



DWK LIFE SCIENCES
DURAN WHEATON KIMBLE

Injection Vial Dimension Guide

Meeting the critical packaging standards for pharma and diagnostic applications

DWK Life Science has over a decade of primary glass primary packaging manufacturing experience serving the pharmaceutical, diagnostic, and compound pharmacy markets. We use the highest quality raw materials under the most stringent manufacturing controls to produce glass primary packaging, meeting United States (USP), European (EP), and Japanese (JP) compendial standards. Through our ISO 15378 accredited manufacturing sites, each clear and amber tubular glass vial conforms to the primary packaging standard for medicinal applications and the ISO 8362 standard for injectable preparations.

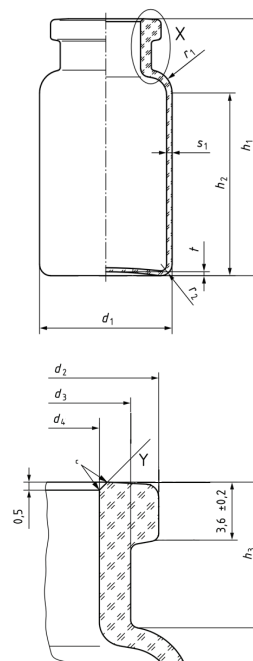
Our tubular glass vials conform to standards defined by ISO 8362-1, commonly referred to as an "R" vial, and GPI 2710, widely referenced in terms of "mL." A common question is how R and mL vials compare with respect to dimensions, impact to fill capacity, and stoppering. The table below shows dimensional differences and provides the estimated fill capacity by comparative vial type. ISO and GPI vials have demonstrated excellent container closure integrity (CCI) performance with stoppers conforming to ISO 8362-2 standards.



Standard	Capacity	Finish (d2)	Brimful Capacity (mL) ¹	Vial Height (h1)	Shoulder Height (h2) ²	Body Diameter (d1)	Opening Inner Diameter (d3)	Flange Height 1 (h4)	Finish to Shoulder (h3)	Heat Radius (r2)
mL	2	13	3.1	32	24.5	14.8	7.05	3.9	7.5	1.9
R	2	13	4	35	22	16	7.0	3.6	8	2.5
mL	3	13	4.9	37.7	29.2	16.8	7.05	3.9	8.5	2
R	3	13	5	40	27	16	7.0	3.6	8	2.5
R	4	13	6	45	32	16	7.0	3.6	8	2.5
mL	5	20	9.6	40	32.5	21.8	12.7	3.6	7.5	2.4
R	6	20	10	40	26	22	12.6	3.6	8.5	2
R	8	20	11.5	45	31	22	12.6	3.6	8.5	2
mL	10	20	15	50	42.5	23.8	12.7	3.6	7.5	2.5
R	10	20	13.5	45	30	24	12.6	3.6	9	2
R	15	20	19	60	45	24	12.6	3.6	9	2
mL	20	20	28.3	58	49.5	29.9	12.7	3.6	8.5	2.7
R	20	20	26	55	35	30	12.6	3.6	10	2.5

¹ Brimful capacity calculated using body ID x vial shoulder height. $V = h \cdot \pi \cdot R^2$ and does not include the finish area

² Vial Shoulder Height: total height – finish height = body height



Contact us at [DWK.com](https://www.dwk.com)

© 2023 DWK Life Sciences
The trademarks used are owned by DWK Life Sciences GmbH,
DWK Life Sciences LLC or DWK Life Sciences Ltd.