

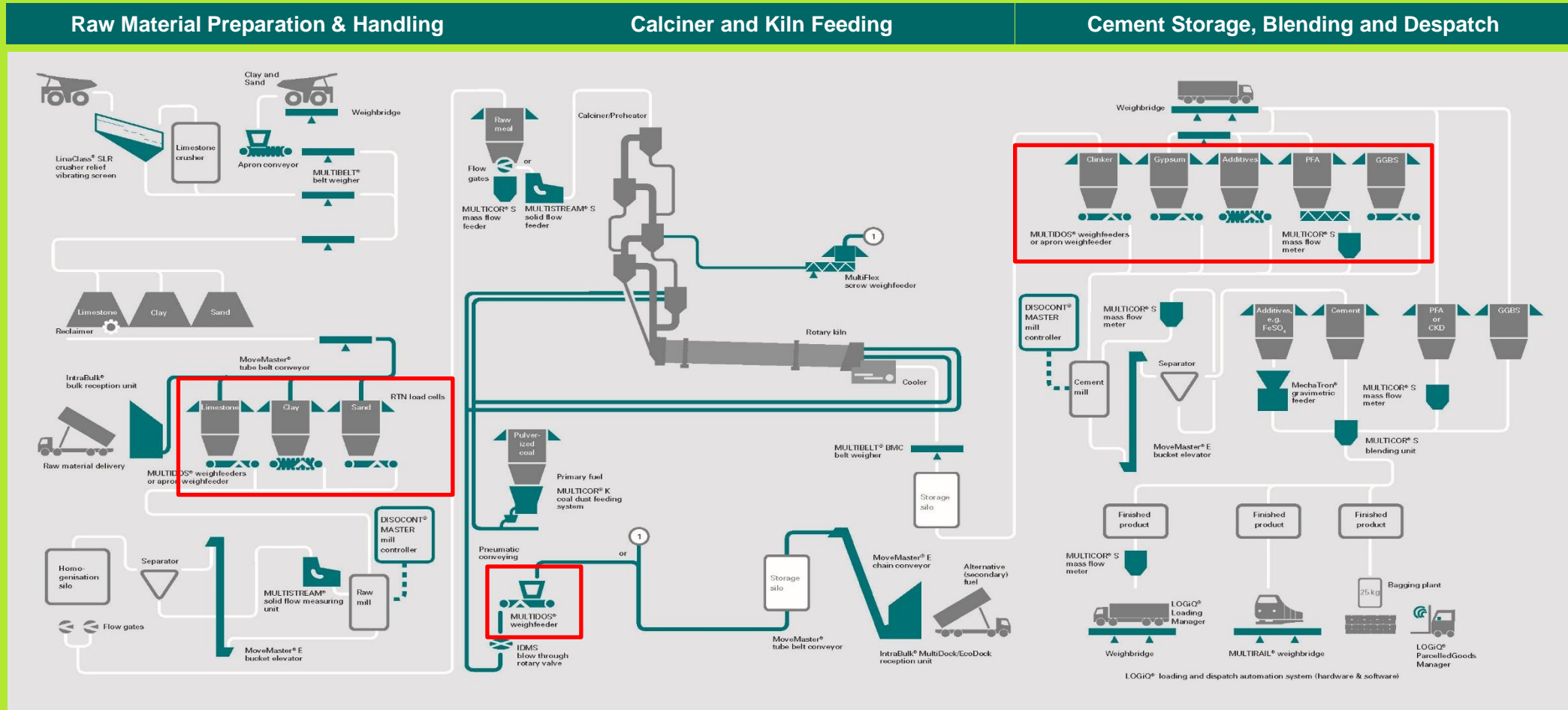
Qlar

Qlar Europe GmbH

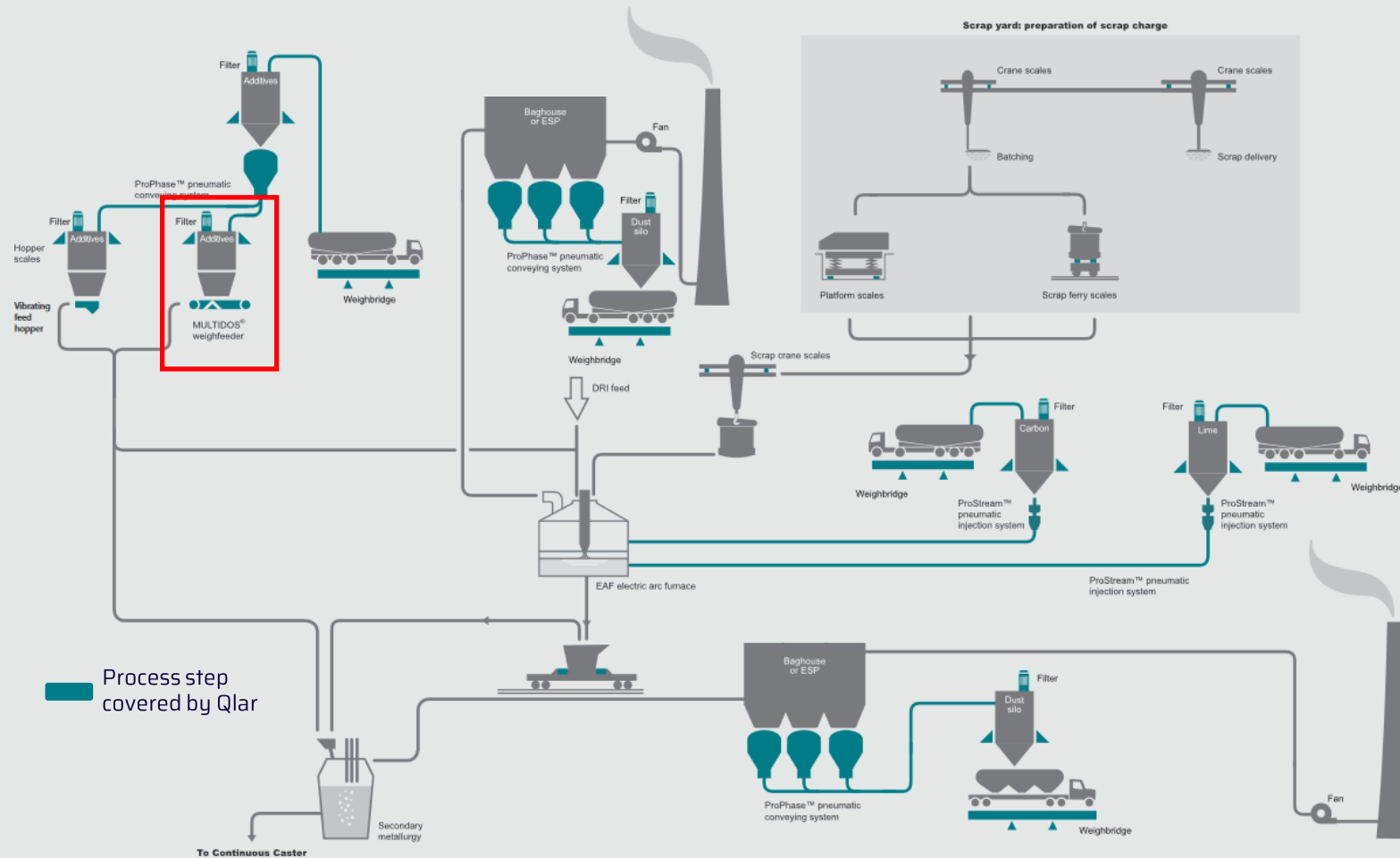
Weighfeeder

May 2025





Green Steel Process



Weighfeeder Typical materials

Raw Materials

- Limestone
- Clay
- Marl
- Corrective components
- Iron ore
- Pyrite
- Bauxite
- Coal
- Sand
- Lime hydrate
- Coke
