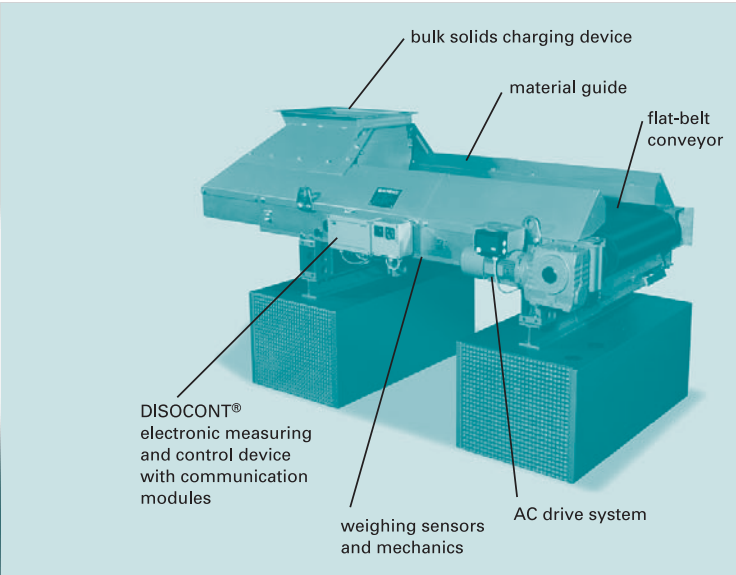
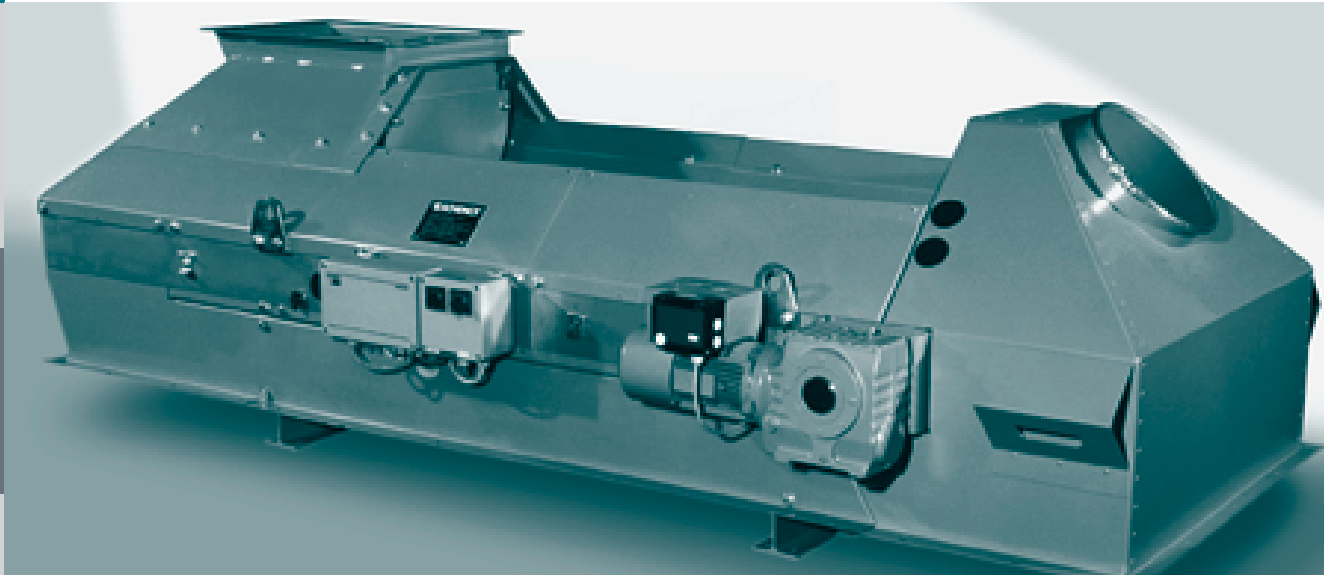


MULTIDOS® – the MechaTronic System

Weighfeeder for continuous gravimetric feeding –
precise, economical, reliable



A system for all feeding and weighing applications with accuracies up to $\pm 0.25\%$ has been created in the form of the Schenck Process MULTIDOS® family with application-specific series to fit every need. MULTIDOS® MTD-M series weighfeeders cover a wide range of applications requiring medium to high feed rates. The MULTIDOS® MTD-H weighfeeders are perfect for applications requiring high feed rates, high-bulk-density materials, and extremely high removal moments, even with large silo discharge openings. A broad spectrum of active and passive bulk material feeders that are specially designed for specific bulk material properties supports the wide range of possible applications.

