**CANTILEVER AXIS - ELEKTRO VBK SERIES**

Metal Work is now presenting the new VBK Series belt-driven rodless electric axis, specifically designed for use in applications where the motor unit remains stationary and the extruded profile moving (so-called cantilever solution). The new axis has a load-bearing structure consisting of anodised aluminium extrusion profile and a linear guide system with rail and ball-recirculation pads.

Typical applications involve the axis being used vertically, for example as a Z-axis in a Cartesian portal, with a Metal Work BK Series Gantry or a SHAK Gantry. However, the VBK can also be individually, in either horizontal or vertical orientation.

A steel-reinforced polyurethane toothed belt provides drive transmission. The parabolic profile of the belt tooth ensures high efficiency, thereby reducing noise and vibration. The central body houses the drive unit consisting of a drive pulley and two idle rollers ("omega" configuration).

The axis, which can be ordered with a mm stroke, comes complete with a belt-tensioning system and channels for pad relubrication. Threaded holes and centring holes are provided on the central body and end caps, allowing multiple mounting options. The extruded block features the characteristic V-Lock profile and an inner opening where cables and pipes can be routed.

The VBK axis is available with or without drive. The standard drive includes a brushless motor with a holding brake, combined with a precision planetary gearbox available in three different gear ratios. The motor unit can be mounted on either side of the central body, while the side without the motor is enclosed by a safety cover.

Standard accessories include a sensor-mounting bracket for the homing and position check, the plates for mounting a BK-2 axis to the carriage, the end plate with a V-Lock profile and the cable chain with a fixing bracket.

Figure 1 – Elektro VBK axis

Figure 2 – Example of application