

DiluFlow[®]

Gravimetric dilutors for solid samples



The best solution for your dilutions!

interscience



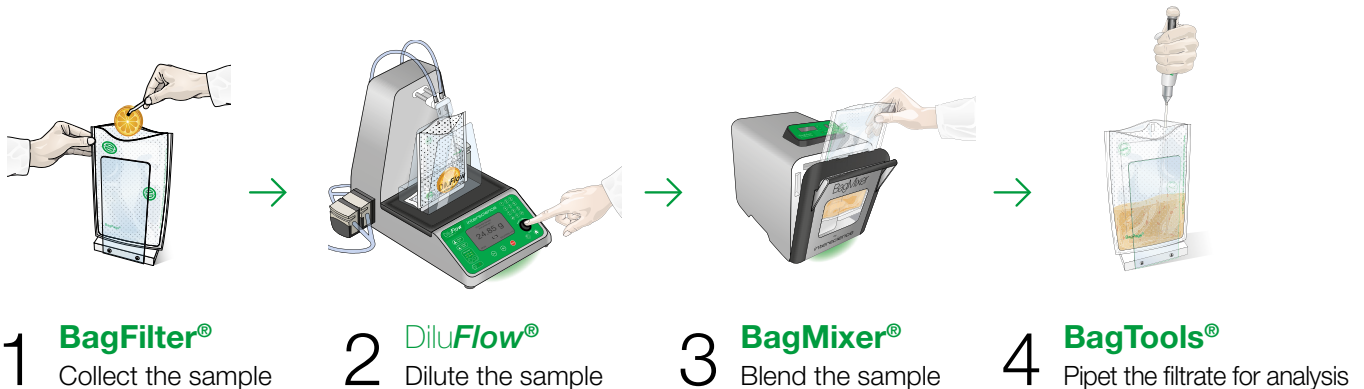
Our quality for your lab

- Full range of products for microbiological analyses
- Leadership for innovative products
- Worldwide distribution network
- Designed and Made in France



BagSystem®

for the best sample preparation



Why use a gravimetric dilutor?

DiluFlow® gravimetric dilutors enable the automatic dilution of the sample with perfect reliability. See the following advantages:

<p>MANUAL DILUTION</p> <p>Step 1 Weigh the sample</p> <p>Step 2 Add manually the diluent</p>		<p>AUTOMATED DILUTION WITH DiluFlow®</p> <p>Place the sample and start the dilution The appropriate quantity of diluent is added in a matter of seconds.</p>
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- | | |
|---|--|
| <p>Time-consuming ■</p> <p>Inaccurate: ■
Direct impact on final result</p> <p>Not reproducible ■</p> <p>Not secure: ■
The bag is not maintained</p> <p>Not automatically traceable ■</p> | <p>■ Quick: 8 seconds* for 225 mL</p> <p>■ Accurate: < 1 % of sample weighing
As little as < 1 % of dispensing (in standard or accurate mode)</p> <p>■ Reproducible</p> <p>■ Secured: The bag is maintained with BagOpen® bag opener</p> <p>■ Traceable: with LIMS, printer or Excel™</p> |
|---|--|

* Dilution time for a 25 g sample diluted at 1/10 on a DiluFlow® Elite with booster kit in fast mode

Easy-to-use efficient & connected 3 models for optimal dilutions



DiluFlow®

DiluFlow® Pro

DiluFlow® Elite

DiluFlow® Elite 1 kg

Ultra low profile	✓	✓	✓	✓
DripTray	✓	✓	✓	✓
Robotic arm	-	✓	✓	✓
Jumbo kit option	-	✓	✓ ⁽⁸⁾	-
Programmable	-	-	✓	✓
Full traceability	-	-	✓	✓
Up to 6 pumps	-	-	✓	✓
Multi-Dispensing	-	-	✓	✓

Superior quality

Watson Marlow™ pumps



Traceability

Printer, USB stick⁽¹⁾, Excel™, Open Office™, CSV, LIMS⁽¹⁾



Up to 6 diluents

With 4 extra connectable pumps⁽¹⁾

IN COMPLIANCE WITH



304 L stainless steel casing

For easy cleaning and long-lasting

Robotic arm⁽²⁾

Easy sample dropping
Avoids contamination
Saves time

Demo video
Scan me !



