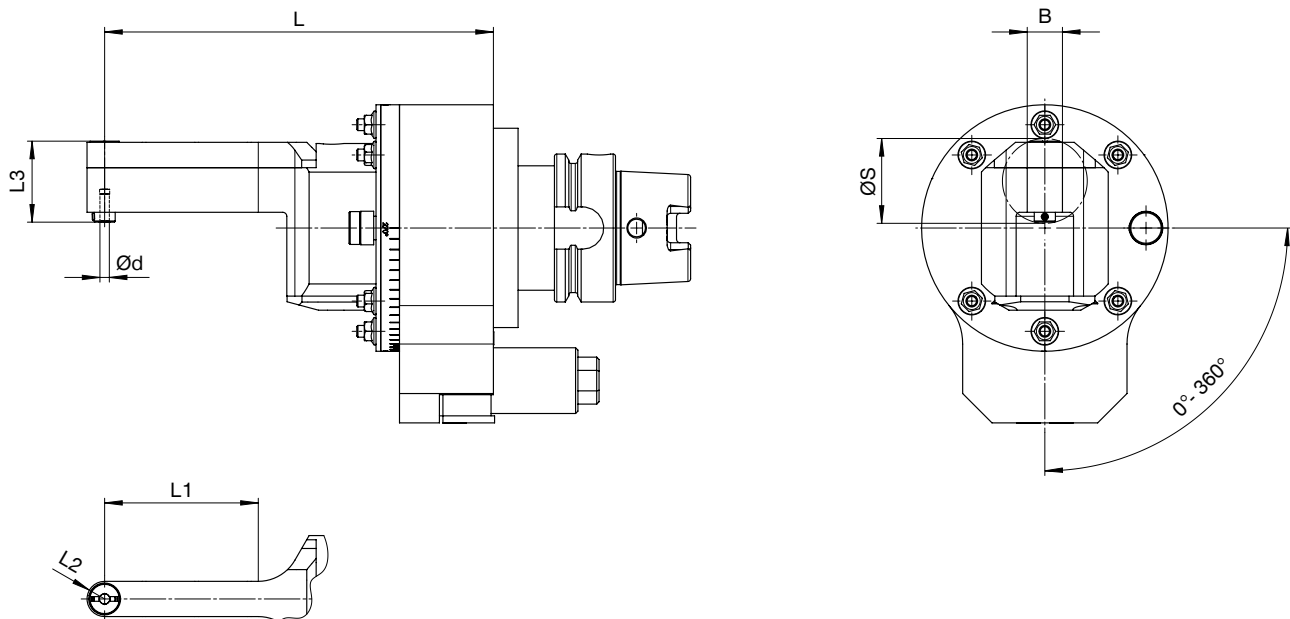


► EXTREMELY NARROW DESIGN

► Angle head without IC



Size 04 / L2=7,5

M_{max}	= 3 Nm
i	= 1:2,07
n_{max}	= 8,000 min ⁻¹
p_{max}	= 50 bar

► Technical data

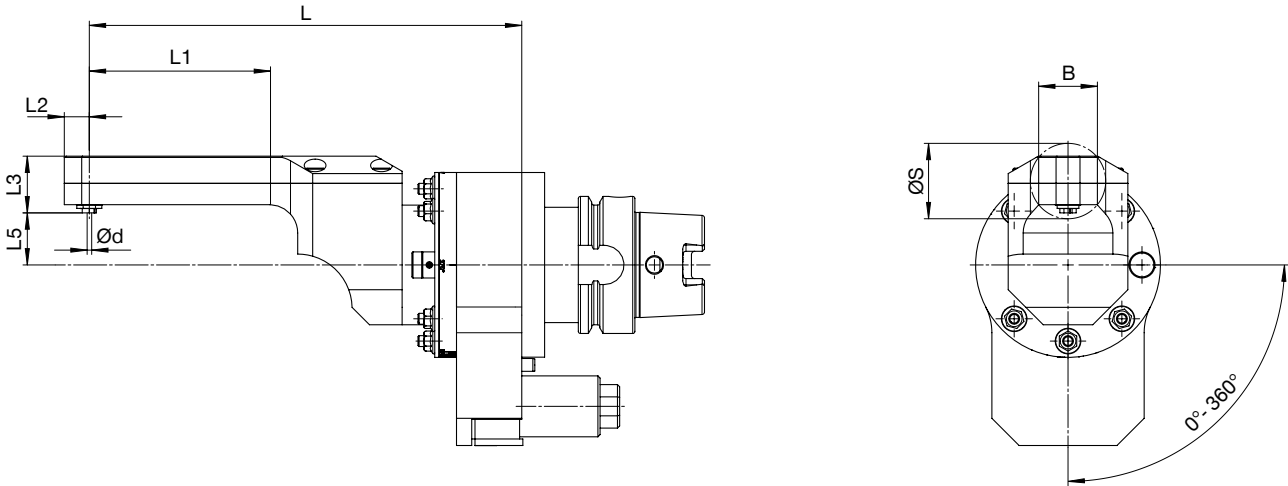
L1 [mm]	L2 [mm]	L3 [mm]	Ød [mm]	B [mm]	ØS [mm]	L [mm]	EC	IC	kg
66	7.5	35	4 DIN 1835E	15	37	166	-	-	5.4

ANGLE HEAD

SLIM WGX-S

► EXTREMELY NARROW DESIGN

► Angle head without IC



Size 04 / L2=11,5

M _{max}	= 8 Nm
i	= 1:1,708
n _{max}	= 10,000 min ⁻¹
p _{max}	= 50 bar

► Technical data

L1 [mm]	L2 [mm]	L3 [mm]	L5 [mm]	B [mm]	Ød [mm]	ØS [mm]	L [mm]	EK*	IK	kg
38.5							154	- / ✓		3.7
83.5	11.5	32	20	27	Nann collet chuck 6043E	37	199	- / ✓	-	3.8
128							244	- / ✓		3.9

Size 04 / L2=14

M _{max}	= 10 Nm
i	= 1:1,367
n _{max}	= 8,000 min ⁻¹
p _{max}	= 50 bar

► Technical data

L1 [mm]	L2 [mm]	L3 [mm]	L5 [mm]	B [mm]	Ød [mm]	ØS [mm]	L [mm]	EK*	IK	kg
43							158	- / ✓		3.8
89	14	38	14	30	Nann collet chuck 603E	42	205	- / ✓	-	4
135							251	- / ✓		4.2



