



**Bulk Solids Handling and Process Solutions
for Food, Dairy, Pharmaceutical and
Nutraceutical Industries**



Powder... We know better

About Us

AMH was established with product lines tailored to the bulk material handling industries. The immediate success of AMH's cost-effective and quality products soon caused us to consider increasing production facilities. The 5,000-square-meter build-up area of AMH TOWER in Kuala Lumpur, Malaysia, consists of offices, fabrication and product testing facilities. By year 2022, we have more than 500 customer data based and more than 1,500 mega size systems install in more than 25 countries. At AMH, we have a mission to be a leading global player of bulk material handling system. To do this, we have a culture that supports our team members so that they can provide exceptional services to our customers worldwide.



PELABAT USKASAH DAN KILANG KEJURUTERAN AUTONOMUS

AMH TECHNOLOGIES SDN. BHD



AMH Group is an Asian-Pacific regional leader in bulk material process handling, pneumatic conveying, and production intermittent processes. We cover design, manufacturing, installation, start-up services, and after-sales services. AMH projects today range in scope from equipment and accessory sales to complete design and installation of turnkey systems.





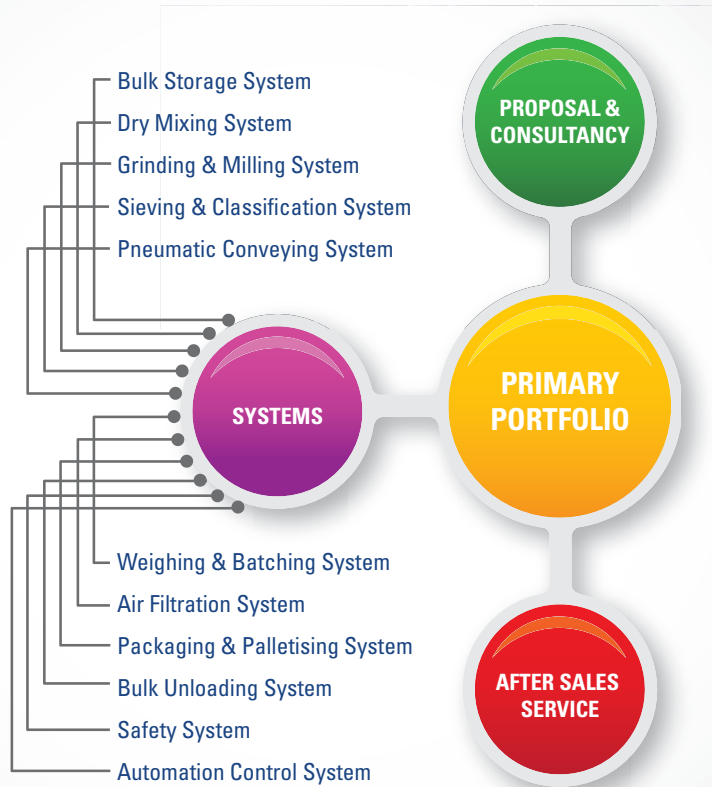
AMH is a member of European Hygienic Engineering & Design Group (EHEDG) where we promote and practice hygienic engineering and design in all our system integrations. At AMH, we combine top-quality equipment and system design integrity with exceptional personal service. You can depend on getting the right equipment recommendation the first time, as well as comprehensive start-up and customer service.

Through continued extensive research and development program, AMH sets new standards for bulk handling equipment performance with entirely unique designs, and product improvements. We have become a branded, energized and experienced company that has demonstrated business momentum and success. As AMH,

we have an established business with many competitive advantages:

- Agile and responsive to meet customers' unique needs
- World-class portfolio of products, services and network capabilities
- Sizeable blue-chip customer base
- Deep knowledge of the global marketplace
- Highly motivated and experienced employees
- Dedicated management team
- Financially strong with positive cash flow and proven business momentum.

Technology System

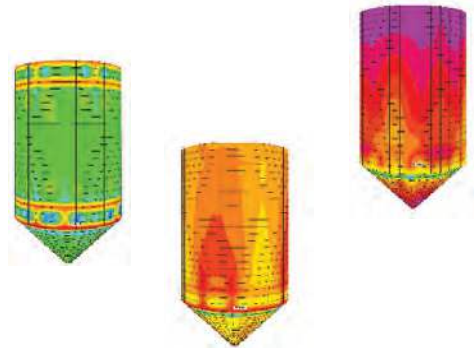


Storage Silo System

AMH designs and builds high quality, individually designed bulk storage silos by fully licensed structural designer familiars with steel silos having designed many plants of different sizes and content with different codes.



