

The background image shows a large industrial grain processing facility. On the left is a large, cylindrical grain silo with a corrugated metal exterior. To its right is a tall, complex metal structure with multiple levels, stairs, and walkways, likely a grain elevator or processing tower. A smaller, vertical metal silo is positioned in front of the main structure. The sky is clear and blue. The entire image is overlaid with a purple geometric design consisting of large triangles and a horizontal line.

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PROUDLY BUILT BY
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BULKWEIGHER

The background image shows a grain processing facility with several large, cylindrical metal grain silos. A tall, lattice-structured conveyor tower rises between two of the silos. The silos have "mfs" and "ALLIED GRAIN SYSTEMS" logos on them. In the foreground, there is a field of harvested grain, possibly wheat or barley, which is partially covered by a purple gradient overlay. The sky is clear and blue.

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ACCURACY AND SIZES

Allied Grain Systems provides accurate weighing of free flowing bulk materials through our bulk weighers. Our bulk weighers are designed and manufactured to have dependability and durability to have an extensive lifetime.

We consider the requirements for each application and tailor-make a solution to suit the needs of each client. We all variables, from capacity requirements, location requirements, materials that will be handled, environmental requirements, service needs, and clean out solutions. Each bulk weighing system undergoes extensive testing to ensure that it will perform at the highest level for both in coming and out going product weighing.

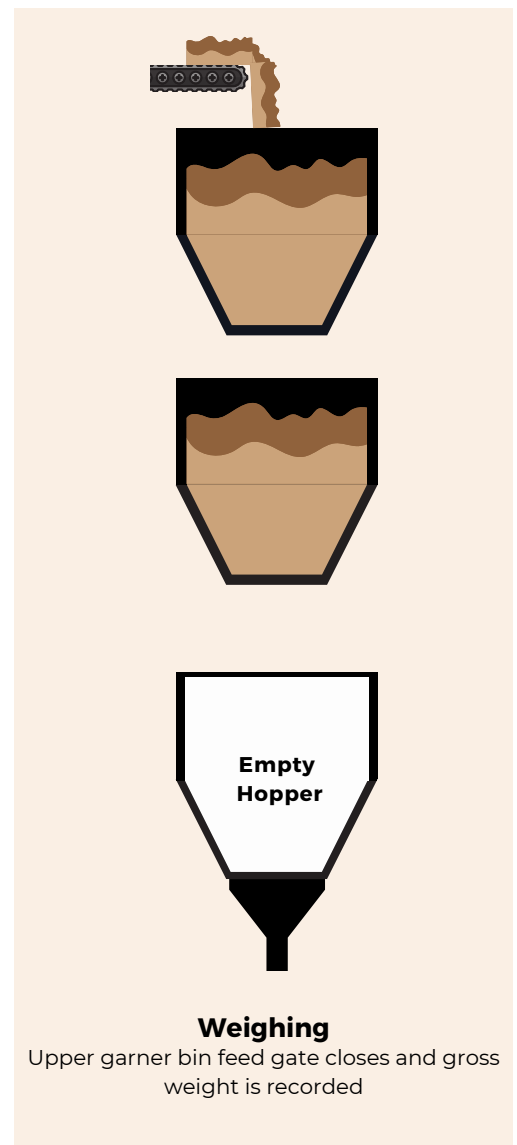
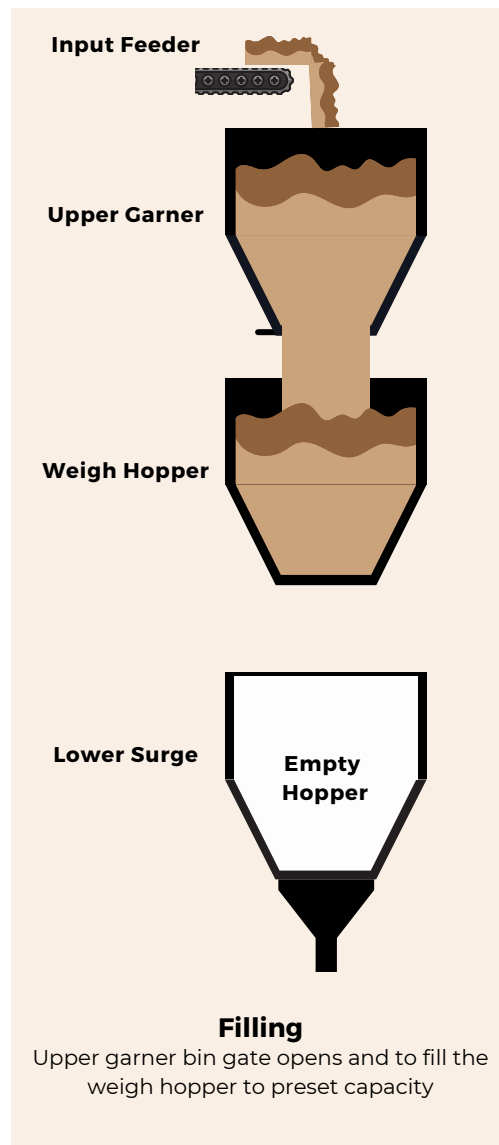


