



Adelphi
Manufacturing

CBD Industry Machinery & Process Equipment Product Guide



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ALL ABOUT FLUIDS



902 304 316

quilinox@quilinox.com

www.quilinox.com



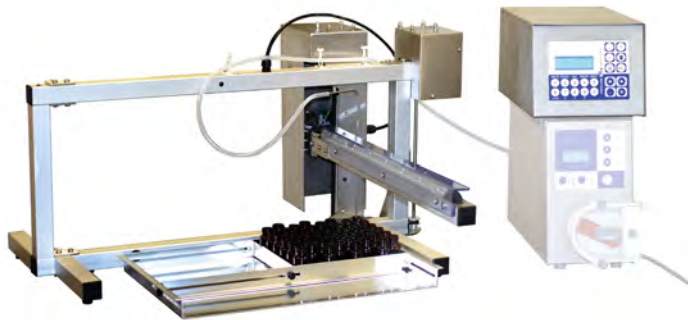


SMALL BATCH PRODUCTION



XYZ Distributor

The XYZ Distributor is designed to be used in conjunction with the Accuramatic Peristaltic Dispenser, and enables small containers to be filled automatically in trays. The Z axis is the diving nozzle movement that allows CBD oils to be automatically filled from above the neck or into the neck.



| Item code | Specification |
|-----------------------------|---|
| 3525000 | XYZ DISTRIBUTOR |
| Electricity (selectable) | 240V AC, 50/60 Hz, 500W (120V optional) |
| Movement space (mm) | X = 520, Y= 335, Z= 155 |
| Electronics | Mircoprocessor |
| Weight (kg) | Control: 4.5. XYZ: 9.0 |
| Distributor dimensions (mm) | 790 × 625 × 390 |
| Control dimensions (mm) | 200 × 280 × 180 |
| Drip delay | 0.0–0.9 secs |
| Max vial height (mm) | 200 |
| Min neck opening (mm) | 8 |
| Tray fill area (mm) | 410 × 265 |

Features:

- Control box remote from moving nozzle frame suitable for use in laminar flow cabinet
- Adjustable trays are supplied so that bottles are held in an orderly fashion
- Setting up is easy using the menu-driven LCD displays
- Special trays can be made to suit odd shaped bottles
- Fills straight rows or honeycombed configurations

Accuramatic Peristaltic Dispensing Unit

This unit can be operated by hand, foot switch, or will cycle automatically with a delay of up to 10 seconds between fills. The pump runs at a constant speed for a precisely determined period of up to 100 seconds, can run forwards or backwards, and has a choice of three filling modes: Braked stop – Soft stop – Stop with suck back.

Like all peristaltic pumps the liquid only comes into contact with the inside of one uninterrupted length of silicone tubing which will withstand repeated sterilisation. Bacteriological inline filtration can be performed at the outlet side of the pump. This Peristaltic Dispenser can be combined with our XYZ Distributor to offer quick, easy, and hygienic filling of whole trays of CBD oil bottles automatically.



| Item code | Specification |
|--------------------|---|
| 3510000 | PERISTALTIC DISPENSER |
| Volumes (ml) | 1 to 1,000 |
| Repeatability | ± 0.5% |
| Max flow rate (ml) | 36 ml/sec (standard pump. Twin pump option available) |
| Electricity | 240V AC, 50 Hz, 50W (120V optional) |
| Weight (kg) | Nett 8.5, Gross 10.5 |
| Carton size (cm) | 44 × 23 × 43 |



SEMI-AUTOMATIC FILLING

Response Benchtop Filler

Our Response range of filling machinery was developed in response to our customers' requests, hence the name!

Designed to meet pharmaceutical standards, all Response machines are versatile, hygienic and easy to use. Their stylish exteriors conceal well-engineered and robust filling systems.