Storage Silo System





AMH specialise in storage silos and hoppers for food, dairy and nutritional industries.

With 125 cumulative years of experience and managing the company of 20 years of track records, we are the leaders in solving bulk storage solution including moisture/ climate control / Conditioning on bulk storage especially in Tropical country, loading, unloading, explosion risk (ATEX/FM Global), sanitation, environment, product characteristics, and other critical factors.

The design included full report licensed structural designer calculation, seismic strength with response spectrum analysis, professional reporting on ATEX /FM Global standard, Temperature load, moisture /climate control system in place.

We have to-date supplied silos made from stainless steel, aluminium, Mild Steel and fabric. All in cylindrical shapes but with either skirt or supporting legs design are our norm as well as Customization size to suit your plant requirement

ACCESSORIES INCLUDE:

1. Venting System with Explosion and suppression system
2. Weighing System and IoT monitoring
3. Customize inlet / outlet
4. Variable discharging system such as Bin Activator, Fluidize air bed, Fluidizing system, vibrating discharge and others accessories
5. Ladders, stairs, and other accessories
6. Insulation with cladding

Mixing & Processing System

Dry mixing system is an integral part of AMH's technologically advanced process designs engineered to special applications in food, dairy, chemical and pharmaceutical manufacturing.



By AMH Technologies





Our Ribbon mixer, Paddle mixer, Ploughshare mixer & Drum mixer will be customised to fit into customer's products and process requirements. Our mixers are built with high-quality stainless-steel construction.

Our vast experience and knowledge prove to be prevailing when customers have to deal with minor ingredients, huge range of recipes changes, pre-weighing, product colouring, flavour, heat sensitivity powder, mixing homogeneity, medium to difficult flow powder, ease of cleaning etc.

ACCESSORIES INCLUDE :

High shear choppers / Intensifier Injection / Liquid Addition system Heating/ Cooling / Drying process Automatic Sampling system RFID / Bar Code Bin Management system Automatic Drying and CIP Kitchen System

Automatic Recipe Formulation



AMH Provide IBC washing and drying system comply with pharma and FDA requirement.





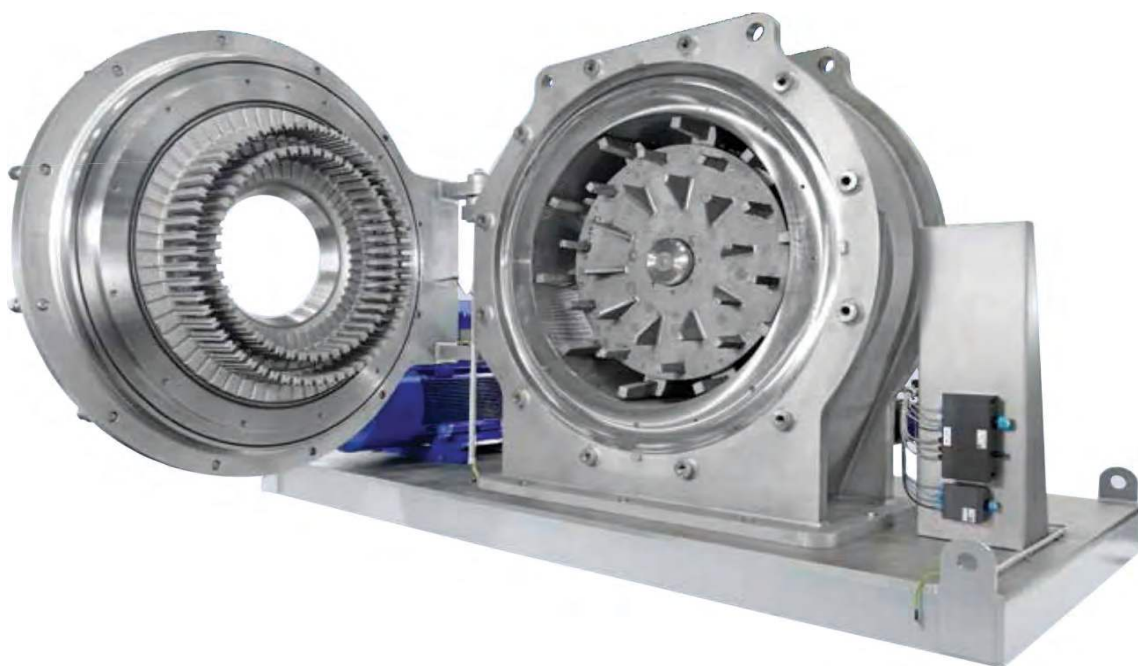
Ingredients are filled and managed within the same protective environment to guard against airborne dust and waste spillage; machine product cross-contamination and human error. All critical functions are monitored and validatable via logic controllers.



