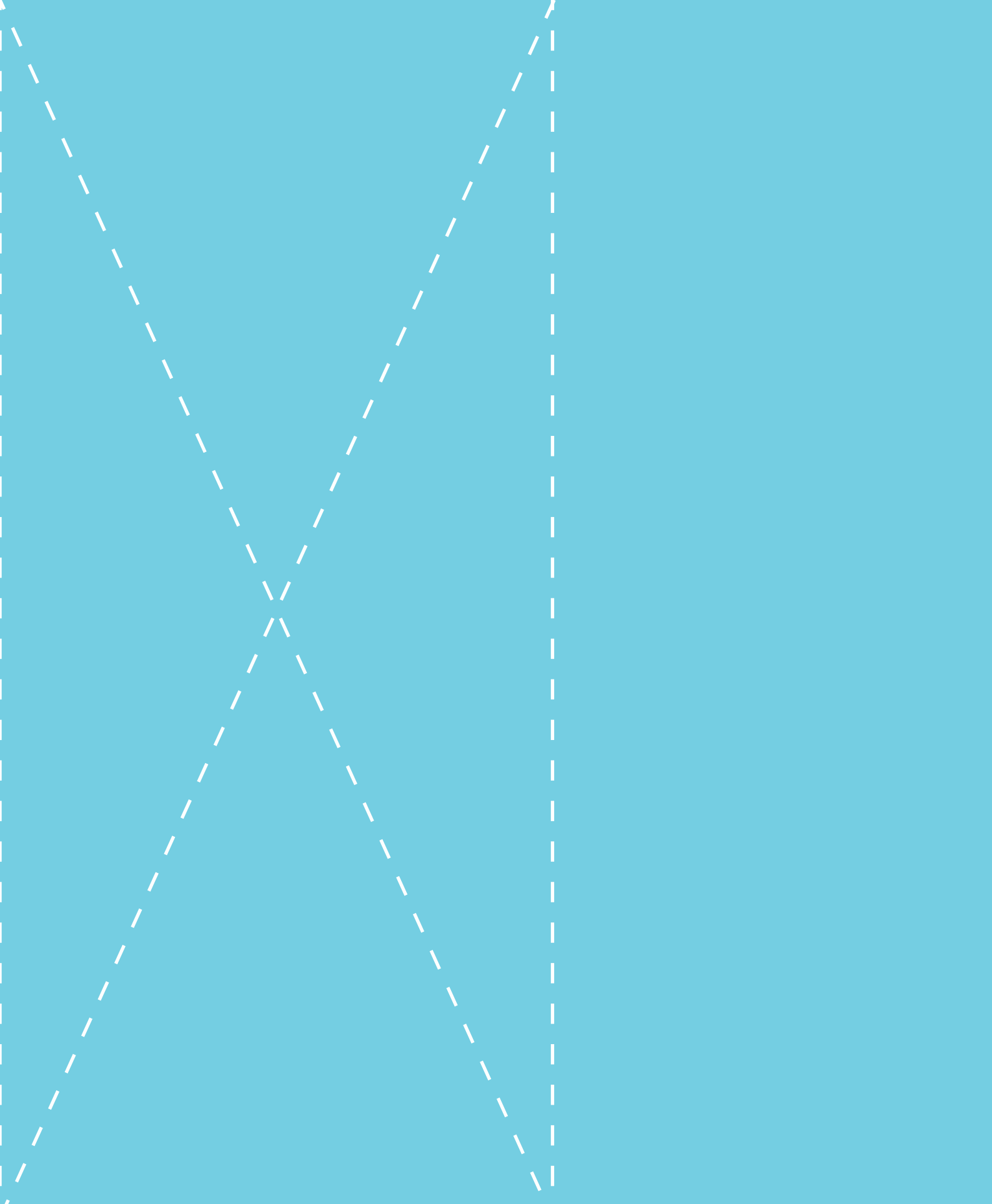




dashco

Glass Ampoules, Vials & Carpoules



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Company Profile

Darou Shisheh Company (Private Joint Stock) was established in 1981 as the first local manufacturer of type I borosilicate pharmaceutical glass containers in order to fulfill the pharmaceutical industry demand for ampoules. It started manufacturing Ampoules with a few production lines. During time with continuous effort, team work, training and dedication we have managed to sustain the majority shares of our local market as well as exporting Dashco products to our international customers. Currently, our company enjoys running above 40 production lines with nominal annual production capacity of 900 million pieces of glass ampoules, vials and carpoules.