- Puzzolana



Cement Mill:

- Clinker
- Additives
- Gypsum (Natural or Rea-)
- Slag



Mill Feeding input data's

Qlar

Questionnaire Multidos® - for mill feeding

Date:

Company:

Contact Person:

Phone No.:

E-Mail:

Project Name / No.:

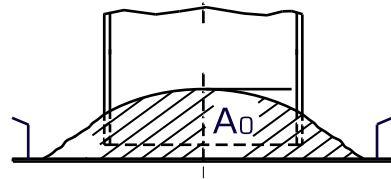
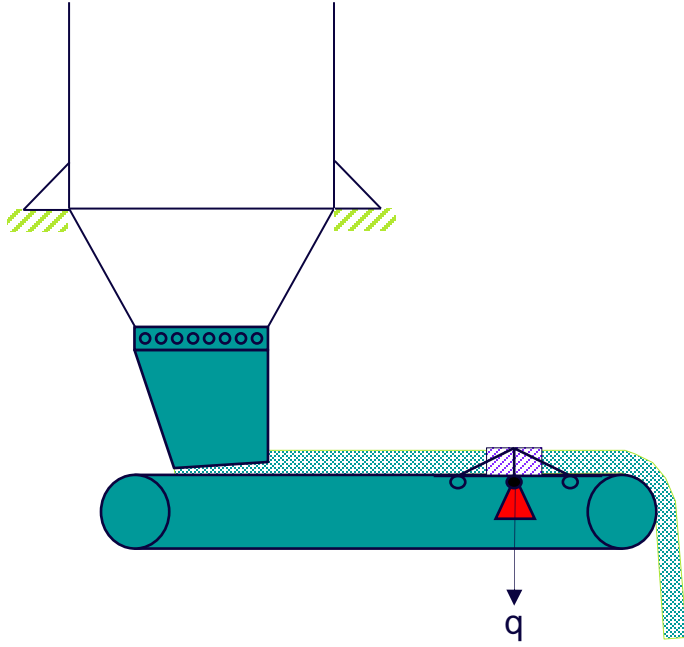