The highly regarded Response Benchtop Filler is a semi-automatic filling machine, available in single or twin-head configurations, with a comprehensive range of nozzles, hoppers and other accessories available to meet your individual requirements. This pneumatically driven filler is perfect for filling CBD oils, thanks to its versatile filling head design.

The Response Benchtop Filler is ideally suited to those wanting to start automating a previously manual filling process, and those that don't currently require the output levels offered by a fully automated solution. However, once production demands increase, Response benchtop filling units can be up-scaled, by mounting the original filler onto a Response Monobloc or a Response Automation System, to create an extremely flexible fully automatic filling machine.



| | Specification (single head) |
|------------------------------|--|
| Accuracy | ±0.25% |
| Output | Up to 40 per minute (dependent on fill volume) |
| Height without hopper / tank | 340 mm |
| Depth | 840 mm |
| Width without conveyor | 343 mm |
| Weight | 41 kg |
| Air consumption per cycle | 5 litres at 6 bar |
| Volume range | 5 ml – 1 litre |



AUTOMATIC FILLING

Response Monobloc Filler

Adelphi's Response Monobloc Filler provides many advantages for CBD oil manufacturers compared with traditional inline packaging systems.

Key Features and Benefits:

- Capable of filling 5ml to 250ml containers
- Space-saving design
- Ten-minute strip down time
- Hygienic stainless steel construction; all wetted parts are 316L stainless steel
- Response volumetric filler fill-accuracy +/- 0.25%
- Quick and easy to change parts from one fill-size container to another
- Easy-to-use intuitive HMI touch screen controls for your operator
- Designed to effectively handle liquids, oils, creams, pastes and solids in suspension
- Speed of operation in the region of 35 per minute
- Reduced labour costs



The Response Monobloc Filler can incorporate the following elements to give a complete turnkey packaging line:

- In-feed table
- Bottle blower
- Filler
- Automatic cap placement
- Capper
- Labeller
- Collection table

Suitable container dimensions:

External diameter up to 85mm

Height up to 250mm

Cap diameter up to 45mm

| | Specification |
|------------------------------|---|
| Accuracy | ±0.25% |
| Output (per minute) | 30 - 35 |
| Height without hopper / tank | 2032 mm |
| Depth | 810 mm |
| Width without conveyor | 1120 mm |
| Weight (approx) | 275 kg (plus Response base unit and hopper) |
| Air consumption per cycle | 7.5 litres at 6 bar |
| Volume range | 5 ml - 250ml |
| Electrical consumption | Single phase 240VAC, 13A supply |
| Maximum bottle diameter | 85 mm (outer diameter) |
| Maximum bottle height | 250 mm |
| Maximum cap diameter | 45 mm |





Response Automation Base



| | Specification |
|------------------------------|---------------------|
| MODEL | AUTOMATION BASE |
| Accuracy | ±0.25% |
| Output (per minute) | Dependent |
| Height without hopper / tank | 1800 mm |
| Depth | 1070 mm |
| Width without conveyor | 1650 mm |
| Weight | 396 kg + Responses |
| Air consumption per cycle | 40 litres per cycle |
| Volume range | 5ml-1 litre |

Key Features and Options:

- Variable speed conveyor with adjustable guides, rails, and delrin or stainless steel slats
- Logic controls for gating and sensing systems and up to four Response fillers
- Neck location system
- Pneumatic cut-off nozzles to ensure a clean fill with no dripping
- ‘Rise while fill’ or ‘bottom up fill’ of container, into neck or fixed nozzle fill system
- Fully interlocked guarding around operating area
- Frame mounted hopper or tank with up to four triclover outlets, manifold and heated jacket
- Other bespoke additions depending on your requirements



(Above) Automation Base with three Response units fitted; seen from the rear



Automation Base with three Response units fitted; operator's view from the front



Pharma Hygiene Products (part of the Adelphi Group of Companies) supply stainless steel process equipment to CBD industry manufacturers who need to obtain the optimum levels of hygiene with their production processes.