Dashco is IMS (ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007) certified, certified GMP class C certified and welcomed by well-known customers not only in the region, but also across Asia, Africa, South America and Europe. Today we are standing among the largest manufacturers of ampoules, vials and carpoules in the world. The high quality products manufactured with up to date state of the art high-Tech automatic production and quality control machinery together with our management and personnel commitment is the true key to our success.

A single objective directs our efforts:
"To become our customers' most valued Supplier"

To accomplish this we work closely with our customers, understand and justify their needs and perform continuous improvement by developing new products and skills.
"working together for longer, healthier life"





Quality Assurance

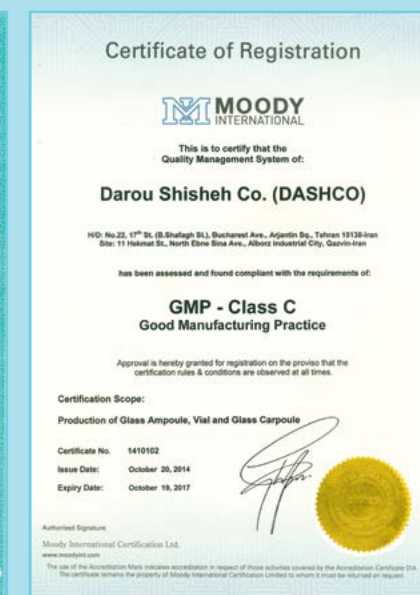
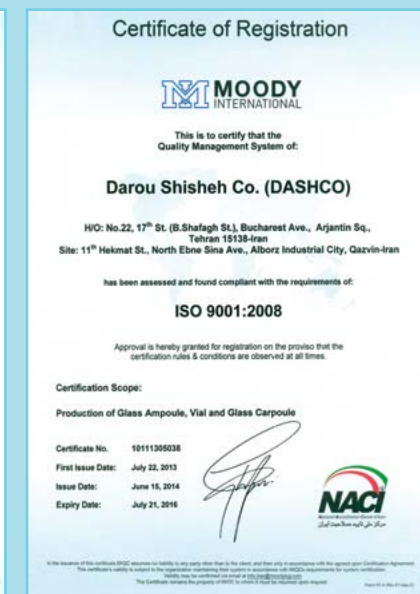
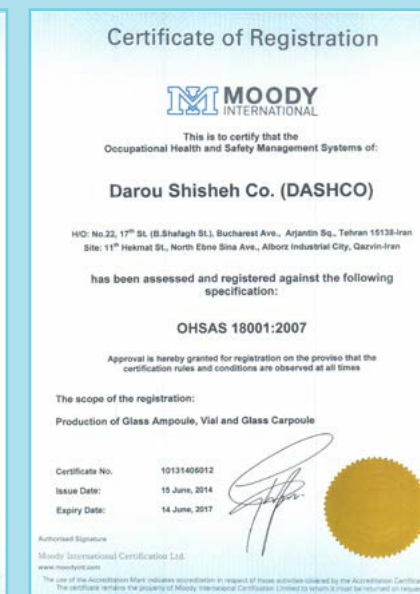
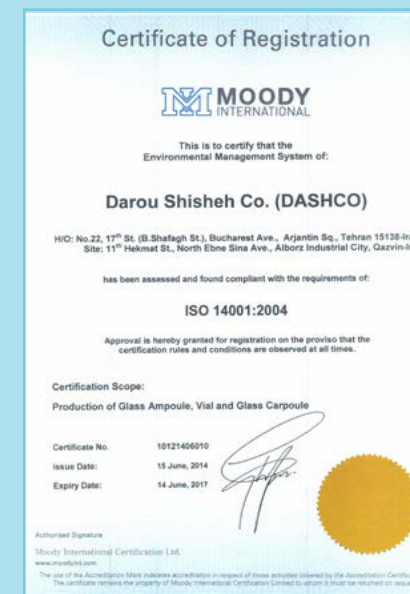
Dashco has continuous effort and technical excellence to supply high quality products. We are dedicated to product consistency and reliability. Therefore we use high quality glass tubes manufactured by international well-known manufacturers such as Schott and operate with most modern production machinery.