Information about scope of quotation	Feed material data
New installation / plant	Bulk material name (please specify)
Modernization	Bulk density [t/m³]
Replacement / substitute	Grain size [mm]
Machine from other manufacturer	Moisture max [%]
Qlar serial no.:	Flow properties:
Cement mill	Flushing <input type="checkbox"/> Sticky <input type="checkbox"/>
Raw mill	Free flowing <input type="checkbox"/> Slightly sluggish <input type="checkbox"/>
Feed range [15 - 110 - 120]	Non-adhesive <input type="checkbox"/> tending to bridging
Nominal feed rate [t/h]	Material temperature [°C]

Qlar

Mill Feeding

Weighfeeder - How it works?

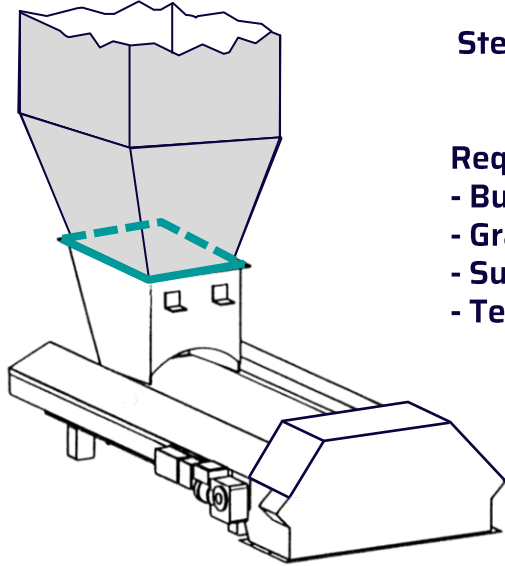


$$q = A_0 \cdot \gamma$$
$$\dot{m} = q \cdot v \cdot 3,6$$
$$v = \dot{m} \cdot (q \cdot 3,6)^{-1}$$

- | | | |
|-----------|--------------------------|----------------------|
| V | = Belt speed | [m/sec] |
| q | = Belt load | [kg/m] |
| \dot{m} | = Feed rate | [t/h] |
| A_0 | = Material cross section | [m ²] |
| γ | = Bulk density | [kg/m ³] |