GeckoGrip

No more adhesive gums!
Ultra adhesive, hygienic and long lasting

PATENTED

Ultra low profile

Perfect for a laminar flow
Ergonomic: no more
musculoskeletal disorders

Kit booster

2 times faster

Only 30 cm!



High accuracy weighing scale

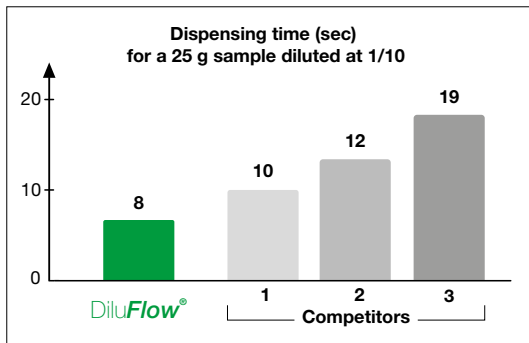
Weighing accuracy up to 99 %

Removable DripTray

Easy to keep your DiluFlow® clean
PATENTED

(1) Only on DiluFlow® Elite (2) Only on DiluFlow® Pro and DiluFlow® Elite (3) Only on DiluFlow® Elite 5 kg

Unique features



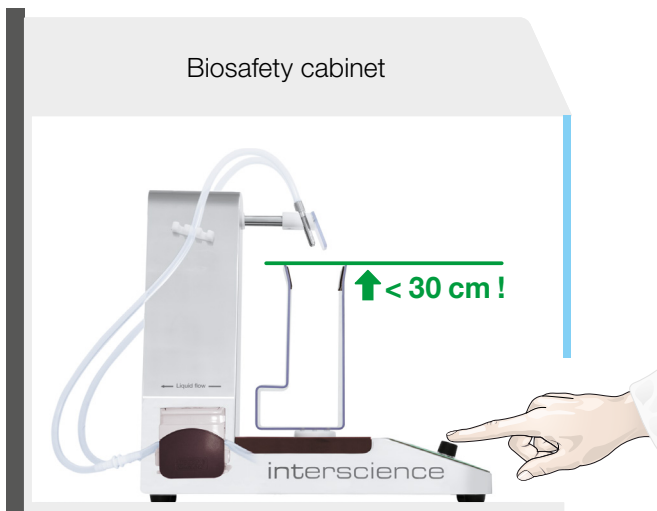
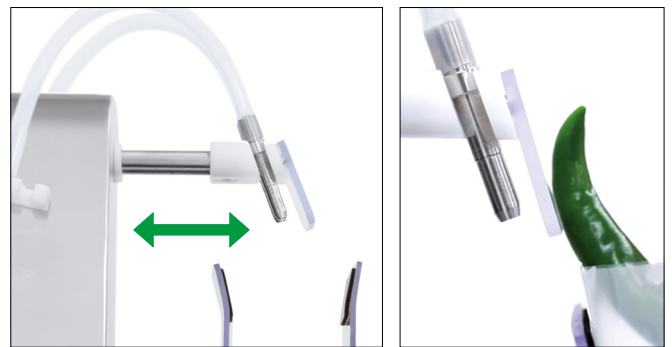
World's fastest dilutor:

With a booster kit, the DiluFlow® are the fastest diluters on the market. Only 8 s⁽³⁾ to dispense 225 mL!

Robotic arm⁽²⁾ & nozzle protection plate

The robotic arm enables you to drop the sample safely and easily without contamination risks. Tested more than 1.3 million times, its reliability is guaranteed.

The protective plate protects the nozzle from any contact with the sample.



Ultra low profile

The DiluFlow® have the lowest bag opening on the market, less than 30 cm!

This allows a better comfort and ergonomics, especially when you use the DiluFlow in a biosafety cabinet.

GeckoGrip gripping system

Inspired by a gecko's paw, this new GeckoGrip material will hold the bag without pressing hard. GeckoGrip sticking properties apply in dry and wet surfaces.

GeckoGrip long lasting material can be washed with soap and alcohol.

PATENTED





LightCode

An intuitive indicator of the status of the DiluFlow®. The degree of accuracy of the finished dilution is displayed: green > 98 %, orange > 95 % or red < 95 %. It will also turn blue if the scale is not stable, thus telling you to wait for stabilization.