*Optional: EC via spray nozzle

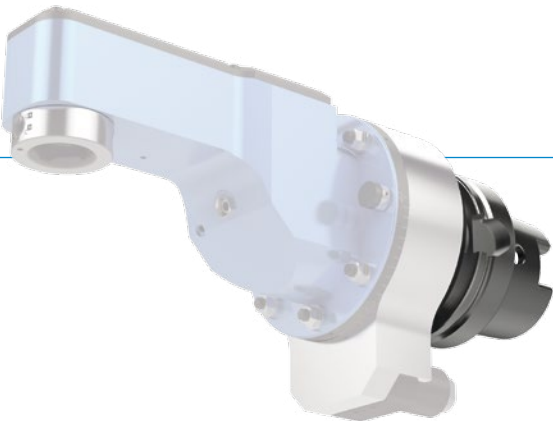


**BENZ ANGLE HEADS ARE DESIGNED FOR
DEMANDING MACHINING WORK**

ANGLE HEAD

SLIM WGX

▶ DRIVE CONE



Technical data for other machine interfaces on request.

Type: **Steep taper**



	▶ Size			
SK DIN 69871	04	05	07	15
SK 40	✓	✓	✓	-
SK 50	✓	✓	✓	✓



	▶ Size			
MAS BT	04	05	07	15
BT 40	✓	✓	✓	-
BT 50	✓	✓	✓	✓



	▶ Size			
CAT	04	05	07	15
CAT 40	✓	✓	✓	-
CAT 50	✓	✓	✓	✓

Type: Hollow shank taper



HSK DIN 69893

	Size			
	04	05	07	15
HSK 40	✓	-	-	-
HSK 50	✓	✓	-	-
HSK 63	✓	✓	✓	-
HSK 80	✓	✓	✓	✓
HSK 100	✓	✓	✓	✓



Coromant Capto®

	Size			
	04	05	07	15
C3	✓	-	-	-
C4	✓	✓	-	-
C5	✓	✓	✓	✓
C6	✓	✓	✓	✓
C8	✓	✓	✓	✓



Kennametal™

	Size			
	04	05	07	15
KM 40	✓	-	-	-
KM 50	✓	✓	-	-
KM 63	✓	✓	✓	-
KM 80	✓	✓	✓	✓
KM 100	✓	✓	✓	✓

ANGLE HEAD

FIX WFX

► MODULAR DESIGN



► ANGLE HEAD BODY (SIZE)

05

07

15

20

► OUTPUT SPINDLE / CLAMPING SYSTEM



BENZ
Solidfix®



BENZ
CAPTO™



Collet chuck



HSK



Milling arbor



Weldon



Whistle
Notch



KM™

► DRIVE CONE



SK
DIN 69871



MAS BT



CAT



HSK
DIN 69893



Coromant
Capto®



KM™

► Specifications

Change the
angle head



Machining



Number of
output spindles



Axis angle



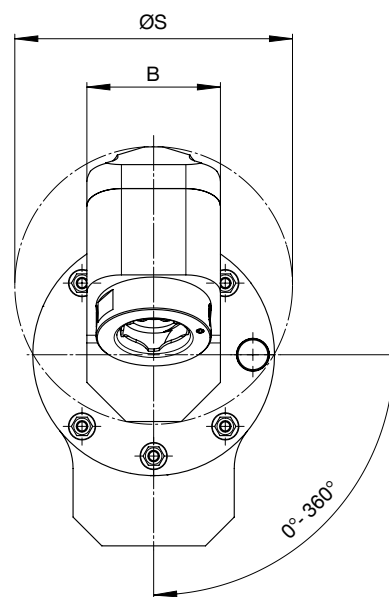
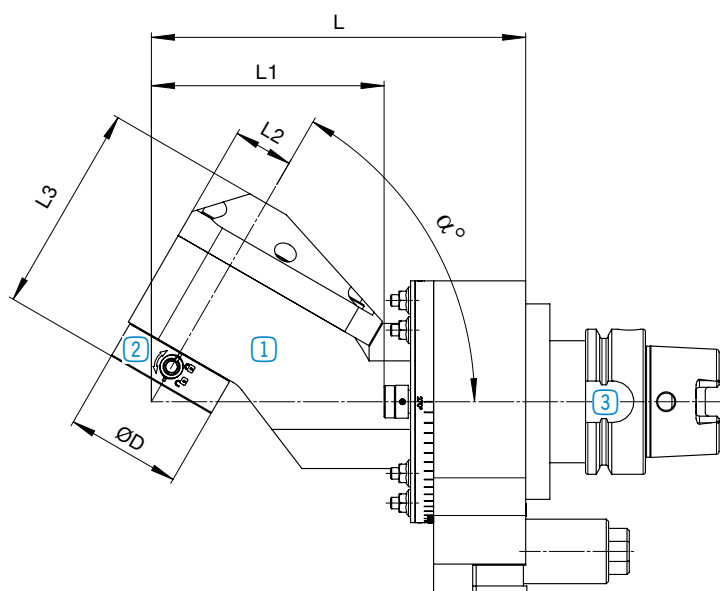
Coolant feed for cutting
edge



FIX WFX



► Angle head with IC



1 Angle head body
P. 54



2 Output spindle /
clamping system
P. 56



3 Drive cone
P. 58



Other dimensions for angle heads with BENZ CAPTO™ output spindle. Dimensions available on request.

ANGLE HEAD

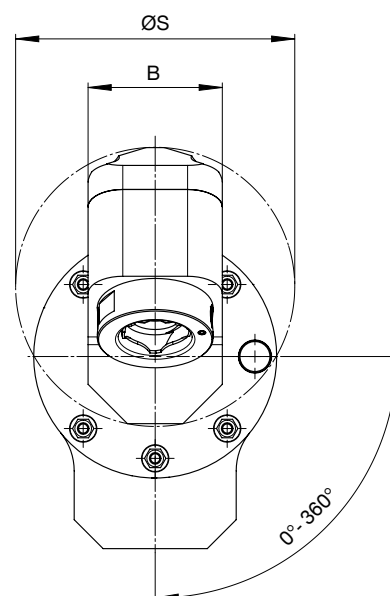
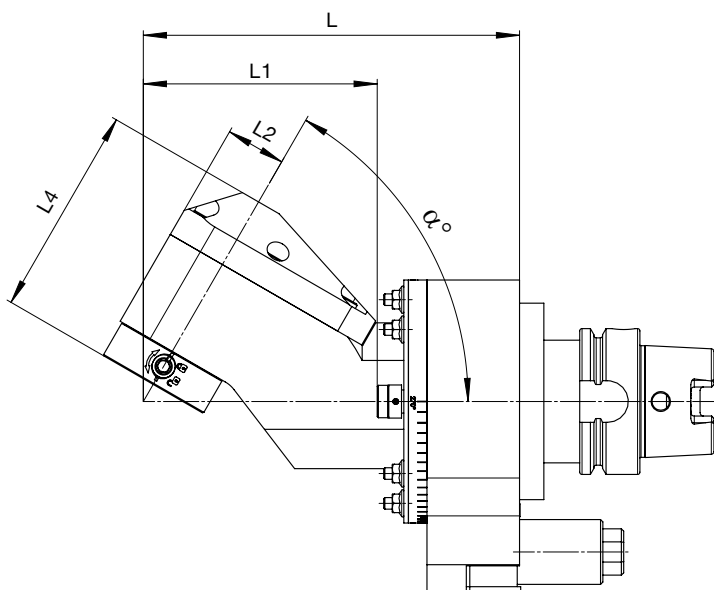
FIX WFX


