

MEETING THE CHALLENGES OF BIOPHARMACEUTICAL POWDER MANUFACTURE

Today, manufacturers are optimizing open-suite facility design to maximize throughput and profitability.

Key to this initiative is minimizing product loss due to feedstock spills, waste and cross-contamination. Improving the safety of workers is also a driving factor, through reduced exposure to airborne particles and lowering the risk of particle ignition. In order to accomplish both, a highly efficient powder transfer and containment system is required — one that is designed exclusively for powders, not one adapted from a liquid transfer system.

The EZ BioPac® single-use system is the fastest, most efficient solution. Its larger diameter top opening permits easy filling and fine-tuning of final weight. It is suitable for a wide range of filling/dispensing volumes, flow rates and product weights. Plus, its rugged, disposable transfer bags feature antistatic properties, assuring fast, complete discharge into process vessels.

Competitive 2D bags have a narrow fill opening, making weight adjustment awkward.



EZ BioPac® is a registered trademark of ILC Dover.

EZ BioPac: 10 ADVANTAGES, ONE SMART SOLUTION

1 EASE OF FILL

Liquid-based bag systems have narrow openings, slowing fill time. EZ BioPac's generous opening speeds filling while reducing risk of overfills, spills or surface contamination.

2 FINE-TUNING

Narrow-neck bags make removing material to fine-tune weight difficult. EZ BioPac's big opening allows fast fine-tuning with a large scoop.

3 71% FASTER FILLS

In direct-comparison trials, the EZ BioPac bag's larger opening and skirt reduced fill times substantially, compared to traditional 2D transfer bags.

Filling Trials — Time to Fill to $5.0\ kg$

		EZ BIOPAC®	2D TRANSFER BAG		
TEST #	TEST MEDIA	PROCESS FILL TIME (MIN:SEC)	PROCESS FILL TIME (MIN:SEC)		
Trial #1	Magnesium Sulfate	2:03.91	3:09.21		
Trial #2	Magnesium Sulfate	1:54.66	3:01.06		
Trial #3	Magnesium Sulfate	1:37.07	3:24.13		

ILC Dover EZ BioPac bag with generous fill opening and protective skirt.



4 REDUCED CONTAMINATION RISK

Competitive single-use bag surfaces can become contaminated from product spills or overflows. EZ BioPac's outer skirt folds down to protect the frame and bag exterior, then up again to seal contaminants inside.

5 TWO SEALING OPTIONS

EZ BioPac bags can be sealed by ILC Dover's robust crimping system (shown) or by making a Z-fold by hand and securing with attached cable ties.

6 SEPARATE DISCHARGE OUTLET

Unlike competitive 2D bags, EZ BioPac bags feature a separate discharge outlet that ensures a clear, clean discharge path and fast product transfer.

7 18% FASTER DISCHARGE

DischargeTrials — Time to Discharge 5.0 kg

		EZ BIOPAC®	2D TRANSFER BAG	
TEST #	TEST MEDIA	DISCHARGE TIME (MIN:SEC)	DISCHARGE TIME (MIN:SEC)	
Trial #1	Flour	1:49.0	1:45.0	
Trial #2	Flour	1:51.81	2:03.07	
Trial #3	Flour	1:21.42	2:10.70	

8 NO PRODUCT RESIDUE

EZ BioPac's ArmorFlex®114 film has static dissipative properties, preventing product from clinging inside the bag, maximizing value and ensuring accurate dispense volumes.

9 SEPARATE DISCHARGE OUTLET

Other bag systems can tip over or move.

EZ BioPac's strong, lightweight frame secures bags of various volumes during filling and scooping.