Our company's highlights are:

- IMS (ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007) certified organization.
- GMP class C Certified.
- Automatic online visual system control incorporated on the machines to ensure geometric precision as well as rejecting products with visible defects.
- Professional trained QC team to conduct Incoming material, process and final product control and defect analyses.
- On site laboratory equipped with precision instruments to perform the required physical, chemical, particles and cosmetic defect tests according to USP, BP, EP and ISO standards.
- Traceable data records from receipt of raw material to dispatch of final products.
- Chemical and physical certificates of analyses provided for each consignment.
- continuous training of QA staff.

Our long experience in the glass industry together with highly experienced dedicated team is available to fulfill your requirements.

Certificates





Ampoules

Dashco manufactures high quality glass ampoules from 1 to 30 ml, using type I borosilicate neutral glass tubes made by international well-known manufacturers.

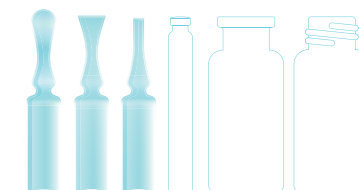
Our ampoule designs are according to ISO 9187-1:2010 (E) and can be customised according to the customer requirements.

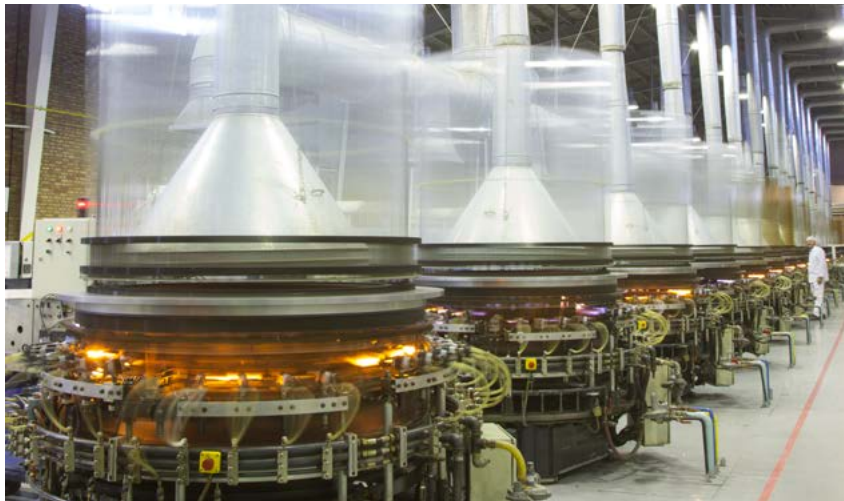
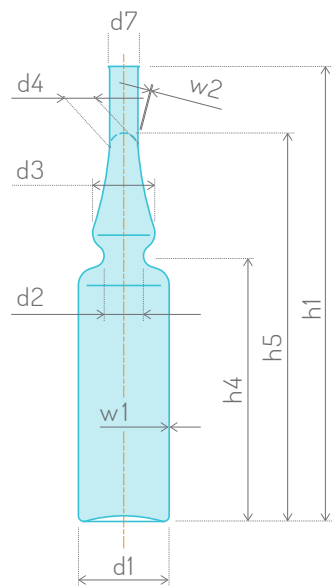
In general we manufacture flint (clear) and amber glass ampoules in the following forms:

- Flame Cut (Straight – stem) Ampoules (Type B)
- Funnel Top Ampoules (Type C)
- Closed Ampoules (inside positive pressure) (Type D)
- Marzocchi Ampoules (Type E)

Dashco has European made ampoule production machinery and each machine has the following specification:

- Continuous online cutting, glazing, optical visual control, annealing and packing.
- Customised Ceramic one or two colour printing using heavy metal free inks
- Colour Break Ring (RB)
- Colour Identification Rings (RC)
- One Point Cut (OPC)
- Type D Ampoule production with incorporated positive pressure
- Uniform distribution of heat during annealing process, thus relieving stress from ampoules
- Automatic rejection of defected products





Ampoules | Form B (Flared-End/Flame Cut)

Volume	1 ml	2 ml	3 ml	5 ml	10 ml	20 ml	25 ml	30 ml
d1	10.75 +/- 0.15	10.75 +/- 0.15	12.75 +/- 0.15	14.75 +/- 0.15	17.75 +/- 0.20	22.50 +/- 0.25	22.50 +/- 0.25	22.50 +/- 0.25
d2	6.5 +/- 0.50	6.5 +/- 0.50	6.5 +/- 0.50	7.0 +/- 0.50	7.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50
d3	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	9.0 +/- 0.50	9.5 +/- 0.50	12.0 +/- 1.00	12.0 +/- 1.00	12.0 +/- 1.00
d4	6.0 +/- 0.35	6.0 +/- 0.35	6.0 +/- 0.35	7.0 +/- 0.35	7.1 +/- 0.35	7.8 +/- 0.50	7.8 +/- 0.50	7.8 +/- 0.50
d7	8.0 +/- 1.0	8.0 +/- 1.0	8.0 +/- 1.0	9.0 +/- 1.0	9.5 +/- 1.0	11.0 +/- 1.0	11.0 +/- 1.0	11.0 +/- 1.0
h1	60.0 +/- 1.0	72.0 +/- 1.0	75.0 +/- 1.0	83.0 +/- 1.0	102.0 +/- 1.0	113.0 +/- 1.0	128.0 +/- 1.0	143.0 +/- 1.0
h4	25.5 +/- 0.50	37.5 +/- 0.50	39.5 +/- 0.50	46.5 +/- 0.50	62.0 +/- 1.0	76.0 +/- 1.3	91.0 +/- 1.3	106.0 +/- 1.3
h5	47.0 +/- 2.0	57.0 +/- 2.0	62.0 +/- 2.0	68.0 +/- 2.0	87.0 +/- 2.0	100.0 +/- 2.0	115.0 +/- 2.0	130.0 +/- 2.0
w1	0.5 +/- 0.03	0.5 +/- 0.03	0.5 +/- 0.03	0.55 +/- 0.03	0.6 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04
w2	0.37 +/- 0.05	0.37 +/- 0.05	0.37 +/- 0.05	0.40 +/- 0.05	0.47 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05

d1: Body diameter
d2: Constriction diameter
d3: Bulb diameter
d4: Stem diameter
d7: Flame cut diameter

