

DiluFlow[®]

Gravimetric dilutors for solid samples



The best solution for your dilutions!

interscience



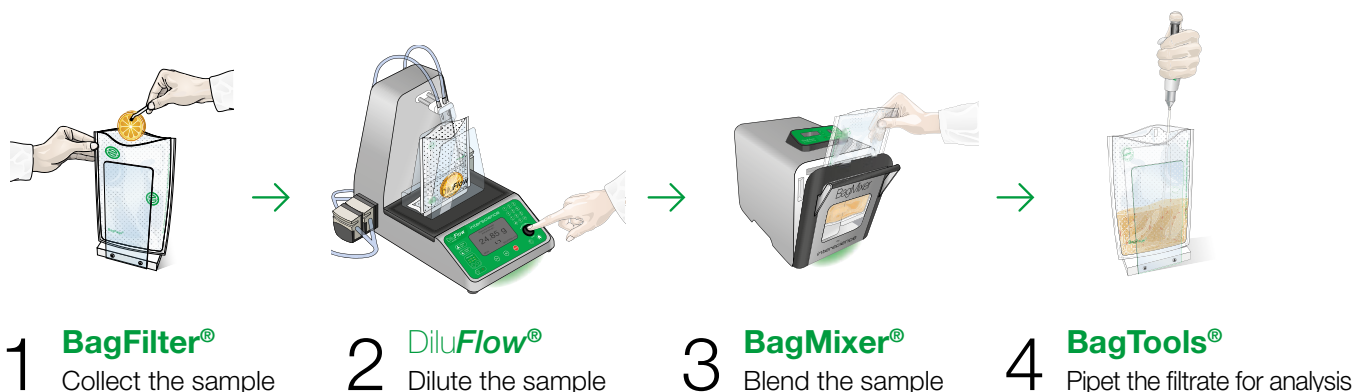
Our quality for your lab

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



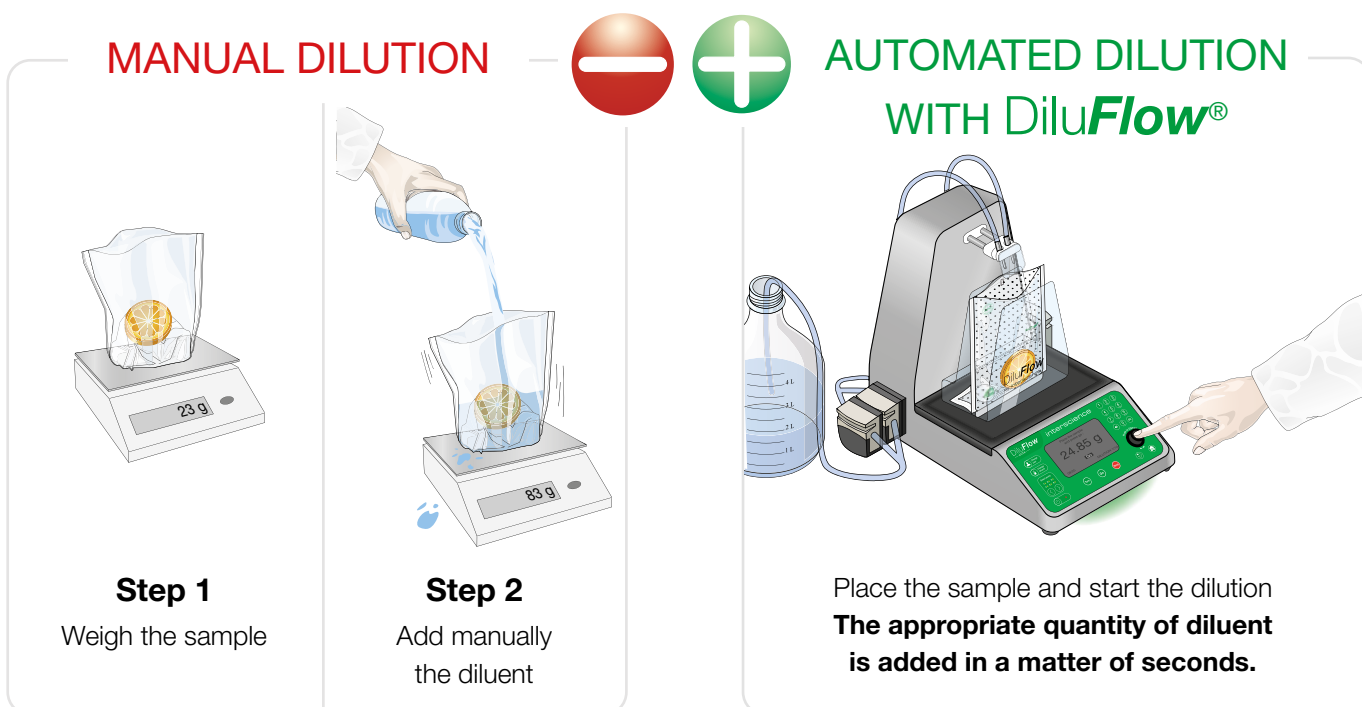
BagSystem®

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:



Time-consuming ■

Inaccurate: ■
Direct impact
on final result

Not reproducible ■

Not secure: ■
The bag is not maintained

Not automatically traceable ■

■ **Quick:** 8 seconds* for 225 mL

■ **Accurate:** < 1 % of sample weighing
As little as < 1 % of dispensing
(in standard or accurate mode)

■ **Reproducible**

■ **Secured:** The bag is maintained
