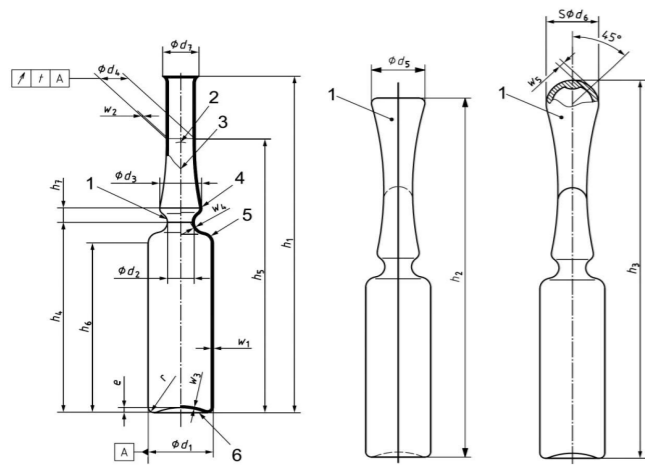
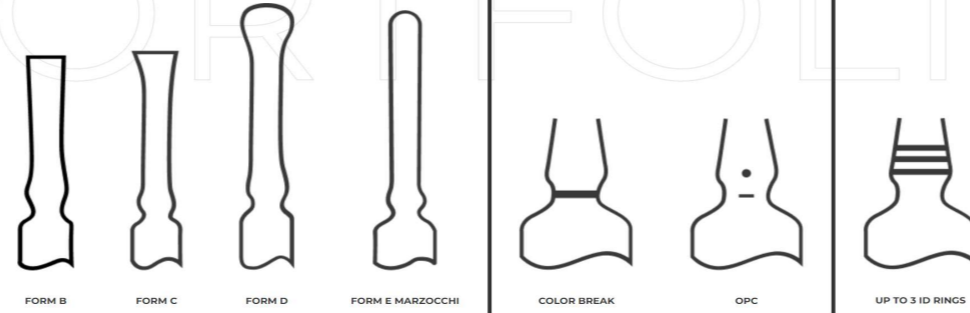


STANDARD DIMENSIONS OF AMPOULES ACCORDING TO ISO 9187-1:2010; ISO 9187-2:2010 (OPC AMPOULES)



Key
 1 constriction
 2 sealing point
 3 stem
 4 bulb
 5 shoulder
 6 base or bottom
 NOTE For dimensions of parameters, see Table 1.

PORTFOLIO



Volume	External diameter										Overall height			Height			Base		Wall thickness					Run-out	Breaking force						
	Nominal volume (ml)	Volume to centre of constriction	d ₁ - body diameter	d ₂ - constriction diameter	d ₃ - bulb diameter	d ₄ - stem diameter	d ₅ - funnel diameter (Form C)	d ₆ - dome diameter (Form D)	d ₇ - flared end diameter (Form B)	h ₁ - overall height (Form B)	h ₂ - overall height (Form C)	h ₃ - overall height (Form D)	h ₄ - height to constriction	h ₅ - height to gauging point	h ₆ - body height (min)	h ₇ - height constriction to bulb (max)	h ₈ - distance from bottom line to upper line of OPC (max)	d ₈ - diameter of point OPC - 2 ± 0,5	r - radius	e - depth of the base	w ₁ - glass thickness of body	w ₂ - glass thickness of stem at gauging	w ₃ - glass thickness at base (min)	w ₄ - glass thickness at constriction	w ₅ - glass thickness of dome	t - circular run-out tolerance	breaking force cbr (F _{min.} - F _{max.})	breaking force OPC (F _{min.} - F _{max.})	l - length (mm)		
1	1,5	10,75							60	67	70	25,5	47	21				1													
2	2,3	±0,15	6,5		8,5	6	9	±0,8	72	79	83	37,5	57	33	4,5	32,5		±0,5	1	0,5	±0,03	0,37		0,3	0,7	±0,1	0,1 to 0,25	0,6	30-80N	25-65N	36 (18/18)
3	3,5	±0,15	7,0		9	7	±0,35	±1	75	82	89	39,5	62	35	5	44,5		±0,5	1	0,55	±0,03	0,40		0,4	0,7	±0,15	0,1 to 0,25	0,8	30-80N	30-70N	36 (18/18)
5	5,5	±0,20	7,5		9,5	7,1	±1	±1	83	90	95	46,5	68	41	5,5	54,0		±0,5	1,5	0,55	±0,04	0,40		0,4	0,8	±0,15	0,1 to 0,25	1	30-90N	30-80N	60 (22/38)
10	11,5	±0,25	8,5		12	7,8	±0,50	±1	102	109	112	62	87	55	6	70,0		±0,5	1,25	0,6	±0,04	0,47		0,4	0,8	±0,15	0,1 to 0,3	1	30-90N	30-80N	60 (22/38)
20	23,5	±0,25	8,5		12	7,8	±0,50	±1	113	120	126	76	100	65	6,5	84,5		±0,5	1,5	0,7	±0,04	0,50		0,5	1	±0,2	0,1 to 0,3	1,2	30-100N	30-80N	60 (22/38)

^a The deviation from the perpendicularity between bottom and length axis at the body outside diameter shall not exceed an angle of 2°.

^b If there is a need to reduce the constriction diameter, e.g. due to a reduction of particles, it shall be agreed between the manufacturer and purchaser.

^c No point of the funnel and the dome shall be outside the body diameter.

^d The run-out tolerance shall be measured at the sealing point (according to ISO 1101).