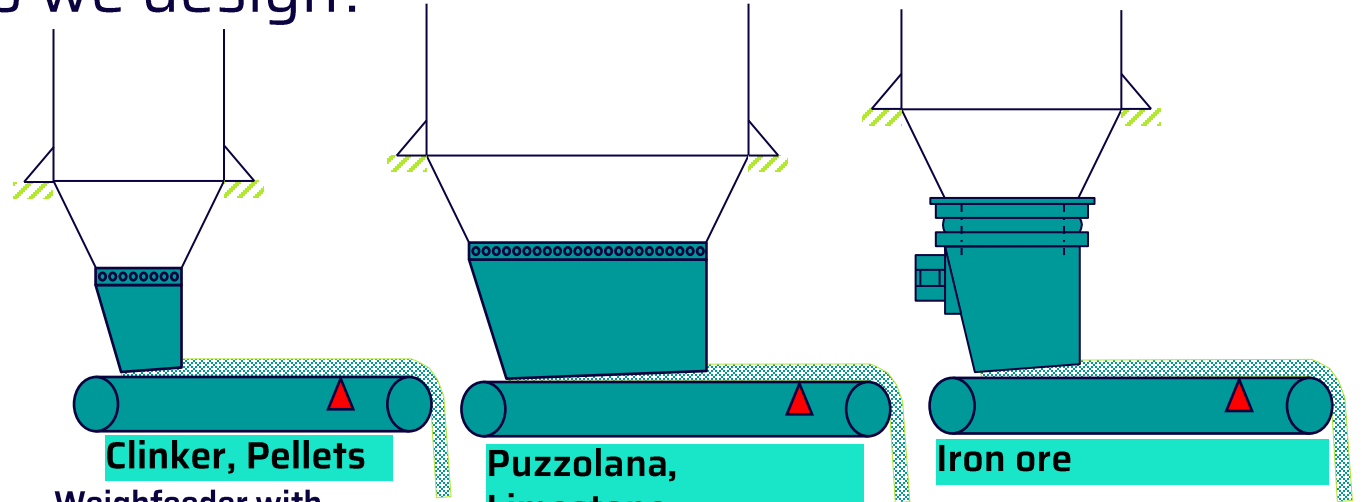


Mill Feeding Weighfeeder – How do we design?



Step 1: The right extraction for your bulk material

- Required information's:
- Bulk material [Name]
 - Grain size [mm]
 - Surface moisture [%]
 - Temperature



Clinker, Pellets

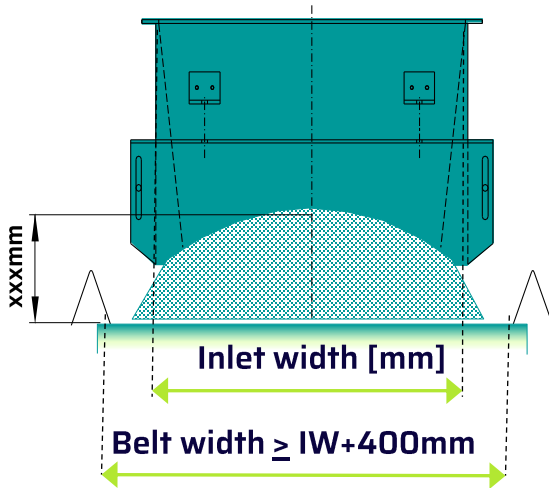
Puzzolana, Limestone

Iron ore

Weighfeeder with continuously controlled prefeeder (block control system)

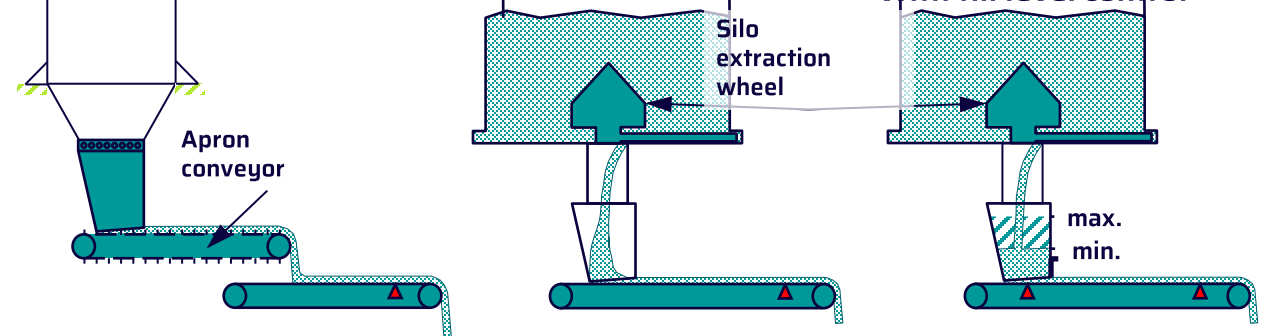
Continuous controlled block feeding

Continuous block feeding With fill level control



Step 2: The right weighfeeder to the selected extraction

- Required information's:
- Maximum feed rate [t/h]
 - Control range [10:1]