with BagOpen® bag opener

■ **Traceable:** with LIMS, printer or Excel™

* 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



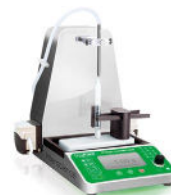
DiluFlow®



DiluFlow® Pro



DiluFlow® Elite



DiluFlow® Elite 1 kg

Ultra low profile	✓	✓	✓	✓
DripTray	✓	✓	✓	✓
Robotic arm	-	✓	✓	✓
Jumbo kit option	-	✓	✓ ^(*)	-
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!

Removable DripTray

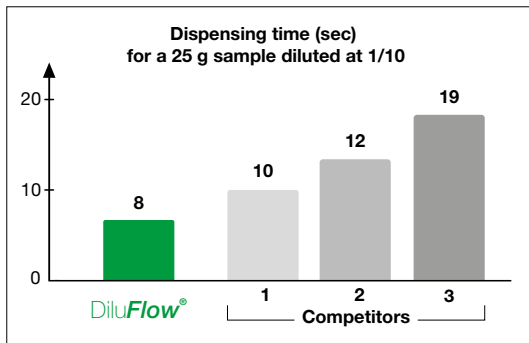
Easy to keep your DiluFlow® clean
PATENTED

High accuracy weighing scale

Weighing accuracy up to 99%



Unique features



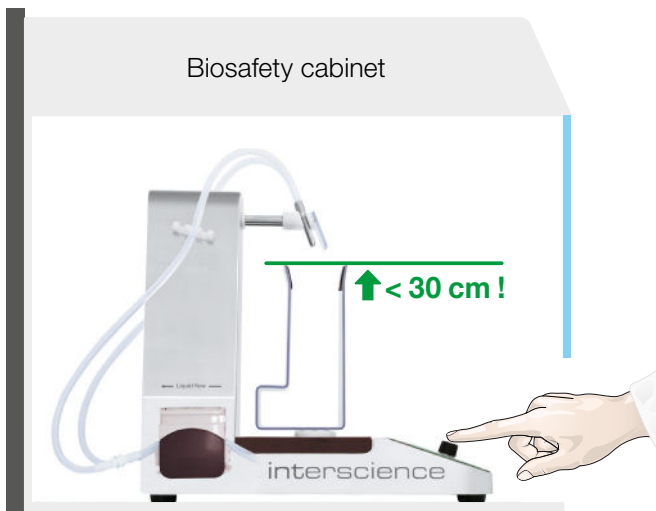
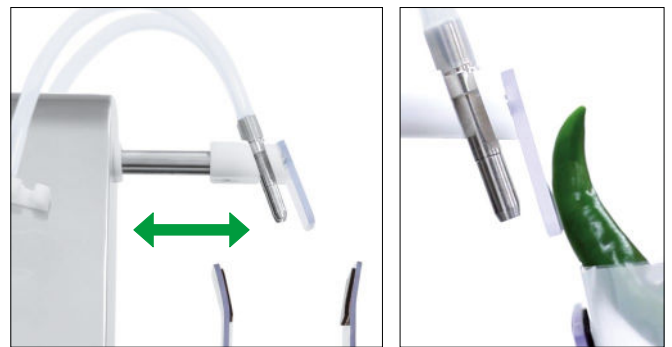
World's fastest dilutor:

With a booster kit, the Dilu**Flow**® are the fastest dilutors 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 Dilu**Flow**® 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⁾

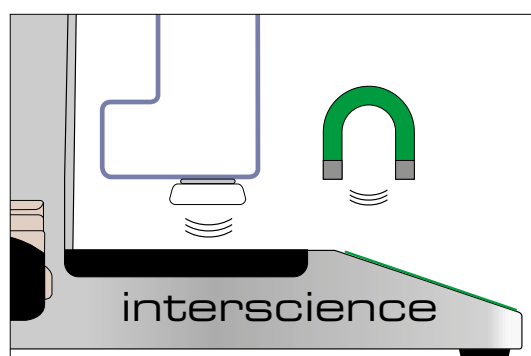
This unique patented mode allows you to serially dispense in small containers such as 9 mL tubes, without having to weigh each tube, by doing just one calibration on the scale.

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.

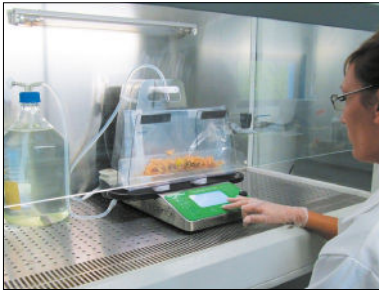
PATENTED SHAPE



(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.

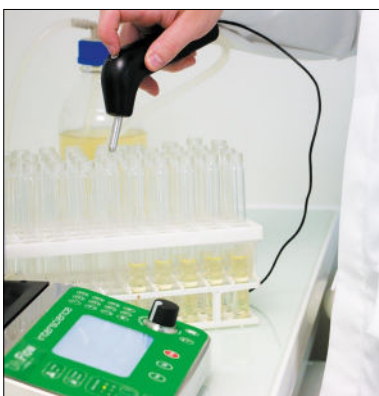
We looked at all dilutors on the market and most of them looked far too complex to use or too sophisticated.

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 ☞



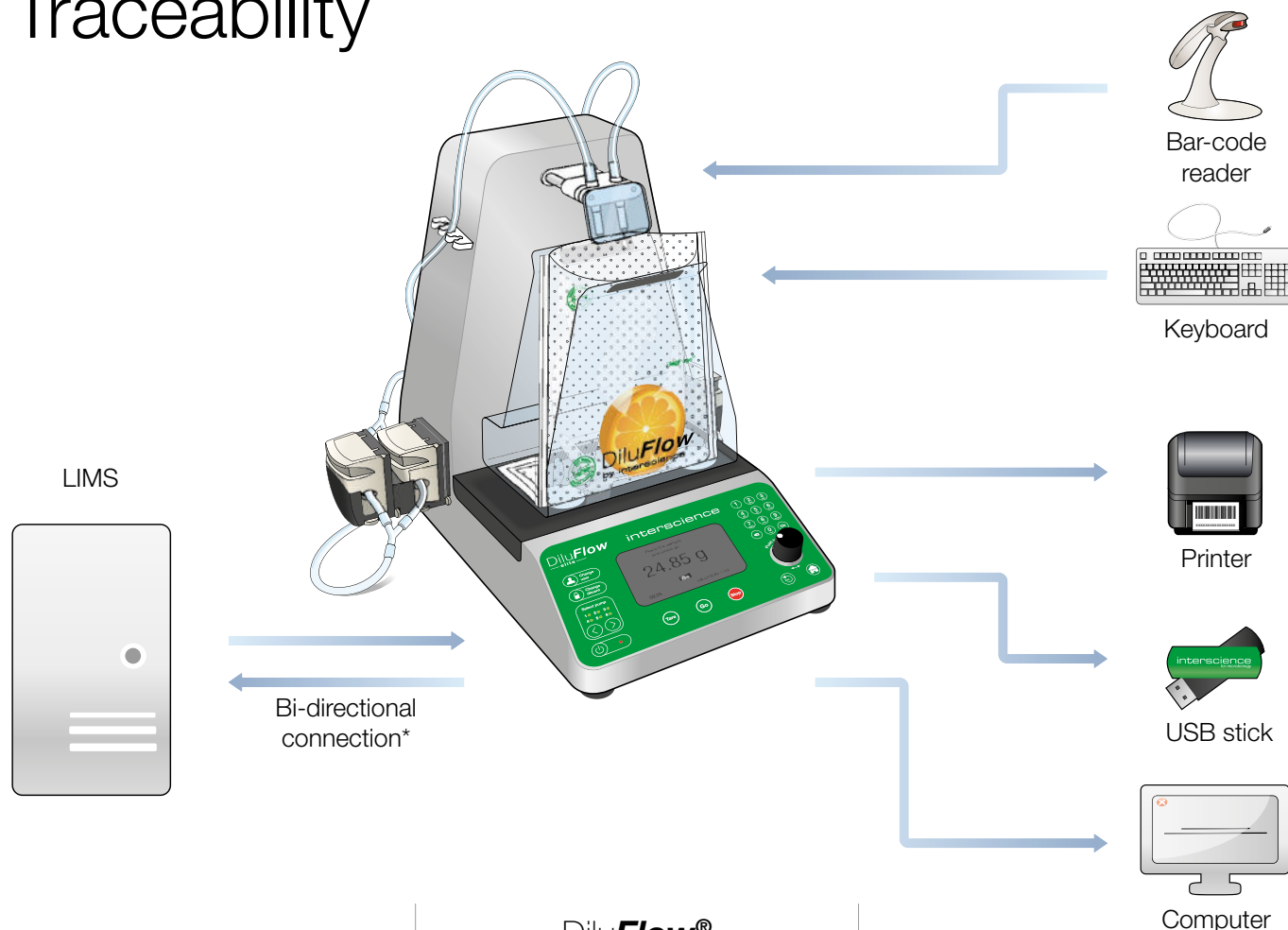
What I really like about my DiluFlow® Elite is the Multi-Dispensing function. I use it to fill 9 mL dilution tubes. Before that, I was using a peristaltic pump, but each time, I had to calibrate the pump with a weighing platform to get $\pm 2\%$ accuracy.