Green:
Accuracy > 98 %



Orange:
Accuracy > 95 %



Red:
Accuracy < 95 %

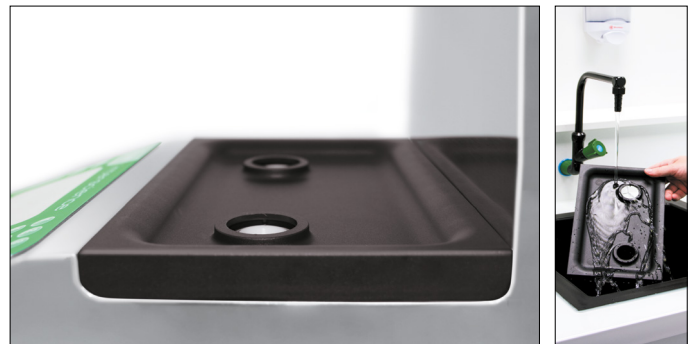


Blue:
Scale stabilizing

DripTray

In case culture media is spilt on the unit, the new patented DripTray can be removed to be rinsed, avoiding a tedious cleaning of the unit.

PATENTED



Multi-Dispensing⁽¹⁾

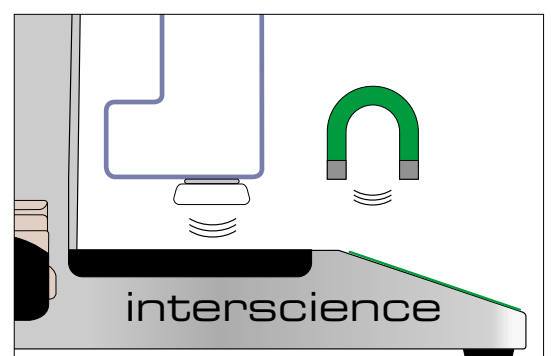
This unique patented mode allows you to serially dispense in small containers such as 9 mL tubes, without having to weigh each tube, by doing just one calibration on the scale.

PATENTED

Magnetic BagOpen®

The 2 points magnetic attachment of the BagOpen® guarantee a stable platform for better measuring accuracy, and provide a natural protection of the weight sensor when removing the bag.

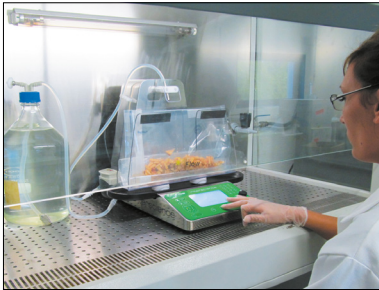
PATENTED SHAPE



(1) Only on DiluFlow® Elite (2) Only on DiluFlow® Pro and DiluFlow® Elite (3) Dilution time for a 25 g sample diluted at 1/10 on a DiluFlow® Elite with booster kit

Multiple ways to use a DiluFlow®

☞ The lab operators like the low profile of the DiluFlow® platform ☞



New standards make it necessary to work under a laminar flow for the dilution work, and this can create operational problems.

Our lab operators like the ultra-low profile of the DiluFlow® platform because they do not need to bend themselves anymore to insert the sample in the bag.

My DiluFlow® can handle up to 5 000 g load if you add the Jumbo kit option, to dilute in large bags. It is useful because you do not need to buy an extra machine for large samples.

■ Brigitte, lab technician

☞ The DiluFlow® Elite, in the 1 kg version, has an accuracy of 0.01 g ☞



In the cosmetics industry, the raw materials cost a fortune, sometimes more than 10 000 euros per kilo ! That is why we only work with small amounts, usually 1 g.

The DiluFlow® Elite, in 1 kg version, has an accuracy of 0.01 g, which enables us to get $\pm 2\%$ weighing accuracy. Moreover we use the tongs platform option which are efficient pliers to hold our tubes, to directly place the tube under the liquid flow every time.

■ Dylan, lab manager

☞ Accurate, user-friendly and reliable... ☞



We analyze between 10 and 20 samples per day in our lab.

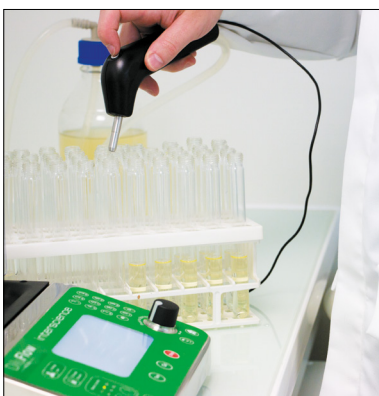
We looked at all dilutors on the market and most of them looked far too complex to use or too sophisticated.