► ANGLE HEAD BODY (SIZE)





More sizes on request.
Higher speeds are possible as an option.


► Angle head with IC



		► Technical data									
Size 05		α [°]	L1 [mm]	L2 [mm]	L4* [mm]	B [mm]	ØS [mm]	L** [mm]	EC	IC	
M _{max}	= 30 Nm	0-120°	138	26	91	54	approx. 108	approx. 200	-	✓	4
i	= 1:1										
n _{max}	= 8,000 min ⁻¹										
p _{max}	= 100 bar										

Size 07		► Technical data									
		α [°]	L1 [mm]	L2 [mm]	L4* [mm]	B [mm]	ØS [mm]	L** [mm]	EC	IC	
M _{max}	= 70 Nm	0-120°	163	35	108	80	approx. 141	approx. 225	-	✓	9.5
i	= 1:1										
n _{max}	= 6,000 min ⁻¹										
p _{max}	= 100 bar										

Size 15		► Technical data									
		α [°]	L1 [mm]	L2 [mm]	L4* [mm]	B [mm]	ØS [mm]	L** [mm]	EC	IC	
M _{max}	= 150 Nm	0-120°	165	40	125	92	approx. 170	approx. 235	-	✓	13
i	= 1:1										
n _{max}	= 4,000 min ⁻¹										
p _{max}	= 100 bar										

Size 20		► Technical data									
		α [°]	L1 [mm]	L2 [mm]	L4* [mm]	B [mm]	ØS [mm]	L** [mm]	EC	IC	
M _{max}	= 230 Nm	0-120°	180	40	125	100	approx. 182	approx. 250	-	✓	16
i	= 1:1										
n _{max}	= 3,000 min ⁻¹										
p _{max}	= 100 bar										

*Value refers to an angle head with BENZ Solidfix® output spindle

**depending on angle α

ANGLE HEAD

FIX WFX

▶ OUTPUT SPINDLE / CLAMPING SYSTEM



i Technical data for other output spindles / clamping systems on request:



Weldon

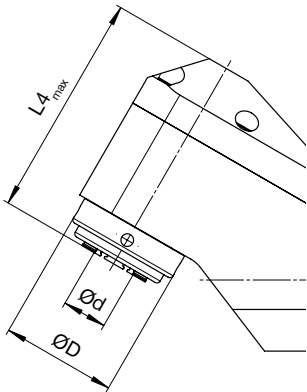


Whistle
Notch



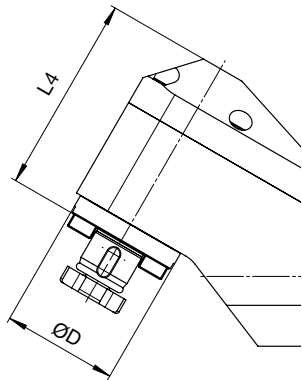
KM™

i We show you **preferable sizes** in the following tables. Smaller output spindles are possible at any time as an option.



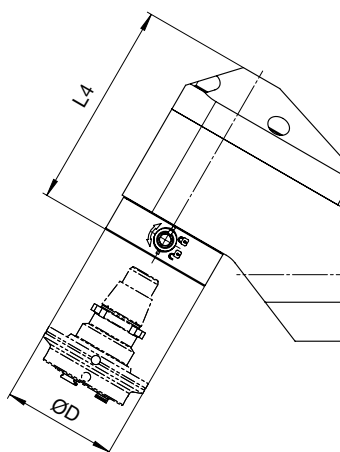
▶ Technical data

Collet chuck	Size	L4 _{max} [mm]	ØD [mm]	Ød _{max} [mm]
ER25A	05	91	47	16
ER32A	07	106	55	20
ER40A	15	125	70	30



▶ Technical data

Milling arbor	Size	L4 [mm]	ØD [mm]	Ød [mm]
22	05	83	48	22
27	07	98	60	27
32	15	122	75	32
40	15	125	90	40

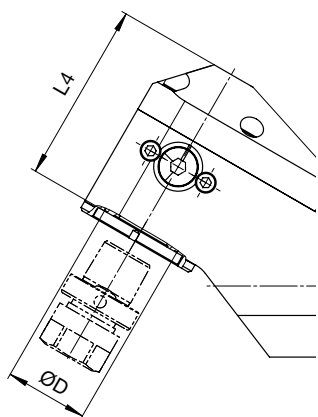


i For adapters and dimensions, see catalogue
BENZ Modular Tool Systems



► **Technical data**

BENZ Solidfix®	Size	L4 [mm]	ØD [mm]
S3	05	91	50
S4	07	108	63
S5	15	125	75

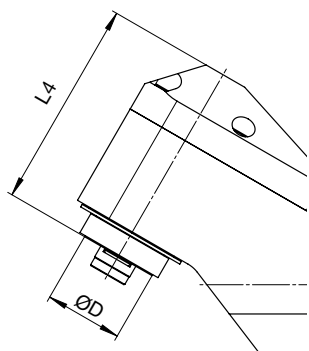


i For adapters and dimensions, see catalogue
BENZ Modular Tool Systems



► **Technical data**

BENZ CAPTO™	Size	L4 [mm]	ØD [mm]
C3	05	100	32
C4	07	108	40
C5	15	129	50
C6	20	135	63



► **Technical data**

HSK	Size	L4 [mm]	ØD [mm]
HSK 32	05	85	32
HSK 40	07	101	40
HSK 50	15	124	50
HSK 63	15	131	63

ANGLE HEAD

FIX WFX

▶ DRIVE CONE



Technical data for other machine interfaces on request.