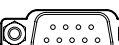







With the DiluFlow® Elite, you just put the first tube on the platform and the calibration is automatic. You can then directly distribute the doses in the tubes with the HandyGun, without having to weigh each tube. It is as if I had 3-in-1 equipment: a peristaltic pump, a scale and a dilutor!



■ Dominique, quality control engineer

Traceability



	DiluFlow® DiluFlow® Pro	DiluFlow® Elite
Available ports	   Input for pedal RS232 for printer USB for PC connection	    Ethernet Jack USB B USB A
Data export to a printer	 Sample number: 1227E-178-PA Operator: Jean Durant 02/12/2014 10:06:37 Pump: Right Theoretical: 290 g Actual weight: 290,61 Precision: 99,8 % * Printed via the supervision software	 Numéro échantillon : 847610931 24/04/15 15:16:05 Dernier étalonnage : 24/04/15 Opérateur: user 0 Appareil: 200453 Programme: 25g 1/10 dilution Lot: kt/1684 Taux de dilution : 1/10 Masse de l'échantillon : 25,32 g Masse réelle : 255,38 g Précision : 99,7 % * Printed directly from the DiluFlow® Elite
Import and export of computer & network data	Traceability : <ul style="list-style-type: none"> • USB connection to computer and data export via the DiluFlow® supervision software • Excel™ file export from the supervision software 	Full traceability : <ul style="list-style-type: none"> • Data export to Excel™ • Data export to USB key (CSV) • Web service bi-directionnal connectivity to the LIMS

* Contact us for a list of compatible LIMS.

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



Printer

Thermal printer (RS 232 and USB output).

Ref 410 150



Foot pedal

For hands-free dispensing. Connection with a 3.5 mm Jack

Ref 507 008



Bar-code reader (1)

Bar-code reader (1D/2D)

Ref 522 000



Handy Gun (1)

Dispensing control with handy gun including electronic start button

Ref 561 001



Booster kit

Booster pump + 2 silicone tubings for pump part (20 cm each), inner Ø 6.4 mm + 2 "Y"

Ref 511 000



Pump module (1)

External module with single pump + 513 043: Dispensing assembly (GL45 - Ø 6.4 mm)

Ref 505 007



Jumbo kit (2)

BagOpen® 3500 + 3500 mL Drip Tray + anti-splash extension for nozzle holder + GeckoGrip

Ref 505 006



5L bottle (GL45)

GL45 glass bottle (5L), autoclavable

Ref 513 001



2L bottle (GL45)

