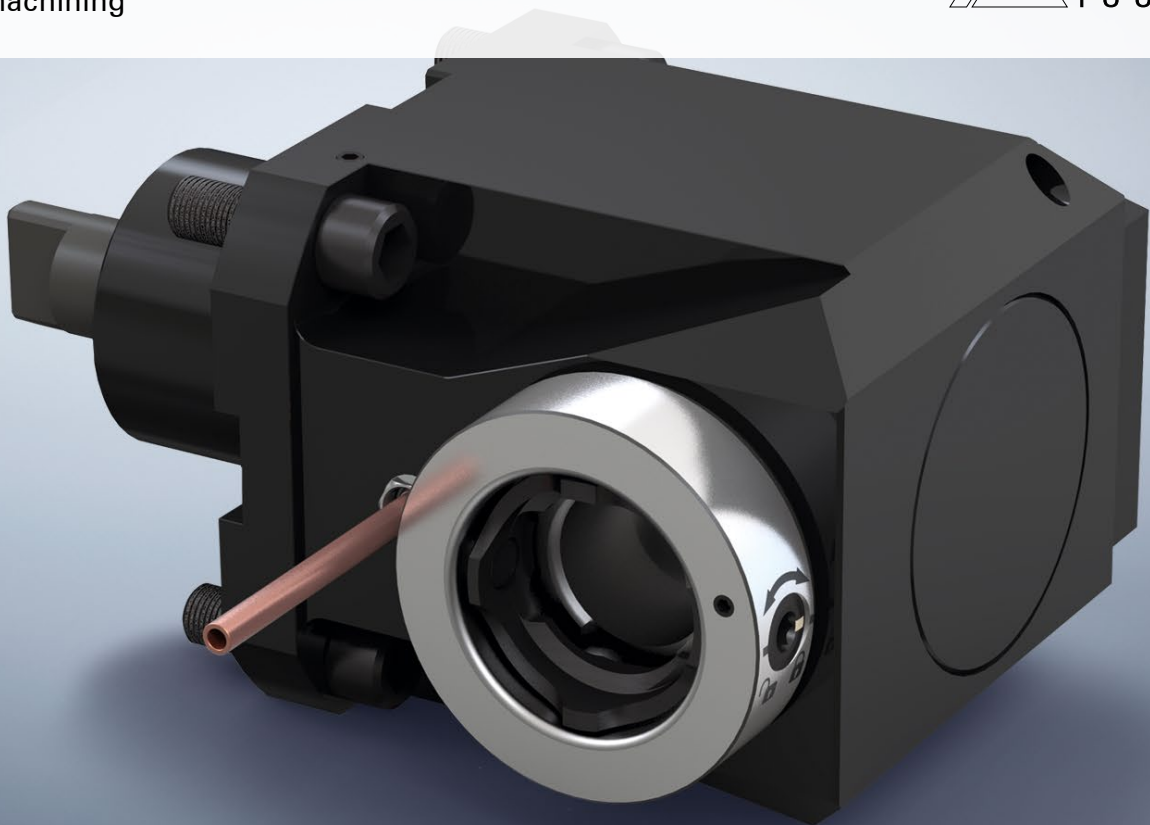


# DMG MORI BMT 60

Live Tools & Static Holders

Tooling & Machine Tooling Technology

Metal machining





AT BENZ GMBH WERKZEUGSYSTEME, OUR MAXIM, INNOVATION, PRECISION, PASSION, IS FAR MORE THAN JUST A MARKETING FORMULA. RATHER, IT DESCRIBES THE CORE GOALS OF OUR BUSINESS WHILE ALSO OUTLINING THE REASONS WHY WE HAVE BEEN ABLE TO COMPETE IN THE MARKET SUCCESSFULLY WITH TOOL SYSTEMS FOR WOODWORKING, METAL MACHINING AND COMPOSITE MATERIAL PROCESSING FOR MORE THAN 40 YEARS.

INNOVATIONS ARE IMPORTANT TO US. BUT WE ALSO RECOGNIZE THAT THEY CAN BE SUCCESSFUL ONLY IF THEY PRECISELY MEET THE NEEDS OF OUR CUSTOMERS. THIS IS WHY WE HAVE MAINTAINED A STRICT FOCUS ON OUR CUSTOMERS FOR MANY YEARS. WE ENSURE THAT OUR DEVELOPMENTS AND INNOVATIONS SIMPLIFY YOUR PRODUCTION PROCESSES AND LOWER YOUR MANUFACTURING COSTS - AND ULTIMATELY IMPROVE YOUR COMPETITIVENESS AS A RESULT.



# BENZ GMBH

## WERKZEUGSYSTEME

FOR DMG MORI BMT MACHINES  
EXCERPT PRODUCT RANGE



More information about our BENZ products and accessories can be found at the download area of our website.

