THAT MAKES SENSE

Clamping solutions for turning and milling operations

Overview of our main products

www.hainbuch.com

HAINBUCH
WORKHOLDING TECHNOLOGY

The HAINBUCH modular system.

FLEXIBILITY IS KEY

Clamping device rotating

TOPlus chuck

TOPlus mini chuck

SPANNTOP chuck

SPANNTOP mini chuck

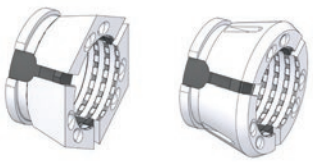
TOROK manual chuck

Clamping device stationary

MANOK plus manual stationary chuck

HYDROK hydraulic stationary chuck

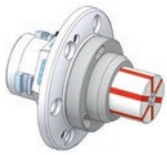
Clamping element



Clamping head – O.D. clamping

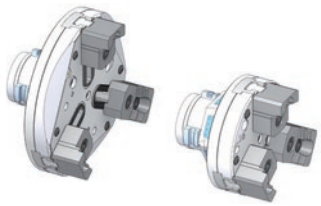
- All round clamping
- 3 different versions:
  For raw material, precision machining, and for in-house machining
- An abundance of profile clamping possibilities
- Coolant-resistant, rubber-metal connection, prevents chips in the chuck
- Clamping range SE 4 – 100 mm
  Clamping range RD 4 – 160 mm

Adaptation clamping device



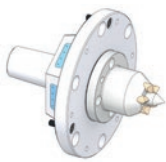
MANDO Adapt mandrel – I.D. clamping

- Quick change-over from O.D. to I.D. clamping without adjusting, due to CENTREX interface
- Concentricity < 0.005 mm can be achieved between chuck taper and mandrel taper
- Clamping range Ø 8 – 190 mm



Jaw module size 145 or 215 – jaw clamping

- Deadlength 3-jaw clamping
- Can be used rotating and for stationary applications
- Change-over from clamping head or mandrel clamping to jaw clamping in less than 2 minutes



Face driver adaption

- Spring-loaded center
- Hard metal face driver
- Extremely quick change-over without disassembling the chuck [1 min.]

Morse taper adaption

- Adaptation possibility via morse taper
- Assembly without adjusting [1 min.]

Chuck

TOPlus mini
[with hexagon clamping geometry and minimal interference contour]

- Now adaptation clamping devices are possible [Modular system]
- 25 % higher holding power than SPANNTOP mini
- Significantly reduced interference contour
- Better tool accessibility
- Ideal for situations with limited installation space
- Concentric precision <0.015 mm possible

Clamping elements

Clamping head SE

Adaptations

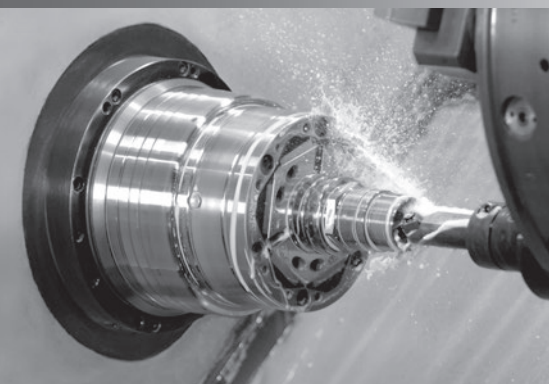
MANDO Adapt SE

Face driver SE

Jaw module SE

Morse taper adapter SE

Chuck



TOPlus [with hexagon clamping geometry]

- 25 % higher holding power than SPANNTOP nova
- Unequalled rigidity due to full-surface contact of the clamping segments
- Absorbs vibration
- Concentric precision <0.015 mm possible

Clamping elements

Clamping head SE

Adaptations

MANDO Adapt SE

Face driver SE

Jaw module SE

Morse taper adapter SE

Chuck

SPANNTOP mini
[with round clamping geometry and minimal interference contour]

- Now adaptation clamping devices are possible [Modular system]
- Significantly reduced interference contour
- Better tool accessibility
- Ideal for situations with limited installation space
- Concentric precision <0.010 mm possible

Clamping elements

Clamping head RD

Adaptations

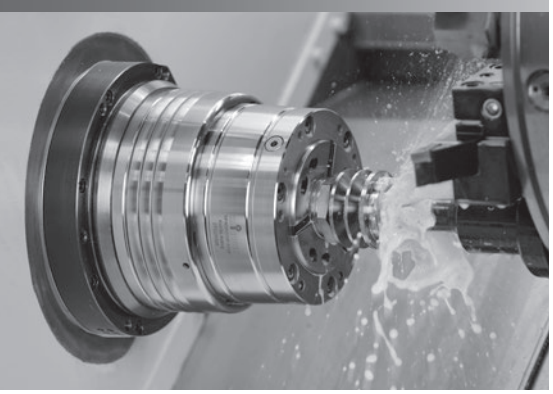
MANDO Adapt RD

Face driver RD

Jaw module RD

Morse taper adapter RD

Chuck



SPANNTOP nova [with round clamping geometry]

- Typical HAINBUCH features, such as user friendly set-up, full passage, parallel clamping, optimal power conversion, extreme rigidity and superior holding power, as well as minimal wear and tear
- Concentric precision <0.010 mm possible

Clamping elements

Clamping head RD

Adaptations

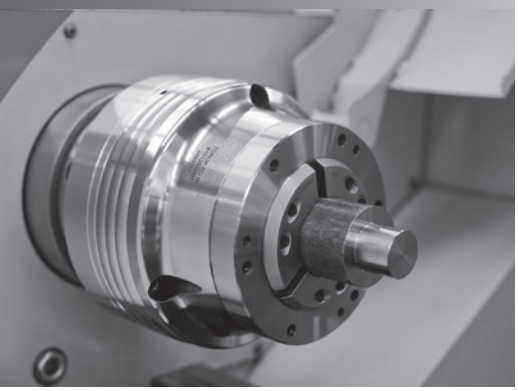
MANDO Adapt RD

Face driver RD

Jaw module RD

Morse taper adapter RD

Manual chuck



TOROK [manually actuated chuck]

- Sensitive manual clamping is possible
- Concentric precision < 0.010 mm possible
- Minimal inertia losses

Clamping elements

Clamping head

Adaptations

MANDO Adapt

Face driver

Jaw module

Morse taper adapter

Jaw chuck

B-Top3 [with CENTREX interface]

- Extremely fast conversion [2 min.] to I.D. clamping with the MANDO Adapt mandrel-in-clamping-device or to O.D. clamping with the SPANNTOP Adapt chuck
- Through-bore passage bushings or end-stop bushings that can be changed from the front
- Fast jaw change with individual unlocking at high change-over accuracy and suitable for the »Reishauer« system, straight gear cutting

Clamping elements

Jaws,
different models

Adaptations

MANDO Adapt

SPANNTOP Adapt
[with end-stop,
without through-bore]

SPANNTOP Adapt M
[without end-stop,
with through-bore]

Eccentric chuck

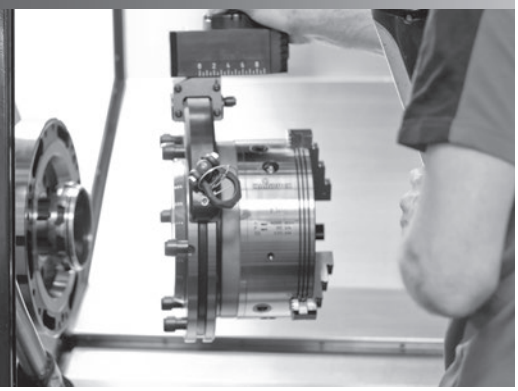
Eccentric chuck [adjustable via C-axis]

- Infinite eccentric adjustment via the C-axis
- Concentric and eccentric machining in a single clamping set-up
- Different eccentric dimensions are possible with the same chuck and clamping head
- Minimal inertia losses

Clamping elements

Clamping head RD

Quick change-over system



Chuck change-over with centroteX

centroteX [high-speed clamping device change-over]

- Dramatic reduction in clamping device change-over times [5 minutes with a hoist]
- Change-over accuracy between machine adapter and clamping device adapter < 0.002 mm – without alignment
- Machine-overlapping utilization of clamping devices
- No loss in rigidity, in comparison with clamping devices that are bolted directly on the machine

Machine adapter

Adaptation examples

SPANNTOP nova
+ clamping device adapter

Jaw chuck B-Top3
+ clamping device adapter

MANDO mandrel
+ clamping device adapter

Mandrel

MANDO T211 [pull-back / with draw bolt]

- Vibration dampening due to vulcanized segmented clamping bushings
- Workpiece stabilization through axial draw force applied against the workpiece end-stop
- Form-compensating, segmented clamping bushings upon request
- Clamping range Ø 20 – 200 mm
- Concentric precision < 0.010 mm possible

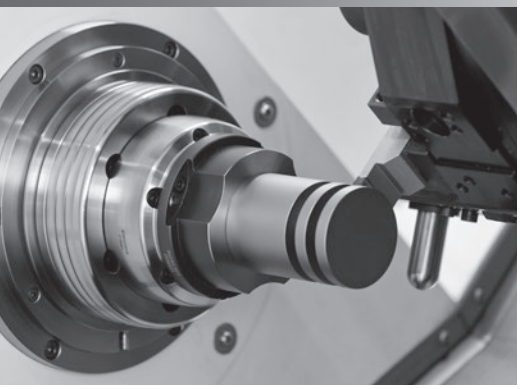
Clamping elements

SB segmented clamping bushing

Adaptations

SAD segmented clamping bushing
[for machining to size]

Mandrel



MANDO T212 [pull-back / without draw bolt]

- Vibration dampening due to vulcanized segmented clamping bushings
- Workpiece stabilization through axial draw force applied against the workpiece end-stop
- Clamping without draw bolt, consequently ideal for blind bores
- Clamping range Ø 8 – 190 mm
- Concentric precision < 0.010 mm possible

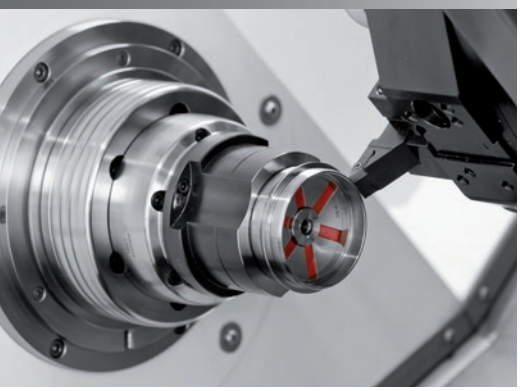
Clamping elements

SB segmented clamping bushing

Adaptations

SAD segmented clamping bushing
[for machining to size]

Mandrel



MANDO T812 [deadlength / without draw bolt]

- Radial clamping, no pull-back against workpiece stop – ideal for grabbing from the main spindle
- Clamping without draw bolt, consequently ideal for blind bores
- Clamping range Ø 8 – 100 mm
- Concentric precision < 0.020 mm possible

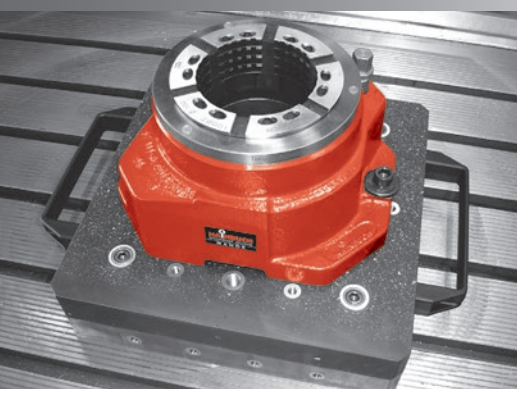
Clamping elements

SB segmented clamping bushing

Adaptations

SAD segmented clamping bushing
[for machining to size]

Quick change-over system



CENTREX [pallet system]

- Extremely high repeatability [< 0.003 mm]
- The draw-in force is not transmitted to the centering, since it is separated from the draw-in mechanism
- Absolute zero point, self-centering even under thermal expansion
- Extremely rigid due to flat contact of base plate and pallet

CENTREX
pallet system

Stationary clamping device

Photo: Maschinenfabrik Berthold Hermle

MANOK [manual stationary chuck]

- Sensitive manual clamping is possible
- Ideal for 5-side machining
- Repeatability < 0.010 mm

Clamping elements

Clamping head RD

Stationary clamping device

MANOK plus [manual stationary chuck with adaptation possibilities]

- Sensitive manual clamping is possible
- Workpiece stabilization through axial draw force applied against the workpiece end-stop
- Short and stable clamping
- Ideal for 5-side machining
- Repeatability < 0.010 mm

Clamping elements

Clamping head SE

Adaptations

MANDO Adapt

Jaw module

Stationary clamping device

HYDROK [hydraulic stationary chuck with adaptation possibilities]

- Ideal for automated clamping
- Outer contour: angular contour allows lower space requirement
- Repeatability < 0.010 mm

Clamping elements

Clamping head SE

Adaptations

MANDO Adapt

Jaw module

Stationary clamping device

ms / hs dock [actuation unit for stationary mandrel clamping]

- Mandrels can be used on the machining center
- Ideal for 5-side machining
- Clamping range Ø 8 – 200 mm
- Play-free centering even at bore tolerances up to ± 0.6 mm

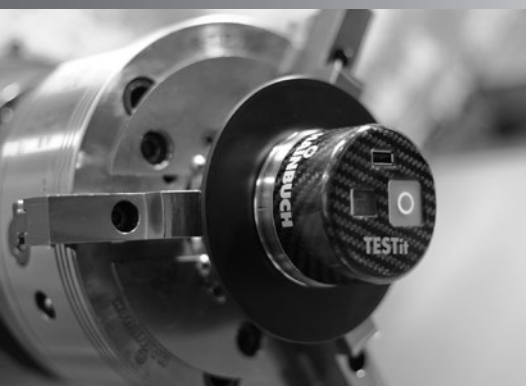
Adaptations

MANDO T211
[with draw bolt]

MANDO T212
[without draw bolt]

MANDO T812
[without draw bolt]

Accessories



Jaw chuck B-Top3 and TESTit in use

TESTit clamping force gauge [for O.D. and I.D. clamping]

- Clamping force measurement for O.D. and I.D clamping
- Can be used rotating [under RPM] and for stationary applications
- Data transmission via Bluetooth
- Software for visualization and archiving of the measurement data
- Lithium rechargeable battery for more than 5 hours of operating time

Types of TESTit for:

O.D. clamping
for chucks

I.D. clamping
for mandrels

Accessories

End-stop systems – vario [manually adjustable end-stops]

- End-stop depth can be variably adjusted in 1 mm-increments
- Standardized workpiece end-stops
- Minimal time expenditure for set-up
- End-stop construction is virtually superfluous
- Perpendicularity on the contacting end-stop part < 0.02 mm
- Practical storage box
- Can be used rotating and stationary

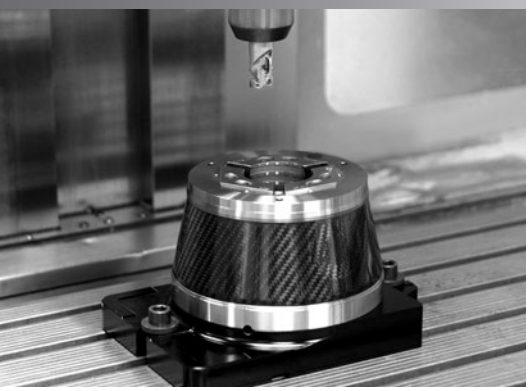
vario part

- Proven and familiar system with gauge discs

vario quick

- Clamping length can be adjusted in seconds
- End-stop blanks available
- Fewer individual parts

Special solutions



Made to order instead of mass production

We never say, »No way«. Whether large chuck, clamping devices made of carbon or special mandrels: We always have an individual solution even for unique special requirements. Our experts develop these solutions together with you. They push the technology to its limits, prefer leaving the beaten path, think outside of the box, and approach their work with passion, enthusiasm, and a wealth of invention.

Advantages of HAINBUCH special solutions:

- A custom solution tailored to your requirements
- Optimized manufacturing processes
- State-of-the-art manufacturing possibilities due to the latest clamping device technologies

Consultation

We find the best solution for you

Questions? We are ready to help!
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Phone: +49 7144.907-333
www.hainbuch.com

You can find us all over the world!

Clamping head change-over [10 sec.]


Clamping device with clamping head


Remove clamping head


Clamping device without clamping head

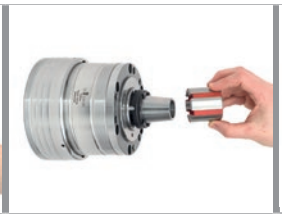

Insert a clamping head

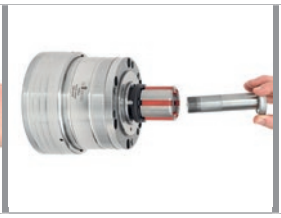

Clamping device is set-up

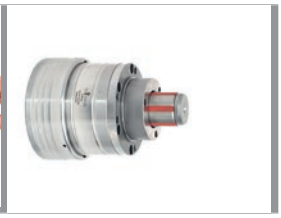
Change-over to mandrel adaptation T211 [1 min.]


Remove clamping head


Insert MANDO Adapt T211


Fit on segmented clamping bushing


Screw in draw bolt

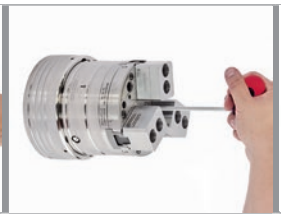

Clamping device is set-up

Change-over to jaw module [2 min.]


Clamping device with clamping head


Remove clamping head


Insert jaw module

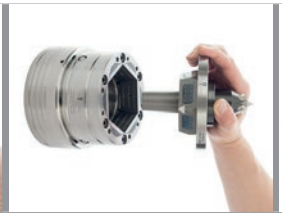

Secure jaw module

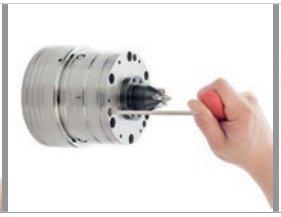

Clamping device is set-up

Change-over to face driver adaptation [1 min.]


Clamping device with clamping head


Remove clamping head

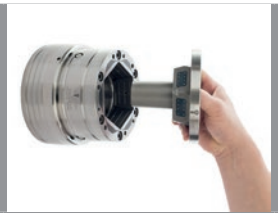

Insert face driver


Secure face driver


Clamping device is set-up

Change-over to morse taper [1 min.]


Remove clamping head


Insert morse taper


Secure morse taper


Insert center


Clamping device is set-up

2500/8.16 part no. 80001/0016 Subject to technical changes.

HAINBUCH

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