Concerning the high containment requirement for API Powders always part of our system supply and solution integration.

Integrated with CIP automated cleaning and drying systems, cleaning validation and verification process ensure all bins will be safe for the next cycle of usage.

Grinding / Milling / Size Reduction





Not all powder in the market is available in fine form, it is a norm to integrate the online or offline grinding/ milling/ size reduction in powder process.

A mill or grinder uses a mechanical action to break the material and reduce it to the required size.

This may encompass a whole range of requirements from de-agglomeration and coarse grinding through to fine grinding and classifying.

ACCESSORIES INCLUDE:

ATEX/ FM Global Explosion proof or shook resistant grinding/ milling/ size reduction system, Delumpers, Conical mills, Hammer mills, Jet Mills, Fine grinders

AMH Engineer understanding your particle target size (PSD) and combine the knowhow knowledge to understand the upstream and downstream equipment, we can make a full system analysis and recommendation a solution for your grinding /milling/ size reduction.

Sieving & Fluid Bed Drying System





Sifting can be described as screening, separating, sieving, classifying, scalping & de-lumping, however each description is a different method of sifting product which requires a different type of sifting method depend on the product's design parameters, product characteristic, product density as well as upstream and downstream process integration.

AMH offers a wide range of powder sifter designs to fit any application including Linear sifter, Centrifugal sifters, Rotary sifters, Vibratory sifters, Tumbler screens & Gyratory sifters.



Sifter can be incorporate with cleaning balls, ultrasonic cleaning solution.

AMH had work with world well know project partner to offer customer a Fluid Bed drying process and intermediate system.



Conveying System





AMH works closely with our clients in designing mechanical conveying systems that are specifically tailored to their unique needs to ensure product handle with care, efficiency, safety, and sanitation. Mechanical conveying systems transport large amounts of product horizontally, vertically, or at an incline through a powder processing system. Typically, there are a number of moving parts within a mechanical conveying system, such as below is the **hygienic type of mechanical conveying solution**

- **Vibrating motion conveyor / Vibrating tube feeder**
- **Chain-vey**
- **Bucket Elevator**
- **Screw conveyor**
- **Flexible conveyor**

PNEUMATIC CONVEYING

Pneumatic conveying systems is a flexible transportation of a wide variety of bulk solids / powder. We provide solution for all the available type of pneumatic conveying in the market you can find.

- Lean Phase Blowing System
- Lean Phase Vacuum System
- Dense Phase Pressure System
- Dense Phase Vacuum System
- Close loops System with Nitrogen / Co2 gassing

Smart Architecture of Dosing, Weighing & Batching Solutions for Ingredients Automation

With a deep knowledge in practical of available load cells in the market, AMH's dosing, weighing & batching systems can count to microns weighing accuracy in short cycles which are customised to the customer's manufacturing processes.

THESE PROCESSES CAN EITHER BE IN BATCHES OR CONTINUOUS MODE AS FOLLOW:

- Micro Dosing System / Weighing System / Batching System
- Minor Dosing System / Weighing System / Batching System
- Major Dosing System / Weighing System / Batching System

AMH's volumetric feeders, gravimetric feeders, Loss-In-Weight feeders, Gain-In-Weight feeder and weigh-belt feeders can solve all your weighing and batching needs.



Dust Control

A good Dust control system represent a good Manufacturing practice and safeguard the operation personnel in the factory.

AMH engineer have years of experience designing dust collection systems to maintain the sanitation, safety and efficiency of your production environment.

Our systems are custom designed based on the proven formula for a professional dust control system.

- AMH dust collection system complies with OSHA, ATEX/ FM Global standard.
- Centralised Dust Collection System
- Integrated Dust Collection system
- JET Venting System
- Centralised Vacuum Cleaner System
- With the option for filtration type :
 - Pleated filter
 - Envelop filter
 - Round Socks Filter
 - Oval Socks Filter



Packaging & Palletising System





AMH can supply and integrate filling and packaging lines below as part of a complete powder handling system.