Type: **Steep taper**



	▶ Size		
SK DIN 69871	05	07	15
SK 40	✓	✓	-
SK 50	✓	✓	✓



	▶ Size		
MAS BT	05	07	15
BT 40	✓	✓	-
BT 50	✓	✓	✓



	▶ Size		
CAT	05	07	15
CAT 40	✓	✓	-
CAT 50	✓	✓	✓

Type: Hollow shank taper



HSK DIN 69893	Size		
	05	07	15
HSK 40	-	-	-
HSK 50	✓	-	-
HSK 63	✓	✓	-
HSK 80	✓	✓	✓
HSK 100	✓	✓	✓



Coromant Capto®	Size		
	05	07	15
C3	-	-	-
C4	✓	-	-
C5	✓	✓	✓
C6	✓	✓	✓
C8	✓	✓	✓

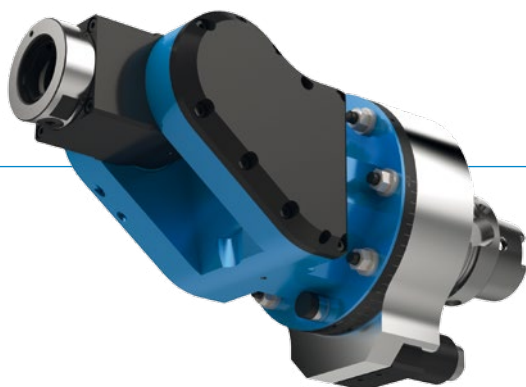


Kennametal™	Size		
	05	07	15
KM 40	-	-	-
KM 50	✓	-	-
KM 63	✓	✓	-
KM 80	✓	✓	✓
KM 100	✓	✓	✓

ANGLE HEAD

FLEX WDX

► MODULAR DESIGN



► ANGLE HEAD BODY (SIZE)

05

07

15

► OUTPUT SPINDLE / CLAMPING SYSTEM



BENZ
Solidfix®



Collet chuck



HSK



Weldon



Whistle
Notch



KM™

► DRIVE CONE



SK
DIN 69871



MAS BT



CAT



HSK
DIN 69893



Coromant
Capto®



KM™

► Specifications

Change the
angle head



Machining



Number of
output spindles



Axis angle



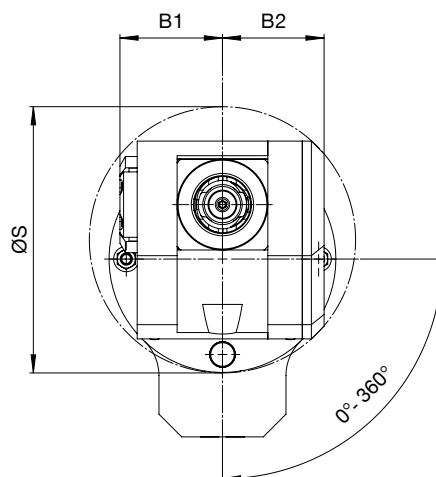
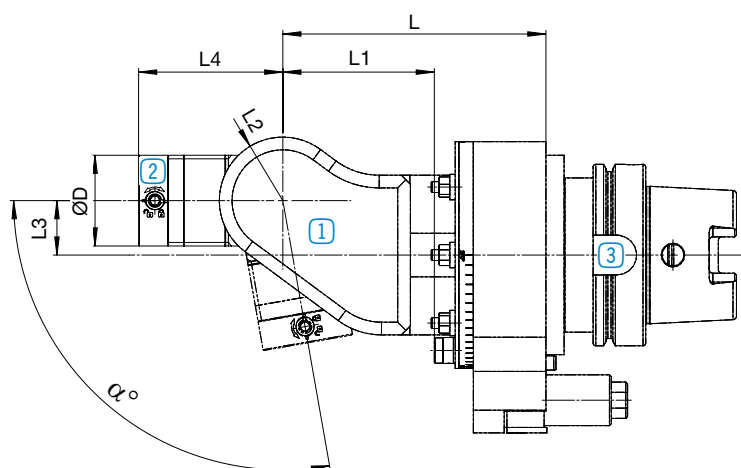
Coolant feed for cutting
edge



FLEX WDX



► Angle head with IC



1 Angle head body
P. 62



2 Output spindle /
clamping system
P. 64

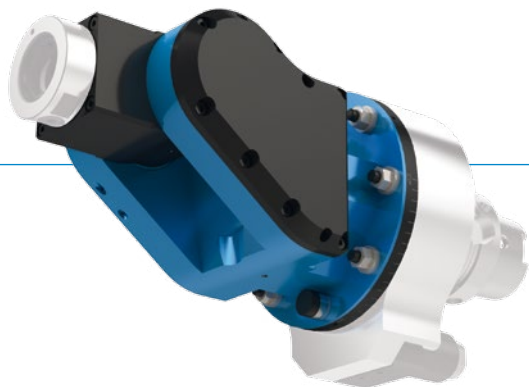


3 Drive cone
P. 66

ANGLE HEAD

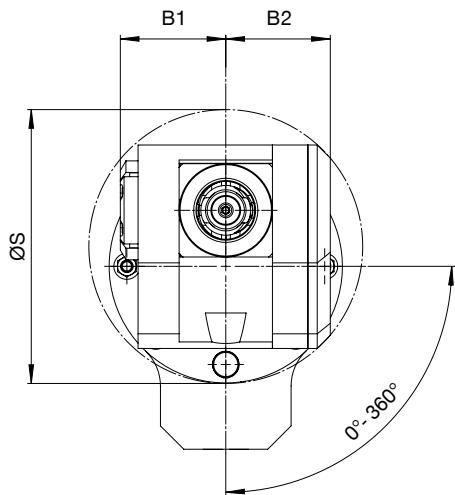
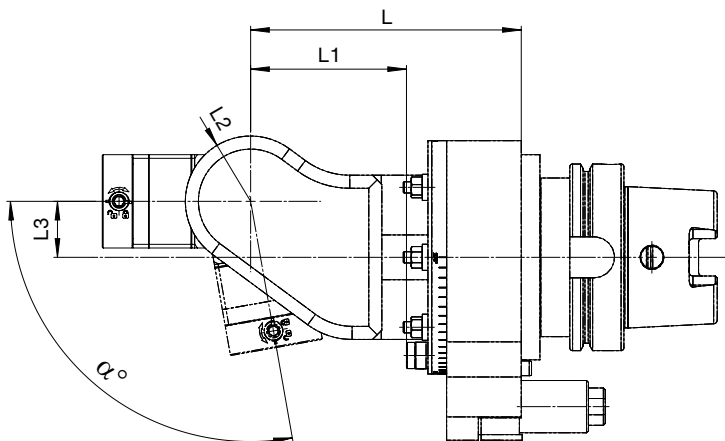
FLEX WDX

► ANGLE HEAD BODY (SIZE)



More sizes on request.
Higher speeds are possible as an option.


