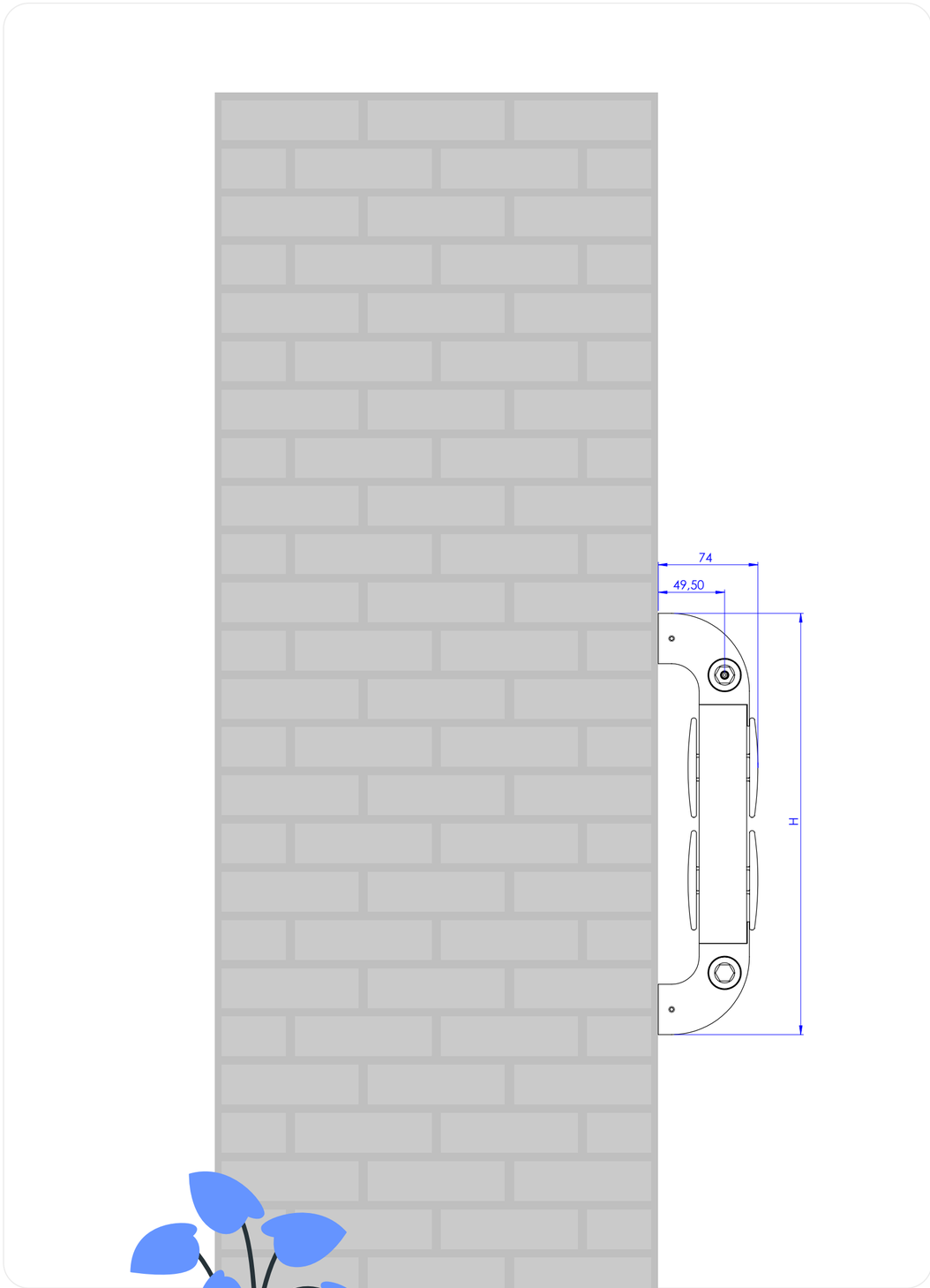QA-VG-ASM