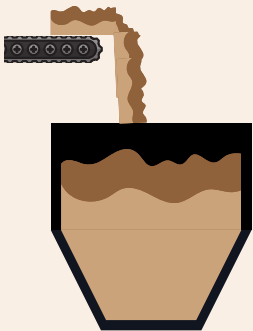
Allied Grain System bulk weighers have a continuous flowing system that can be used to weigh free-flowing material with an incredible accuracy of 0.1% and we offer solutions that range from 20TPH up to 2,000TPH.

Allied Grain Systems ensures that 'custom built' is standard and display a willingness to change in order to meet the requirements of your specific needs with a solution. Behind our products is a team dedicated to improvements to promote efficiency and keep at the forefront with all the changes in industry regulations.

Systems Features: 4-load cell design, ladder style gates, and access doors and platforms at key locations. Operation are available as hydraulic, pneumatic, or electric. Optional equipment includes service platforms, test weights, auto life systems, control gates, power units, and inline voltage regulators.

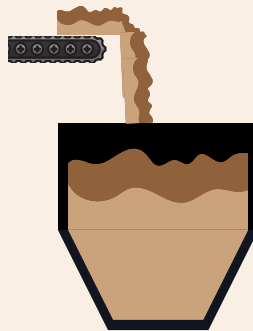
BASIC BULK WEIGHER OPERATION



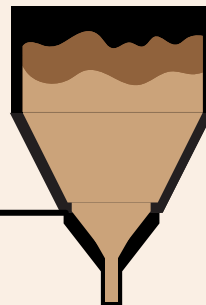


Discharging

Weigh hopper bin discharge gate opens to fill lower garner bin



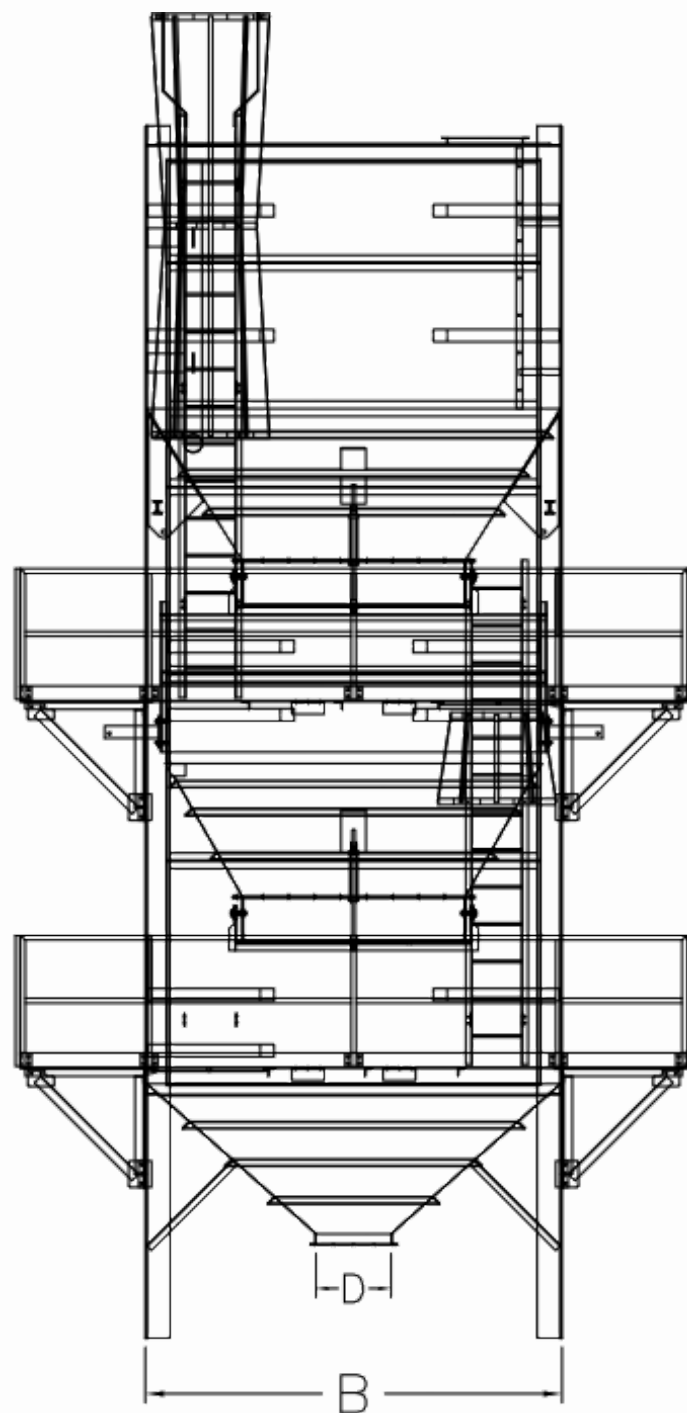
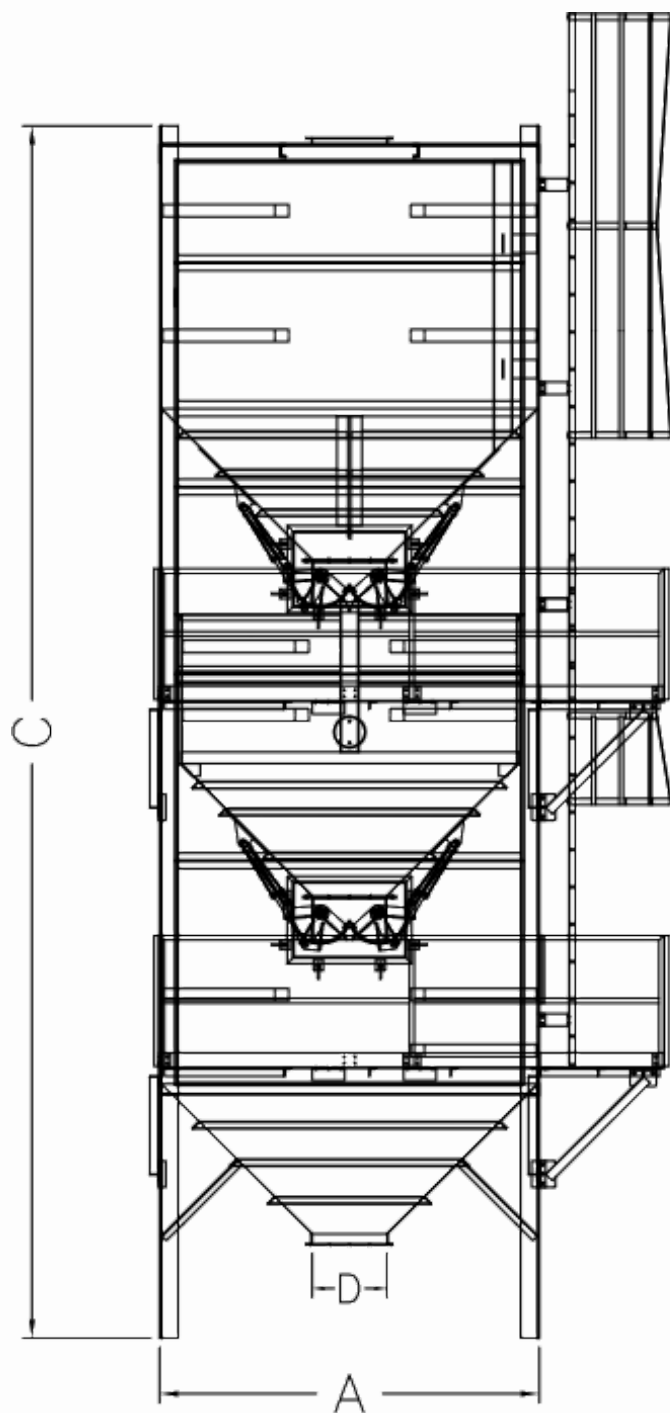
Empty
Hopper



Cycle Continues

Filling cycle continues until the pre set weight is achieved. Operator can decide to go to another rail car or stop