h1: Total height
h4: Constriction height
h5: Sealing height

w1: Body wall thickness
w2: Stem wall thickness



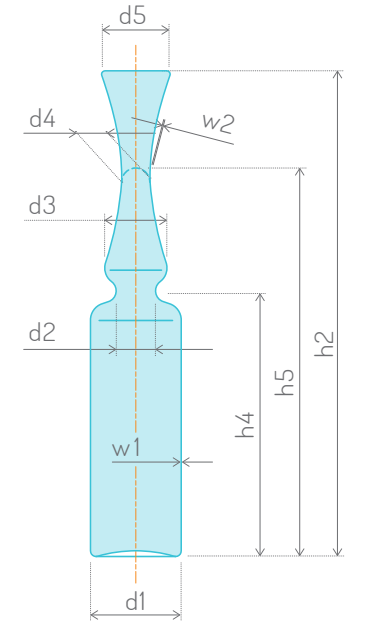
Form C (Funnel Top) | Ampoules

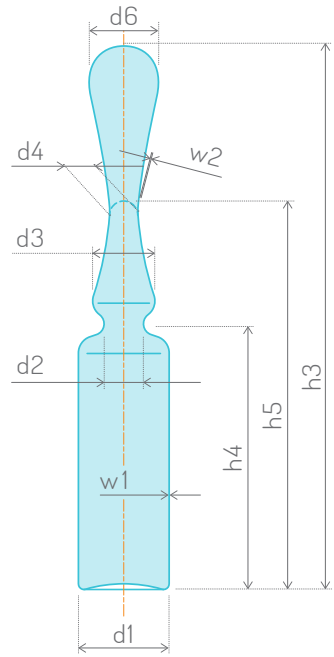
Volume	1 ml	2 ml	3 ml	5 ml	10 ml	20 ml	25 ml	30 ml
d1	10.75 +/- 0.15	10.75 +/- 0.15	12.75 +/- 0.15	14.75 +/- 0.15	17.75 +/- 0.20	22.50 +/- 0.25	22.50 +/- 0.25	22.50 +/- 0.25
d2	6.5 +/- 0.50	6.5 +/- 0.50	6.5 +/- 0.50	7.0 +/- 0.50	7.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50
d3	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	9.0 +/- 0.50	9.5 +/- 0.50	12.0 +/- 1.00	12.0 +/- 1.00	12.0 +/- 1.00
d4	6.0 +/- 0.35	6.0 +/- 0.35	6.0 +/- 0.35	7.0 +/- 0.35	7.1 +/- 0.35	7.8 +/- 0.50	7.8 +/- 0.50	7.8 +/- 0.50
d5	9.0 +/- 0.8	9.0 +/- 0.8	10.7 +/- 0.8	12.2 +/- 1.0	13.0 +/- 1.0	14.0 +/- 1.0	14.0 +/- 1.0	14.0 +/- 1.0
h2	67.0 +/- 1.0	79.0 +/- 1.0	82.0 +/- 1.0	90.0 +/- 1.0	109.0 +/- 1.0	120.0 +/- 1.5	135.0 +/- 1.5	150.0 +/- 1.5
h4	25.5 +/- 0.50	37.5 +/- 0.50	39.5 +/- 0.50	46.5 +/- 0.50	62.0 +/- 1.0	76.0 +/- 1.3	91.0 +/- 1.3	106.0 +/- 1.3
h5	47.0 +/- 2.0	57.0 +/- 2.0	62.0 +/- 2.0	68.0 +/- 2.0	87.0 +/- 2.0	100.0 +/- 2.0	115.0 +/- 2.0	130.0 +/- 2.0
w1	0.5 +/- 0.03	0.5 +/- 0.03	0.5 +/- 0.03	0.55 +/- 0.03	0.6 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04
w2	0.37 +/- 0.05	0.37 +/- 0.05	0.37 +/- 0.05	0.40 +/- 0.05	0.47 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05

d1: Body diameter
d2: Constriction diameter
d3: Bulb diameter
d4: Stem diameter
d5: Funnel diameter

h2: Total height
h4: Constriction height
h5: Sealing height

w1: Body wall thickness
w2: Stem wall thickness





Ampoules | Form D (Closed)