► Angle head with IC



Size 05

M_{max}	= 15 Nm
i	= 1:1
n_{max}	= 8,000 min ⁻¹
p_{max}	= 100 bar


► Technical data

α [°]	L1 [mm]	L2 [mm]	L3 [mm]	B1 [mm]	B2 [mm]	ØS [mm]	L [mm]	EC	IC	 kg
0-90°	72.5	35	25	49.5	49.5	127	134	-	✓	7

Size 07

M_{max}	= 35 Nm
i	= 1:1
n_{max}	= 6,000 min ⁻¹
p_{max}	= 100 bar


► Technical data

α [°]	L1 [mm]	L2 [mm]	L3 [mm]	B1 [mm]	B2 [mm]	ØS [mm]	L [mm]	EC	IC	 kg
0-100°	83.5	35	30	56.5	56	147	145	-	✓	10

Size 15

M_{max}	= 70 Nm
i	= 1:1
n_{max}	= 4,000 min ⁻¹
p_{max}	= 100 bar

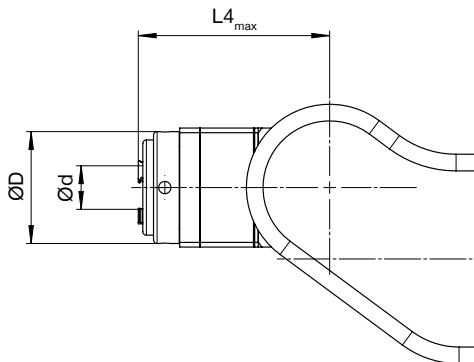
► Technical data

α [°]	L1 [mm]	L2 [mm]	L3 [mm]	B1 [mm]	B2 [mm]	ØS [mm]	L [mm]	EC	IC	 kg
0-90°	136.5	50	35	64.5	67	178	205	-	✓	18

ANGLE HEAD

FLEX WDX

▶ OUTPUT SPINDLE / CLAMPING SYSTEM



Technical data for other toutput spindles / clamping systems on request:



Weldon



Whistle
Notch



KM™

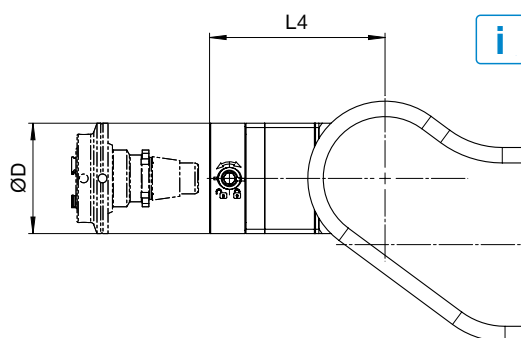


We show you **preferable sizes** in the following tables. Smaller output spindles are possible at any time as an option.



▶ Technical data

Collet chuck	Size	L4 _{max} [mm]	ØD [mm]	Ød _{max} [mm]
ER20A	05	80	44	16
ER25A	07	85	47	20
ER32A	15	106	55	30

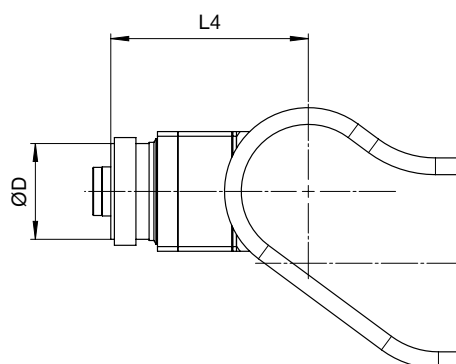


i For adapters and dimensions, see catalogue
BENZ Modular Tool Systems



► **Technical data**

BENZ Solidfix®	Size	L4 [mm]	ØD [mm]
S2	05	75	50
S3	07	80	63
S4	15	102	75



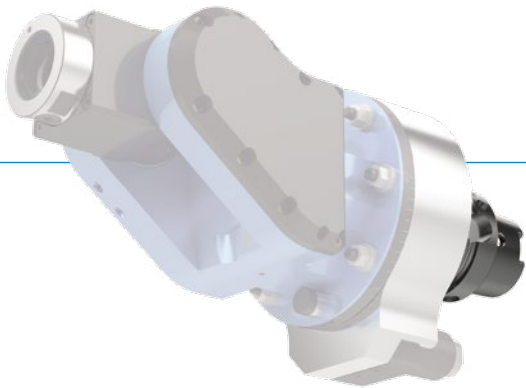
► **Technical data**

HSK	Size	L4 [mm]	ØD [mm]
HSK 32	05	74	32
HSK 40	07	84	40
HSK 50	15	103	50

ANGLE HEAD

FLEX WDX

► DRIVE CONE



Technical data for other machine interfaces on request.

Type: Steep taper



	► Size		
SK DIN 69871	05	07	15
SK 40	✓	✓	-
SK 50	✓	✓	✓



	► Size		
MAS BT	05	07	15
BT 40	✓	✓	-
BT 50	✓	✓	✓



	► Size		
CAT	05	07	15
CAT 40	✓	✓	-
CAT 50	✓	✓	✓

Type: Hollow shank taper



HSK DIN 69893	Size		
	05	07	15
HSK 40	-	-	-
HSK 50	✓	-	-
HSK 63	✓	✓	-
HSK 80	✓	✓	✓
HSK 100	✓	✓	✓



Coromant Capto®	Size		
	05	07	15
C3	-	-	-
C4	✓	-	-
C5	✓	✓	✓
C6	✓	✓	✓
C8	✓	✓	✓

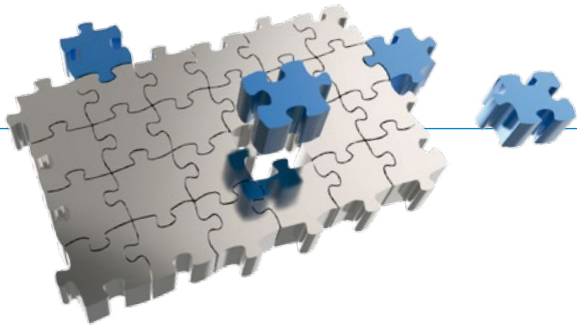


Kennametal™	Size		
	05	07	15
KM 40	-	-	-
KM 50	✓	-	-
KM 63	✓	✓	-
KM 80	✓	✓	✓
KM 100	✓	✓	✓

ANGLE HEADS

CUSTOMISED SPECIAL SOLUTIONS

► YOUR CUSTOM ANGLE HEAD



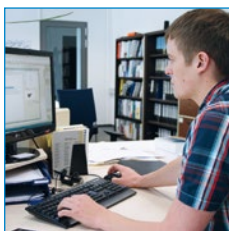
We love the challenge and the exceptional!

