

# LIQUID IN SOLID DOSAGE

  
ACG-Associated Capsules

ACG – **pam**

EMPTY HARD CAPSULES | CAPSULE FILLING MACHINES

# Liquid in Hard Capsules - The Future of Oral Solid Dosage.



## Shifting Trend

Over the years, various research & development efforts have documented that liquid in hard capsules can offer solutions for some challenging compounds. A large number of pharmaceutical companies have directed their research efforts in investigating and understanding the benefits of encapsulating liquid in two-piece hard capsules.



## Exploring Greater Opportunities

Today, pharmaceutical companies across the world want to extend a number of their products in liquid-in-hard-capsule. By far, this remains a relatively unexplored alternative that could lead to quicker relief for patients, an extension of the drug's patent life, and most importantly, manufacturing cost effectiveness.



ACG Worldwide - one of the world's leading processing, manufacturing and packaging solution providers for the global pharmaceutical industry - understands the industry's need for producing liquid in hard capsules. And, thanks to its five decades of experience, ACG offers an end-to-end array of solutions, right from special empty hard capsules to capsule-filling and band-sealing equipment for lab as well as commercial-scale production.

## Flofit™

Liquid in Capsule. Solid in Performance.



ACG Associated Capsules, the world's second-largest privately held capsule manufacturer and a member of ACG Worldwide, offers Flofit - a two-piece empty hard capsule that's ideal for filling and band-sealing liquid, pastes and wax. Flofit makes a significant contribution to the development of efficacious pharmaceutical products, by providing the flexibility to rapidly develop and test formulations in-house. The process can be scaled-up, yet kept in-house, much similar to the operations seen in tableting or powder/pellet filling in hard capsules. In addition, Flofit offers better bioavailability and enhanced appearance, thereby, improving patient compliance.

ACG Pam - one of Asia's leading pharmaceutical machinery manufacturers and flagship engineering company of ACG Worldwide - offers Fluidocap, a revolutionary capsule-filling technology for liquids and pastes. Fluidocap helps overcome many problems associated with the use of softgel capsules including high cost, wastage, cross contamination, migration of the drug into the capsule shell, and issues with low bioavailability.

The Fluidocap range of machines - available in both lab and manufacturing scale - can accommodate the filling and band-sealing of a variety of formulations, including lipid-based products, high-viscosity pastes and wax-type products.



The Fluidocap 1000 is a semi automatic, laboratory machine that can fill liquid into hard capsules and band-seal them using a gelatin band.



The Fluidocap F40 and Fluidocap F70 are fully-automatic capsule-filling machines that can fill a large variety of liquid and semi-solid formulations into two-piece hard capsules.



The Fluidocap S40 & S70 are automatic band-sealing machines that can be integrated in line with the liquid filling machines.

- Enables liquid filling of hard capsules followed by band sealing
- Improves bioavailability and product stability
- Enhances patient compliance by effectively masking taste and odor
- Lends a distinct appearance and helps differentiate in a me-too marketplace
- Available in gelatin as well as HPMC
- Available with up to four-color circular-printing



## Fluidocap

- Fluidocap 1000 - A semi-automatic machine for liquid filling and band sealing. With an output of up to 1,000 capsules per hour, Fluidocap 1000 can be easily scaled up for commercial production.
- Fluidocap F40 - A fully-automatic capsule-filling machine for liquid formulations with an output of up to 40,000 capsules per hour.
- Fluidocap S40 - An automatic machine for band sealing liquid/powder-filled capsules with an output of up to 40,000 capsules per hour.
- Fluidocap F70 - A fully-automatic capsule-filling machine for liquid formulations with an output of up to 70,000 capsules per hour.
- Fluidocap S70 - An automatic machine for band sealing liquid/powder-filled capsules with an output of up to 70,000 capsules per hour.
- Combination filling - Combination filling like pellets in liquid is possible on these machines, using special purpose attachments.



With over fifty years of industry expertise, ACG Worldwide is an integrated processing, manufacturing and packaging solutions provider to the global pharmaceutical industry. We synergistically integrate businesses process and materials right from granulation and coating equipment to hard capsules and capsule filling machines; barrier packaging films to blister and cartoning machines; tablet compression systems to tablet tooling; vision inspection systems to end-of-line packaging solutions. A state-of-art R&D facility, SciTech Center in Mumbai, stands testimony to continuous investment in innovative products and technologies. Recognized as 'Best Vendor' by OPPI, ACG has also bagged awards for several innovative products from IIP and Pharmexcil. ACG Worldwide serves customers in more than 100 countries and has its subsidiaries in Brazil, China, Indonesia, the US and the UK.



### ACG-Associated Capsules

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