We are now using a DiluFlow® which matches our requirements completely. The keyboard is really easy-to-use; only 2 keys to press for a dilution.

■ Alain, microbiological coordinator



☞ 3-in-1 equipment ☞



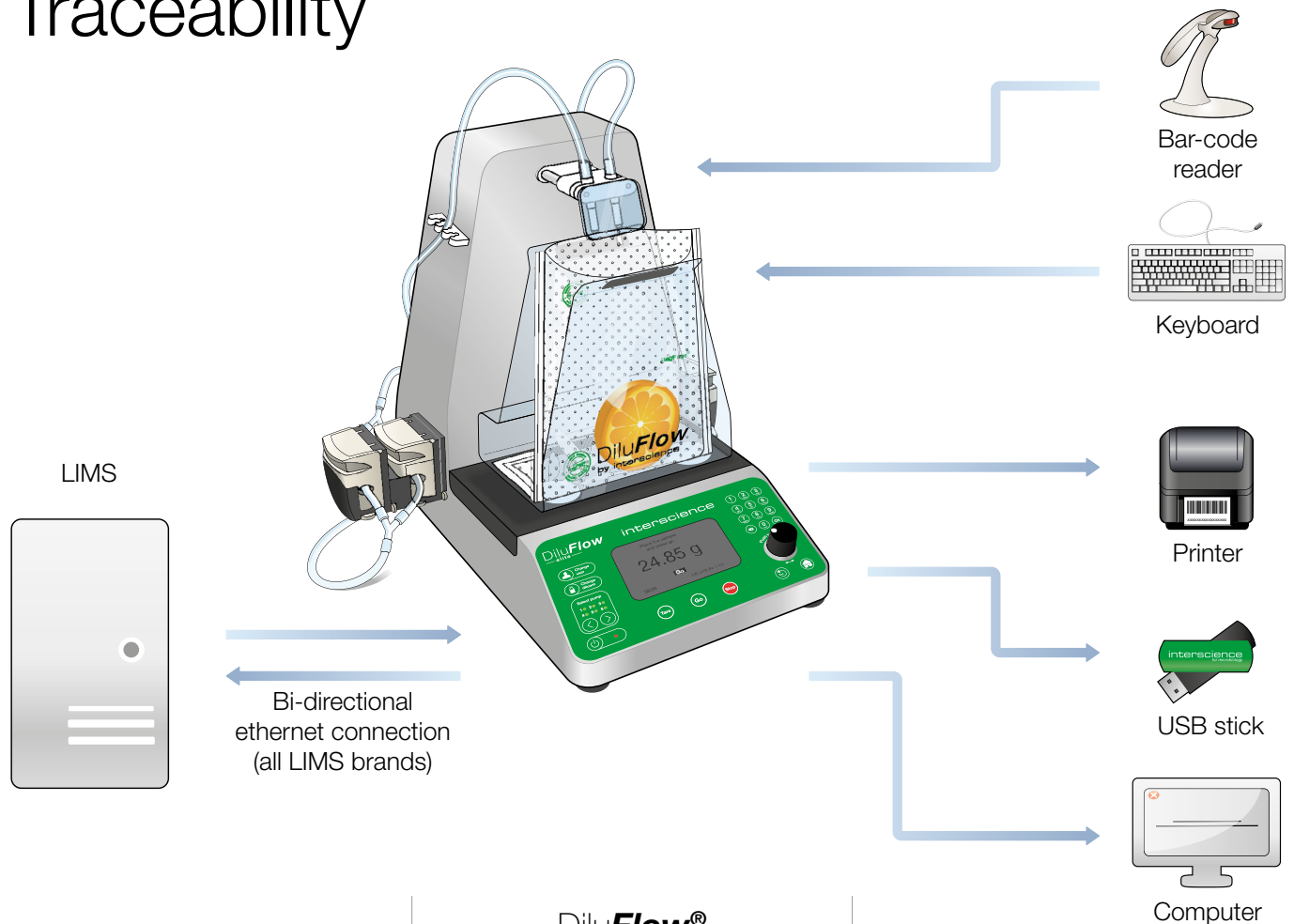
What I really like about my DiluFlow® Elite is the Multi-Dispensing function. I use it to fill 9 mL dilution tubes. Before that, I was using a peristaltic pump, but each time, I had to calibrate the pump with a weighing platform to get $\pm 2\%$ accuracy.

