



## **E SERIES**

**Net weighers**

## Innovation backed by tradition

The invention of the world's first automatic weigher in 1881 by company founders **Carl Reuther and Eduard Reiser**, marked the end of thousands of years of manual weighing and heralded the start of a new era of automatic weighers.

This important industrial invention has brought significant improvements to the process of weighing bulk materials; resulting in time saving, improved accuracy and tamper-resistant operation. To embrace this, the Greek word 'Chronos' meaning 'time' was chosen for both the name of the weigher and the company. The CHRONOS-weigher has evolved continually over the past century and today modern industrial and computerised weighing techniques rely on such high precision automatic weighers.

Today's **E SERIES net weighers** from Chronos BTH raise the industry's standards to a higher level with their exceptional performance. This was achieved by combining our worldwide weighing experience acquired through thousands of E SERIES weighers sold worldwide and our constant desire to introduce innovative technologies.

This new generation of our well-established type **E SERIES** net weigher is equipped with state-of-the-art load cell weighing technology. Two cleaning doors allow significantly enhanced and easier cleaning access. The optimised weigh hopper – with stainless steel contact parts as standard – ensures hygienic bulk weighing and easy cleaning. A fully stainless steel version is available upon request.



## Net weighers

### Applications

The latest generation of the **E SERIES** net weighers meets the highest demands for accuracy, reliability and performance. The simple construction and sturdy design ensure safe and accurate operation. Our precision weighing systems are available in single weigher, double weigher combinations or fully integrated in bagging lines for a weighing range from 5 to 50 kg per weighment (larger weighments upon request). Combined with our digital weighing module **SpeedAC NXT** the E SERIES is designed to comply with international standards. The E SERIES net weighing system can be used as a stand-alone weigher or fully integrated into a bagging line for various applications from the Food, Feed, Pet

Food, Agriculture, Chemical, Pharmaceutical or Minerals Industries. A comprehensive range of bulk feeders is offered to work along with our E SERIES in order to suit every type of bulk material.



### Features and benefits

- Electronic net weigh system with two or three strain-gauge load cells
- Simple construction and sturdy design for safe and accurate operation
- Advanced reliability to ensure years of accurate and trouble-free operation
- Highest accuracies up to 15g@2 Sigma\* with free-flowing products
- Stainless steel contact parts for hygienic applications
- Easy access and easy cleaning due to enclosed design with two removable access doors
- Diverse standard weigh hopper capacities available: E 25 with 30, 50, 80 litre / E55 with 65 or 120 litre; for other sizes please see section options
- Weigh hopper is directly suspended from the load cells
- Weigh hopper with pneumatically operated bottom double discharge doors, operating with sealed bearings

\* Depending on bulk material characteristics, bag size etc.

- High-capacity version E 55 F1 with more than 2.000 weighments per hour, featuring state-of-the art servo technology
- Deliverable as stand-alone weigher or fully integrated into your bagging plant
- Perfect system integration with our own field-proven weigher controller SpeedAC NXT



### Functionality

The E SERIES weighers operate electronically with load cell technology for continuous weighing of constant, adjustable bulk material quantities in the range from 5 to 50 kg. The weigher starts and the dosing unit (feeder) operates in full feed. After reaching the first cut-off point the feeder proceeds in dribble flow until the final cut-off.

The feeding device stops and the bottom gate of the weigh hopper opens and discharges the bulk material. After emptying, the bottom gate closes again and the next weighing cycle starts.



# Feeding devices for diverse bulk materials

Based on their application know-how Chronos BTH has developed a wide range of feeding devices for the E SERIES net weighers, which are suitable for a variety of material characteristics. We will select the appropriate feeding

system to ensure careful material handling, taking into consideration factors including speed, accuracy, material degradation and cleanout requirements.

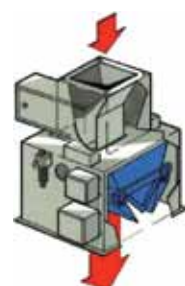
## Servo-motor controlled gravity feeder "F1"

The F1 servo-motor controlled gravity feeder reaches more than 2000 weighments per hour featuring state-of-the-art servo technology for accurate control of the dosing device and precise weighing accuracy even at this high speed.



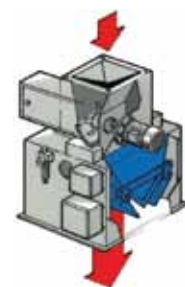
## Gravity feeder "G"

The **gravity feeder** is used for continuous feeding of free-flowing materials, such as plastic granules, granular fertilizer, grain, rice, sugar, etc. The quantity fed during full feed and dribble feed modes depends on the flow characteristics of the material and the distance that the adjustable catch gate is opened. Dosing cross sections and quantities are adjustable. The gravity feeder is pneumatically operated.