- **Pre-gassing System**
- **Post Gassing System**
- **Sea Bulk Container Loading System**
- **Bulk / Big Bag Filling System**
- **10 – 25kg Bag Filling System**
- **Bag in Box Filling System**
- **Form Fill Seal Filling System**
- **Can / Jar Filling System**

By partnering with the most innovative filling / Robotic automation companies in the world, we offer the best solution for maximum efficiency, accuracy, economy, safety, and ease of use.



Coupled with our extensive knowledge of powder handling, we provide a turn-key solution and engineer the best possible layout and solution for customer by comply with food & dairy sanitation standards when optimum hygiene is required. applications. These features are inflatable seal head, retractable bag hanger arms, auto bag hanger release, automatic height adjustment, vibratory densification, auto empty bag inflation, etc.

AMH designed and built multiple units of sea bulk filling system for PE resins of the world's biggest petro-chemical company in Jurong Island, Singapore.

Product Infeed Bulk Unloading System





AMH, we offer Bag tipping, Big Bag unloading , Seabulk unloading, tanker unloading, (Quadro tipping, twin unloading big bag etc.)

- **Bag / Sack Tipping Station / Bag / Sack Unloading System**
- **Bulk Bag Unloading Station**
- **Combine Sack / Bulk Bag Unloading Station**
- **Dairy standard Automatic Bag slitter station**
- **Seabulk / Tanker Unloading Station**
- **Bag Lifter Asist / Scissor lifter**
- **Vacuum Lifter**
- **Safety Gate**
- **AMH Product infeed / Material Intake** stations are design based on safety and ergonomic in mind for all types of bag, sacks and boxes, container whilst controlling and reducing dust emissions with consideration of dust explosion protection system.



Food Safety & ATEX Explosion System



AMH considers effective safety, health and environmental management to be of prime importance to its business and is committed to continuous improvement in performance in all these areas.

AMH's overall goal is to protect both human life and the environment as per ATEX / FM Global directives such as Frame Arrestor, Explosion Panel, Vantex Valve

For food industrial companies are facing the challenge of reconciling sustainability and profitability. With our partner of intelligent solutions for foreign object detection, material sorting and analysis, we help our customers to ensure that sustainable and high-quality production is profitable for people, the environment and industry. Such as X-Ray & in-line Metal Detector, Magnet, Rotary Magnet, Insect Detector



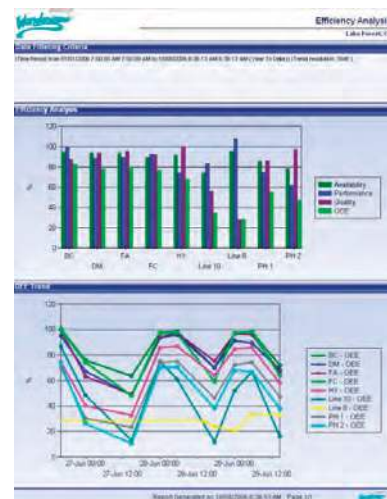
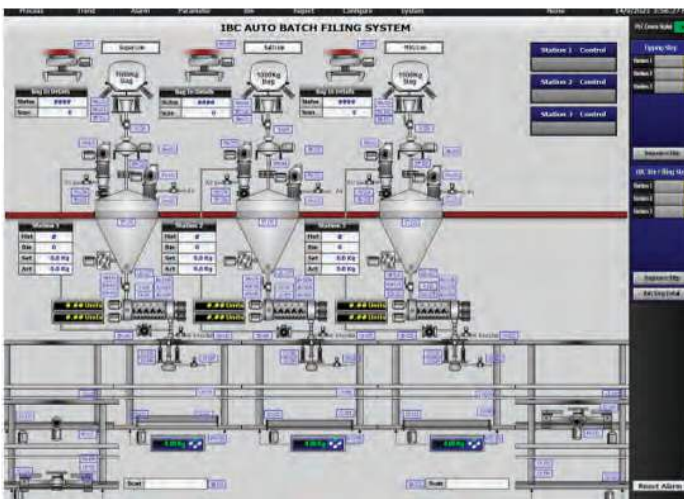
Automation / Process Control



Our automation architectures improve user productivity and reduce costs by delivering high-performance functionality i.e. PLC system, HMI system, SCADA system, DCS system. Depends on the needs and usage of customers. But we can advise customers which system is most suitable for them for the most efficient and cost-effective use.

Visualization: InTouch

- HMI / SCADA / DCS
- Operator Real-time Dashboard with Situational Awareness ArchestrA Graphic
- Tools for rapidly developing custom applications
- Real time information
- Empower your operator



Qualification

AMH Process Technology for the past 30 years has built up strong experience in validation and qualification of processes and installations.