With the DiluFlow® Elite, you just put the first tube on the platform and the calibration is automatic. You can then directly distribute the doses in the tubes with the HandyGun, without having to weigh each tube. It is as if I had 3-in-1 equipment: a peristaltic pump, a scale and a dilutor!



■ Dominique, quality control engineer

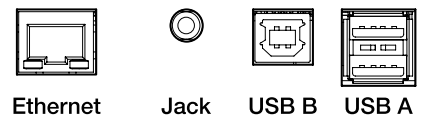
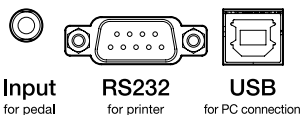
Traceability



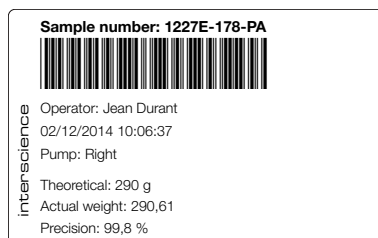
DiluFlow®
DiluFlow® Pro

DiluFlow® Elite

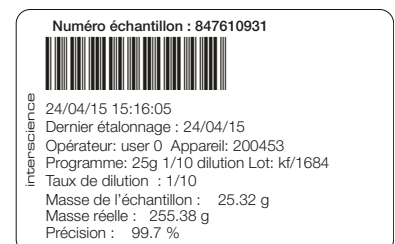
Available ports



Data export to a printer



* Printed via the supervision software



* Printed directly from the DiluFlow® Elite

Import and export of computer & network data

Traceability :

- USB connection to computer and data export via the DiluFlow® supervision software
- Excel™ file export from the supervision software

Full traceability :

- Data export to Excel™
- Data export to USB key (CSV)
- Bi-directional connectivity to the LIMS by Ethernet

How to order



DiluFlow®

Single pump (3 kg)
Double pump (3 kg)

Ref 501 103
Ref 501 203



DiluFlow® Pro

Single pump (5 kg)
Double pump (5 kg)

Ref 502 105
Ref 502 205













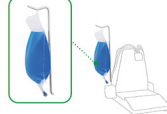
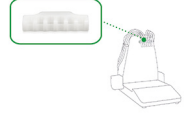
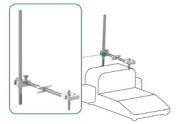
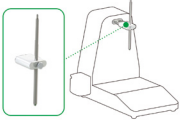










DiluFlow® Elite

Single pump (1 kg)
Double pump (1 kg)
Single pump (5 kg)
Double pump (5 kg)

Ref 503 101
Ref 503 201
Ref 503 105
Ref 503 205

DiluFlow® is delivered with 1 distribution arm, 1 drip tray 400, 1 or 2 pumps, 1 distribution assembly (GL45 - Ø 6.4 mm) per pump, 1 USB cable, 1 supervision software, 1 power cord, 1 BagOpen® 400 for dilutor, 1 user's manual, 1 conformity certificate / warranty card, 10 GeckoGrip, 1 pack of adhesive putty, blender bags samples.
DiluFlow® Pro is delivered with 1 drip tray 400, 1 or 2 pumps, 1 protection for distribution nozzle, 1 distribution assembly (GL45 - Ø 6.4 mm) per pump, 1 USB cable, 1 supervision software, 1 power cord, 1 BagOpen® 400 for dilutors, 1 user's manual, 1 conformity certificate / warranty card, 10 GeckoGrip, 1 pack of adhesive putty, 1 Allen wrench, blender bags samples.
DiluFlow® Elite is delivered with 1 drip tray 400, 1 or 2 pumps, 1 protection for distribution nozzle, 1 distribution assembly (GL45 - Ø 6.4 mm) per pump, 1 USB key, 1 USB cable, 1 power cord, 1 BagOpen® 400 for dilutors, User's Manual, 1 conformity certificate / warranty card, 10 GeckoGrip, 1 pack of adhesive putty, 1 Allen wrench, blender bags samples.

