



Grinder System Application

Flat Broaches

Description

Manufacturing or regrinding flat broaches.

Application

Flat broaches up to 36" (914.4mm) long and 12" (304.8mm) wide can be ground on the HS-160 series. The HS-130 Series can grind up to 48" (1,219.2mm) long and 12" (304.8mm) wide. Maximum size depends on machine configuration.

Shear angles from 0-45°.

Rake angles from 0-20°.

CNC grinding produces an accurate tooth profile and proper tooth height, improving broach performance and part tolerance.

Process

Flat broaches are mounted on a magnetic chuck or with clamping fixtures. The integrated contact probe can be used for determining broach location and for verifying pitch spacing on one or all teeth. The grinding program uses the probe data to ensure consistent stock removal from each tooth.

Broaches are sharpened (gullet ground) using a single CBN resin bond, CBN plated or conventional abrasive grinding wheel with a full radius for generating the gullet. Optional operations include top relief, chamfer, corner radius and chip breakers.

Multiple flat broaches (of the same size and type) can be ganged on the chuck and ground simultaneously to increase broach throughput.

Optional software is available to allow one wheel profile to produce a variety of tooth profiles

Material

Hardened tool steel

Machine Features and Benefits

Huffman Broach Grinders include the HS-130, HS-160 Series Grinders.

Grinding from a hardened solid blank replaces old method of pre-milling, heat treating and then sharpening for dramatically increased broach throughput, and lower cost.

High-pressure flood coolant minimizes heat induced stress.

CNC resharpener removes a controlled amount from each tooth, extends broach life and ensures even tooth wear.

Probing can be used for determining broach location in either a manufacturing or regrind application.

For regrinding only, the probe is used for determining the first tooth location and for verifying the pitch spacing.

An optional swiveling magnetic chuck is available for regrinding broaches having corner radii, chamfers or side geometry.

Optional fixtures are available for regrinding window broaches.

An optional integrated wheel truing system is available.