From storage to mixing and transportation of CBD oils, Pharma Hygiene Products' range is manufactured to the highest quality, and is designed to suit every stage of the production process.

Mixing and Storage Containers

Manufactured from 316L and 304 grade stainless steel, these containers can be supplied either plain or graduated, and come complete with side handles and skirtband. They have hygienic crevice and pit-free interiors, and are polished throughout. An optional lid is available for all sizes.

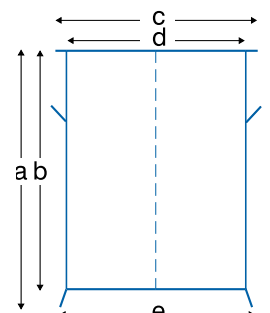
Integrated mixers can also be incorporated into the lids of these containers.



| Item code | Capacity (litres) | a | b | c | d | e | Skirt | Handle | Grad. | Weight (kg) | Lid code | Lid weight (kg) |
|-----------|-------------------|-----|-----|-----|-----|-----|-------|--------|-----------|-------------|----------|-----------------|
| VES4020P | 20 | 390 | 380 | 350 | 265 | 275 | YES | SIDE | - | 3.4 | VEL4020P | 0.6 |
| VES*020G | 20 | 390 | 380 | 350 | 265 | 275 | YES | SIDE | 5-20/5 | 3.4 | VEL*020P | 0.6 |
| VES4025P | 25 | 390 | 380 | 380 | 300 | 305 | YES | SIDE | - | 3.8 | VEL4025P | 0.8 |
| VES*025G | 25 | 390 | 380 | 380 | 300 | 305 | YES | SIDE | 5-25/5 | 3.8 | VEL*025P | 0.8 |
| VES4030P | 30 | 460 | 445 | 380 | 300 | 305 | YES | SIDE | - | 4.4 | VEL4030P | 0.8 |
| VES*030G | 30 | 460 | 445 | 380 | 300 | 305 | YES | SIDE | 5-30/5 | 4.4 | VEL*030P | 0.8 |
| VES4050P | 50 | 560 | 535 | 435 | 350 | 355 | YES | SIDE | - | 6.4 | VEL4050P | 1 |
| VES*050G | 50 | 560 | 535 | 435 | 350 | 355 | YES | SIDE | 5-50/5 | 6.4 | VEL*050P | 1 |
| VES4075P | 75 | 625 | 600 | 480 | 400 | 405 | YES | SIDE | - | 8.5 | VEL4075P | 1.3 |
| VES*075G | 75 | 625 | 600 | 480 | 400 | 405 | YES | SIDE | 5-75/5 | 8.5 | VEL*075P | 1.3 |
| VES4100P | 100 | 675 | 650 | 520 | 445 | 455 | YES | SIDE | - | 12 | VEL4100P | 1.6 |
| VES*100G | 100 | 675 | 650 | 520 | 445 | 455 | YES | SIDE | 10-100/10 | 12 | VEL*100P | 1.6 |
| VES4150P | 150 | 675 | 650 | 620 | 550 | 555 | YES | SIDE | - | 16 | VEL4150P | 2.3 |
| VES*150G | 150 | 675 | 650 | 620 | 550 | 555 | YES | SIDE | 10-150/10 | 16 | VEL*150P | 2.3 |
| VES6240P | 240 | 890 | 850 | 730 | 600 | 625 | YES | SIDE | - | 26 | VEL6240S | 3 |

- Notes:
1. Graduations: 5-20/5 = graduated from 5 litres to 20 litres in 5 litre intervals.
 2. In the data table, replace the * with 4 if 304 grade is required, or with 6 if 316L grade is required.
 3. Where no * occurs in the item code, material is 304 grade.

A number of optional modifications are available, please contact us for further details.