High feed rates
Mean control range 1:10

Low feed rates
Wide control range < 30 t/h

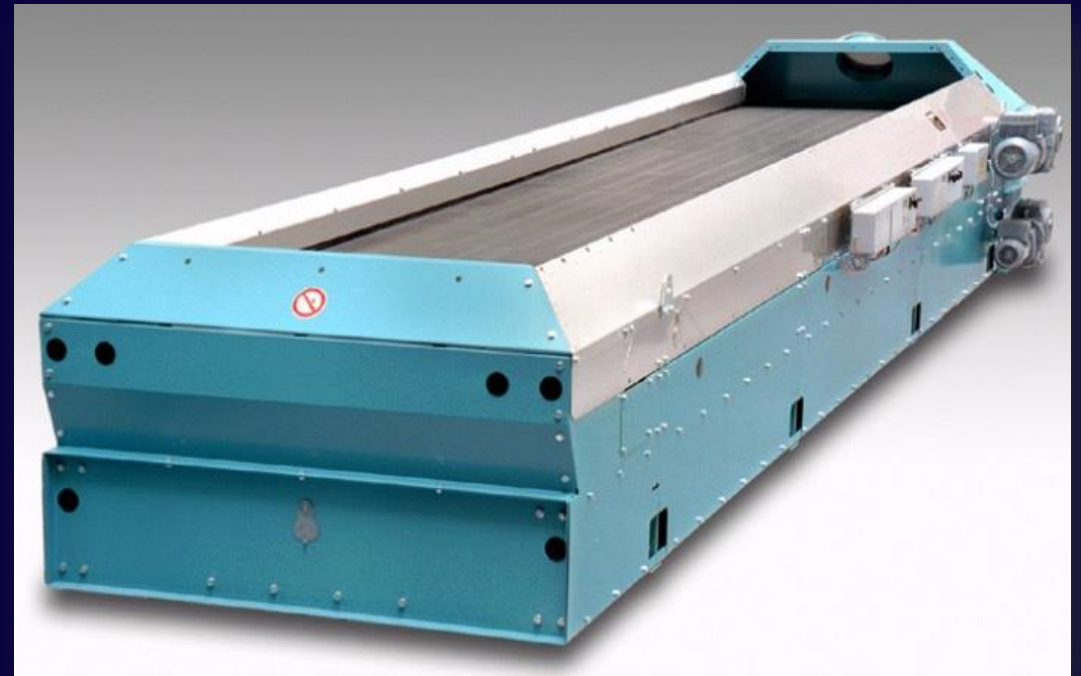
e.g. Rea-gypsum, Clay

Weighfeeder Types

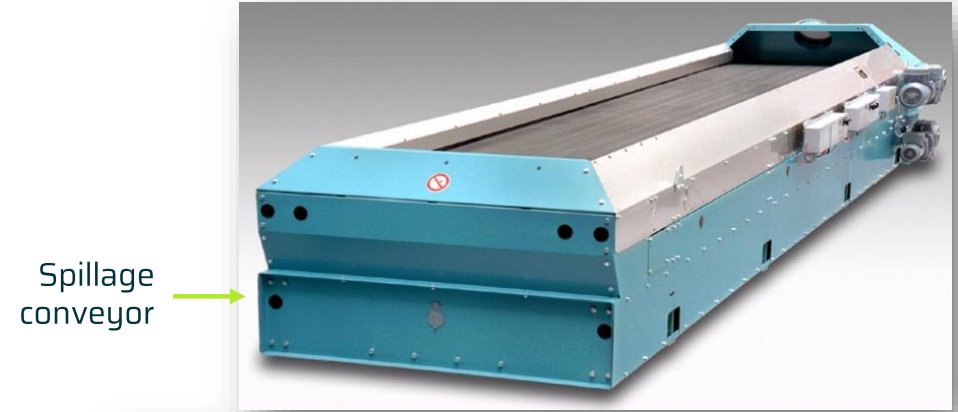
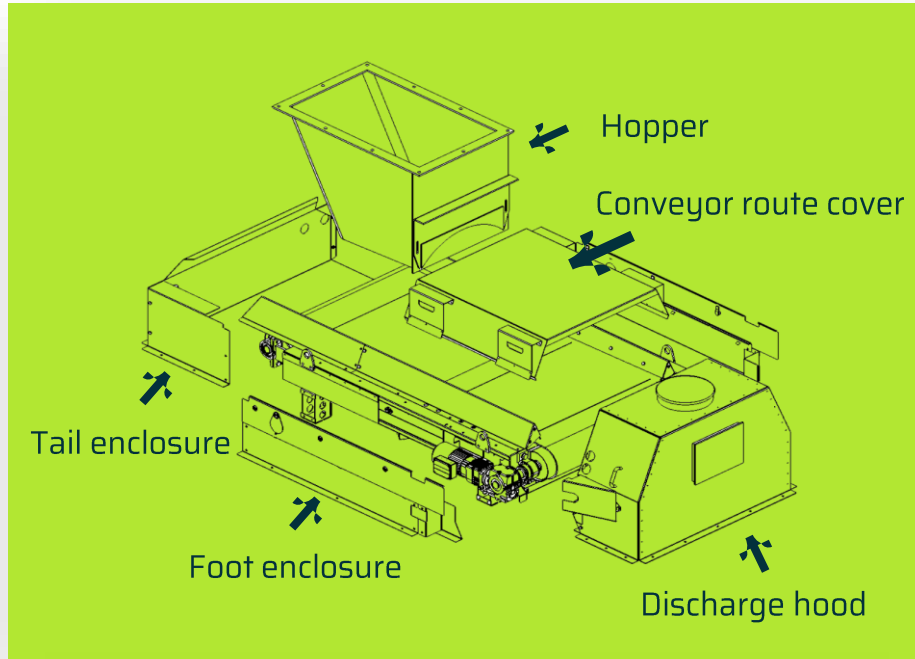
MULTIDOS® E