BULK WEIGHER SPEC SHEET



Capacity	Draft						Cubic Metre			Shipping	Live
T.P.H	Size	A (M)	B (M)	C (M)	D (M)	UG	WH	LG	Weight (T)	Weight (T)	
136	81.6	1.8	1.8	4.4	0.3	4.1	1.5	1.6	3.9		9.8
272	136	1.9	2.2	6.9	0.4	6.2	3.7	4	5		16.1
544	272	2.2	2.5	6.6	0.5	8.5	4.7	5.2	6.8		22.7
816	408.2	2.5	3.1	8.7	0.6	21	10.2	11	8.2		41.2
1089	544.3	3.1	3.4	9.9	0.6	27.9	14.8	16.7	10.4		60.8
1089 Extended	544.3	3.1	3.4	12.2	0.6	56.6	14.8	16.7	12.9		63.3
1361	680.4	3.1	3.4	11	0.6	33.4	17.7	22.9	11.8		72.3
1361 Extended	680.4	3.1	3.4	12.2	0.6	45.9	17.7	22.9	13.6		85
1633	870.9	3.4	3.4	12.2	0.8	46.6	21.9	23.4	14.5		92.1
2177	1088.6	3.7	3.7	12.2	0.8	64	27.2	27.5	15.9		104
2177 Extended	1088.6	3.7	3.7	15.2	0.8	104.8	27.2	27.5	29.5		146

Nominal TPH	139	278	556	833	1111	1111	1389	1667	2222	2222	2778
Nominal Bushells Per Hour	5000	10000	20000	30000	40000	40000	50000	60000	80000	80000	100000
Model	CA1000-5k	CA1000-10k	CA1000-20k	CA1000-30k	CA1000-40k	CA1000-40k extended	CA1000-50k	CA1000-60k	CA1000-80k	CA1000-80k extended	CA1000-100k
Class	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Max Capacity kg	1400	2300	4500	6900	9000	9000	12000	15000	19000	19000	25000
Min Capacity kg	500	1000	1000	2500	2500	2500	2500	5000	5000	5000	6667
Min Totalised load kg	1000	1500	2000	5000	5000	5000	5000	10000	10000	10000	13333
Totalised Scale Interval	1	2	2	5	5	5	5	10	10	10	10
Number of Load cells	4	4	4	4	4	4	4	4	4	4	4
Load cell model	Mettler Toledo SLS510										
Load cell Capacity kg (each)	500	1000	2500	2500	5000	5000	5000	5000	7500	7500	10000
Total cell capacity kg	2000	4000	10000	10000	20000	20000	20000	20000	30000	30000	40000
Target Discrete load kg	1361	2268	4536	6804	9072	9072	11340	11340	13333	18144	25000
dead load (Weigh Hopper and Gate)	400	682	968	1141	1792	1792	2220	2439	3019	3019	3508

BULK WEIGHER CONTROLS



ONEWEIGHT BULKWEIGH
WORKSTATION



NMI APPROVED
CONTROLLER



SMARTPASS RFID
TECHNOLOGY

Fast, precise, reliable bulk weighing operations for improved production and efficiency.

Whether you're loading or unloading railcars, barge ships, or trucks of grain, co-products or processed goods, the OneWeigh Bulk Scale automation system is designed for speed, and accuracy. With precise hopper system control, rapid draft cycles and intuitive interfaces, the system is simple to use.

Allied Grain uses the rugged METTLER TOLEDO IND570 bulk weighing controller. The IND570 provides an accurate, repeatable measurement and provides the versatility required in both manual and automatic weighing applications. The IND570 combats noise in any weighing system – Mechanical & Electrical fluctuations that can corrupt the weight signal are managed by TraxDSP™, advanced digital signal conditioning software, which is integrated into the terminal. Industrial weighing applications often require complex applications to run in difficult environments. The IND570 introduces enhanced functionality and tools that support consistent performance throughout the life of your weighing system.

In conjunction with the IND570, Allied Grain uses the METTLER TOLEDO SWS310 Weigh Module. The SWS310 provides an accurate & repeatable weighing solution for suspended hoppers & bulkweighers.

The SWS310 uses the MT SLS410 load cell which provides exceptional weighing accuracy in a wide range of process weighing applications.

The combination of the above equipment in conjunction with Allied Grain's range of Bulkweighers can be certified 'Legal for Trade' using National Measurement Institute (NMI) Pattern of Approval

- NMI 6/14B/31

Precise, Fast Automation Loading and Unloading

Maximize Your Load and Attain Target Weight Precision

Precise control of hopper system, order processing features to prevent discharge of grain, minimal operator intervention improved turnaround times.

