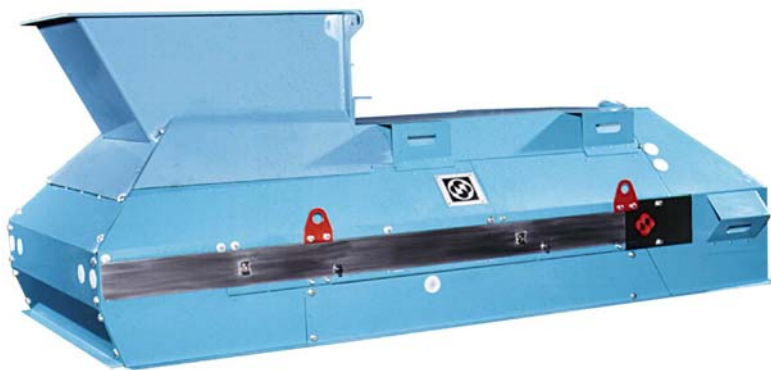


## MULTIDOS Weighfeeder®



MULTIDOS Weighfeeder Version 4

- Weighfeeder for bulk solids of most diverse properties
- Wide performance range
- MechaTronic design with integrated electronics
- Safe belt run monitoring and tracking
- Easy belt change without auxiliaries

### Application

Schenck weighfeeders are used for continuous gravimetric feeding of bulk solids. Their rugged design makes them suitable for the harsh demands of industrial operation in the rock, sand and gravel, metal and basic material, chemical and animals feed industries.

Application oriented types and the high quality standard of the Schenck weighfeeders ensure economical solutions even to highly sophisticated feeding tasks. The first-class measuring, control and supervisory electronics enables comprehensive monitoring of weighfeeders.

The MechaTronic variant permits easy integration into plant control at a very reasonable price.

This results in:

- Minimal investment and sequential costs (operating and maintenance costs)
- Little installation effort and low space requirements
- Improved accuracy and quality of the final product.

## Construction

The weighfeeder standard equipment comprises:

- Rugged feeder mechanics
- Automatic belt tracking
- Plough scraper (diverting foreign objects on return belt to the side)
- Belt outside scraper
- Static belt tension through take-up screws integrated in frame
- Belt influence compensation (BIC).

For the many and varied applications, the following accessories are available:

- Dust-tight enclosure of varying extent:
  - Discharge hood
  - Belt cover
  - Rear enclosure
  - Complete enclosure
- Integral chain conveyor for cleaning of mounting surface.

## Operating Principle

Designed for continuous feeding as well as for the batching of bulk solids, the MULTIDOS weighfeeder consists of:

- Belt conveyor
- Drive with speed transducer for belt speed acquisition
- Material prefeeder, e.g. hopper with bed depth setter
- Integrated belt scale, and
- Measuring and control electronics.

The electronic measuring and control system is designed to determine feed rate  $m$  (kg/hr) by multiplication of belt load  $q$  (kg/m) and belt speed  $v$  (m/s), and to keep the preset feed rate value constant with the use of a closed-loop control.

For weighfeeder function and accuracy, the belt scale assembly is of central importance.

The Schenck weighfeeders use electronic single-idler belt scales. One idler is acquired by two hermetically sealed stainless strain-gauge load cells. The weighing electronics measures the resulting force  $G$  of the material located on the above belt section between the two opposed carrying idler.

Belt load  $q$  results from the quotient from force  $G$  and the distance between the two idlers, i.e. weigh span  $L$ . Feed rate is computed from value  $q$  multiplied by the belt speed. Feed rate totalization over the time finally supplies the amount fed out. The belt influence is considered with the aid of the belt influence compensation (BIC).

The infeed hopper is an essential prerequisite for the reliable operation of the weighfeeder. Various types can be selected in accordance with material properties:

- Feed hoppers mechanically designed for specific materials
- Vibration feed hoppers for bridging materials
- Settling chambers for fluidizable material

### Variants (MULTIDOS M)

- Dimensions

Belt widths / mm:  
650, 800, 1000, 1200, 1400

Distance pulley to pulley / mm:  
1500, 200, 2700, 3500, 4000,  
5000, 6000, 7000, 8000

- Dust-tight enclosure

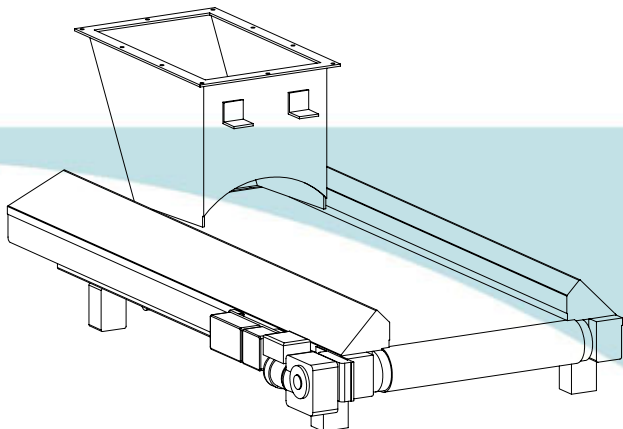
### Variants (MULTIDOS H)

- Dimensions

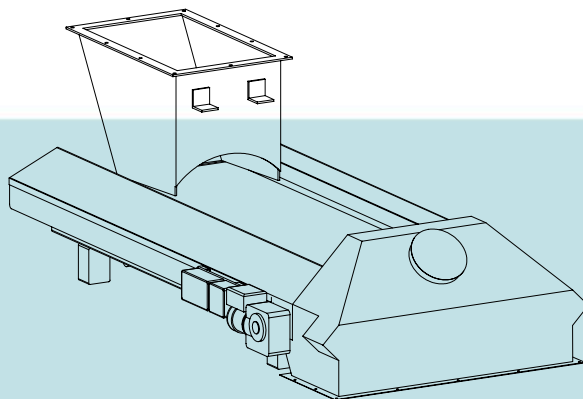
Belt widths / mm:  
1400, 1600, 1800, 2000

