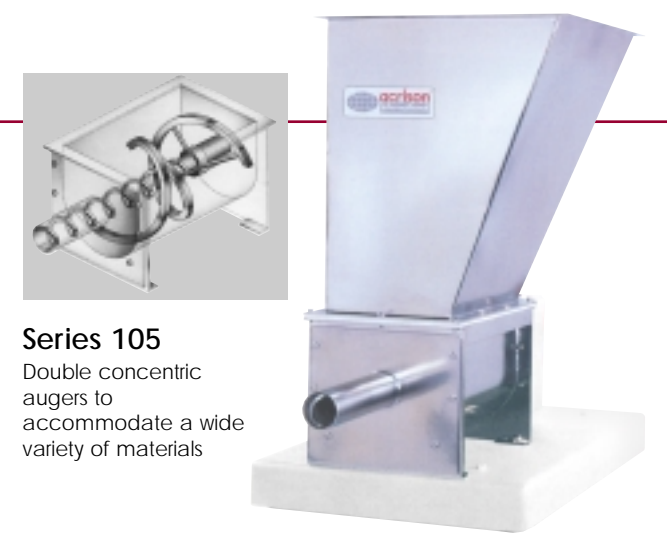
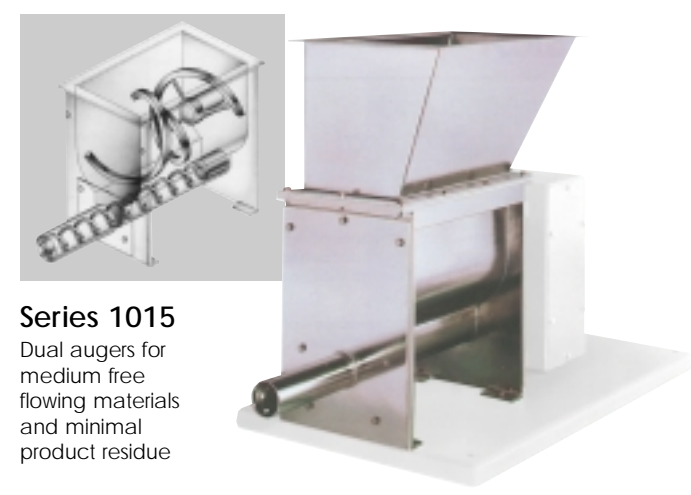


Introduction

Over 30 years ago, Acrison developed a truly dynamic scale system for use in conjunction with their metering mechanisms, aimed at satisfying the many differing requirements of the processing industries. The unrivalled design has evolved into a range of standard weigh scale models that enables Acrison to offer a complete feeding solution tailored to the specific application. This ensures that virtually all process requirements can be incorporated into the design of the weigh feeder system and provides the ultimate in performance and reliability.



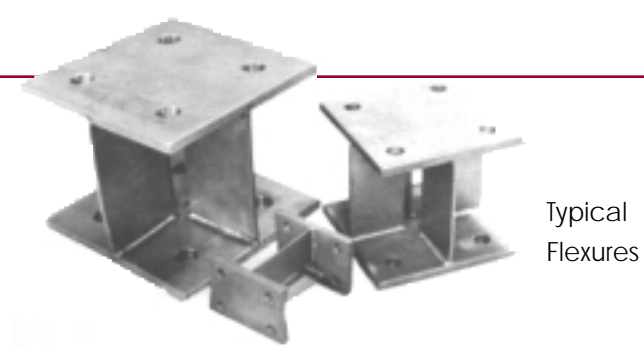
Series 105
Double concentric augers to accommodate a wide variety of materials



Series 1015
Dual augers for medium free flowing materials and minimal product residue

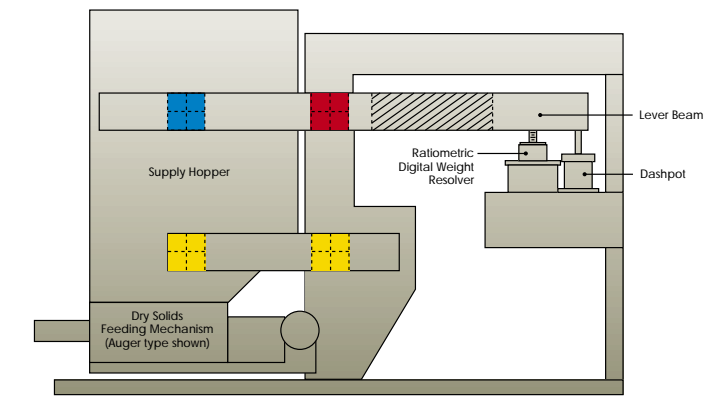
Scale System Overview

Acrison scales are available in two basic designs: "Overhead" and "Platform". Whatever the configuration, all Acrison scales use the same design principle. This is based on a lever network which uses frictionless flexures as the pivot points and a Ratiometric Digital Weight Resolver as the measuring device. In all cases, the mass