Mobile Frames for Containers

Manufactured from 304 stainless steel, Pharma Hygiene Products offer both a standard range of mobile frames on castors for containers 20 - 240L, as well as tilted mobile frames for decanting from your container, designed specifically for CBD oil manufacturers. A single frame fits both our standard 75L and 150L vessels. The angle of tilt means that when decanting CBD oils, the container can drain completely with no liquid pooling.



Mobile frame with 75L container (left) and 150L container (right)



Standard mobile frames for 20L - 240L containers



Cans with Lids

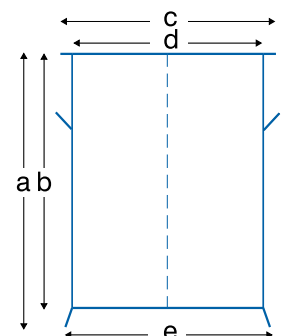
Manufactured from either 304 or 316L grade stainless steel, these cans come complete with lids and swing handles. They have hygienic crevice and pit-free interiors, and are polished throughout.

Note: in the data table below, replace * with a 4 if 304 grade is required, or with a 6 if 316L grade is required.

A number of optional modifications are available, please contact us for further details.



| Item code | Capacity (litres) | a | b | c | d | e | Skirt | Handle | Weight (kg) |
|-----------|-------------------|-----|-----|-----|-----|-----|-------|--------|-------------|
| CWL*001P | 1 | 155 | 150 | 125 | 100 | N/A | NO | SWING | 0.4 |
| CWL*002P | 2 | 175 | 170 | 160 | 130 | N/A | NO | SWING | 0.7 |
| CWL*003P | 3 | 185 | 180 | 185 | 155 | N/A | NO | SWING | 1 |
| CWL*004P | 4 | 200 | 185 | 186 | 170 | 173 | YES | SWING | 1.3 |
| CWL*005P | 5 | 240 | 230 | 205 | 175 | 180 | YES | SWING | 1.4 |
| CWL*006P | 6 | 280 | 270 | 205 | 175 | 180 | YES | SWING | 1.7 |
| CWL*008P | 8 | 285 | 270 | 235 | 200 | 205 | YES | SWING | 2 |
| CWL*010P | 10 | 295 | 280 | 250 | 220 | 225 | YES | SWING | 2.5 |





Buckets and Pails

(A) Buckets

Manufactured from 304 grade stainless steel with one size available in 316L stainless steel, these buckets are polished throughout, graduated in 1 litre intervals and come complete with swing handle. Skirtbands are standard as shown. Buckets without a skirtband are available to special order. Lids are available as an option.



A Buckets
B Heavy duty bucket
C Pails
D Buckets with spouts

| Item code | Capacity (litres) | a | b | c | Skirt | Handle | Grad. | Weight (Kg) | Lid Code | Lid Weight (kg) |
|-----------|-------------------|-----|-----|-----|-------|--------|--------|-------------|----------|-----------------|
| BUC4007P | 7 | 240 | 160 | 250 | No | Swing | N/A | 1 | BUL4007P | 0.4 |
| BUC4008G | 8 | 285 | 200 | 200 | No | Swing | 1-8/1 | 1.05 | BUL4008P | 0.55 |
| BUC4010G | 10 | 295 | 175 | 270 | YES | SWING | 1-10/1 | 1.4 | BUL4010P | 0.4 |
| BUC4012G | 12 | 320 | 210 | 260 | YES | SWING | 2-12/1 | 1.6 | BUL4012P | 0.5 |
| BUC6012G | 12 | 320 | 210 | 260 | YES | SWING | 2-12/1 | 1.6 | BUL4012P | 0.5 |
| BUC4015G | 15 | 325 | 202 | 340 | YES | SWING | 2-15/1 | 1.8 | BUL4015P | 0.6 |

(B) Heavy Duty Bucket

Manufactured from 304 grade stainless steel, this bucket is designed for heavy duty applications. It comes complete with a skirtband and swing handle

and is graduated. The interior is crevice- and pit-free and it is polished throughout.