- Do you need an angle head that does not match any standard parameters? No problem! We develop and produce your angle head made to measure exactly according to your specifications. Small adaptations to standard products and highly complex new developments are our strength - prompt, affordable and with the usual BENZ quality thanks to our modular kits. Extreme conditions anywhere in the world: our tried and tested components and systems provide you with limitless possibilities.

FROM THE CUSTOMER REQUIREMENT TO THE INDIVIDUAL SOLUTION



- 1 We define the best possible solution and develop an appropriate concept based on your requirements.



- 2 Your contact partner for construction starts implementation after coordinating the solution proposal.



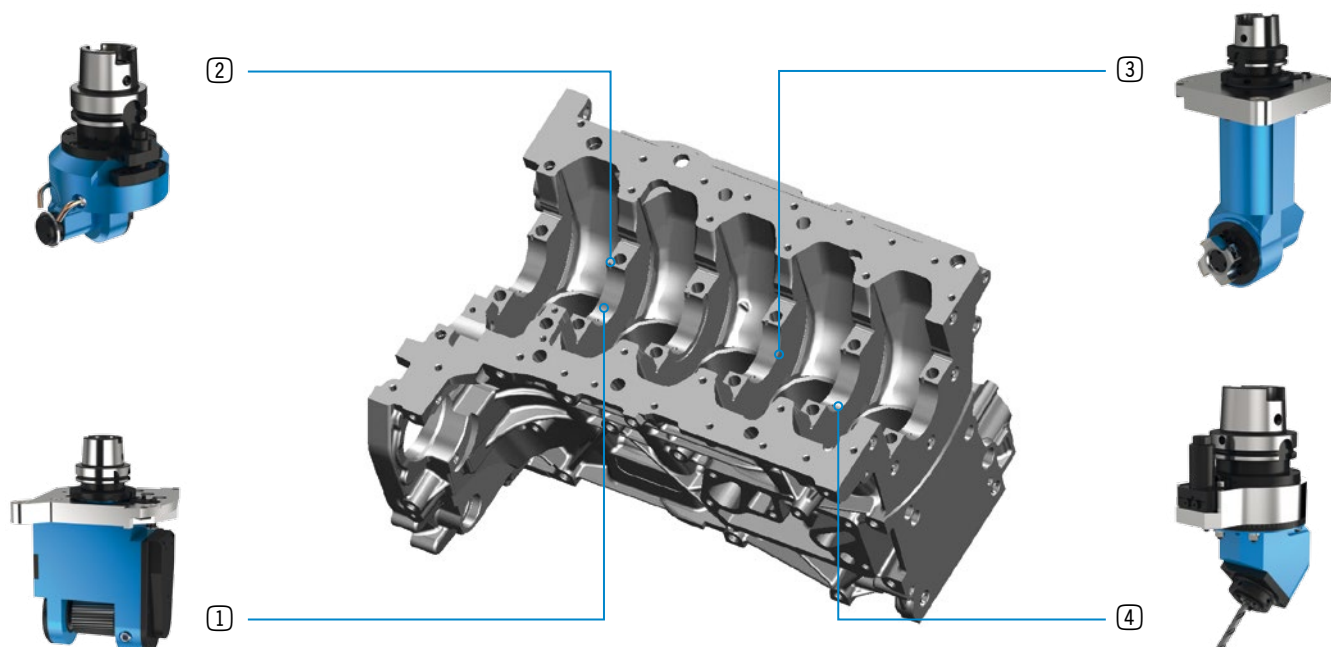
- 3 Your angle head is a high quality piece of work and is produced and assembled at the BENZ factory by experienced employees.



- 4 Your angle head is subjected to various performance tests before it leaves our factory.



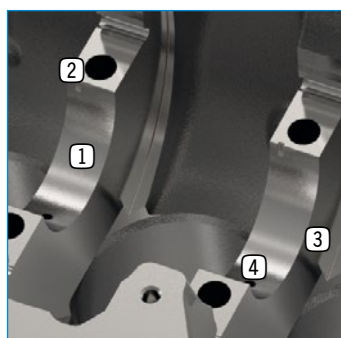
► AUTOMOTIVE EXAMPLE



Engine block machining in the automobile industry



Workpiece in detail



► Automobile industry

1

2

3

4



Bearing shell



Retaining slot

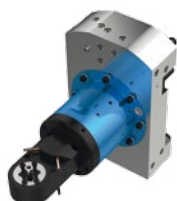


Side plate



Oil hole

More special solutions:



Milling operation for servo housing



Milling operation at rear side of a disc brake



Engine block machining

ANGLE HEADS

CUSTOMISED SPECIAL SOLUTIONS

3 Customised special solutions / Angle heads

▶ AEROSPACE EXAMPLES



Engine machining in the aerospace industry

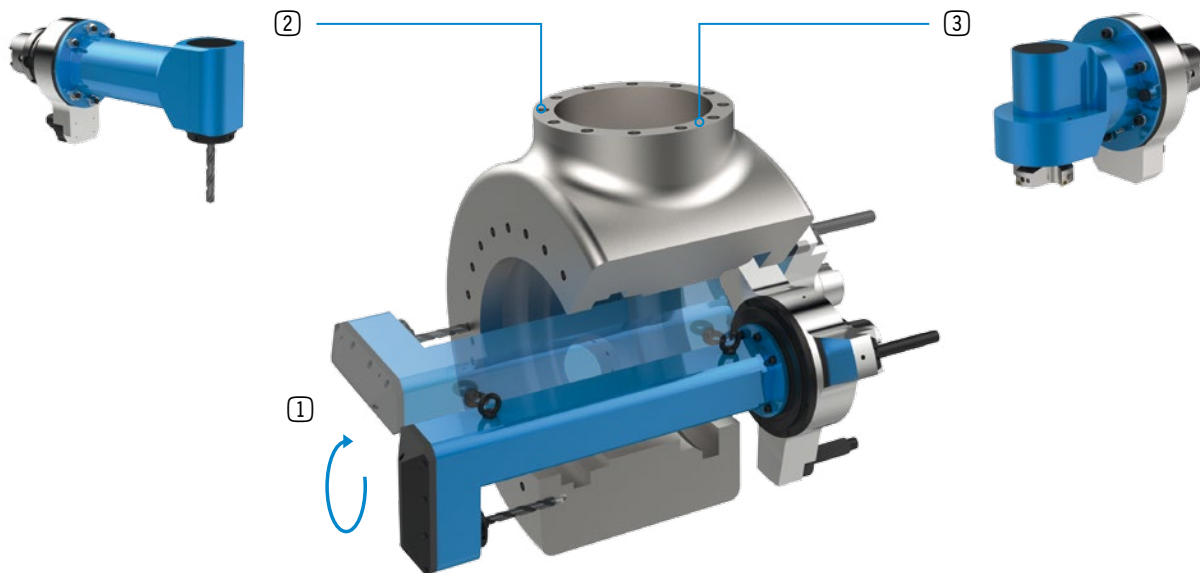


▶ Aerospace		
1	2	3
Flange hole	Connection hole	Internal hole

More special solutions:



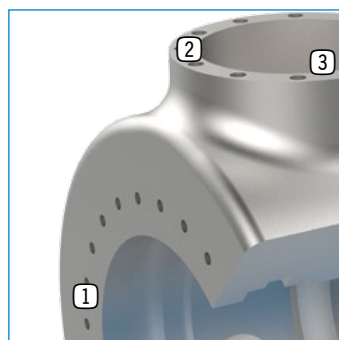
► WIND POWER EXAMPLES



Rotor hub machining in the wind power industry



Workpiece in detail



► Wind power

1

2

3



Core hole



Thread



Flange surface

More special solutions:



Cross holes with large immersion depth

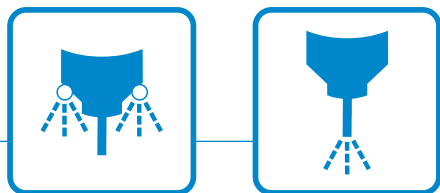


Milling operations on vertical boring and turning machines

ANGLE HEADS

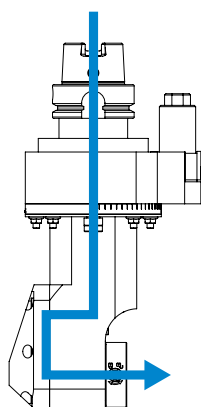
EQUIPMENT VERSIONS

► COOLANT FEED FOR CUTTING EDGE

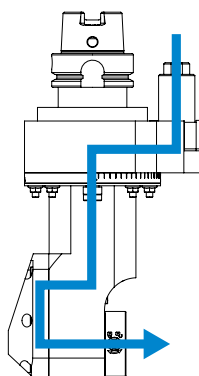


- **Cooling of the tool**
for demanding machining work
- **Various options**
internal cooling, external cooling or a combination of both
- **Cooling lubricant options**
Water, oil, MQL and a

Internal (IC)



via the spindle



via the stop block

Types of cooling (coolants)



Water cooling



Oil cooling

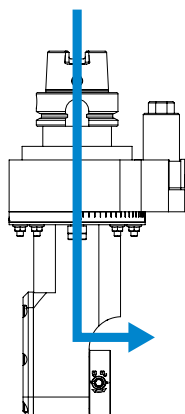


MQL

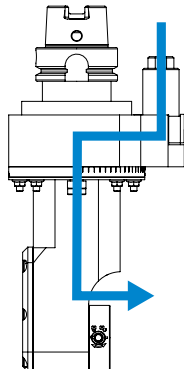


Air cooling

External (EC)



via the spindle



via the stop block

► ADDITIONAL SUPPORT



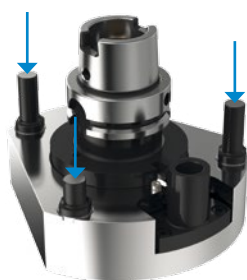
- **Increased rigidity**
between angle head and machine spindle
- **Optimum power transmission**
from the machine spindle onto the tool
- **Improved workpiece quality / service life of the angle head**
due to reduced vibrations

i The need for an additional support depends on the respective machining case. Please contact us. We will be happy to advise you.

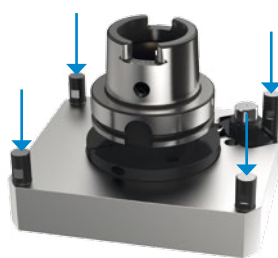
Versions



Torque support



Torque support
with 3-point support



Torque support
with 4-point support

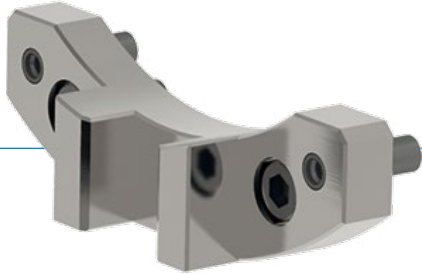


Mechanical/hydraulic
additional support

ANGLE HEADS

EQUIPMENT VERSIONS

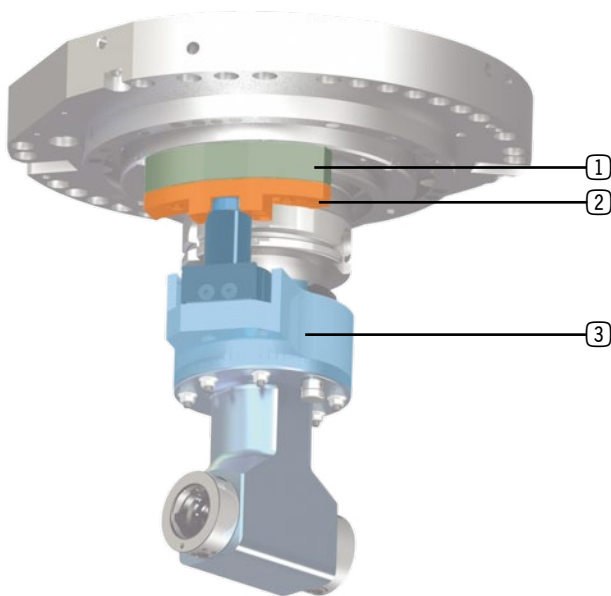
► LOCK AND UNLOCK BLOCK: STOP BLOCK



- **Positioning the angle head**
at the machine spindle
- **Fixing the angle head**
against possible turning
- **Guarantees a high level of repeat accuracy**
during automatic change of the angle head
- **ISO 9524 standardised design**

i BENZ stop blocks can be adjusted to the machine by the user. In this case, the hole pattern is provided by the user. For this purpose, please observe our latest angle head operating instructions.

