

ABSTRACT

ORTHOPEDIC Z-SHAPED CUTTING GUIDE DEVICE AND ORTHOPEDIC SURGICAL ROBOT COMPRISING GUIDE DEVICE

An orthopedic Z-shaped cutting guide device (10) and an orthopedic surgical robot applying the guide device (10), the guide device comprising a rapid mounting flange (1), a mounting base (2), a Z-shaped extension handle (3) and a limiter (4). One end of the rapid mounting flange (1) is mounted at an end of a robot arm (15), and is rapidly positioned by means of a positioning structure; the mounting base (2) is mounted at the other end of the rapid mounting flange (1); the Z-shaped extension handle (3) is fixedly connected on the mounting base (2); an end of the Z-shaped extension handle (3) is fixedly connected to the limiter (4); and a guide groove (8) that is slightly wider than a swing saw blade and that allows a blade to pass through is provided in the center of the limiter (4). For the current positional deviation problem that exists during bone cutting in orthopedic surgery, the orthopedic surgical robot applying the guide device (10) achieves the rapid positioning and guiding of the guide device (10) by means of switching between an active and a passive mode of the robot arm (15), thereby providing an even better operation mode for an operator; in addition, the structure is simple and reliability is high.

Figure 1