<https://www.benztooling.com/en/services/downloads>



# BMT 60


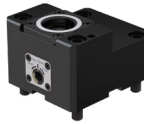
Live Tools | Static Holders



## LIVE TOOLS

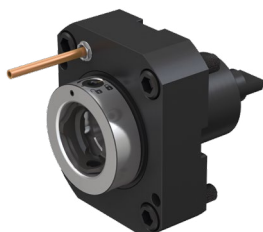
	AXIAL	6		RADIAL	7
	RADIAL, DOUBLE	8		ADJUSTABLE	9
	BROACHING UNIT BENZ LinA 4.0	10			

## STATIC HOLDERS

	STANDARD	12		BENZ CAPTO™	13
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# LIVE TOOL – BMT 60 AXIAL

## TECHNICAL DATA



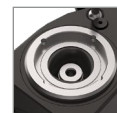
### OUTPUT SPINDLES



BENZ  
Solidfix®



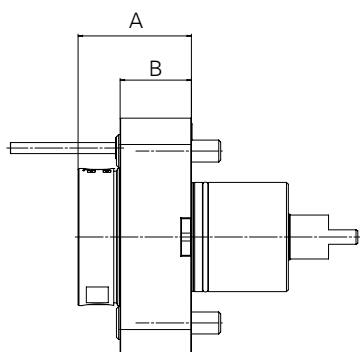
Collet chuck  
System ER  
DIN 6499



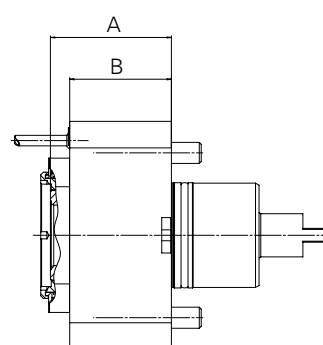
BENZ  
CAPTO™

**i** Other output spindles  
available upon request

BENZ Solidfix® / Collet chuck



BENZ CAPTO™



Output spindle	Technical Data				$n_{1 \max} / n_{2 \max}$ [rpm]	$M_{1 \max} / M_{2 \max}$ [Nm]	$A_{\max}$ [mm]	B [mm]	Order No.
	Size Spindle	i	EC	IC*					
BENZ Solidfix®	S5	1:1	✓		6000 / 6000	100 / 100	62	39	115DA03500S5
	S5	1:1	✓	✓	6000 / 6000	100 / 100	62	39	115EA03500S5
Collet chuck	ER40A	1:1	✓		6000 / 6000	100 / 100	80	55	115DA03551E7A
	ER40A	1:1	✓	✓	4500 / 4500	100 / 100	84,9	55	115EA03551E7A
BENZ CAPTO™	C5	1:1	✓		6000 / 6000	100 / 100	74,5	58	115DA03500L5B
	C5	1:1	✓	✓	6000 / 6000	100 / 100	89,5	72,5	115EA03500L5B

\*Internal Cooling  $p_{\max} = 50$  bar

# LIVE TOOL – BMT 60 RADIAL

## TECHNICAL DATA



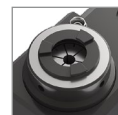
LENGTH L1

90

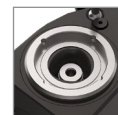
OUTPUT SPINDLES



BENZ  
Solidfix®



Collet chuck  
System ER  
DIN 6499



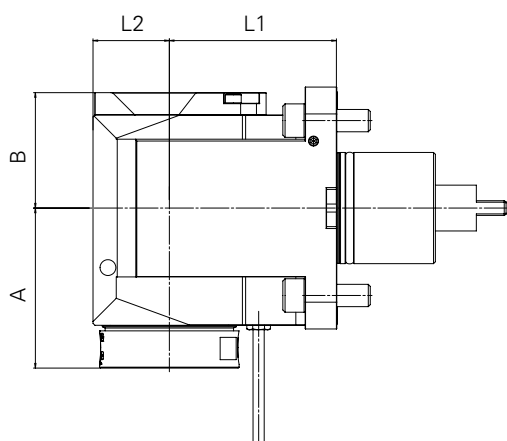
BENZ  
CAPTO™



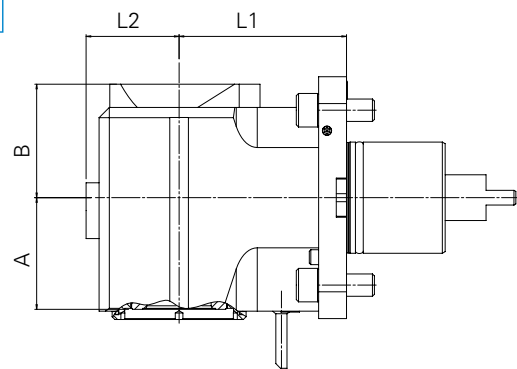
Other output spindles  
available upon request