Typical Flexures

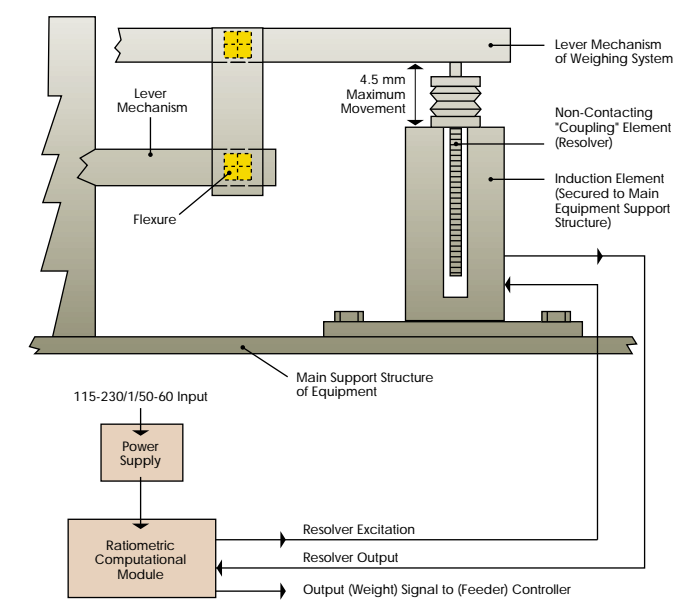
of the scale hopper and the metering mechanism is mechanically counterbalanced, so only the product in the system is weighed.



The Overhead Scale

The various Acrison "Overhead" scales are designed with the lever network of the weighing mechanism located above the main support structure of the feeding mechanism. The scale hopper and feeder are an integral part of the weighing system. The overhead scales are designated the 403 series and are constructed in sizes to suit the application.

The Ratiometric Digital Weight Resolver



As weight is added to or subtracted from the scale, the lever mechanism moves in a direct and perfectly linear relationship to that weight change. This movement is precisely measured by the weight resolver and instantly converted into a highly accurate signal in the form of a count ranging from 0 to 1,048,576. Mechanical counterbalancing of the scale means that this pure, unamplified scale resolution of 20 bits is **only** used for the product.

The scale signal is the result of measuring the ratio of two signals, not their absolute value, thus providing increased accuracy and stability.

As shown opposite, the non-contacting coupling element is attached to the primary lever beam and the induction element is fixed to the main support structure. **This non-contacting design ensures that the system is unaffected by shock loads to the scale system.**

Weigh Feeder = Volumetric Feeder + Dynamic Weigh Scale + Controls

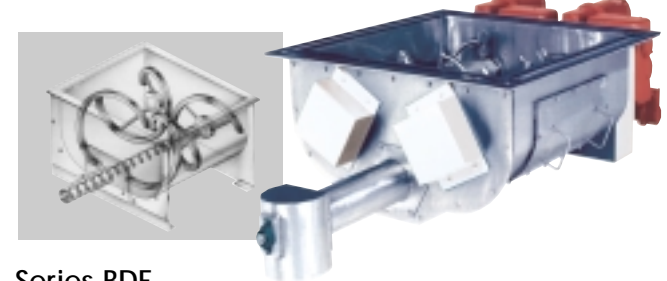
Volumetric Feeders

Acrison have five differing metering mechanism designs to give you more precise, more consistent, more reliable feeding.

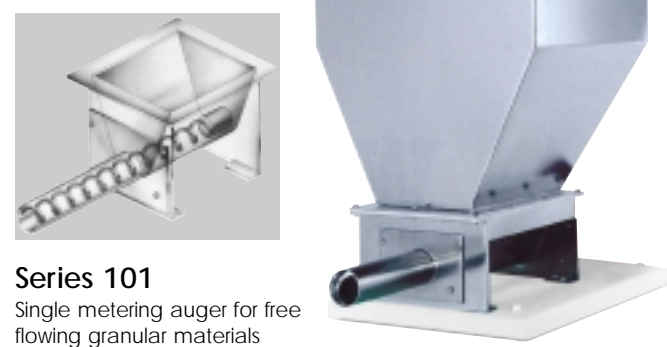
You can be sure that whatever your dry solids metering requirements, Acrison have the right feeder for you.