MULTIDOS® H with cleaning scraper



Standard Accessories / Options



The **MULTIDOS[®] E, H** and spillage conveyors are available in ATEX versions

- The customer shall provide us the safety related products values
 - The questionnaire BV-F 2579 shall be used for this purpose

Limit values:

- Minimum Ignition Energy (MIE): ≥ 1 mJ at the highest product temperature
- Minimum Ignition Temperature of dust cloud (MIT) ≥ 247.5 °C
- Glow temperature of a dust layer (5 mm) ≥ 240.0 °C
- Product temperature: $-10^{\circ}\text{C} \dots +80^{\circ}\text{C}$
- Dust Group: IIIA, IIIB, IIIC
- ST1 (organic dusts with KST max. 200 bar m/s)

[BV-F2579 DE / GB](#)

Weighfeeders Examples

Cement mill

Clinker and Limestone feeding



Raw coal feeding

Atex 21/22





Weighfeeders Examples

Cement mill

Clinker and Limestone feeding



Gypsum industry

Weighfeeder from 1964



MTD-E AF Examples

*MTD-E incl. feeding screw - LH Mannersdorf A
„Standard AF version“*



*MTD-E incl. Pre-bin with extraction screw
and piping to the filter
“AF version - sealing around the infeed”*



MTD-E AF

Design details



Sealing around the infeed



White belt for Atex machines



Green belt is antistatic
⇒ For non Atex machines only)

Segment scraper to be selected
for AF Applications



Mill Feeding Apron Weighfeeder

The extraction and weighing of difficult materials from a bin:

- Clay
- Gypsum
- Limestone
- Clinker (up to 300°C)

The standard solution:

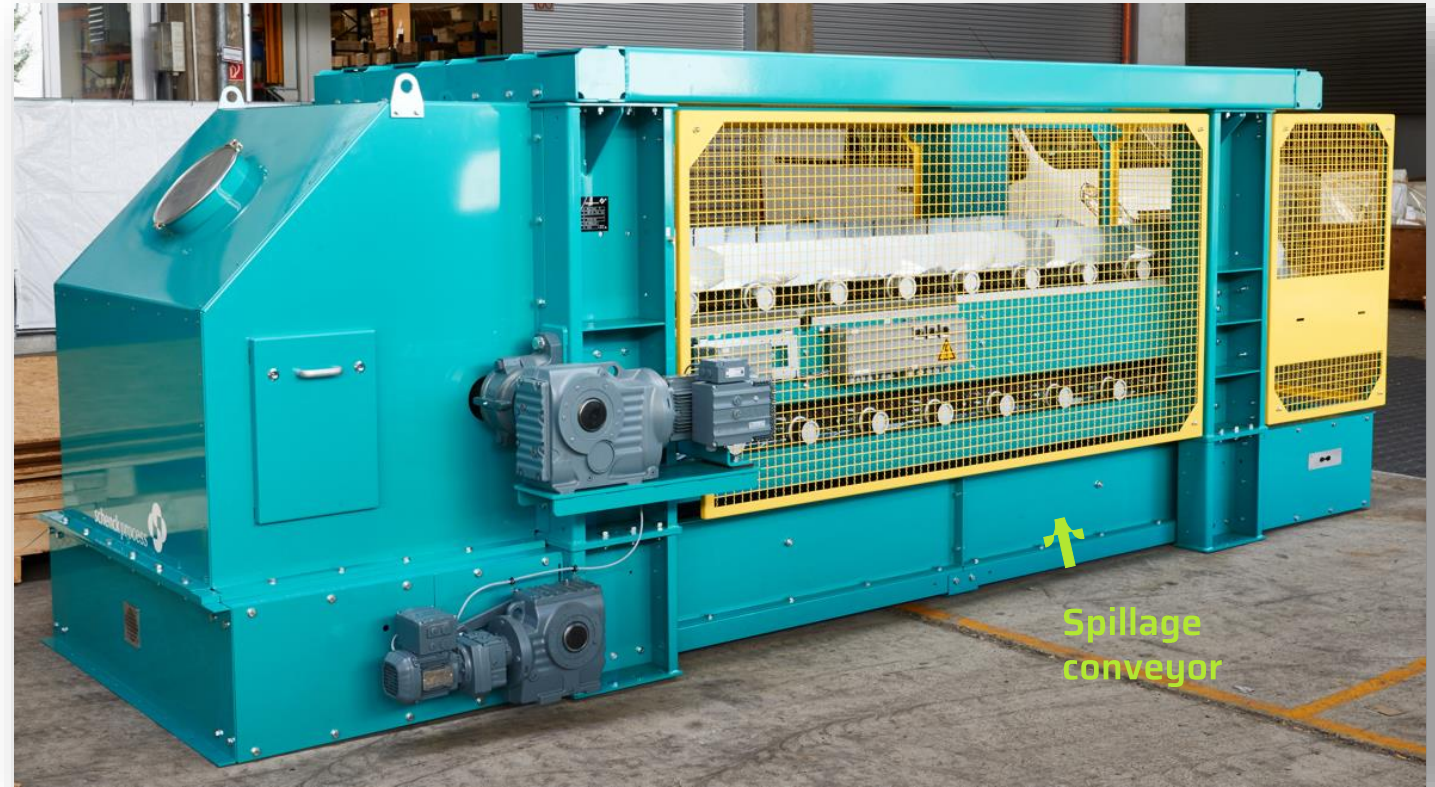
Apron feeder + Heavy Belt Weighfeeder

The idea:

Integrate both units into one / Reduce number of components / Reduce costs

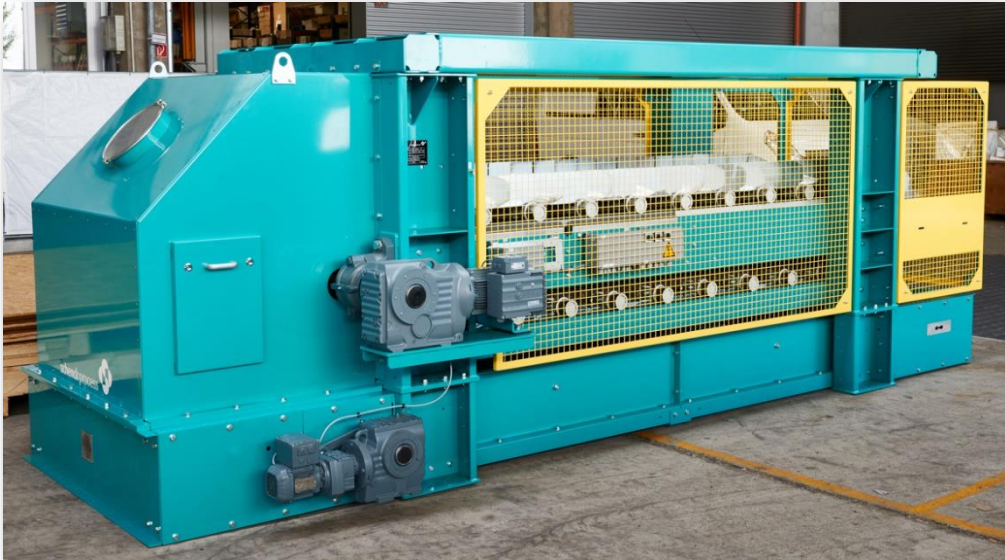
The solution:

Integrate existing weighing technology into an existing apron feeder construction



Mill Feeding Weighfeeder Types

Apron feeder MTD VDP-R2
with cleaning scraper



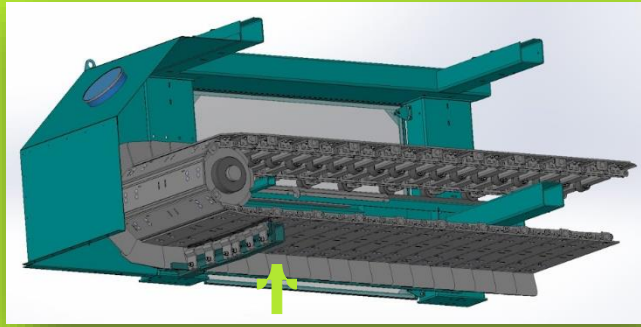
Apron feeder MTD VDP-C
without cleaning scraper