Set of 3 GL45 glass bottle (2L), autoclavable

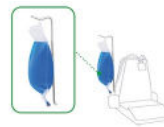
Ref 413 002



Independent stand for broth bags

Independent stand for 2 broth bags

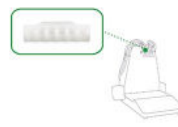
Ref 513 015



Integrable stand for broth bags

Integrated to the unit, to hold one broth bag. Delivered with 4 screws + Torx screwdriver

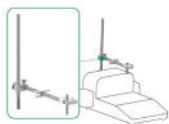
Ref 505 010



6 nozzles holder (1)

Can hold up to 6 nozzles

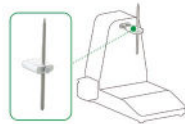
Ref 505 008



Adjustable distribution system (3)

Ideal to fill various containers

Ref 505 004



Adjustable distribution system (4)

Ideal to fill various containers.

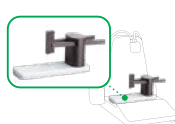
Ref 505 005



Weighing platform

To weigh and support a container. Not delivered with container.

Ref 505 002



Tongs platform

To hold a tube (Ø 10 to 60 mm). No delivered with tube.

Ref 505 003



BagOpen® 80/100 mL for dilutors

Bag holder for 80/100 mL bags for DiluFlow®

Ref 505 014



BagOpen® 400 for dilutors (stainless steel)

Stainless steel stand for 400 mL bags

Ref 505 016



Film for printer

Thermal transfer film

Ref 410 130



Paper for printer

Set of 2 thermal paper rolls for printer

Ref 521 110



Sticker for printer

Set of 2 rolls of 1000 stickers for thermal printer - Label size: 70 x 45 mm

Ref 521 012



Certified standard weight (500 g)

500 g COFRAC calibrated weight, type F1

Ref 513 005



GeckoGrip

Set of 10 adhesives for DiluFlow® BagOpen® 400 and 3500

Ref 505 009



GeckoGrip

Set of 10 adhesives for DiluFlow® BagOpen® 80/100

Ref 505 015

Tubings

Complementary products

A Dispensing assembly		B Dispensing assembly for Booster Kit	
C Tube weight	G Silicone tubings (L 23.5 cm - tubings Ø 3.2 mm)	K Tubings Tygon™ for pump with 0.2 µm filter	
D Trocar	H Straight connectors	L Nozzles	
E PTFE filter	I Y connectors	M Protection cap	
F Autoclavable GL45 stopper	J Tygon™ tubings for pump		

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	•	•	•	•
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	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	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

		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
Reference		501 103	501 203	502 105	502 205	503 105	503 205	503 101	503 201
OVERVIEW	304L stainless steel body	✓		✓		✓		✓	
	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	✓		✓		✓		✓	
	Stainless casting electromechanical core	✓		✓		✓		✓	
	Robotic arm	-		✓		✓		✓	
	Compatible with Jumbo Kit	-		✓		✓		-	
	Protection for dispensing 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	-		-		-		✓	
	SPECIFICATIONS	Resolution up to 200 g	0.01 g						
Weighing range		0.1 to 3000 g		0.1 to 5000 g				0.1 to 1000 g	
Max weight without support		4500 g		7000 g				1500 g	
Weighing accuracy		0 to 100 g: ± 0.05 g 100 to 3000 g: ± 0.1%		0 to 100 g: ± 0.05 g 100 to 5000 g: ± 0.1%				0 to 20 g: ± 0.01 g 20 to 1000 g: ± 0.1%	
Dilution factor		1/2 to 1/99				1/2 to 1/1000, customizable fractions			
Minimum weight required for dilution		5 g						0,5 g *	
Minimum weight required for distribution		5 g							
Dilution/distribution accuracy		> 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							
Language		English				French, english			
Voltage - Frequency		100-240 V~ 50-60 Hz							
Warranty		1 year							
Spare parts availability	10 years								
In compliance with	ISO 7218 - ISO 6887								
TRACEABILITY	Traceability	Printer / Supervision software (export to Excel™ / OpenOffice™, CSV file, printer)				Printer / Export to Excel™ file / CSV file Export on USB key / Bi-directional connection to LIMS			
	Type of LIMS connection	-				File sharing, web service			
	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 / Handv gun / Ethernet connection for LIMS			

* with a recommended dilution factor of 10

Certified production:



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

Your local distributor

interscience

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