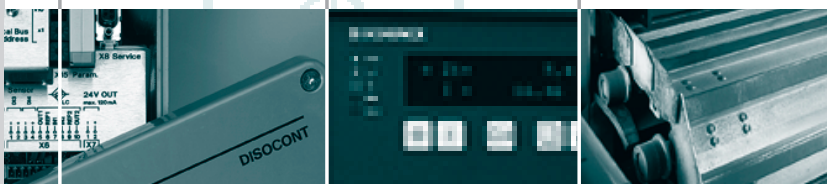
Possible Applications:

- ☒ Feeding of chunky, granular bulk materials (e.g., clinker, gypsum, lump coal)
- ☒ Feeding of all powdery or mealy bulk solids (e.g., raw meal, fly ash, filter dust) with appropriate charging devices
- ☒ Feeding of poorly flowing bulk materials (e.g., clay, marl, gypsum from flue gas desulfurization systems)
- ☒ Charging of raw and cement mills
- ☒ Kiln charging
- ☒ Mixture formation in gravel quarries and in the hard stone industry
- ☒ Mixture formation in smelting and coke plants
- ☒ Coal mill charging
- ☒ Feeding tasks in all mining-related industries
- ☒ Chemical industry, food industry (special design)

More about DISOCONT®
on pages 126–127

More about
INTECONT® PLUS
on pages 124–125

More about
MULTIDOS® VDP
on pages 72–73



100% MechaTronic

Conveying technology, sensors, weighing mechanics, measuring and control electronics, and AC drive technology are intelligently integrated into a single weighing system at one site.

Bulk Solids Charging Devices

Selection of the appropriate bulk solids charging depends on the flow properties of the bulk solids:

- ☒ Free-flowing, poorly flowing, sticky, flushing
- ☒ Range of grain sizes
- ☒ Moisture
- ☒ Feed rate

Options

- ☒ Conveyor cover
- ☒ Discharge hood

MechaTronic Advantages

- ☒ "Plug and play" capability
- ☒ No need for control cabinets
- ☒ Fewer cables
- ☒ On-site calibration
- ☒ Manageable system
- ☒ Cost reduction

Quality Features

- ☒ Weighing mechanics with no pivot point nor guides
- ☒ Automatic belt tracking system
- ☒ Weighted belt tensioning system, high-end continuous weigh belt
- ☒ Automatic belt cleaning system (both sides)
- ☒ Belt influence compensation (BIC) using smart software in the weighing electronics
- ☒ Self-calibrating system (KME), upon request

Our Solutions Package

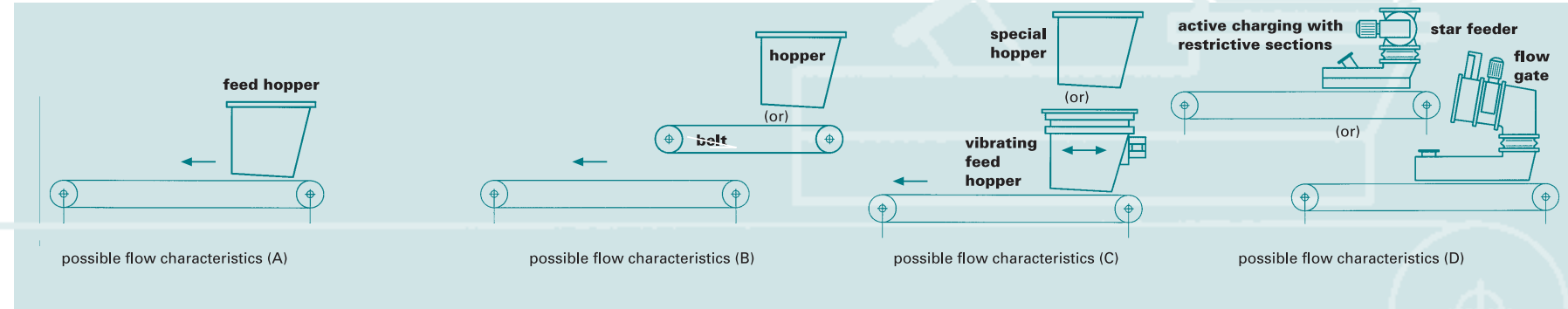
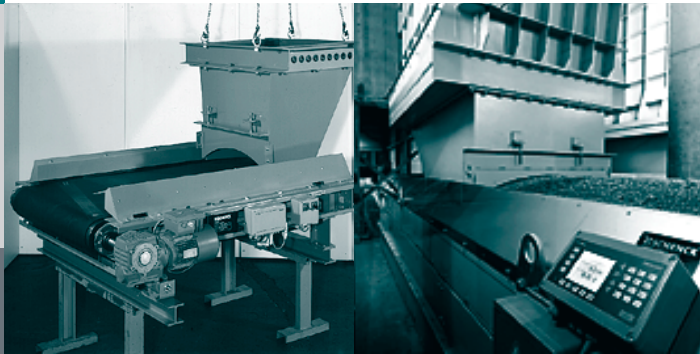
- ☒ Flatbelt conveyor optimized for precise weighing
- ☒ Three-phase AC drive system with speed sensor
- ☒ Integrated weighing sensors