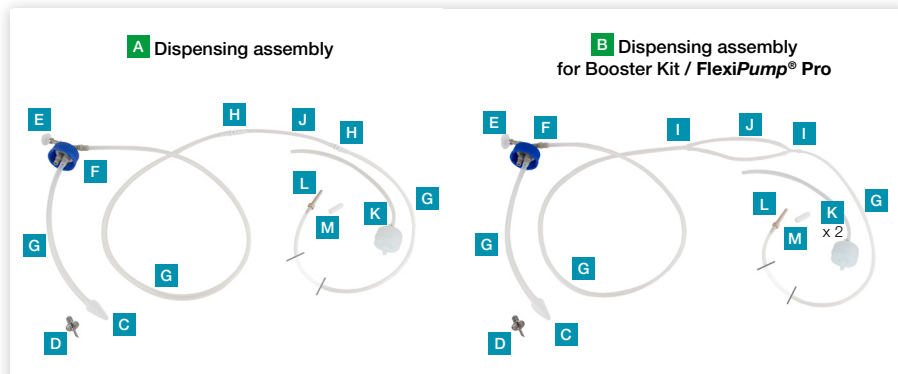
Accessories

 <p>Printer Thermal printer (RS 232 and USB output).</p> <p>Ref 410 150</p>	 <p>Foot pedal For hands-free dispensing. Connection with a 3.5 mm Jack</p> <p>Ref 507 008</p>	 <p>Bar-code reader (1) Bar-code reader</p> <p>Ref 522 000</p>	 <p>Handy Gun (1) Dispensing control with handy gun including electronic start button</p> <p>Ref 561 001</p>	 <p>Booster kit Booster pump + 2 silicone tubings for pump part (20 cm each), inner Ø 6.4 mm + 2 "Y"</p> <p>Ref 511 000</p>	 <p>Pump module (1) External module with single pump + 513 043: Dispensing assembly (GL45 - Ø 6.4 mm)</p> <p>Ref 505 007</p>
 <p>Jumbo kit (2) BagOpen® 3500 + bac de récupération 3500 + extension anti-éclaboussure pour embout de distribution + GeckoGrip</p> <p>Ref 505 006</p>	 <p>5L bottle (GL45) GL45 glass bottle (5L), autoclavable</p> <p>Ref 513 001</p>	 <p>2L bottle (GL45) Set of 3 GL45 glass bottle (2L), autoclavable</p> <p>Ref 413 002</p>	 <p>Independent stand for broth bags Independent stand for broth bags</p> <p>Ref 513 015</p>	 <p>Integrable stand for broth bags Integrated to the unit, to hold one broth bag. Delivered with 4 screws + Torx screwdriver</p> <p>Ref 505 010</p>	 <p>6 nozzles holder (1) Can hold up to 6 nozzles</p> <p>Ref 505 008</p>
 <p>Adjustable distribution system (3) Ideal to fill various containers</p> <p>Ref 505 004</p>	 <p>Adjustable distribution system (4) Ideal to fill various containers.</p> <p>Ref 505 005</p>	 <p>Weighing platform To hold a tube (Ø 10 to 60 mm). No delivered with tube.</p> <p>Ref 505 002</p>	 <p>Tongs platform To hold a tube (Ø 10 to 60 mm). No delivered with tube.</p> <p>Ref 505 003</p>	 <p>BagOpen® 80/100 mL for dilutors Bag holder for 80/100 mL bags for DiluFlow®</p> <p>Ref 505 014</p>	 <p>BagOpen® 400 for dilutors (stainless steel) Stainless steel stand for 400 mL bags</p> <p>Ref 505 016</p>
 <p>Film for printer Thermal transfer film</p> <p>Ref 410 130</p>	 <p>Paper for printer Set of 2 thermal paper rolls for printer</p> <p>Ref 521 110</p>	 <p>Sticker for printer Set of 2 rolls of 1000 stickers for thermal printer - Label size: 70 x 45 mm</p> <p>Ref 521 012</p>	 <p>Certified standard weight (500 g) 500 g COFRAC calibrated weight, type F1</p> <p>Ref 513 005</p>	 <p>GeckoGrip Set of 10 adhesives for DiluFlow® BagOpen® 400 and 3500</p> <p>Ref 505 009</p>	 <p>GeckoGrip Set of 10 adhesives for DiluFlow® BagOpen® 80/100</p> <p>Ref 505 015</p>

(1) Only on DiluFlow® Elite (2) Only on DiluFlow® Pro and DiluFlow® Elite 5 kg (3) Only on DiluFlow® (4) Only on DiluFlow® Pro and DiluFlow® Elite