Series 170

The unique chamber configuration is the basis of ultra-hygienic, self-emptying 'Flavour Applicators' specifically for food industry applications and self-emptying 'RapiChange' feeders for the plastics industry



Series BDF
Dissimilar speed triple auger mechanism for the most difficult non-free flowing materials



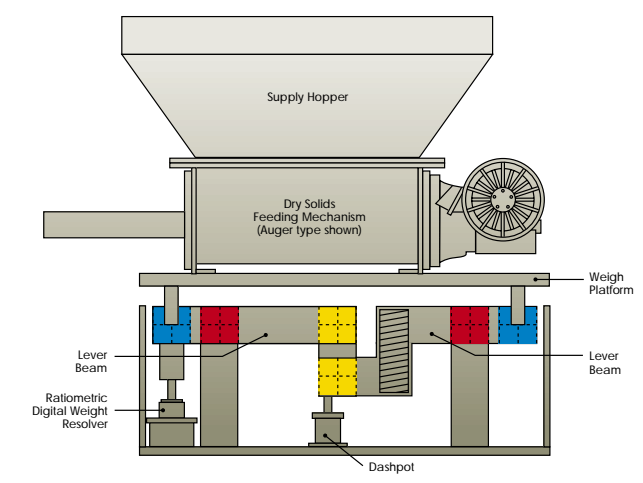
Series 101
Single metering auger for free flowing granular materials

The Platform Scale

Acrison's several "Platform" type scale systems are designed with the lever network located below the scale hopper and feeder. The lever network in this case is a double lever system encased in a steel chassis, so that the scale system is totally enclosed. The platform scales are designated the 402, 404, 405 or 406 series.

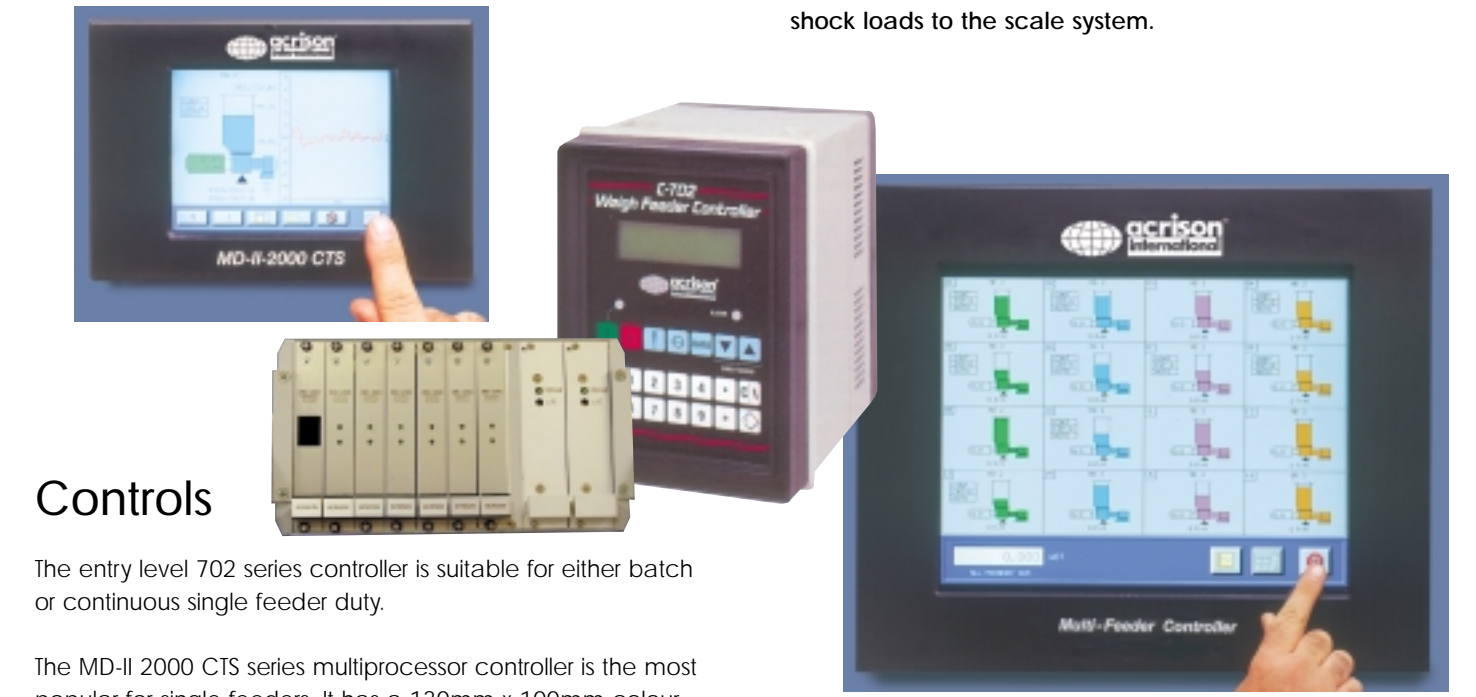
Linkage Flexures – These flexures secure the lower portion of the weighing system to the main support structure, thus completing the parallelogram lever network and equalising the moment of the lever mechanism

Counterbalance Weight – This is weight added to the lever network to counterbalance the entire weight of the scale hopper and feeder. Thus only the product in the system is weighed



Primary Support Flexure – These two flexures attach the primary lever beam of the weighing system to the main support frame

Secondary Support Flexures – These two flexures attach the scale hopper to the primary lever beam



Controls

The entry level 702 series controller is suitable for either batch or continuous single feeder duty.