Rapid Draft Cycles and Elimination of Tramming

Save Time and Keep Your Operations Moving

Reduce cycle time with a OneWeigh controller and eliminate timing with continuous automatic adjustments. Draft size is adjusted with every draft. This eliminates minimum last draft size requirements of older systems.

Free up operator with minimal monitoring needs.

Rely on the RFID-enabled oneWeigh system to start loadout, calculate target weight, finish order, and print the weight certificate.



NMI APPROVAL

NMI 6/14B/31

Rev 0



Australian Government

Department of Industry,
Science and Resources**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/14B/31Issued by the Chief Metrologist under Regulation 60 of
the*National Measurement Regulations 1999*

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Allied Grain Systems Model CA1000-60K Discontinuous Totalising Automatic Weighing Instrument

submitted by Allied Grain Systems Pty Ltd
 41 Rockdale Road
 Young NSW 2594

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 107, *Discontinuous Totalising Automatic Weighing Instruments (Totalising Hopper Weighers)*, dated July 2004.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved and variant 1 – certificate issued	22/06/23

CASE STUDY: T-PORTS WALLAROO



Allied Grain Systems were contracted by T-Ports to design and construct the most modern, automated, cost effective and efficient grain storage and handling system to suit their application, located at Wallaroo, South Australia.

Features of the complex include

- Two fully sealed 10,000 Tonne silo
- 1,000 Tonne per hour intake system with dual road hoppers
- 1,500 Tonne per hour out-loading system to ship via 500m rock causeway
- Full Automation

Along with these features the system also features a 1,500 Tonne Bulkweigher with an extremely abrasive ceramic tile wear liner. The ceramic tile wear liner are installed at all of the heavy wear points to add longevity to the bulkweigher.

ABHR ARTICLE

Reaping the benefits of bulk weighers

Continuous bulk weighing systems offer grain handling facilities accuracy, reduced waste and improved operational performance, which is why Allied Grain Systems has started developing bulk weighers.



Bulk weighers are common in the United States.

IN THE UNITED STATES, BULK weighers are a common sight on grain handling facilities.

John White, managing director at Allied Grain Systems, wants to see them become more popular in the Australian market.

"Traditionally in Australia for out loading of grain from facilities, we use a garner bin positioned above ground on weight cells," he told *ABHR*.

"It's hard to get this type of system certified due to wind loading effecting on the side of the garner bin which effects the accuracy of the weigh cells.

"You have to load a truck and run it over a certified weigh bridge system to get similar levels of accuracy, which in some applications can add much more time and effort."

Most of the bulk weighers in Australia have been imported in the past. This is an expensive process, as often they are too large to fit inside a container and need to be shipped on open deck.

Allied Grain Systems decided to design and manufacture its own range of bulk weighers in Australia. The company's team worked closely with Mettler Toledo Australia for the weighing equipment of the bulkweigher system as Mettler Toledo components are used in

overseas models. The larger bulkweighers were designed and built in sections, to be delivered to site as wide loads to be bolted together on site.

Ceramic tiles are installed at all of the heavy wear points to add longevity to the system, while hydraulic slide gates are selected to operate the continuous internal slide gates.

White said Allied Grain Systems can customise the design of the bulk weighers for applications between 50 to 2500 tonnes per hour.

"There are a lot of applications where bulk weighers can be installed, and we have the design skills to ensure each meets the client's requirements," he said.

"They're mainly used to accurately weigh the outloading of a commodity for record keeping but can also be used to deliver a preset amount of grain with incredible accuracy.

"The whole system is controlled by a programmable logic controller, which stores and saves weights automatically."

Allied Grain Systems performs 3D modelling with AUTOCAD to ensure the design will fit the application and ensure the towers are able to handle the associated loads.

It also provides full installation services and after sales support. While the bulkweighers themselves are reasonably low maintenance, the company can provide periodic preventative maintenance and provide test weights with the units so customers can calibrate at any time they choose.

White said the market for bulk weighers is growing fast.

"We have installed a few around the country and the feedback from customers has been very positive," he said.

"They've been trouble-free and work day in, day out to provide accurate measurements that can be relied on.

"We'd really like to provide more for the local market, which is why we aim to educate customers about these units and their benefits." 



The bulk weighers can be customised for applications between 50 to 2500 tonnes per hour.







The logo features the word "ALLIED" in a large, bold, white sans-serif font. A stylized orange swoosh underline is positioned beneath the "A". Below "ALLIED", the words "GRAIN SYSTEMS" are written in a smaller, white, all-caps sans-serif font. A thin orange horizontal line is placed directly under "GRAIN SYSTEMS".

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