Advantages

- ☒ Constantly designed for accuracy and reliability, the Loss-in-Weight Feeder has been continually refined for the last 50 years to become today's MULTIDOS® system
- ☒ "Less is more" design, e.g., the measuring roller is placed directly on two load cells. The MechaTronic concept ensures stable feeding results over the long term
- ☒ Low maintenance due to lifetime lubrication of the bearings and weighted belt tensioning system
- ☒ On-site or remote weighing system calibration via PC, local field office or host computer
- ☒ Cutting-edge, process-adaptive, modular electronic measuring and control system equipped with fieldbus technology
- ☒ Wide feed rate adjustment range

MULTIDOS®

Continuous gravimetric feeding –
precise, economical, reliable and modular



Basic MULTIDOS® Data

- ☒ System accuracy: ± 0.25% (with respect to the actual feed rate)
- ☒ Feed rate adjustment range (t/h) up to 1:50
- ☒ See table for pulley centers and conveyor belt width

Options

- For material temperatures greater than 80 °C (176 °F):**
- ☒ High-temperature conveyor belt for use with materials up to a maximum of 170 °C (338 °F).

For dust protection:

- ☒ Discharge hood
- ☒ Conveyor belt covering
- ☒ Side and rear cladding

Hopper liners (high wear resistance):

- ☒ Manganese steel, HARDOX, EURODUR, polyethylene, ceramic – other materials upon request

For dusty or mealy bulk solids:

- ☒ Flexowell edges

For belt cleaning (for sticky materials):

- ☒ Hard-metal scraper

Possible flow characteristics (A)

- ☒ Free-flowing, mainly chunky
- ☒ Appropriate bulk material charging:
 - Direct extraction hopper T40/T60, T20, T70

Possible flow characteristics (B)

- ☒ Poor flowing to sticky, chunky with fines
- ☒ Appropriate bulk material charging: T81/T82
- ☒ Discharge apron feeder (speed-controlled)
- ☒ Vibratory feeder

Possible flow characteristics (C)

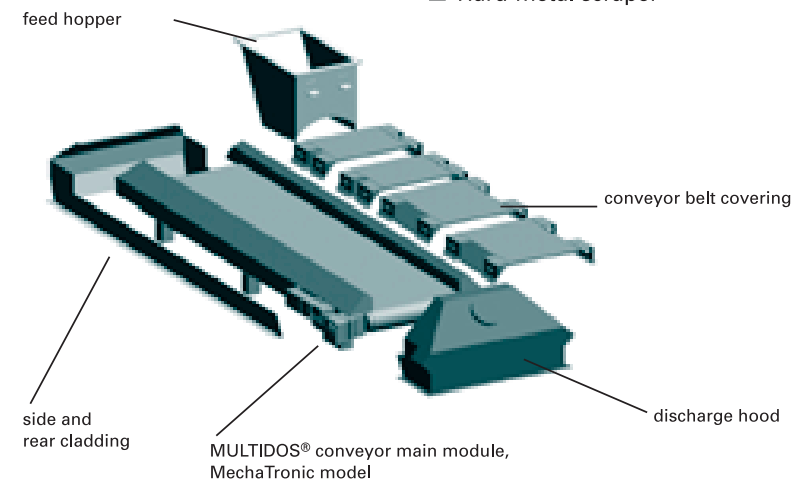
- ☒ Moderately flowing, bridging, chunky with fines
- ☒ Appropriate bulk material charging:
 - Hopper for special duty (T90)
 - Vibratory hopper (hopper with vibratory unit) V50/V51, V60/V61

Possible flow characteristics (D)

- ☒ Fluidizing, flushing, dusty, fine-grained
- ☒ Appropriate bulk material charging:
 - Star feeder (speed-controlled)
 - Flow gate (position-controlled)
 - Feeding screw (speed-controlled)

⁽¹⁾ For other bulk densities up to γ_{max} = approx. 2,5 t/m³, the maximum feed rate can be calculated using a proportional conversion.

Modular:



MULTIDOS®

Maximum feed rate (t/h) at bulk solids weight $\gamma = 1 \text{ t/m}^3$ ⁽¹⁾

Min. pulley centers (mm)	Belt width	Bulk material feeding for direct extraction hopper						Prefeeder for bulk material charging			
		T40/T60	T20	T70	T90	V50/V51	V60/V61	Flow gate		Star feeder	
		1,500	2,000	2,700	2,700	2,000	2,700	3,500		3,500	
MULTIDOS® MTD								Dust	Meal	Dust	Meal
max. pulley centers 12,000 mm	650	70									
	800	150				80		80	40	50	
	1,000	190	250	250	250	250	250	50	120	50	50
	1,200	250	320	350	250	350	350	70	160		
	1,400	300	450	450	250	450	450	100	200		

Min. pulley centers (mm)		T20/T30	T80	T81	T82	V60/V61				
		2,700	3,500	4,500	5,500	3,500				
max. pulley centers 12,000 mm	1,400	370	260	195	175	370	100	200		
	1,600	440	330	240	220	500	120	260		
	1,800	540	410	300	270	590	150	300		
	2,000	700	470	350	350	700				