Distance pulley to pulley / mm:  
2700, 3500, 4500, 5500, 6500,  
7500

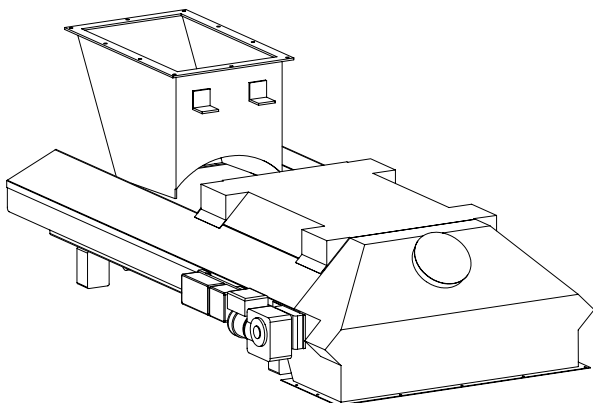
**Version 1:  
Without auxiliaries**



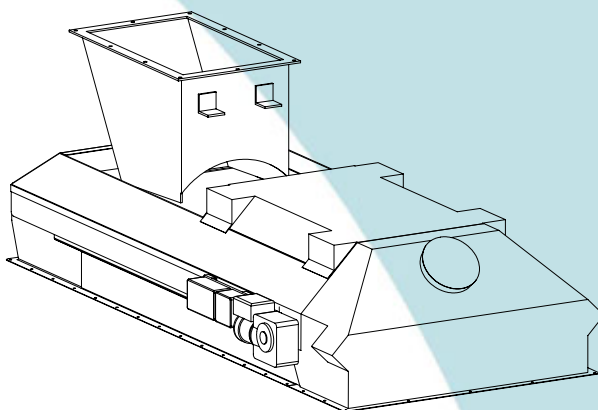
**Version 2:  
With auxiliary: Discharge hood**



**Version 3:  
With auxiliaries:  
Discharge hood and belt cover**



**Version 4:  
With auxiliaries:  
Discharge hood, belt cover and  
dust protective cover**



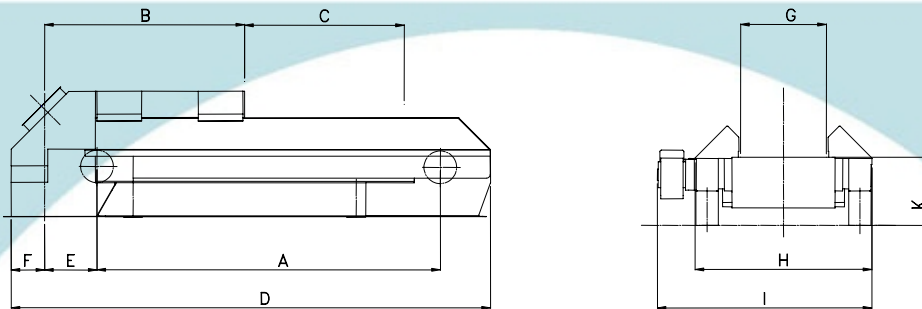
**Technical Data (MULIDOS M)**

Accuracy (related to actual value)		+/- 0.25 to 0.5 %			
Conveying speed		max. 0.5 m/s			
Material temperature		80° C with standard, 130° C and 170° C with special variants			
		Belt width / mm			
Feed rate max.	650	800	1000	1200	1400
Volumetric / m <sup>3</sup> /h	70	150	250	350	450
Gravimetric / t/h (with $\gamma=1.5 \text{ t/m}^3$ )	100	220	350	500	700

**Technical Data (MULIDOS H)**

Accuracy (related to actual value)		+/- 0.25 to 0.5 %			
Conveying speed		max. 0.5 m/s			
Material temperature		80° C with standard, 130° C and 170° C with special variants			
		Belt width / mm			
Feed rate max.	1400	1600	1800	2000	---
Volumetric / m <sup>3</sup> /h	690	800	915	1025	---
Gravimetric / t/h (with $\gamma=1.5 \text{ t/m}^3$ )	1030	1200	1370	1530	---

## Dimensions



<b>MULTIDOS M</b>														
Distance pulley to pulley* A / mm										Belt width / mm				
										650	800	1000	1200	1400
A	1500	2000	2700	3500	4000	5000	6000	7000	8000					
B	1183	1183	1583	2213	2713	3713	4713	5713	6713					
C	430	930	1230	1400	1400	1400	1400	1400	1400					
D	2312	2812	3512	4312	4812	5812	6812	7812	8812					
E	305	305	305	305	305	305	305	305	305					
F	195	195	195	195	195	195	195	195	195					
G										1030	1230	1430	1630	1830
H										1300	1500	1700	1900	2100
I										350	500	700	900	1100
K										410	410	410	410	410

<b>MULTIDOS H</b>										
Distance pulley to pulley* A / mm							Belt width / mm			
							1400	1600	1800	2000
A	2700	3500	4500	5500	6500	7500				
B	1732	1732	1732	1732	1732	1732				
C	1000	1800	2800	3800	4800	5800				
D	3731	4531	5531	6531	7531	8531				
E	384	384	384	384	384	384				
F	269	269	269	269	269	269				
G							1915	2115	2315	2515
H							2365	2565	2765	2965
I							1325	1525	1725	1925
K							638	638	638	638

\* Further pulley distances on request



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**Keep in Motion**