Volume	1 ml	2 ml	3 ml	5 ml	10 ml	20 ml	25 ml	30 ml
d1	10.75 +/- 0.15	10.75 +/- 0.15	12.75 +/- 0.15	14.75 +/- 0.15	17.75 +/- 0.20	22.50 +/- 0.25	22.50 +/- 0.25	22.50 +/- 0.25
d2	6.5 +/- 0.50	6.5 +/- 0.50	6.5 +/- 0.50	7.0 +/- 0.50	7.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50
d3	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	9.0 +/- 0.50	9.5 +/- 0.50	12.0 +/- 1.00	12.0 +/- 1.00	12.0 +/- 1.00
d4	6.0 +/- 0.35	6.0 +/- 0.35	6.0 +/- 0.35	7.0 +/- 0.35	7.1 +/- 0.35	7.8 +/- 0.50	7.8 +/- 0.50	7.8 +/- 0.50
d6	10.0 +/- 1.0	10.0 +/- 1.0	10.5 +/- 1.0	12.0 +/- 1.0	13.5 +/- 1.0	13.5 +/- 1.0	13.5 +/- 1.0	13.5 +/- 1.0
h3	70.0 +/- 1.0	83.0 +/- 1.0	89.0 +/- 1.0	95.0 +/- 1.0	112.0 +/- 1.0	126.0 +/- 1.0	141.0 +/- 1.0	156.0 +/- 1.0
h4	25.5 +/- 0.50	37.5 +/- 0.50	39.5 +/- 0.50	46.5 +/- 0.50	62.0 +/- 1.0	76.0 +/- 1.3	91.0 +/- 1.3	106.0 +/- 1.3
h5	47.0 +/- 2.0	57.0 +/- 2.0	62.0 +/- 2.0	68.0 +/- 2.0	87.0 +/- 2.0	100.0 +/- 2.0	115.0 +/- 2.0	130.0 +/- 2.0
w1	0.5 +/- 0.03	0.5 +/- 0.03	0.5 +/- 0.03	0.55 +/- 0.03	0.6 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04
w2	0.37 +/- 0.05	0.37 +/- 0.05	0.37 +/- 0.05	0.40 +/- 0.05	0.47 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05

d1: Body diameter
d2: Constriction diameter
d3: Bulb diameter
d4: Stem diameter
d6: Dome diameter

h3: Total height
h4: Constriction height
h5: Sealing height

w1: Body wall thickness
w2: Stem wall thickness

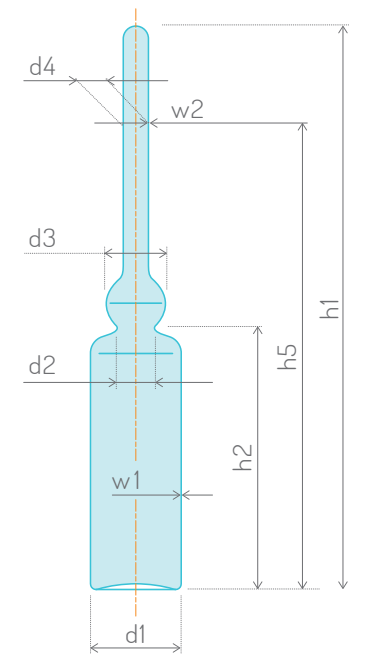
Form E (Marzocchi) | Ampoules

Volume	1 ml	2 ml	3 ml	5 ml	10 ml	20 ml	25 ml
d1	10.75 +/- 0.15	10.75 +/- 0.15	12.75 +/- 0.15	14.75 +/- 0.15	17.75 +/- 0.20	22.50 +/- 0.25	22.50 +/- 0.25
d2	6.5 +/- 0.50	6.5 +/- 0.50	6.5 +/- 0.50	7.0 +/- 0.50	7.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50
d3	8.5 +/- 0.50	8.5 +/- 0.50	8.5 +/- 0.50	9.0 +/- 0.50	9.5 +/- 0.50	12.0 +/- 1.00	12.0 +/- 1.00
d4	6.0 +/- 0.35	6.0 +/- 0.35	6.0 +/- 0.35	7.0 +/- 0.35	7.1 +/- 0.35	7.8 +/- 0.50	7.8 +/- 0.50
h1	85.5 +/- 0.50	97.5 +/- 0.50	100.0 +/- 0.50	110.0 +/- 0.50	127.0 +/- 1.0	150.0 +/- 1.0	158.0 +/- 1.0
h2	25.5 +/- 0.50	37.5 +/- 0.50	39.5 +/- 0.50	46.5 +/- 0.50	62.0 +/- 1.0	76.0 +/- 1.3	91.0 +/- 1.3
h5	47.0 +/- 2.0	57.0 +/- 2.0	62.0 +/- 2.0	68.0 +/- 2.0	87.0 +/- 2.0	100.0 +/- 2.0	115.0 +/- 2.0
w1	0.5 +/- 0.03	0.5 +/- 0.03	0.5 +/- 0.03	0.55 +/- 0.03	0.6 +/- 0.04	0.7 +/- 0.04	0.7 +/- 0.04
w2	0.37 +/- 0.05	0.37 +/- 0.05	0.37 +/- 0.05	0.40 +/- 0.05	0.47 +/- 0.05	0.50 +/- 0.05	0.50 +/- 0.05

