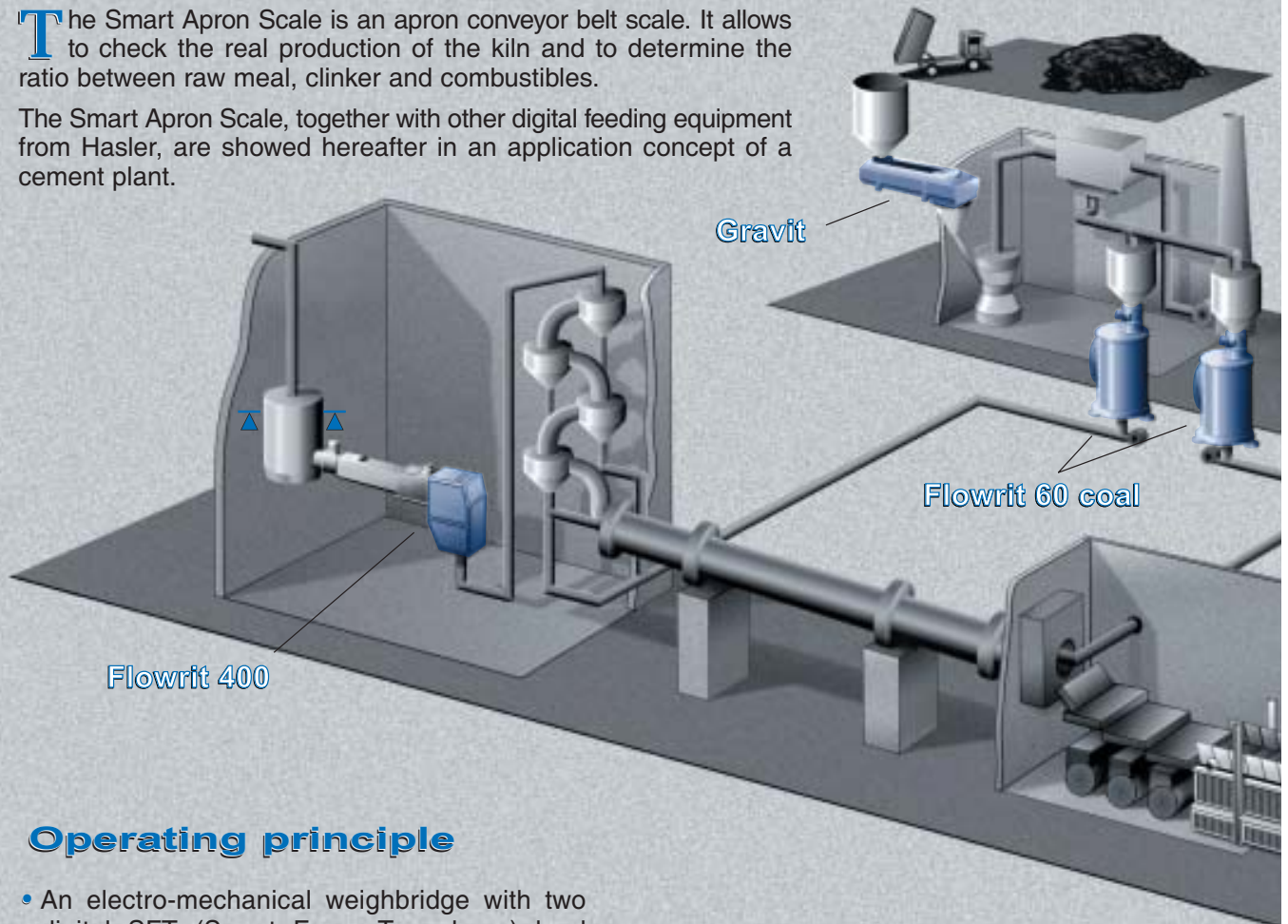
# Smart Apron Scale

## Apron conveyor Belt Scale

### Application

The Smart Apron Scale is an apron conveyor belt scale. It allows to check the real production of the kiln and to determine the ratio between raw meal, clinker and combustibles.

The Smart Apron Scale, together with other digital feeding equipment from Hasler, are showed hereafter in an application concept of a cement plant.



### Operating principle

- An electro-mechanical weighbridge with two digital SFT (Smart Force Transducer) load cells is inserted into the apron conveyor for the accurate flowrate measurement.
- The SFT load cells are factory calibrated for life - no field calibration with reference weights are ever required.
- No weighbridge misalignment error thanks to the deflection free measurement by the SFT.
- Smooth vibration free weight acquisition thanks to uncut rails in the weighing area. This eliminates the known weighing errors with traditional scales caused by the rollers passage over the rail cut.
- The conveyor speed is measured by an incremental encoder mounted on the drive shaft.

