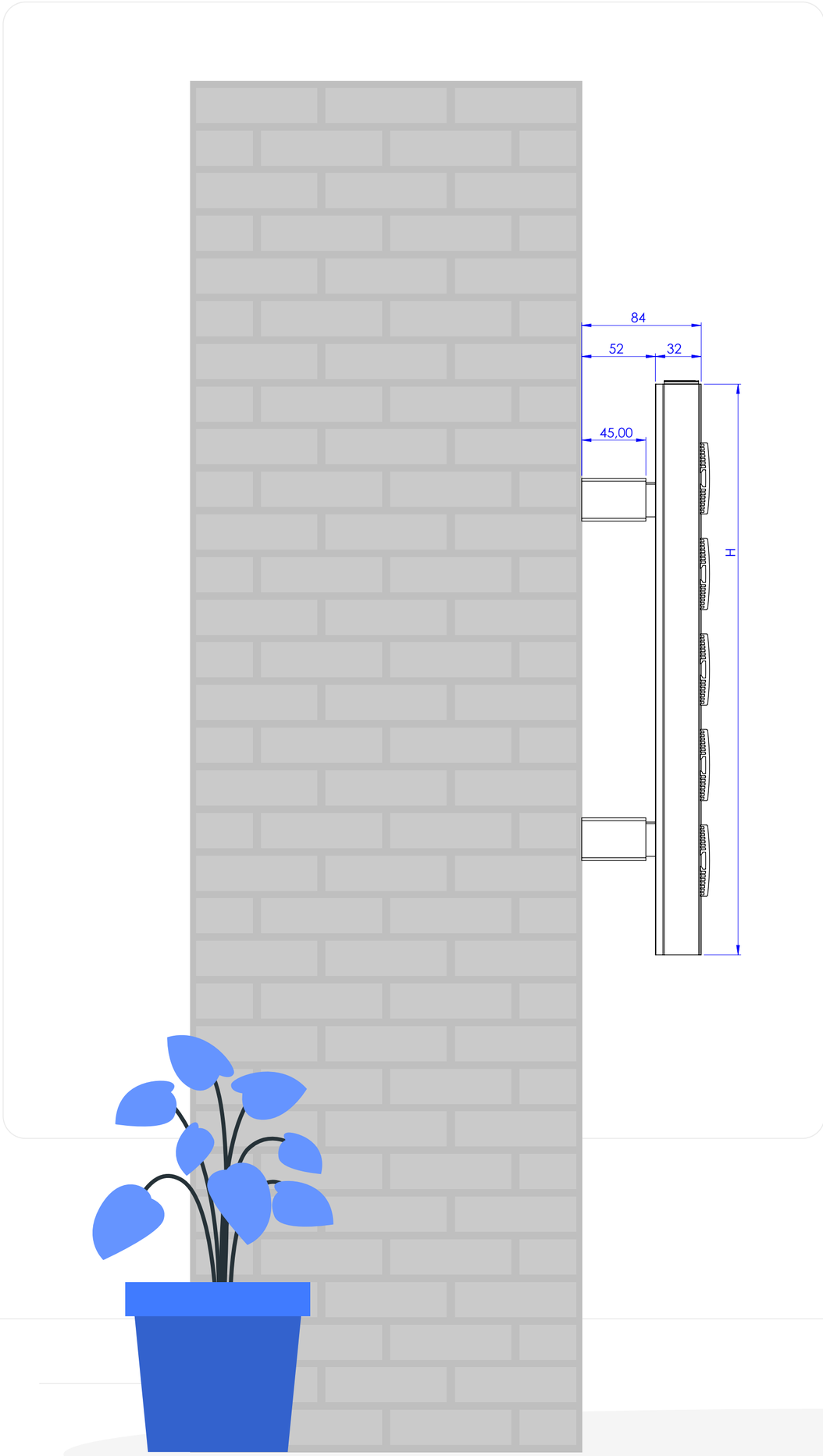QA-VT-ASM