Mill Feeding Apron Weighfeeder Types



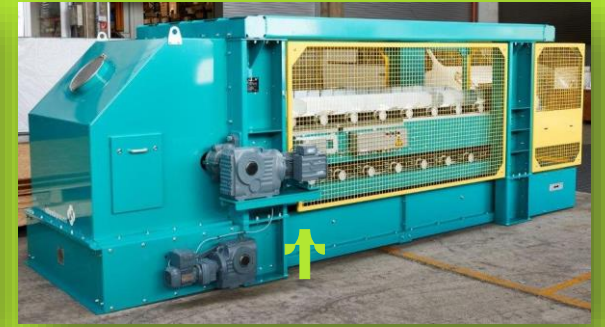
Compact analog
weighing modules



HD Pans with cleaning
scraper available



- Discharge hood with
dedusting flange
- Buckled plates available

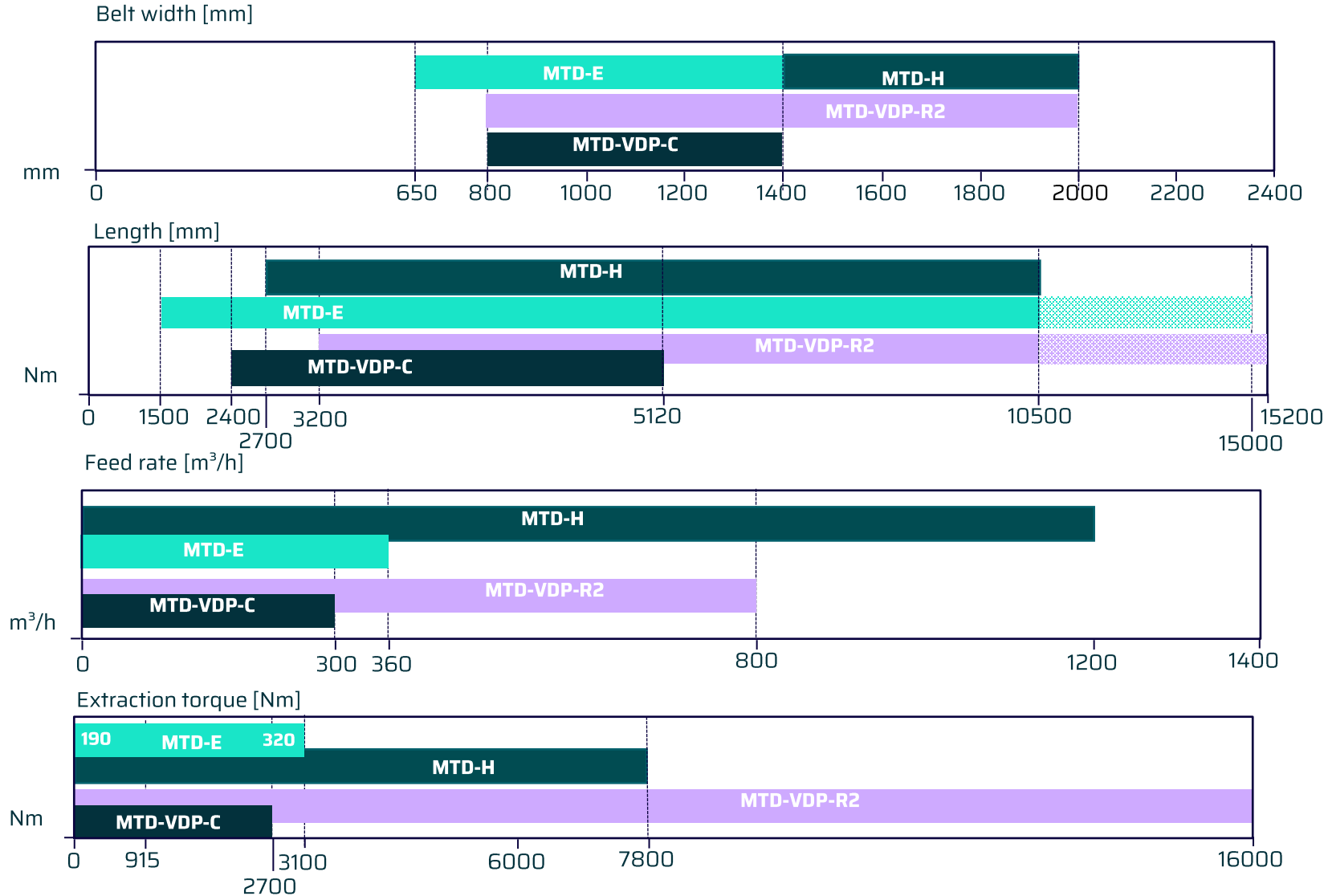


Spillage conveyor available



Mill Feeding

Weighfeeder overview



Manufacturing in:

- Germany
- India
- China



Weighfeeder assembly in
Darmstadt, Germany

Qlar

Thank you
for your
Attention.