BENZ Solidfix® / Collet chuck



BENZ CAPTO™



Output spindle	Size Spindle	i	EC	IC*	$n_{1\max} / n_{2\max}$ [rpm]	$M_{1\max} / M_{2\max}$ [Nm]	$A_{\max}$ [mm]	B [mm]	L1 [mm]	L2 [mm]	Order No.
BENZ Solidfix®	S5	1:1	✓	-	6000 / 6000	150 / 150	86	62	90	41	115FAX03559S5D
	S5	1:1	✓	✓	6000 / 6000	150 / 150	86	68	90	41	115GAX03559S5D
Collet Chuck	ER40A	1:1	✓	-	6000 / 6000	150 / 150	81,5	62	90	41	115FAX03559E7AD
	ER40A	1:1	✓	✓	6000 / 6000	150 / 150	86,4	68	90	41	115GAX03559E7AD
BENZ CAPTO™	C5	1:1	✓	-	6000 / 6000	150 / 150	65,5	61	90	50	115FAX03559L5BD
	C5	1:1	✓	✓	6000 / 6000	150 / 150	65,5	67,5	90	50	115GAX03559L5BD

\*Internal Cooling  $p_{\max} = 100$  bar



# LIVE TOOL – BMT 60

## RADIAL, DOUBLE

### TECHNICAL DATA



LENGTH L1

90

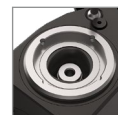
OUTPUT SPINDLES



BENZ  
Solidfix®



Collet chuck  
System ER  
DIN 6499



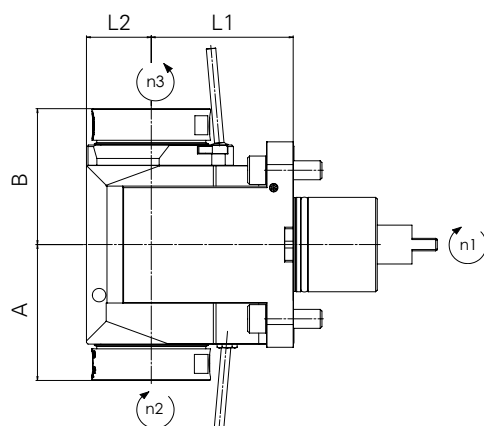
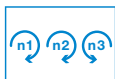
BENZ  
CAPTO™



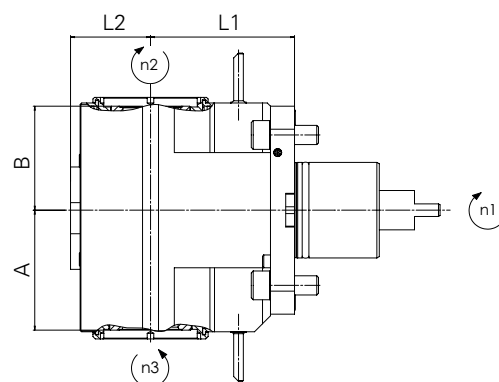
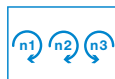
Other output spindles  
available upon request



BENZ Solidfix® / Collet chuck



BENZ CAPTO™



Technical data

Output spindle	Size Spindle	i	EC	IC*	$n_{1\max} / n_{2\max}$ [rpm]	$M_{1\max} / M_{2\max}$ [Nm]	$A_{\max}$ [mm]	B [mm]	L1 [mm]	L2 [mm]	Order No.
BENZ Solidfix®	S5	1:1	✓		6000 / 6000	150 / 150	86	63	90	41	115FAX03559S52
Collet Chuck	ER40A	1:1	✓		6000 / 6000	150 / 150	81,5	63	90	41	115FAX03559E7A2
BENZ CAPTO™	C5	1:1	✓		6000 / 6000	150 / 150	80,5	70,5	90	50	115FAX03500L5BD2

\*Innenkühlung  $p_{\max} = 100$  bar



# LIVE TOOL – BMT 60

## ADJUSTABLE

### TECHNICAL DATA



Collet chuck

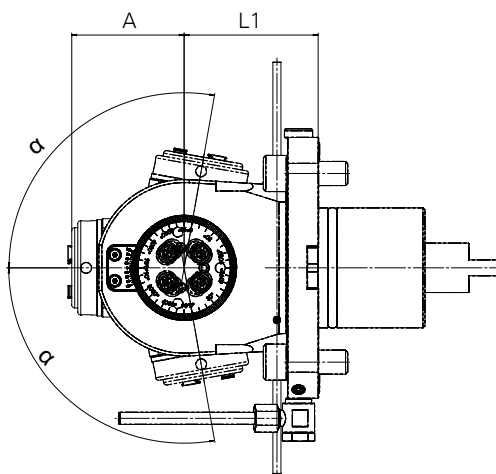


### OUTPUT SPINDLE



Collet chuck  
System ER  
DIN 6499

**i** Other output spindles  
available upon request



Technical data										Order No.
Output spindle	Size Spindle	i	EC	IC*	$n_{1\max} / n_{2\max}$ [rpm]	$M_{1\max} / M_{2\max}$ [Nm]	$A_{\max}$ [mm]	L1 [mm]	$\alpha$ [°]	
Collet Chuck	ER25A	1:0,816	✓	-	6000 / 4900	32 / 39	57,9	67	100	115FDX03549E5A
	ER25A	1:0,816	✓	✓	6000 / 4900	32 / 39	62,9	67	100	115GDX03549E5A

\*Internal cooling  $p_{\max} = 50$  bar

# LIVE TOOL – BMT 60

## RADIAL, BROACHING UNIT - BENZ LINA 4.0

### TECHNICAL DATA



LENGTH L1

90

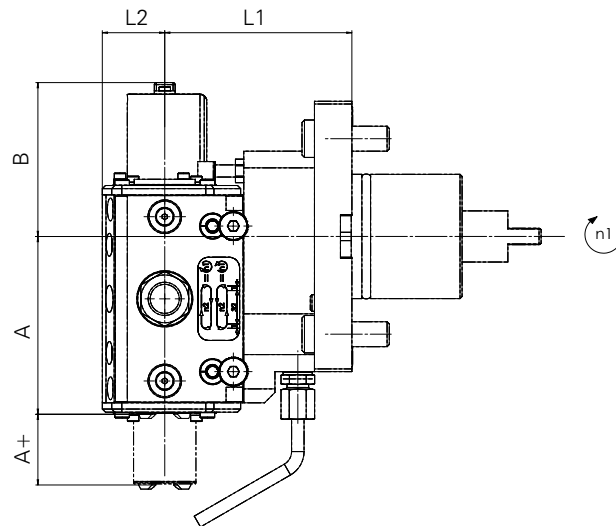
OUTPUT SPINDLE



Prism-shaped  
profile  
Ø 30 mm



Industry 4.0 ready  
Contact the BENZ Sales Team



Performance data

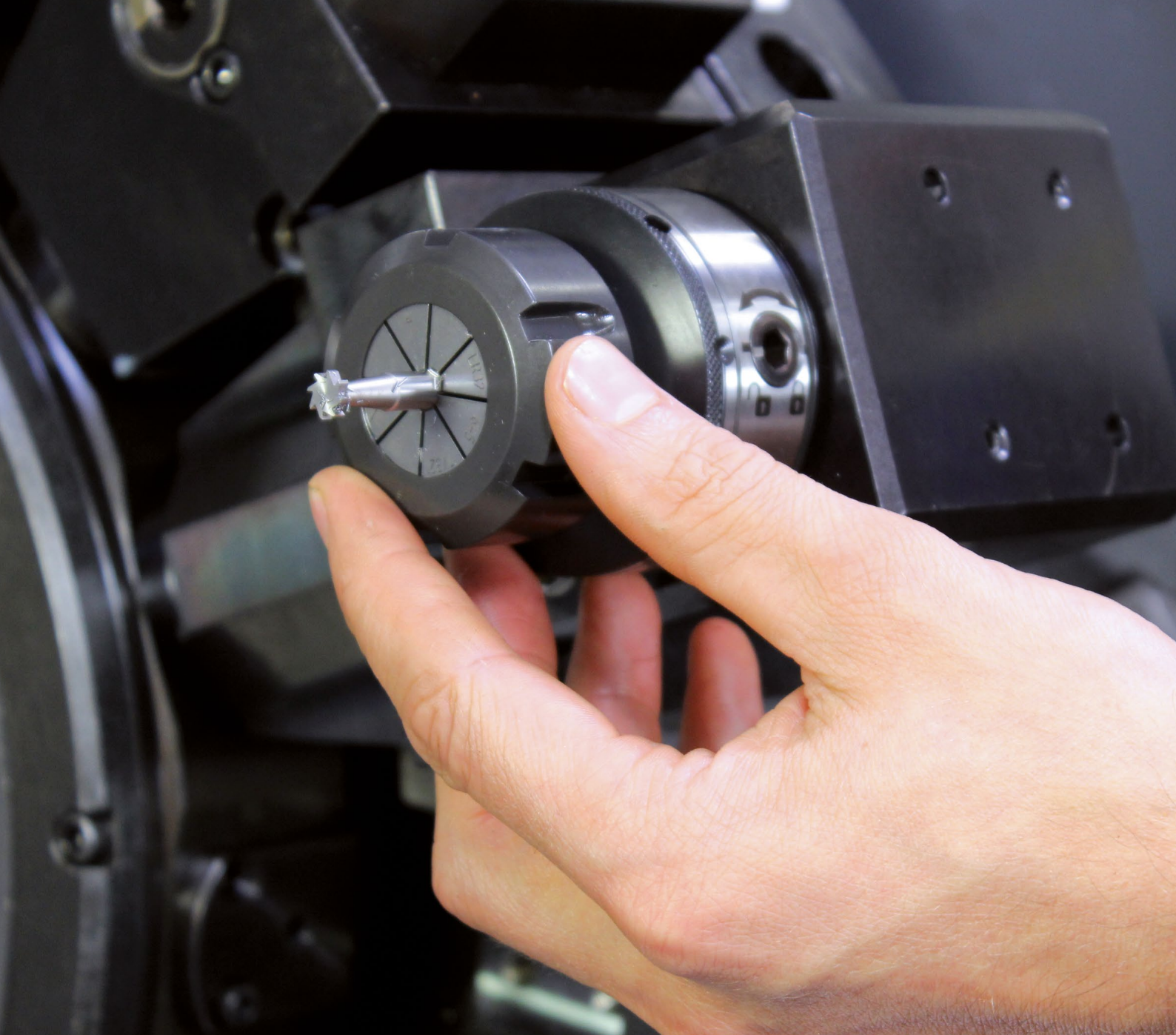
Type	$n_{1 \max} / *n_{2 \max}$ [rpm / min <sup>-1</sup> ]	$M_{1 \max} / F_{c \max}$ [Nm]	f [mm]	Groove width <sub>max</sub> [mm]
GS	3000 / 1500	15 / 1700	0,02 - 0,10	12
GSL	2000 / 1000	23 / 1700	0,02 - 0,10	12

Technical Data

Type	Size Plunger	i	EC	IC	**Stroke [mm]	A [mm]	A+ [mm]	B [mm]	L1 [mm]	L2 [mm]	Order No.
GS	30	2:1	✓	✓	32	86,5	33	74	90	30	115GS03502B2D-90
GSL	30	2:1	✓	✓	51	115,5	53	87,5	90	30	115GSL03508B2D-90

\*number of double stroke per minute

\*\*usable working stroke



# ACCESSORIES

Practical additions for your interchangeable unit

BENZ Solidfix® is a modular quick change system that allows you to change tools in less than 20 seconds. The time-consuming process of removing the live tool from the machine is avoided, as only the adapter with cutting tool is changed. Replacing

the change adapter saves you several live tools.


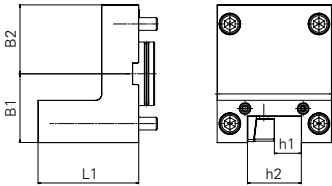
**Your advantage:** One live tool instead of several – and therefore lower investment costs compared to exchanging the complete unit!

A large selection of adapters and matching accessories can be found in our catalogue [BENZ Modular Quick Change Systems](#)


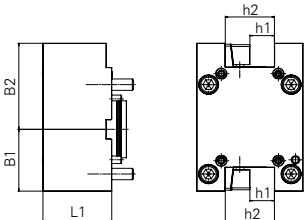


# STATIC HOLDERS – BMT 60

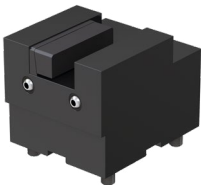
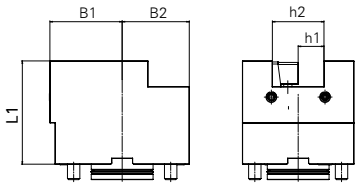
## O.D. TURNING TOOL | SINGLE

Model	Drawing	Technical data						Order No.
		h1 [mm]	h2 [mm]	L1 [mm]	B1 [mm]	B2 [mm]	EC	
		25	50	95	40	90	✓	<a href="#">115A035560003</a>


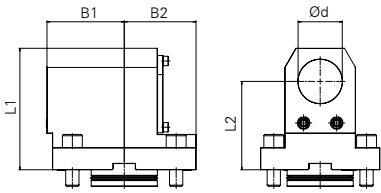
## O.D. TURNING TOOL | 2 TOOLS - MAIN & SUB SPINDLE

Model	Drawing	Technical data						Order No.
		h1 [mm]	h2 [mm]	L1 [mm]	B1 [mm]	B2 [mm]	EC	
		25	50	70	90,5	65	✓	<a href="#">115A035567001</a>

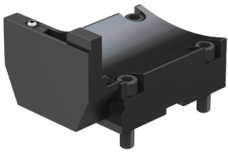
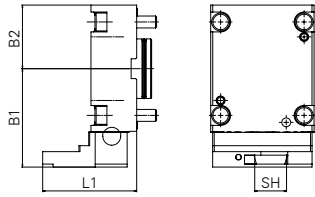
## FACE AND I.D. TURNING TOOL | SINGLE

Model	Drawing	Technical data						Order No.
		h1 [mm]	h2 [mm]	L1 [mm]	B1 [mm]	B2 [mm]	EC	
		25	50	100	70	65	✓	<a href="#">115A035559001</a>

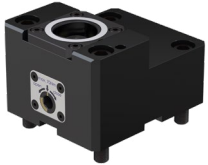
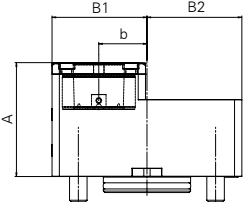
## BORING BAR HOLDER | SINGLE

Model	Drawing	Technical data							Order No.
		Ød [mm]	L1 [mm]	L2 [mm]	B1 [mm]	B2 [mm]	EC	IC	
		40	110	80	70	65	✓	✓	<a href="#">115A035578001</a>


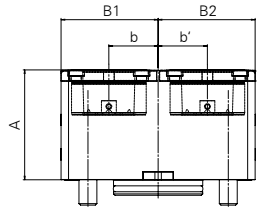
## CUT-OFF HOLDER

Model	Drawing	Technical data					Order No.
		SH [mm]	L1 [mm]	B1 [mm]	B2 [mm]	EC	
		32	94,6	99	65	✓	115A035583001


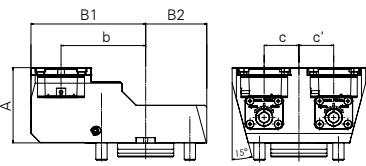
## AXIAL HOLDER | SINGLE - BENZ CAPTO™

Model	Drawing	Technical data					Order No.
		Size Adapter [mm]	A [mm]	b [mm]	B1 [mm]	B2 [mm]	IC
		C5	78	33	65	65	✓

## AXIAL HALTER | 2 TOOLS - BENZ CAPTO™ - MAIN & SUB SPINDLE


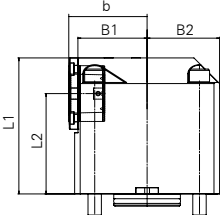
Model	Drawing	Technical data					Order No.
		Size Adapter [mm]	A [mm]	b / b' [mm]	B1 [mm]	B2 [mm]	IC
		C5	78	33	65	65	✓

## AXIAL HALTER | 2 TOOLS - BENZ CAPTO™ Y


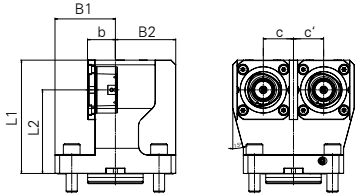
Model	Drawing	Technical data						Order No.
		Size Adapter [mm]	A [mm]	b [mm]	B1 [mm]	B2 [mm]	c / c' [mm]	IC
		C5	80	90	122	65	37	✓

# STATIC HOLDERS – BMT 60


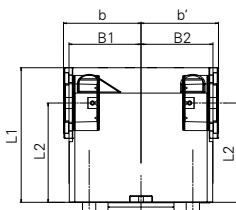
## RADIAL HOLDER | SINGLE - BENZ CAPTO™

		Technical data						
Model	Drawing	Size	L1	L2	b	B1	B2	IC
		Adapter [mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
		C5	122	90	70	65	65	✓
		115AP035L5BDU-90						

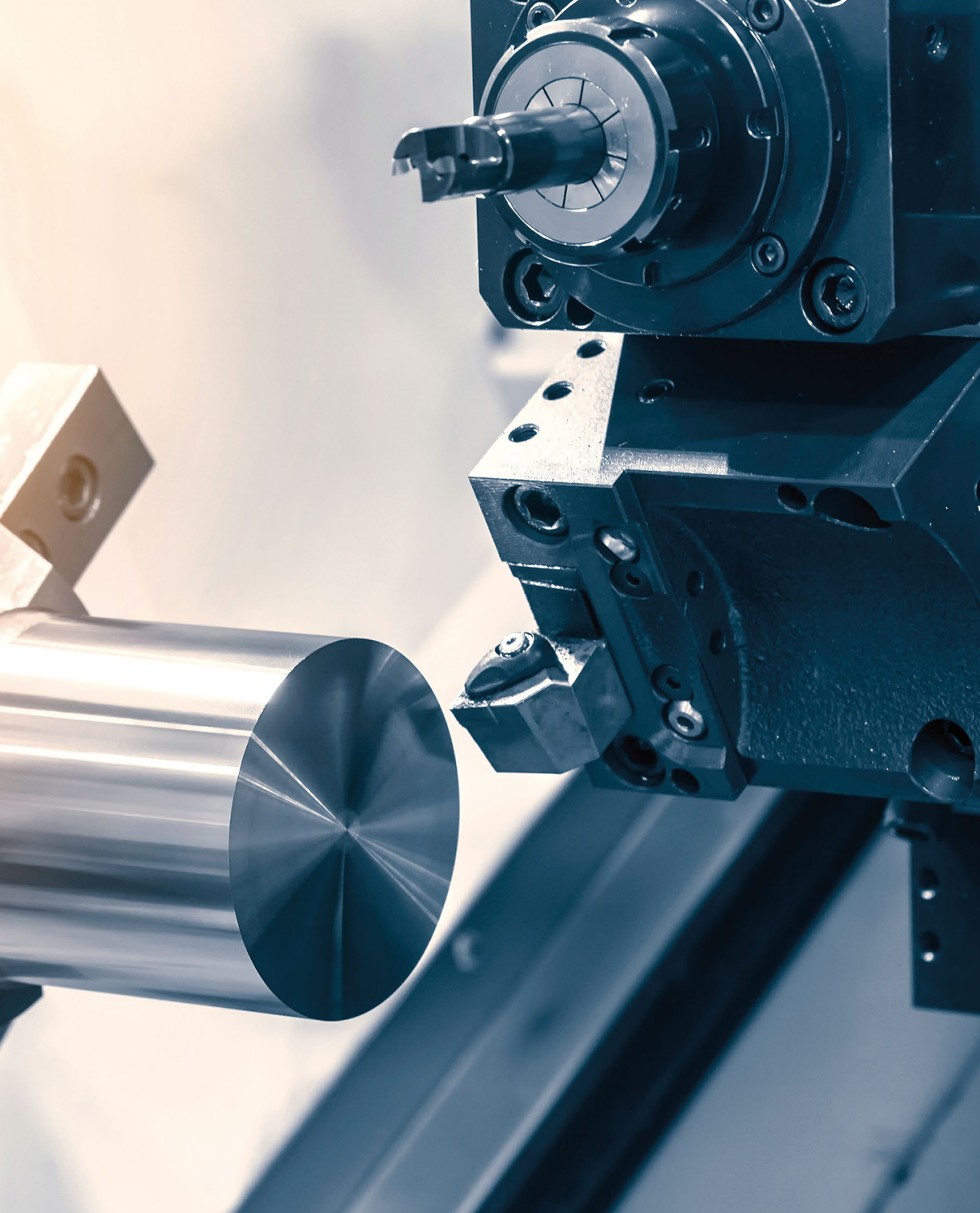
## RADIAL HOLDER | 2 TOOLS - BENZ CAPTO™ Y

		Technical data							
Model	Drawing	Size	L1	L2	b	B1	B2	c / c' IC	Order No.
		Adapter [mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
		C5	122	90	30	65	65	32,5 ✓	115AR035L5BS0750

## RADIAL HOLDER | 2 TOOLS - BENZ CAPTO™ - MAIN & SUB SPINDLE

		Technical data						
Model	Drawing	Size	L1	L2	b / b'	B1	B2	IC
		Adapter [mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
		C5	122	90	70	65	65	✓
		115AR035L5B2U-90						







# BENZ PRODUCT WORLD

## TOOLING & MACHINE TOOLING TECHNOLOGY

### TOOLING TECHNOLOGY



METAL

#### LIVE TOOLS/TOOL HOLDERS

- Radial heads 90°
- Radial heads  $\neq$  90°
- Axial heads
- Swivel heads
- Multi-spindle heads
- Broaching units
- Rotating tool holders
- Static tool holders

**COMPONENTS.** Our comprehensive tool concepts for turning centers and milling centers are ideal for nearly every application. Providing a technological advantage is our goal.

**SPECIFIC TO THE CUSTOMER.** Our modular approach enables customized configurations.

**SYSTEMS.** We develop special customer-specific tools for OEM and end customers on request.



METAL

#### EXCHANGEABLE UNITS

- Angle heads 90°
- Angle heads  $\neq$  90°
- Swivel heads
- Multi-spindle heads
- Broaching units
- High-speed spindles

**KNOWLEDGE AND EXPERIENCE.** Our knowledge of the metalworking industry and decades of development partnership make us ideal for new tasks anywhere in the world.

**COMPONENTS.** We deliver a vast array of standard components from stock and develop innovative, customized systems for OEM and end customers.

**VARIETY.** Whether in machining centers in the automotive, aerospace or wind energy industries, units from Benz can be used anywhere. Numerous customers choose us as their systems and innovation partner.



WOOD / COMPOSITE AND ALUMINIUM

#### EXCHANGEABLE UNITS

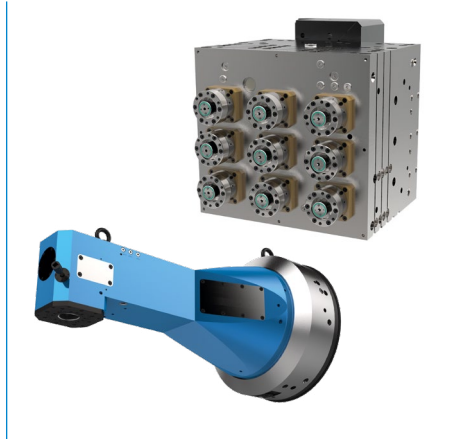
- Angle heads 90°
- Swivel heads
- Multi-spindle heads
- Multi-axis heads
- Sanding units
- Floating head units

**FOR ANY APPLICATION.** Cost-effectively process and machine wood, composites and aluminium: We provide series production angle heads for drilling, milling, sawing and grinding in addition to other units for special applications.

**FROM BASIC TO HIGH-END.** Benz units are available in a variety of performance classes, making them ideal for everything from light machining to high-performance continuous operation.

**SYSTEMS.** We have the solution for your special applications: Customized Benz units for machining centers. Put us to the test!

## MACHINE TOOLING TECHNOLOGY



METAL

### MULTI-SPINDLE HEADS AND LARGE DRILL HEADS

- Large angle heads
- Large drill heads
- XXL multi-spindle heads

DEVELOPMENT PARTNER. We accompany you from brainstorming to inspection of the final machine, always to your expectations. Our assortment ranges from compact heads to XXL units. SYSTEMS. Benz stands for high-end solutions in the fields of machine tooling technology, specialty solutions, custom assemblies and mechanical modules. We manufacture and configure multiple-spindle and large-angle heads as well as large drill heads. COMPONENTS. Attachment units complete our range.



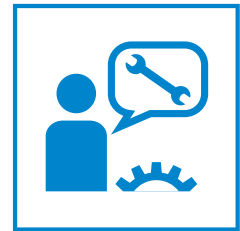
METAL / WOOD / COMPOSITE AND ALUMINIUM

### SYSTEM TECHNOLOGY

- Multiple-spindle drill heads
- Motor spindles
- Motors
- 5-axis technology
- C-axes
- Swivel axes
- Rotary distributors
- Z-axes

COMPONENTS. Our range includes standard products in an assortment of shapes and sizes. THE PERFECT ADDITION. Our system additions provide you with even more efficiency. Perfect your existing solutions with Benz products! SYSTEMS. We develop the technology of tomorrow. Your individual requirements for the efficiency of your machine tools and the suitability of the tools in use provide our benchmark for new, innovative solutions.

## SERVICE



METAL / WOOD / COMPOSITE AND ALUMINIUM

### SERVICE

- Repair service
- Rapid Repair Kit
- Preventive maintenance
- Spare part management
- Global service
- Service hotline

DO NOT LOSE A SECOND. Speed is the order of the day when unexpected breakdowns occur. Our service center ensures immediate assistance around the world. We ensure your machine has as little downtime as possible. SERVICE QUALITY. We guarantee top service quality reflecting our expertise as a manufacturer. FORESIGHT. We go one step further: Preventive maintenance, customized Rapid Repair Kits and our spare part management service ensure you have the best setup to face any emergency. We look to the future to keep you at your peak.

# PICTOGRAMS & ABBREVIATIONS

## OVERVIEW

### UNIT SPECIFICATIONS

#### Type of machining



**Drilling**  
The unit is suitable for boring machining



**Milling**  
The unit is suitable for milling machining



**Threading**  
The unit is suitable for thread machining



**Broaching and slotting**  
The unit is suitable for machining by broaching and slotting

#### Number of output spindles (tool holding fixtures)



**1**  
The unit has one output spindle



**2**  
The unit has two output spindles

#### Axis angle



**0°**  
Unit for machining tasks at a 0° angle



**90°**  
Unit for machining tasks at a 90° angle



**± 0**  
Unit for machining tasks at an adjustable angle  
0° ± max. α°

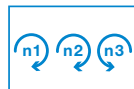
#### Drive for spindle Direction of rotation



**clockwise / clockwise**  
synchronized rotation



**clockwise / counterclockwise**  
counter-rotation



**clockwise / clockwise / counterclockwise**  
synchronized and counterrotation

#### Coolant feed for cutting blade



**Extern (EC)**  
The tool is cooled using an external feed line (spray nozzle)



**Combination (EC+IC)**  
The tool is cooled by a combination of both internal and external systems

### ABBREVIATIONS

$M_{max}$

Maximum torque

$i$

Gear ratio

$n_{max}$

Maximum speed

$p_{max}$

Maximum pressure (bar)

EC

External cooling

IC

Internal cooling

p.

Page

✓

Possible

-

Not possible

SW

Width across flats

mm

Millimeter

## Usage note – general

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