Tubings

Complementary products



- C** Tube weight
- D** Trocar
- E** PTFE filter
- F** Autoclavable GL45 stopper
- G** Silicone tubings
- H** Straight connectors
- I** Y connectors
- J** Tygon™ tubings for pump
- K** Tubings Tygon™ for pump with 0,2 µm filter
- L** Nozzles
- M** Protection cap

Ref	Code	Designation	Quantity				
				DiluFlow®	DiluFlow® Pro	DiluFlow® Elite 5kg	DiluFlow® Elite 1kg
505 012	L	Adjustable nozzles (L 23.5 cm - tubings Ø 3.2 mm)	5	•	•		•
505 013	L	Adjustable nozzles (L 12 cm - tubings Ø 6.4 mm)	5	•	•	•	
505 017	M	Nozzle cap for trocar	10	•	•	•	•
505 018	M	Nozzle cap (Ø 1.6 - 3.2 mm)	10	•	•	•	•
513 008	B	Booster kit dispensing assembly (GL45 - Ø 3.2 mm)	1	•	•	•	•
513 009	G J I	Tubings + Y (Ø 3.2 mm)	5	•	•	•	•
513 011	J	Tubings for pump (Ø 4.8 mm)	6	•	•	•	
513 016	D G H J L M	Dispensing assembly for broth bags (Ø 4.8 mm)	1	•	•	•	
513 020	D	Trocar	1	•	•	•	•
513 023	E	PTFE filters 0.2 µm (Ø 25 mm)	5	•	•	•	•
513 024	L M	Nozzles (tubings Ø 4.8 - 8 mm)	5	•	•	•	•
513 039	C	Tube weights (Ø 6 mm)	5	•	•	•	•
513 040	L M	Nozzles (tubings Ø 1.6 - 3.2 mm)	5	•	•	•	•
513 041	B	Booster kit dispensing assembly (GL45 - Ø 6.4 mm)	1	•	•	•	•
513 042	G J I	Tubings + Y (Ø 6.4 mm)	5	•	•	•	•
513 043	A	Dispensing assembly (GL45 - Ø 6.4 mm)	1	•	•	•	•
513 044	G H J	Tubings (Ø 6.4 mm)	5	•	•	•	•
513 045	A	Dispensing assembly (GL45 - Ø 3.2 mm)	1	•	•	•	•
513 047	G H J	Tubings (Ø 3.2 mm)	5	•	•	•	•
513 048	M	Nozzle cap (Ø 1.6 - 3.2 mm)	10	•	•	•	•
513 050	A	Dispensing assembly with 0.2 µm filter (GL45 - Ø 6.4 mm)	1	•	•	•	•
513051	B	Dispensing assembly + Y with 0.2 µm filter (GL45 - Ø 6.4 mm)	1	•	•	•	•
513 052	K	Tubings for pump with filter 0.2 µm (Ø 6.4 mm)	2	•	•	•	•
561 302	J	Tubings for pump (Ø 3.2 mm)	6	•	•	•	•
561 304	J	Tubings for pump (Ø 6.4 mm)	6	•	•	•	•
561 401	E F	Autoclavable GL45 stopper + 0.2 µm filter	1	•	•	•	•
561 403	H	Straight connectors (tubings Ø 6.4 - 8 mm)	6	•	•	•	•
561 404	H	Straight connectors (tubings Ø 3.2 - 4.8 mm)	6	•	•	•	•
562 401	I	Y connectors (tubings Ø 6.4 - 8 mm)	6	•	•	•	•
562 402	I	Y connectors (tubings Ø 3.2 mm)	6	•	•	•	•

BagMixer®
Lab blenders

Models (mL) :
100/400/3500

BagFilter®
Lateral filter bag

Models (mL) :
400/3500

BagPage®
Full-page filter bag

Models (mL) :
100/400/3500

BagLight®
Non-filter bag

Models (mL) :
100/400/3500

BagOpen®
Bag opener/holder

Models (mL) :
80/100 - 400 - 3500

BagRack®
Storage rack for bags

Models (mL) :
80/100 - 400
3500 (2/4 compartments)

BagClip®
Closing clip

Models (mL) :
80/100 - 400 - 3500

BagPipet® & BagTips®
Fixed volume pipet & sterile tips

BagTips® Models:
Regular (19 cm)
Jumbo (24 cm)

