

Production process	Event generator	
	ATLAS	CMS
ggF	POWHEG [29–33]	POWHEG
VBF	POWHEG	POWHEG
WH	PYTHIA8 [34]	PYTHIA6.4 [35]
ZH ($qq \rightarrow ZH$ or $qg \rightarrow ZH$)	PYTHIA8	PYTHIA6.4
$ggZH$ ($gg \rightarrow ZH$)	POWHEG	See text
ttH	POWHEL [43]	PYTHIA6.4
tHq ($qb \rightarrow tHq$)	MADGRAPH [45]	AMC@NLO [28]
tHW ($gb \rightarrow tHW$)	AMC@NLO	AMC@NLO
bbH	PYTHIA8	PYTHIA6, AMC@NLO