We will be happy to help you with the adjustment of the stop block. Please contact us.



- ① Spacer block**
 - Regulates the distance between stop block and machine
 - Matched to the specific machine
- ② Stop block**
 - Locks or unlocks the angle head at the machine spindle
 - The slot at the stop block holds the locking bolt of the torque support
- ③ Torque support**
 - Increases the rigidity between angle head and machine spindle
 - As a rule matched to the specific machine
 - Alternative: BENZ standard torque support

Matching



► Stop block / torque support

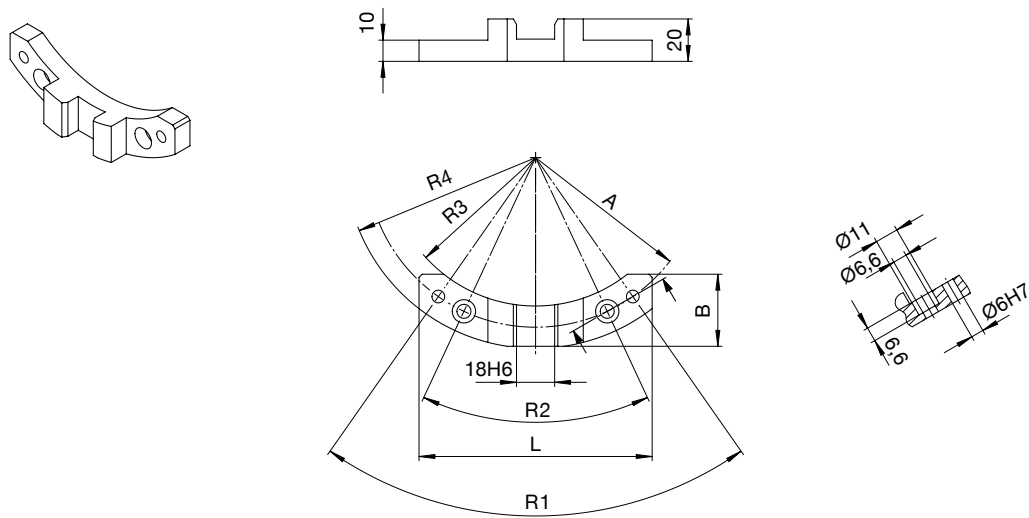
The torque support of the angle head and the stop block at the machining centre must be matched to each other



► Stop block / spacer block

The spacer block must be attached to the machine and adjusted by the customer to set the stop block.

► Standard stop blocks

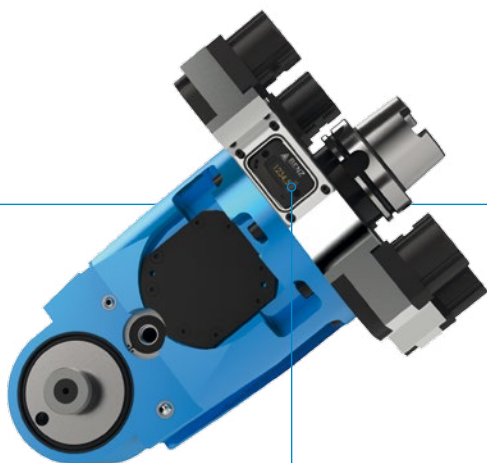


Order No.	► Technical data						
	A [mm]	R1 [°]	R2 [°]	R3 [°]	R4 [°]	L [mm]	B [mm]
K00600-055/075	65	70	50	R55	R75	90	28
K00600-070/090	80	70	50	R70	R90	110	34
K00600-100/120	110	60	40	R100	R120	130	31

ANGLE HEADS

EQUIPMENT VERSIONS

▶ OPERATING HOURS COUNTER



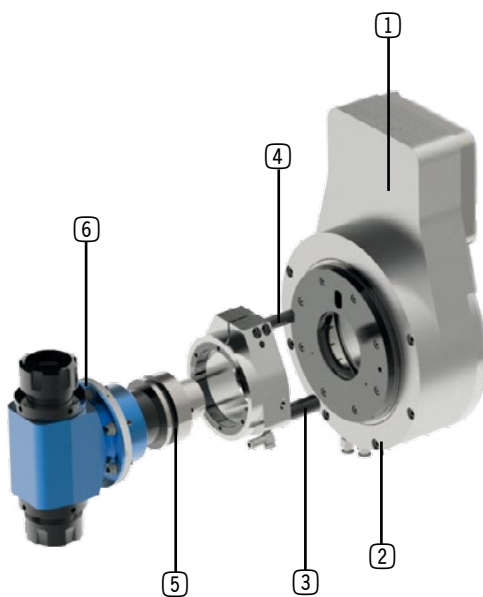
- ▶ **Simple and fast monitoring of the operating times**
via digital display (this is integrated directly in the housing of the angle head)
The counter is activated when the spindle of the angle head starts to turn
- ▶ **Efficient and preventative maintenance**
by determining the optimum time for maintenance
- ▶ **Prevention of any faults in the production sequence**
by reducing the risk of failure of the unit to a minimum



► C-AXIS FUNCTIONALITY

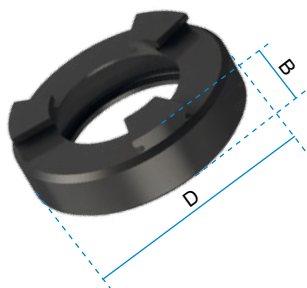


- **NC angle positioning of exchangeable units**
by extending the available machine basic axes (XYZ) by a 4th axis (C-axis)
- **Control of the exchangeable units**
using 3 independent controllable compressed air interfaces



- ① **C-axis**
- For swivelling the angle head
- ② **Plane surface of support bolt**
- The support bolt of the torque support lies on this surface
- ③ **Support bolt**
- ④ **Locking pin of the torque support**
- Locks the torque support at the C-axis
- ⑤ **Drive cone**
- adapted to the specific machine
- ⑥ **Angle head can be rotated 360°**
- