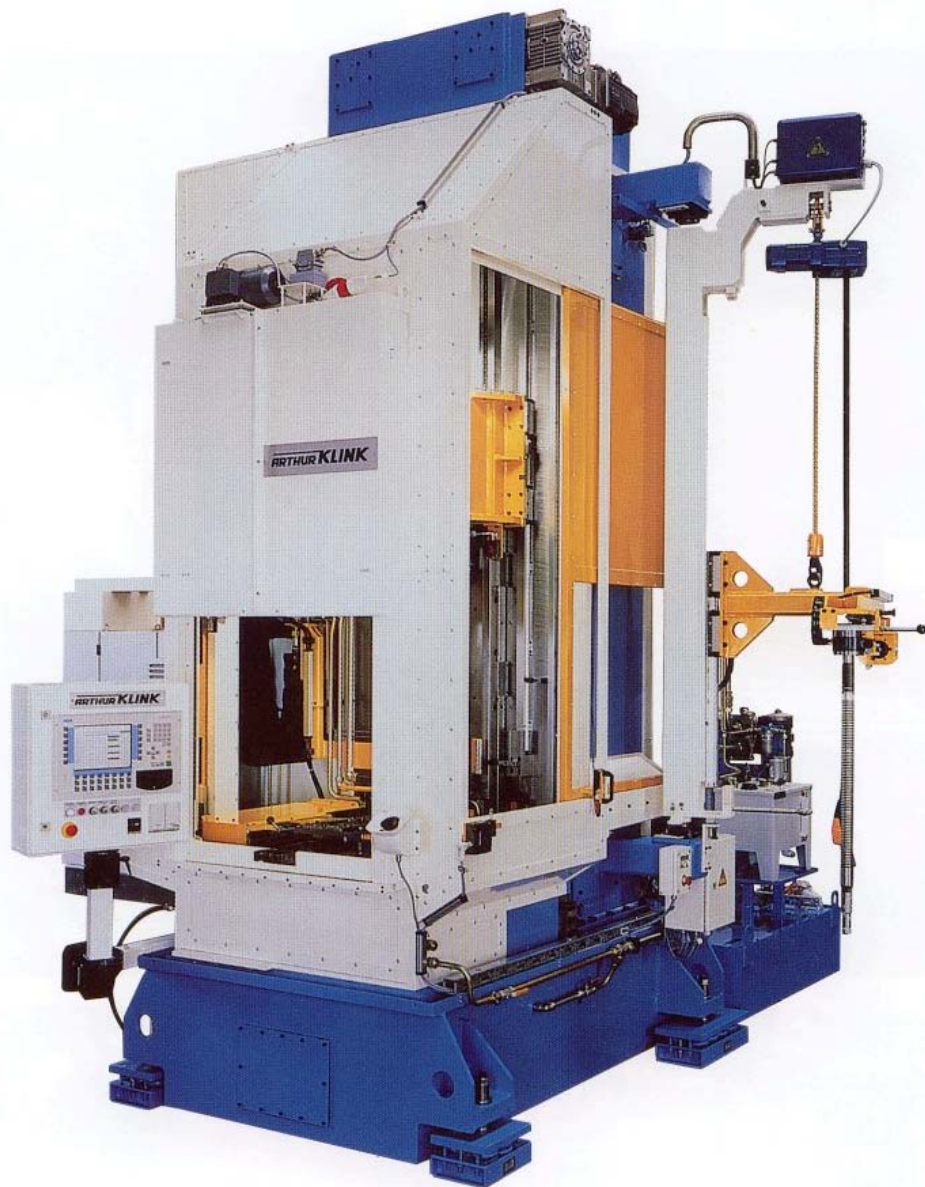

BROACHING

Internal Broaching Machines



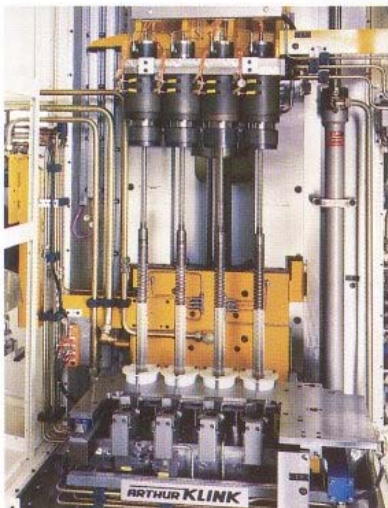
ARTHUR KLINK

Vertical Internal Broaching Machines

- Design: either twin-cylinder or table-up
- Hydraulic or electromechanical drive
- Pulling capacity 63 - 1200 kN
- Broaching stroke 1000 - 2800 mm
- Cutting speed 1 - 60 m / min
- Manual or fully automatic load
- Soft- and / or hardbroaching machine
- Dry cutting
- Helical broaching machine, NC – controlled
- Additional application e.g. marking, de-oiling, measuring, deburring



Table-up internal broaching machine, mechanically driven type RISH-M 25 x 1600 x 500 with automatic loading- / unloading system



3-station oil blowoff device, interlinked with the machine-cycle



View into the working zone of a 4-station table-up hard broaching machine



Hydraulically driven internal broaching machine
type RISZ 100 x 2750 x 800,
in traditional twin-cylinder design



Table-top internal broaching machine, hydraulically driven
type RISH 10 x 1000 x 400
with automatic loading- / unloading system



Internal table-top broaching machine, mechanically driven
type RISH-M 25 x 2000 x 500 / HG with automatic loading- / unloading system
for manufacturing sleeves



Broaching tools

Internal broaches

for all internal profiles suitable for broaching starting from bores or penetrations, such as circular bores, polygons, multispline sections, serrations and involute gearing, internal annulus gearing up to 500 mm dia., internal helical profiles etc, etc, etc...

Surface broaches

for all external profiles suitable for broaching such as connecting rods and caps, serration on steering racks and steering gear units, gear selector rods, crankcase bearing recesses. Broaches also with carbide inserts (clamped or brazed) etc, etc, etc...

Special-purpose broaches

Pot broaching inserts and pot broach holders for broaching external profiles. Turbine broaches for fir-tree or dovetail profiles. Carbide tools for high-speed broaching of heat-treated components etc, etc, etc...

All tools in HSS steels or powder metallurgy steels. TIN coating for marked increase in service life periods.

Broaching machines

Internal broaching machines

Vertical Surface broaching machines
- Pulling capacity: 63 to 1200 kN
- Sizes: 320-400-500-630-800
- Broaching stroke: 1000 to 2800 mm
- Drive: electro-hydraulic or electromechanical
- Cutting speed: 1 to 60 m/min.

Horizontal Surface broaching machines

- Pulling capacity: 63 to 630 kN
- Sizes: 400-500-630
- Broaching stroke: 1000 to 2750 mm
- Drive: electro-hydraulic
- Cutting speed: 1 to 40 m/min.
- Arrangement for keyway broaching

• Dimensions: to DIN 55143, 1415, 1417
• Table designs: fixed table, sliding table, indexing table

Push broaching machines for producing internal profiles using the long-stroke continuous method
Blind hole broaching of internal profiles using the short-stroke push broaching method.

Surface broaching machines

Vertical Surface broaching machines
- Pulling capacity: 63 to 630 kN
- Sizes: 320-400-500-630-800
- Broaching stroke: 630 to 2750 mm
- Drive: electro-hydraulic or electromechanical
- Cutting speed: 1 to 60 m/min.

Horizontal Surface broaching machines

- Pulling capacity: 63 to 630 kN
- Sizes: 400-500-630
- Broaching stroke: 1000 to 6000 mm
- Drive: electro-hydraulic or electromechanical
- Cutting speed: 1 to 40 m/min.

• Dimensions: to DIN 55141, 1415, 1417
• Table designs: fixed table, tilting table, swivelling table, NC table
• Broach holder attachment: T-slots or with hydraulically actuated clamping (Arthur Klink System)

Special-purpose broaching machines

- Pot broaching machines for broaching external contours (tool-embracing broach)
- Broaching machines for profiles to accommodate turbine blades
- Rough- and finish broaching of turbine blades
- CNC short-stroke push-type broaching machines and helical broaching machines for external and/or internal profiles
- Broaching units for placement or incorporation in transferlines
- High-speed broaching machines for broaching heat-treated components
- NC-controlled broaching centre, with automatic tool and workpiece handling system
- Production lines consisting of several broaching machines and:
- Complete machining installations with machining units for broaching, boring, countersinking, reaming, thread cutting, milling and deburring; computer controlled.

Grinding machines

CNC broach sharpening machines for the automatic sharpening and production grinding of surface and round-type broaches with annular or helical chip spaces. All axes are CNC-controlled by SINUMERIK 840 D with integrated AT computer for graphical user interface and broach administration. A high-speed tracing arrangement allows the determination of the broaching tooth coordinates both by tracing the tooth cutting edges and by tracing the chip spaces. Grindable tooth lengths up to 2500 mm.

Carbide coating

TiN carbide coating using the PVD process for broaches, cutting tools and all kinds of wear-resistant machine components. Workpieces with a max. workpiece length of 3000 mm and a max. workpiece diameter of 500 mm are coated.

Contract machining

Contract broaching

Machines in all sizes, up to a max. broaching stroke of 2800 mm and 1200 kN pulling capacity are available.
A large number of current broaches are held in stock for your workpieces.

Please ask for our tool list!

Sharpening and repair of broaches

In our repair department your broaches, of any design, are expertly sharpened and, if damaged, repaired.
The know-how of our specialists guarantees the optimum sharpening of your broaches.

Contract hardening

Two electrically heated vacuum heat-treatment furnaces are available. Useful capacity per furnace: dia. 610 mm, length 3000 mm; batch weight 1000 kg max.; hardening temperature 1320 °C. Any temperature curves during the hardening process can be programmed and documented.

Take advantage of our more than 70 years of experience in the field of broaching. We solve your machining problems.
Please ask for further technical literature.

ARTHURKLINK: Expertise in Broaching

ARTHURKLINK
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