Model/Reference	Species	P (bar)	T (˚C)	Compositional range	Notes
MagmaSat *Ghiorso and Gualda, 2015*	H_2O	0–20,000[1]	550-1420[1]	Very broad compositional range of natural silicate melts: subalkaline picrobasalts to rhyolites, including a variety of mafic and silicic alkaline compositions	[1]Ranges extracted from Fig. 2d of Ghiorso and Gualda. 2015
	CO_2	0–30,000[1]	1139-1400[1]		
	H_2O - CO_2	0–10,000[1]	800-1400[1]		
Dixon *Simplification of Dixon (1997) used in VolatileCalc (Newman and Lowenstern, 2002)*	H_2O-CO_2	0-5000[1] 0-2000[2] 0-1000[3]	600-1500[1] (1200)[4]	Alkali basalts: 40-49 wt% SiO_2	[1]Warnings implemented in VolatileCalc (Newman and Lowenstern, 2002). [2]Calibration range suggested by Lesne et al. (2011) [3]Calibration range suggested by Iacono-Marziano et al. (2012) [4]Calibration temperature of Dixon (1997)
MooreWater *Moore et al. 1998*	H_2O	0–3000[1]	700–1200[1]	Broad compositional range: subalkaline basalts to rhyolites, alkaline trachybasalts-andesites, foidites, phonolites	[1]Author-suggested calibration range. The calibration dataset spans 190 to 6067 bar, and 800-1200˚C
Liu *Liu et al. 2005*	H_2O - CO_2	0-5000[1]	700–1200[1]	Haplogranites and rhyolites	[1]Author-suggested calibration range for the mixed fluid model. The calibration dataset covers 750-5510 bar and 800-1150˚C for the Carbon model, and 1-5000 bar and 700-1200˚C for the water model
Iacono-Marziano *Iacono-Marziano et al., 2012*	H_2O - CO_2	95–10,500 (mostly <5000)[1]	1100-1400 (preferably 1200-1300)[2]	Predominantly mafic compositions: subalkaline and alkaline basalts-andesites	[1]Range of calibration dataset, as authors do not specifically state a calibration range. We note that the vast majority of experiments were conducted at <5000 bar. [2]Authors state that most experiments were conducted between 1200-1300˚C (whole range 1100-1400˚C_
Shishkina *Shishkina et al. 2014*	H_2O[1]	0–5000[2]	1050–1400 (preferably 1150-1250)[2, 3]	Mafic and intermediate compositions: Subalkaline basalts-basaltic andesites, alkali basanites-phonolites. SiO_2<65 wt%.	[1]Although their empirical expressions are for pure fluids, they were mostly calibrated on mixed CO_2-H_2O experiments. [2]Author-suggested range [3]Note, this model contains no temperature term.
	CO_2[1]	500–5000[2]	1200–1250[2, 3]	Predominantly mafic compositions: subalkaline basalts, alkaline basanites, trachybasalts	
AllisonCarbon *Allison et al., 2019*	CO_2	0-7000[1]	1200[2] (~1000-1400)	Alkali-rich mafic magmas from 6 volcanic fields. Separate model coefficients for each composition.	[11]Author-suggested range. The calibration dataset spans: (SFVF:4133–6141 bar, Sunset Crater: 4071-6098 bar, Erebus: 4078-6175 bar, Vesuvius: 269-6175 bar, Etna=485-6199, Stromboli=524-6080) [2]Note, all calculations performed at 1200 ˚C (the experimental temperature). Authors suggest results generally applicable between 1000-1400 ˚C