d1: Body diameter
d2: Constriction diameter
d3: Bulb diameter
d4: Stem diameter

h1: Total height
h2: Constriction height
h5: Sealing height

w1: Body wall thickness
w2: Stem wall thickness





Vials



Dashco offers high quality glass tubular Vials from 2 to 30 ml, using type I borosilicate neutral glass tubes made by international well-known manufacturers.

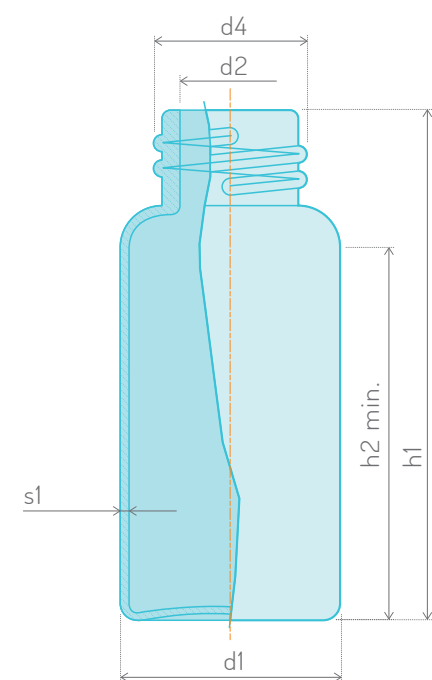
Our Vial designs are according to ISO 8362-1:2009 and ISO 11418-7:1998

In general we manufacture flint (clear) and amber glass Vials in the following forms as well as offering Vials for Lyophilisation (freeze drying) purposes:

- Crimp Neck
- Screw Neck

Dashco uses European made fully automatic Vial production machinery and each manufacturing process includes:

- Automatic glass tube loading
- Online visual control system
- Automatic rejection of defected products
- Customised ceramic colour printing using heavy metal free inks
- Off line quality and dimensional recheck in air conditioned environment
- Highly skilled & experienced workers and inspection personnel



Vials

Screw-neck

Volume	5 cc	7.5 cc	10 cc	15 cc	20 cc	25 cc	30 cc
s1 mm	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05
h2 mm	29	23	28	43	36	46	56
h1 mm	45 +/- 0.5	40 +/- 0.5	45 +/- 0.5	60 +/- 0.5	55 +/- 0.7	65 +/- 0.7	75 +/- 0.7
d4 mm	14.0 - 0.4	18.0 - 0.5	18.0 - 0.5	18.0 - 0.5	22.0 - 0.5	22.0 - 0.5	22.0 - 0.5
d2 mm	8.6 +/- 0.2	11.5 +/- 0.2	11.5 +/- 0.2	11.5 +/- 0.2	15.2 +/- 0.25	15.2 +/- 0.25	15.2 +/- 0.25
d1 mm	18.0 +/- 0.2	22 +/- 0.2	24 +/- 0.2	24 +/- 0.2	30 +/- 0.3	30 +/- 0.3	30 +/- 0.3