- ➔ SFT™ 100 % digital load cell with very high resolution (1:1'000'000)



SFT the intelligent weighing technology!

# Smart Apron Scale

Apron conveyor Belt Scale

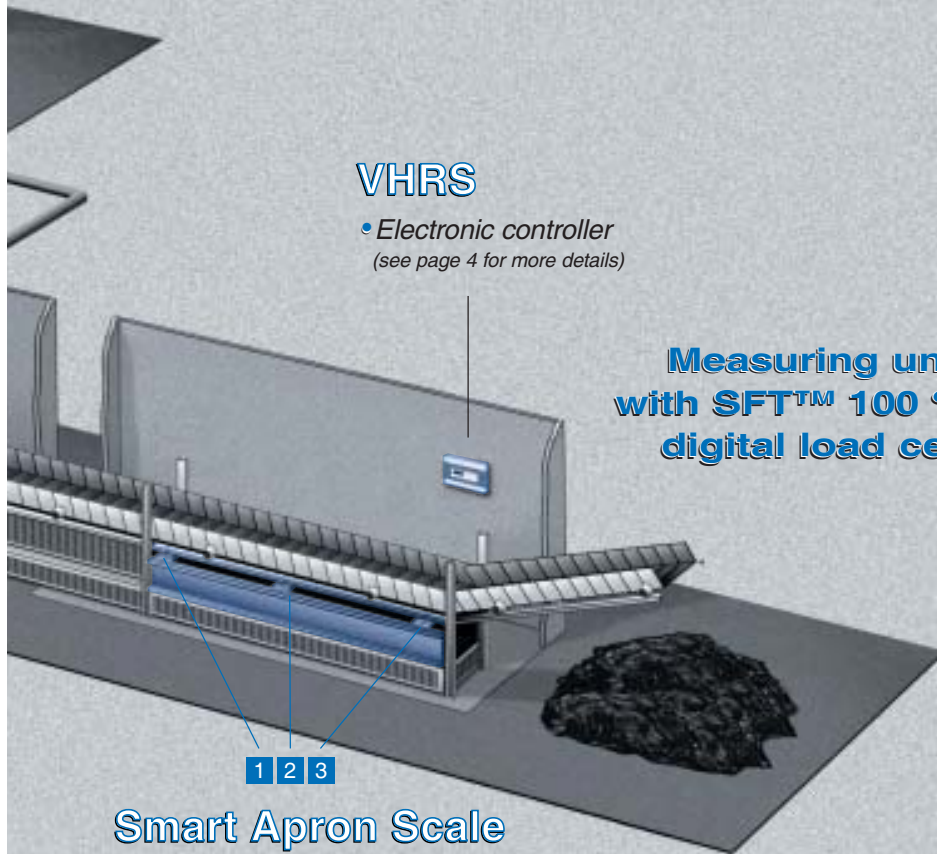
**Complete downstream articulation block**



**VHRS**

- *Electronic controller*  
(see page 4 for more details)

**Measuring unit with SFT™ 100 % digital load cell**



1 2 3

**Smart Apron Scale**



**Complete upstream articulation block**

- ➔ For better accuracy, the Smart Apron Scale should be installed horizontally.



## PRODUCT

- **Connected to a VHRS electronic controller**  
- panel or wall versions - with following interfaces:



### in standard

- Through isolated digital input / output :
- totalizers 1 and 2
  - out-of-range indicator
  - out-of-range acknowledgement
  - start printer
- Isolated 0/4-20 mA analog output :
- flow rate

### in option

- Serial communication, isolated :
- RS 232, RS 422 or RS 485 using a J-Bus / Modbus protocol for a connection with a PLC or host computer or
  - RS 232 connection with a printer

## Technical Specifications

<b>Accuracy :</b>	+/- 1 %
<b>Distance :</b>	
• between rails :	600 - 2'000 mm
• between rollers :	600 - 1'500 mm
<b>Total load per axle :</b>	1'000 kg max.
<b>Space required :</b>	
• horizontal length :	≥ 5'000 mm
<b>Conveyor speed :</b>	all ranges
<b>Rails :</b>	
• Type DIN 5901/02 :	S12 - S49
• Type U PN :	8 - 14
• Type U AP :	80 - 150
<b>Standard colour :</b>	Rosso Solido (purple), equivalent pigment RAL 4031
<b>Protection class :</b>	IP 65, NEMA 4
<b>Load cells :</b>	100 % digital Smart Force Transducer (SFT)

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