



TECHNICAL FEATURES



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Angle Heads *+Live* **Tools**



Alberti angle heads and live tools are designed to facilitate unmatched precision when machining parts with demanding complexity. Tools available from stock include over 50 types of standard angle heads and more than 250 types of standard live tools.

Custom designed angle heads, live tools, and stationary heads from KOMA Precision represent the state of the art in ultra precision, application specific tooling. Specialty tooling has been designed incorporating up to 252 spindles for a complete range of machine tools, as well as OEM specialty machinery.



Alberti Tooling Build Features

Alberti GS 600 Cast Iron Tool Bodies



MATERIAL: GS 600 Spheroidal Cast Iron

GS 600 is the same cast iron as used for the beds of machine tools. GS 600 features a low percentage of carbon, and spheroids are added during casting to provide compact grain structure and enhance the mechanical features of the material.

GS 600 ADVANTAGES:

- High tensile strength - 60kg/mm² (40% higher than steel, twice that of aluminum).
- High compression strength (absorbs vibration).
- Low thermal expansion (maintains accuracy & bearing pre-loads).
- Excellent dimensional stability (maintains accuracy).

TOOL BODY FEATURES:

- Bodies are completely machined inside & outside contributing to uniform weight.
- Bearing housing surfaces are ground.
- Bodies are chromium plated with (2) precision-lapped surfaces parallel to the tool output spindle for accurate alignment.

Alberti: Gleason Gears



GEARING MATERIAL - ADJUSTABLE ANGLE TOOLS:
Aerospace/military grade steel with ultimate strength of 300 kg/mm².

GEARING MATERIAL - ALL OTHER MODELS:
Same steel as in the gears of Formula One race car transmissions with an ultimate strength of 190 kg/mm². (A "good" gear steel has an ultimate strength of 120 kg/mm².)

All bevel gears used are spiral Gleason gears, not spur gears. Gleason gears provide more than one tooth of engagement thereby creating optimized meshing of the teeth, greater power transmission, and reduced noise during operation. Gleason provides the following computerized data computation for each set of gears used in Alberti tools:

- Maximum pitch diameter.
- Ultimate strength of the material.
- Minimum & maximum RPM of the gears.

Alberti Spindle, Shaft, and Bearings



TOOL INPUT SHAFTS & OUTPUT SHAFTS

MATERIAL: 18 NiCrMo5 (Nickel Chrome Moly) with no lead, case hardened and tempered (Certified to ISO9000/9001/9002).

ADVANTAGES

Lead increases machinability prior to heat-treating, but reduces strength up to 50%. This is especially important for the shafts and shanks, which are subject to great stress during heavy machining operations.

BEARINGS

All shafts are supported by (2) or (3) Abec 7 angular contact bearings. Angular contact bearings represent the evolution of conical rollers and support both axial & radial loads. All tool body bearing housing surfaces are ground for maximum precision.





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ROTARY TABLES | ANGLE HEADS | LIVE TOOLS | SWISS TOOLS | TOOL PRESETTERS