d1: Body diameter
d2: Inner diameter
d4: Outer diameter

h1: Total height
h2: Cylinder height

s1: Body wall thickness



Injection

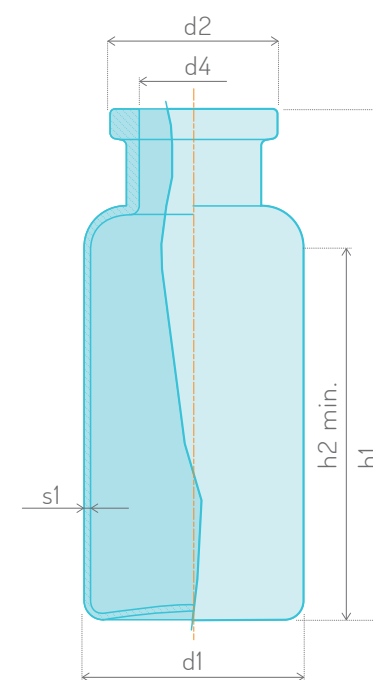
Vials

Volume	2 R ml	4 R ml	6 R ml	8 R ml	10 R ml	15 R ml	20 R ml	25 R ml	30 R ml
s1 mm	1.0 +/- 0.04	1.0 +/- 0.04	1.0 +/- 0.04	1.0 +/- 0.04	1.0 +/- 0.04	1.0 +/- 0.04	1.2 +/- 0.05	1.2 +/- 0.05	1.2 +/- 0.05
h2 mm	22	32	26	31	30	45	35	45	55
h1 mm	35 +/- 0.5	45 +/- 0.5	40 +/- 0.5	45 +/- 0.5	45 +/- 0.5	60 +/- 0.5	55 +/- 0.7	65 +/- 0.7	75 +/- 0.7
d4 mm +/- 0.2	7.0	7.0	12.6	12.6	12.6	12.6	12.6	12.6	12.6
d2 mm +0.2 -0.3	13.0	13.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
d1 mm	16 +/- 0.15	16 +/- 0.15	22 +/- 0.2	22 +/- 0.2	24 +/- 0.2	24 +/- 0.2	30 +/- 0.25	30 +/- 0.25	30 +/- 0.25
Overflow Capacity ml	4 +/- 0.5	6 +/- 0.5	10 +/- 0.5	11.5 +/- 0.5	13.5 +/- 1.0	19 +/- 1.0	26 +/- 1.5	32.5 +/- 1.5	37.5 +/- 1.5

d1: Body diameter
d2: Inner diameter
d4: Outer diameter

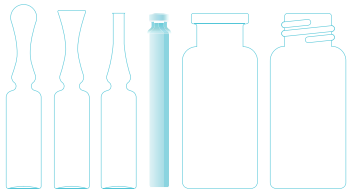
h1: Total height
h2: Cylinder height

s1: Body wall thickness





Carpoules



Dashco offers high quality glass tubular Carpoules from 1.5 to 3 ml, using type I borosilicate neutral glass tubes made by international well-known manufacturers.

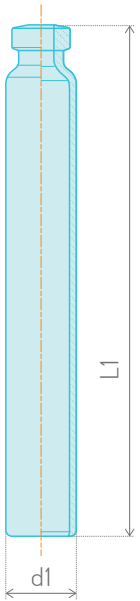
Our Carpoules designs are according to ISO 11040-1:1992 and ISO 13926-1: 2004

In general we manufacture

- Dental anaesthetic cartridges
- Insulin Pen- Injectors

Dashco has European made fully automatic carpoule production machinery and each manufacturing process includes:

- Automatic glass tube loading
- Online visual control system
- Automatic rejection of defected products
- Customised ceramic colour printing using heavy metal free inks
- Off line quality and dimensional recheck in air conditioned environment
- Highly skilled & experienced workers and inspection personnel



Volume	1.5	1.8	3
L1 mm	56.7 +/- 0.2	62.0 +/- 0.4	62.3 +/- 0.2
d1 mm	8.65 +/- 0.10	8.65 +/- 0.15	11.6 +/- 0.15

d1: Body diameter

L1: Total height







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