We own a fully dedicated validation and project team, we support both qualification and validation of an installation throughout the lifecycle of a project.

AMH Process Technology and project team will be involved in the sales / pre-order phase to meet and come to an agreed URS as well as in safety /ATEX/FM Global assessments and norm compliance during the engineering phase. This involvement continues onto FAST project execution and final validation, including full documentation support as well as final training after successfully testing and commissioning.

OUR STANDARD DOCUMENTATION :

1. Project Management Details Master Schedule
2. Details Project drawings
3. Quality Plan
4. Health and Safety list Analysis
5. Erection and Construction safety Procedure
6. Process & Instrument Diagram
7. Function Description
8. Utilities details requirement
9. Material Certification list
10. Pressure Vessel testing and procedure
11. ATEX/ Explosion proof design study
12. Professional Structural design calculation
13. Details Logic / Control diagram
14. Welding documentation
15. Software / Hardware design
16. GMP Plan Layout assessment and study process
17. I/O Details list
18. IQ/OQ Protocol
19. FAT/SAT Protocol
20. Preventive and maintenance spare part list
21. Operational and Maintenance book

Liquid Processing & Solutions

We had completed many turnkey projects for dairy and juice plants over the years in different countries;

- Sweetened condensed milk/Evaporated Milk
- UHT/ESL Plant
- Fresh milk receiving system
- Ice-cream plant

STERILISER / PASTEURISER

Our System provides a range of customised heat treatment equipment to kill/reduce any living micro-organisms that may be present in the product. This helps to increase stability and shelf life of the product. Products are also treated with different methods with different temperatures and holding times depending on the requirements of product and shelf life.

THE DESIGN FOR THE HEAT TREATMENT MODULE DEPENDS ON;

- Shelf life
- Nature of product
- Nature of heating (Direct heating such as steam injection, Indirect heating such as plate or tubular heat exchanger)
- Continuous operation time requested by the customer

TYPES OF HEAT TREATMENT PROCESS

- Direct Steam Injection (DS!)
- Tubular Pasteuriser
- Plate Pasteuriser



Services



Feasibility Study

AMH offers evaluation and analysis of the potential of the proposed project which is based on extensive investigation and research to support the process of decision making. Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of an existing process or proposed system, advantages and disadvantages present in the environment, the resources required to carry through, and ultimately the prospects for effective solutions.

Design Engineering

Our designs are based on conceptualization, feasibility assessment, design parameters establishment, engineering experience and available resources.

Project Management

Our project engineers are well-trained, highly motivated and dedicated to bringing every project from project initialisation and a complete closure to be handed over to our clients.

Installation, Testing & Commissioning

Within AMH, we have experienced crew of installation, testing and commissioning. They



are also meeting the safety and health regulations emphasized by the Construction Industry Development Board Malaysia (CIDB).

Training

The operator and safety training courses are designed specifically for plant operators and plant supervisory personnel who are responsible for plant and equipment safety. Experienced and novice operators alike will benefit from information concerning equipment fundamentals for all types of our systems. Additionally, it provides maintenance and production managers with an overview of the maintenance practices necessary to ensure maximum productivity from our equipment.

After-Sale Service

After the project is handed over, our after-sale service will be able to take care of preventive maintenance, spare parts and tools, system upgrading etc to ensure the system is always running smoothly.

