

**Table 1.** Basic biophysical parameters of stomatal guard cells in the open and closed state in *V. faba* and *Arabidopsis*

References are as follows: Humble and Raschke (1971); Raschke et al. (1975); Blatt (1987b); Clint and Blatt (1989); Willmer et al. (1995); Willmer and Fricker (1996); Franks et al. (2001); Shope et al. (2003); Shope and Mott (2006); Meckel et al. (2007); Violet-Chabrand et al. (2016); Xie et al. (2016). GC, Guard cells.

Parameter	Species			
	<i>V. faba</i>		<i>Arabidopsis</i>	
	Closed	Open	Closed	Open
Aperture ( $\mu\text{m}$ )	1.0–6.0	8.0–16.5	1–3	2–6
Pore area ( $\mu\text{m}^2$ )	75–124	178–262	3–5	10–15
GC length ( $\mu\text{m}$ )	35–45	40–50	9–11	10–20
GC diameter ( $\mu\text{m}$ )	10–12	14–16	3–5	5–6
GC surface area ( $\text{cm}^2 \times 10^{-5}$ )	1.2–1.6	1.6–3	0.2–0.3	0.3–0.5
GC volume ( $\text{pL}$ )	2.7–3.7	4.0–7.5	0.3–0.4	0.5–0.65
GC vacuole surface area ( $\text{cm}^2 \times 10^{-5}$ )	0.96–1.2	1.3–1.6	0.15–0.23	0.25–0.43
GC vacuole volume ( $\text{pL}$ )	1.8–2.4	3.6–5.8	0.23–0.3	0.43–0.55
GC turgor (atm)	1–4	3.5–6	3–5	6–8
Plasma membrane voltage (mV)	–30 to –70	–100 to –180	–30 to –70	–100 to –180
Tonoplast membrane voltage (mV)	0 to –50	–10 to –40	0 to –50	–10 to –40

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