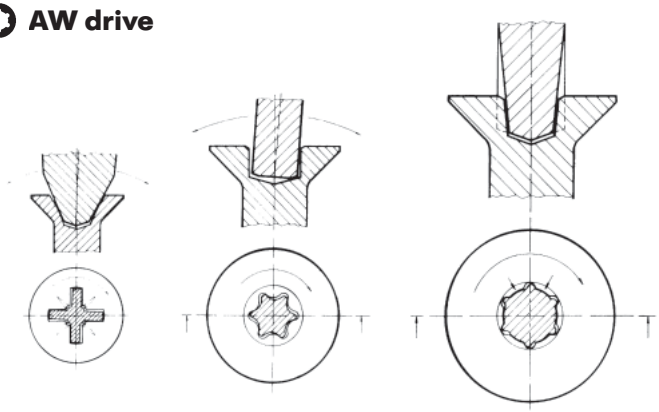
11 Design recommendations

11.1 Inside drives for screws

Technical advancement and economical considerations are leading to an almost complete replacement of straight-slotted screws with inside drives worldwide.

AW drive



Previous drive systems **AW drive**

Fig. AR

AW®drive

AW drive system

Advantages over previous drive systems:

- Improved power transmission through tapered multipoint.
- Longer service life due to optimum fit.
- Optimum centering due to tapered shape of bit.
- Largest possible contact surface of bit in screw drive ➔ ejection forces.
- Ejection forces (comeout) virtually zero. Even force distribution prevents damaging of the surface-protection coating and therefore ensures better resistance to corrosion.

Allen head

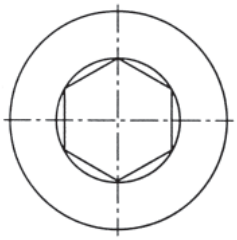


Fig. AS

Excellent power transmission due to several power attack points. Allen head screws have smaller spanner sizes than external hexagon screws, i.e. more economical designs are also possible due to smaller dimensions.

Cross head Z (Pozidriv) according to ISO 4757

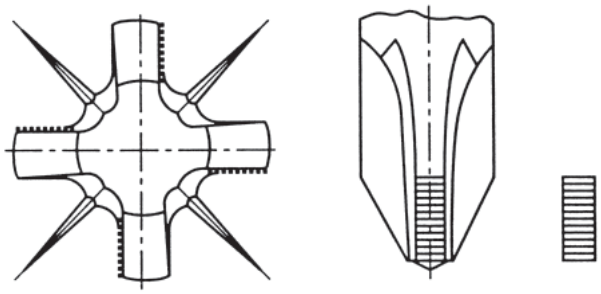


Fig. AT

The four "tightening walls" in the cross head which the screwdriver contacts when screwing in the screw are vertical. The other walls and ribs are angled. This can improve installation work somewhat with optimally produced cross heads. The Pozidriv screwdriver has rectangular wing ends.

Cross head H (Phillips) according to ISO 4757

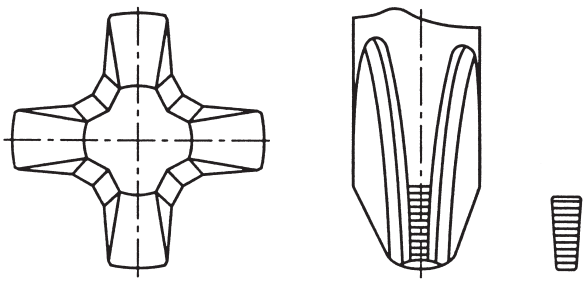


Fig. AU

Normal cross head with which all walls and ribs are angled diagonally, whereby the screwdriver has trapezoidal wing ends.