The MD-II 2000 CTS series multiprocessor controller is the most popular for single feeders. It has a 130mm x 100mm colour touch screen (CTS) that displays process information in a clear graphical form.

The MD-II MFC multi-feeder controller can control up to 32 feeders in different combinations of systems.

The Acrison Personal KDU is designed to communicate with up to 32 feeders via a remote infra-red link, through a serial cable or via blue-tooth.

Acrison's SBC2000 Single Board Controller is a compact unit in which all controls information is stored on one card. It enables serial communication with an auxiliary destination (eg pc, plc).

Acrison controllers are now available with integral Ethernet network gateway and Fieldbus modules, so they can interface with a LAN or other host device such as a plc or dcs.

Acrison – visibly different, measurably better.

Benefits of Acrison

The Acrison scale offers a range of distinctive features, all designed to offer greater accuracy, reliability and peace of mind.

Acrison for Accuracy:

- Pure, unamplified 20 bit scale resolution
- Only the product weight is sensed due to the mechanical counterbalancing
- Linearity to 0.05%

Acrison for Reliability:

- Repeatability to 0.005%
- Scale unaffected by power variations of up to $\pm 30\%$
- Entire weighing device is guaranteed for 5 years

Acrison for Safety:

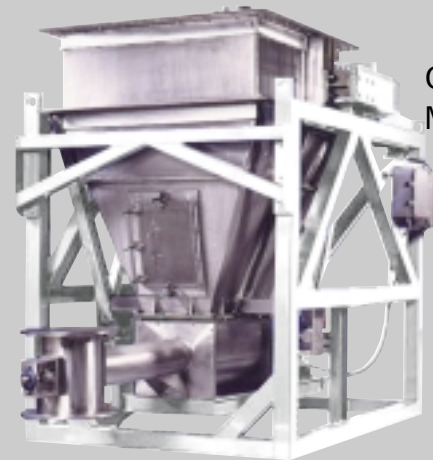
- Available to Ex-d(e)-IIB-T6

Acrison for Durability:

- Temperature range of -20° to $+60^{\circ}\text{C}$
- System design is less sensitive to in-plant vibrations
- Mechanical damping provided by oil dashpot
- Frictionless flexures
- Non-contact design

Acrison for Low Maintenance:

- All scale electronics are the same in every scale, minimising spare parts requirements
- No field calibration necessary



Overhead Scale,
Model 403



Overhead Scale,
Model GP403



Compact
Overhead Scale,
Model 407



Platform Scale,
Model 402, 404,
405, 406



In-Line Weigh
Feeder Module,
Model 270



Test Centre

We operate a fully equipped test facility at our Manchester, UK headquarters. Customers are encouraged to witness trials on their products, not only at full production rates but also over extended periods, to allow a comprehensive evaluation of feeder performance.



More Support

Should you have an application for which you believe our metering feeders would be suited then please do not hesitate to give us a call or visit our web site at www.acrisonint.net. We would be delighted to have the opportunity to tell you more.

Customer Satisfaction

This is our primary aim through offering the very best in solids metering equipment. As testament to this, today thousands of our feeders are giving accurate and reliable performance world-wide. Their performance and dependability is unrivalled, making life easier for those who depend on us and enhancing the quality of their product too.



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Acrison's pedigree is unrivalled

- 1965 Double Concentric Auger patented
- 1967 Frictionless, all flexure weighing system launched
- 1970 First low rate loss-in-weight feeder
- 1973 Acri-Lok scale disturbance protection system developed and patented
- 1975 First to offer microprocessor control systems
- 1977 First to utilise all digital synchro-resolver technology
- 1980 First to introduce a totally automatic computerised sampling system
- 1990 First to offer a 5 year warranty on the entire scale system
- 1993 Introduced modular control technology including touch screen interface
- 1993 Launched modem module for remote access to MD-II controllers
- 1998 Launched new Series 170 easy clean feeder for food applications
- 1999 Introduction of 'RapiChange' self-emptying feeders for the plastics industry
- 2000 Launched pKDU and infra-red link
- 2000 Launched field bus connectivity
- 2000 Launched 270 series in-line weigh feeder module
- 2001 Launched blue-tooth connectivity
- 2001 Launched 407 compact scale



Acrison Scale Systems



for precise metering
of dry solid ingredients