BagSeal®
Thermal sealing unit

For bags
up to 2000 mL

PetriPile®
Petri dish storage stack

Models (ø) :
55 - 65 - 90 - 150 mm

Technical specifications

Reference	DiluFlow® 3 kg		DiluFlow® Pro 5 kg		DiluFlow® Elite 5 kg		DiluFlow® Elite 1 kg	
	Single pump	Double pump	Single pump	Double pump	Single pump	Double pump	Single pump	Double pump
BagOpen height < 30 cm		✓		✓		✓		✓
Removable drip tray (Patented)		✓		✓		✓		✓
BagOpen with GeckoGrip system (Patented)		✓		✓		✓		✓
Magnetic stand for BagOpen (Patented shape)		✓		✓		✓		✓
LightCode: color status LED		✓		✓		✓		✓
Compatible with Booster Kit		✓		✓		✓		✓
304L stainless steel body		✓		✓		✓		✓
Stainless casting electromechanical core		✓		✓		✓		✓
Robotic arm		-		✓		✓		✓
Compatible with Jumbo Kit		-		✓		✓		-
Protection for tubing nozzle		-		✓		✓		✓
Up to 6 pumps		-		-		✓		✓
Multi-dispensing mode (Patented)		-		-		✓		✓
Powder mode		-		-		✓		✓
Weighing mode		-		-		✓		✓
Auto-tare function		-		-		✓		✓
24 editable programs		-		-		✓		✓
Bidirectional connectivity		-		-		✓		✓
1 g dilution to 1/10 th		-		-		-		✓
Resolution up to 200 g					0.01 g			
Weighing range	0.1 to 3 000 g				0.1 to 5 000 g		0.1 to 1 000 g	
Max weight without support	4 500 g				7 000 g		1 500 g	
Weighing accuracy	0 to 100 g: ± 0.05 g 100 to 3 000 g: ± 0.1%				0 to 100 g: ± 0.05 g 100 to 5 000 g: ± 0.1%		0 to 20 g: ± 0.01 g 20 to 1 000 g: ± 0.1%	
Dilution factor			1/2 to 1/99				1/2 to 1/1000, customizable fractions	
Dilution accuracy/distribution	> 99% in Standard or Accurate mode (in optimal conditions)							
Dilution time for a 25g sample diluted to 1/10 th	< 9 s (with Booster Kit in Fast mode)				< 8 s (with Booster Kit in Fast mode)			
Dilution time for a 375g sample diluted to 1/10 th			< 80 s (with Booster Kit in Fast mode)		< 75 s (with Booster Kit in Fast mode)			
Distribution time for 90 mL	< 7 s (with Booster Kit in Fast mode)				< 6 s (with Booster Kit in Fast mode)			
Distribution time for 225 mL	< 10 s (with Booster Kit in Fast mode)				< 9 s (with Booster Kit in Fast mode)			
Max number of pumps	2 integrated				2 integrated + 4 external			
Dilution/distribution mode					Fast - Standard - Accurate			
Traceability	Printer / Supervision software (export to Excel™ / OpenOffice™, CSV file, printer)				Printer / Export to Excel™ file / CSV file Export on USB key / LIMS			
Exported data	Sample weight / Total weight / Dilution factor / Dilution accuracy / Right or left pump + with supervision software: Sample number / Name of operator / Date / Time				Sample weight / Total weight / Dilution factor / Dilution accuracy / Diluent / Sample number / Diluent lot number / Date / Time / Last calibration date / Name of operator / Name of program			
Connection	RS232 output for printer / USB port for computer / Jack output for foot pedal connection				2 USB ports (type A) to connect a printer, keyboard, bar-code reader, USB key / 1 USB port (type B) to connect a computer / Jack socket to connect a foot pedal / Handy gun / Ethernet connection for LIMS			
Language	English				French, english			
Net weight	10.1 kg	12.5 kg	12.3 kg	14.8 kg	12.8 kg	15.3 kg	12.9 kg	15.2 kg
Dimensions (w x d x h)	31.3 x 43.7 x 39.4 cm		37 x 43.7 x 39.4 cm		31.3 x 42.1 x 37.7 cm		37 x 42.1 x 37.7 cm	
In compliance with	ISO 7218 - ISO 6887							
Warranty after recording the warranty card	1 year							

* with booster kit in standard or accurate mode ** with booster kit in fast mode

Certified production:



Products made for INTERSCIENCE by Interlab, an ISO 9001 certified company.



Your local distributor

interscience

PARIS

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