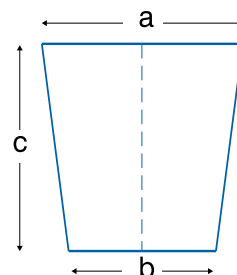
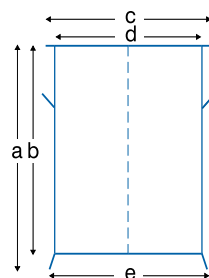
| Item code | Capacity (litres) | a | b | c | d | e | Skirt | Handle | Grad. | Weight (kg) |
|-----------|-------------------|-----|-----|-----|-----|-----|-------|--------|--------|-------------|
| BHD4015G | 15 | 255 | 240 | 340 | 320 | 295 | YES | SWING | 2-15/1 | 2.7 |

(C) Pails

Manufactured from either 304 or 316L grade stainless steel, these pails come complete with a skirtband and swing handle. They have crevice- and pit-free

interiors and are polished throughout. Lids are available as an option.

| Item code | Capacity (litres) | a | b | c | d | e | Skirt | Handle | Grad. | Weight (kg) | Lid code | Lid weight (kg) |
|-----------|-------------------|-----|-----|-----|-----|-----|-------|--------|-------|-------------|----------|-----------------|
| PAI*010P | 10 | 255 | 240 | 275 | 237 | 245 | YES | SWING | N/A | 2.1 | PAL*010P | 0.5 |
| PAI*012P | 12 | 283 | 273 | 275 | 237 | 245 | YES | SWING | N/A | 2.5 | PAL*012P | 0.5 |
| PA*015P | 15 | 285 | 275 | 305 | 267 | 275 | YES | SWING | N/A | 2.8 | PAL*015P | 0.6 |





(D) Buckets with Spouts

Manufactured from 304 grade stainless steel, these straight sided buckets are graduated, come complete with pouring spout, swing handle, bottom steadying handle, and skirtband. They have crevice-

and pit-free interiors and are polished throughout. Lids that are extended to cover the spout are available as an option.

| Item code | Capacity (litres) | a | b | c | d | e | Skirt | Handle | Grad. | Weight (kg) | Lid code | Lid weight (kg) |
|-----------|-------------------|-----|-----|-----|-----|-----|-------|--------|----------|-------------|----------|-----------------|
| BUS4010G | 10 | 275 | 265 | 297 | 237 | 245 | YES | SWING | 1-10/0.5 | 2.3 | BSL4010P | 0.5 |
| BUS4015G | 15 | 308 | 295 | 320 | 267 | 272 | YES | SWING | 2-15/0.5 | 2.7 | BSL4015P | 0.6 |
| BUS4020G | 20 | 395 | 380 | 328 | 267 | 272 | YES | SWING | 2-20/1 | 3.4 | BSL4020P | 0.6 |

Note: In the data tables replace the * with 4 if 304 grade is required, or with 6 if 316L grade is required.

A number of optional modifications are available, please speak to a sales representative for further details.

Polypropylene Vessels

Pharma Hygiene Products can supply a range of mobile polypropylene vessels for products that cannot come into contact with stainless steel.

These vessels have welded seams and are supplied with drop on lids. An external stainless steel band can be added with two carrying handles to aid moving when empty. A mobile frame set on four castors (two braked) is an optional extra.

Propeller or high shear mixers can also be supplied, and the vessels are available in various sizes.

Please enquire for further information.



Paddle Stirrer

This paddle stirrer is formed in one piece and manufactured from 316L pharmaceutical grade stainless steel, ensuring the highest levels of hygiene when mixing CBD oils in a vessel.

| Item code | a (mm) | b (mm) | c (mm) | Weight (kg) |
|--------------|--------|--------|--------|-------------|
| PAD6200 | 1000 | 125 | 260 | 1.2 |
| PAD6200-1300 | 1300 | 125 | 260 | 1.5 |





Integrated Mixers & Agitators

Pharma Hygiene Products can supply a wide variety of mixers and agitators, and mount them on our standard and custom vessels and containers to meet your specific requirements.