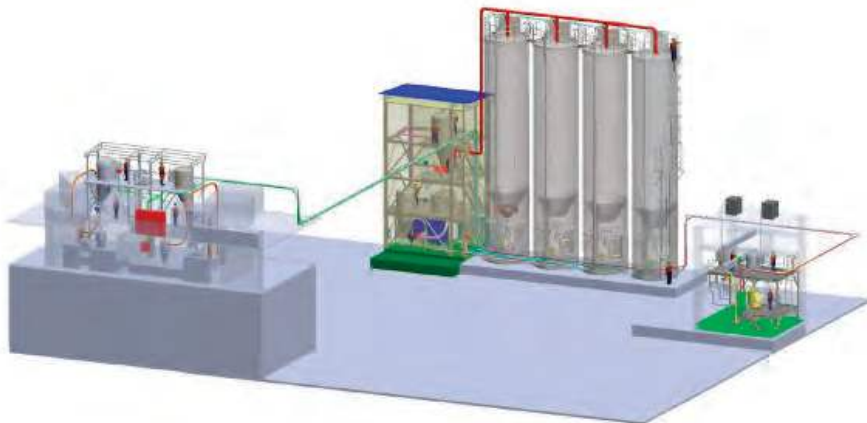
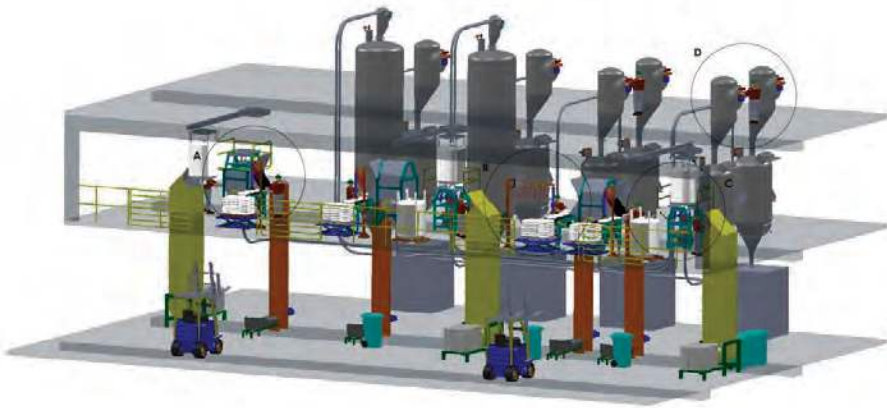
Industries / Testimonials

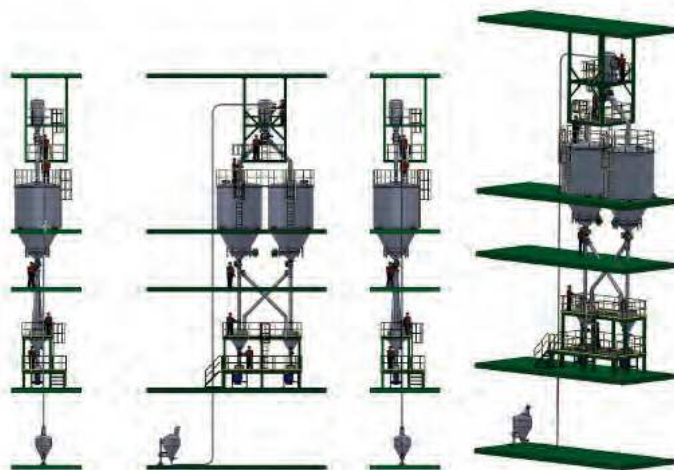
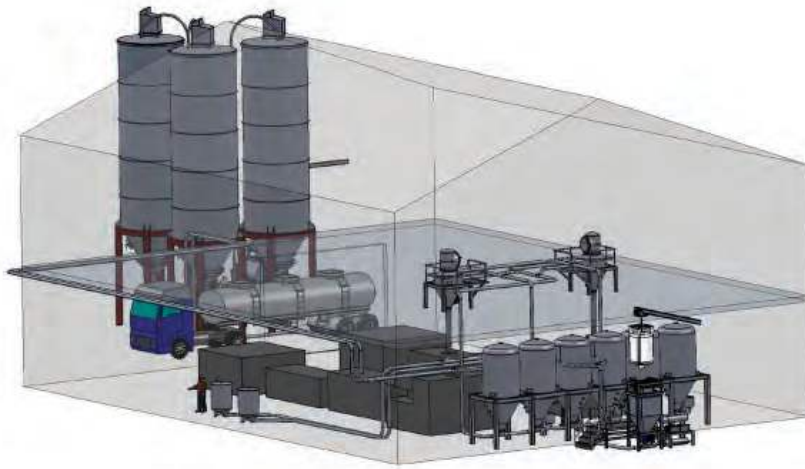


Our range of customers consist of food, dairy, pharmaceutical and nutraceutical industries. Today we have the most coverage of these customers in Asia Pacific region. We have the know-how about the different standards, regulations, requirements and expectations of these industries.

- **Infant Nutrition**
- **Life science powder**
- **Beverages and Coffee**
- **Cereals and Cereal Bars**
- **Chocolate and Confectionary**
- **Bakery, Noodles and Rice**
- **Dairy**
- **Biscuits and Snacks**
- **Salt and Seasoning**
- **API Manufacturing**
- **Vitamins**
- **Detergents and Soaps**
- **Chemical industries**
- **Pet foods and nutrition**







AMH Group of Companies



AMH TECHNOLOGIES PTE LTD
AMH TECHNOLOGIES SDN BHD
AMH ASIA PACIFIC SDN BHD
AMH SYSTEM SDN BHD

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