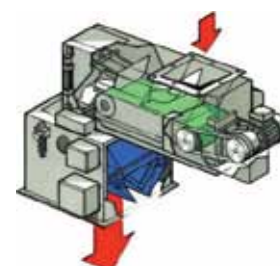
## Agitator feeder "A"

The agitator feeder is the same as the gravity type feeder but additionally equipped with an agitator. The agitator device feeds material which does not flow freely. Typical materials in this low performance range are pellets, bran and animal feed. The agitator is motor driven.



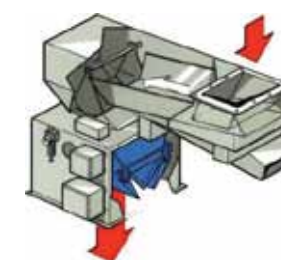
## Belt feeder "B"

The belt feeder is used for non-free-flowing materials that need to be handled carefully to maintain their structure, such as animal feed or pellets. The belt feeder can be used with a wide range of materials at a medium performance level and produces extraordinarily precise accuracies. The quantity of the fed material depends on the speed of the conveyor and the feeder cross section adjusted by the stream depth regulator. Production rates of up to 1200 bags per hour (simplex configuration) could be reached depending upon the specific application.



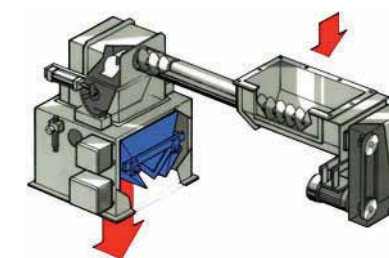
## Vibratory chute feeder "V"

The vibratory chute feeder is the preferred option for difficult materials, which need careful handling such as forage flakes, resin, caprolactam pellets, coal, coke or minerals. The material is fed in full feed mode and dribble feed mode. Production rates of up to 500 bags per hour (simplex configuration) can be achieved depending upon the specific application.



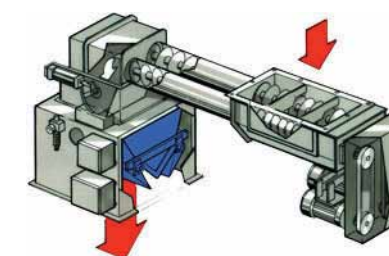
## Single screw feeder "S"

To reliably feed non-free-flowing, mealy or powdery materials such as flours, feed pre-mixes, milk powders and minerals, we offer screw feeders. To meet the cleanliness and hygiene requirements for these materials, easy access for thorough cleaning is an important feature, e.g. we include cleaning doors, reversible configuration of the screws, outlet valves for removal of residues, options for wet cleaning, etc. Production rates of up to 600 bags per hour (simplex configuration) can be achieved depending upon the specific application.



## Double screw feeder "DS"

To reliably feed non-free-flowing, mealy or powdery materials as described above we also offer double screw feeders, which provide enhance speeds and accuracies. As with the single screw feeder cleanliness and hygienic operation are important design features; clean-down options are the same as previously described.





# Net weighers

## Options

- Air purged bearing (dosing screw)
- 20° inclined screw for fluidized bulk materials
- Interlocking control for two weighers
- Multi-feeder selector switch on multi-fed installation
- Selector switch for bagging or bulk applications
- Increase of weigh hopper capacity up to 220 litres
- Bulk weigher application
- Diverse material and finish options for food, fertilizer and other applications
- Vibration to weigh hopper to reduce material build-up when sticky materials are being handled
- Interface for statistic printer
- Interface for Profibus DP / Ethernet
- Interface for standard PC-keyboard connectable for easy data input
- Others upon request

## Production rate

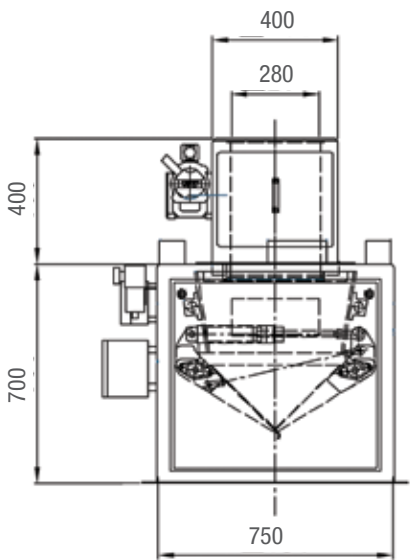
Over **2000 weighments per hour\*** with servo-motor controlled gravity feeder “F1 type”

\*Production rate depending upon feeder type, bulk material characteristics, bag size, scale configuration etc.

## Technical data

	E55 NXT	E25 NXT
Weighing technology:	Electronic net weighing	Electronic net weighing
Weighing range:	5-50 kg	5-30 kg
Weigh hopper capacity:	65 or 120 l	30, 50 or 80 l
Operating pressure:	6 bar	6 bar
Electrical requirements:	3 AC / 400 V / 50 Hz	3 AC / 400 V / 50 Hz
Ambient temperature:	+5°C to +40°C	+5°C to +40°C

## Typical layout



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