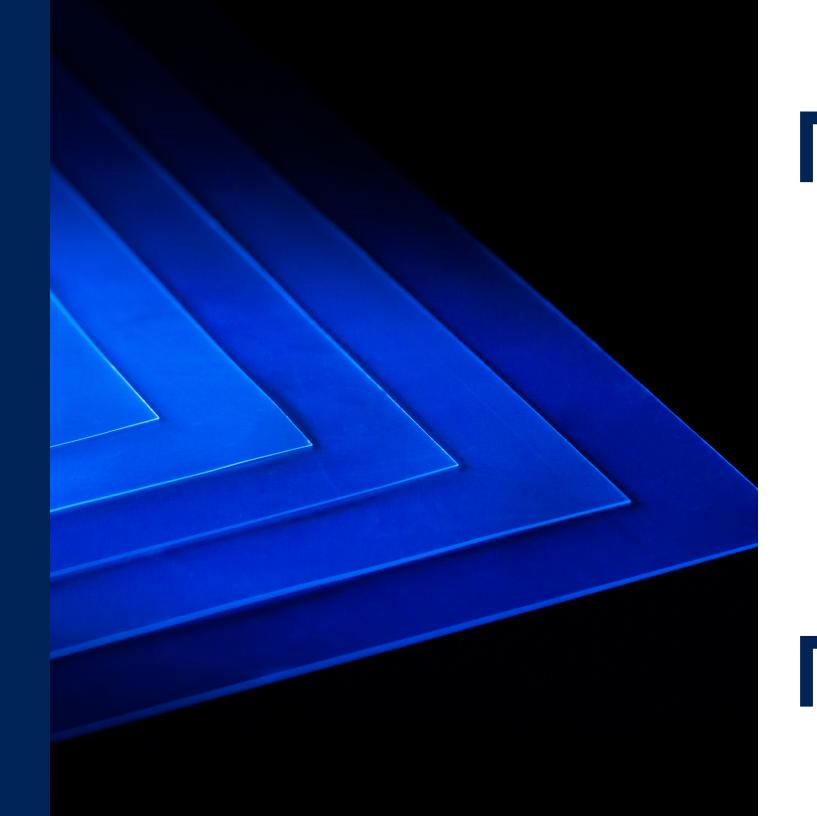
No need for barrels or containers.

10 FULL RANGE OF BAG VOLUMES AND FLANGE SIZES

To provide maximum flexibility for its customers and to guarantee the right-size product for all applications, ILC Dover makes EZ BioPac bags available in a full range of capacities and flange sizes.

Sanitary Flange Sizes Available

EZ BIOPAC VOLUME, L	1.5"	2"	3"	4"	DN 100	DN 150	6"	8"
1	4	4	4	4				
5	4	4	4	4				
10	4	4	4	4	4			
25		4	4	4	4	4	4	4
50					4	4	4	4
100						4	4	4



CERTIFIED QUALITY FOR GMP AND PEACE OF MIND.

EZ BioPac's ArmorFlex film meets FDA and 2002/72/EC requirements and EP 3.1.3 test conditions. In addition, it complies with FDA 21 CFR and passes USP <661> Physiochemical Tests for Plastics, USP <88> Class VI (7-day implant), USP <87> biological reactivity (in vitro) and Chilworth incendivity tests. Its permanent antistat has a five-year shelf life and replaces migrating additives. EZ BioPac is also tested for solvent resistance, and a DMF has been filed with FDA.

To order or learn more about the EZ BioPac single-use bag system, please send an email to **customer_service@ilcdover.com**, call **+1.800.631.9567** or visit us at **www.ilcdover.com**.

Since 1947, ILC Dover has built a global reputation for out-of-the-box thinking that makes the seemingly impossible possible. Our engineered solutions solve our customers' most complex challenges through the creative and efficient application of flexible materials often integrated with advanced equipment and hardware.

We look beyond the boundaries of convention to help customers see what could be, and discover the extraordinary possibilities within everyday things. We are a diverse company serving many markets. We are dreamers, engineers, scientists and pragmatists — all dedicated to outperforming tradition to better mankind.

We apply our vast knowledge of materials, soft goods, film-based solutions and design to move the world forward, from advancing spacesuits for astronauts to developing solutions for NASA Mars missions to engineering lighter-than-air vehicles here on Earth. We continue to pioneer the use of flexible containment solutions to support advanced pharmaceutical and biopharmaceutical manufacturing, and we're revolutionizing the packaging and extraction of bulk liquids to enhance customer profitability and sustainability.

Additionally, we create quick-deploy systems that protect cities and critical infrastructure from floods, and design and manufacture advanced respirators to protect against a range of chemical and biological threats.

Every day, everything we do brings new solutions to light. Are you ready to take your vision beyond boundaries? *Let's talk*.



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