We offer high-shear mixers for mixing emulsions, propeller mixers for free dissolving powders, as well as general mixing, and slow agitators for keeping products suspended. All can be supplied in varying power and speed specifications.

Please enquire for further information.



Mobile Mixers for Vessels & Containers

Manufactured from 304 grade stainless steel, with 316L grade contact parts, these mixers are designed for use with any open container of suitable dimensions.

Available with either high-shear mixing head (shown) for mixing emulsions, or a propeller mixing head for mixing free dissolving powders and for general mixing.

The mixing head is mounted on a mobile stand with painted hydraulic cylinder (manually operated), and the control panel is IP55 rated and constructed of stainless steel. Mixers can be specified with 3 phase or single phase power options.

Safety interlocks and a motor shroud are further options.



| Item code | Model | Operating rpm |
|-----------|-------------------------|---------------|
| CSP-HM | Mobile high-shear mixer | 2900 |
| CSP-PM | Mobile propeller mixer | 1400 |

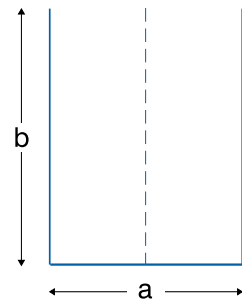


Measuring Jugs

Heavy Duty Measuring Jugs (A)

Manufactured from 304 and 316L grade stainless steel, these jugs are straight sided, graduated and come with a pouring spout and closed side handle. They have crevice- and pit-free interiors and are polished throughout.

| Item code | Capacity (litres) | a | b | Handle | Graduation | Weight (gm) |
|-----------|-------------------|-----|-----|--------|-------------|-------------|
| JUM*0.5G | 0.5 | 75 | 135 | SIDE | 0.1-0.5/0.1 | 285 |
| JUM*001G | 1 | 100 | 135 | SIDE | 0.2-1/0.2 | 475 |
| JUM*002G | 2 | 135 | 170 | SIDE | 0.2-2/0.2 | 690 |

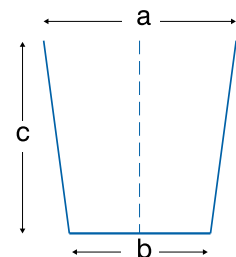


Note: In the table above replace the * with 4 if 304 grade is required, or with 6 if 316L grade is required.

Light Duty Measuring Jugs (B)

Manufactured from 304 grade, these jugs are tapered and come with either an open or closed handle. They are graduated in pints and litres, have crevice- and pit-free interiors and are polished throughout. The option of rimmed feet is available with the closed handle version from 0.5 litre upwards.

| Item code | Capacity (litres) | a | b | c | Handle | Graduation | Weight (gm) |
|-----------|-------------------|-----|----|-----|-------------|----------------|-------------|
| MEA40.1G | 0.1 | 75 | 40 | 45 | OPEN | 0.05-0.1/0.05 | 40 |
| MEA4.25G | 0.25 | 100 | 50 | 70 | OPEN | 0.05-0.25/0.05 | 65 |
| ME*40.5G | 0.5 | 120 | 60 | 110 | OPEN/CLOSED | 0.05-0.5/0.1 | 120 |
| ME*4001G | 1 | 150 | 75 | 135 | OPEN/CLOSED | 0.1-1/0.1 | 200 |
| ME*41.5G | 1.5 | 155 | 85 | 150 | OPEN/CLOSED | 0.1-1.5/0.1 | 290 |
| ME*4002G | 2 | 170 | 85 | 200 | OPEN/CLOSED | 0.2-2/0.1 | 320 |



Note: In the table above replace the * with an A if an open handle is required, or with a C if a closed handle is required. For a rimmed foot, replace G with R.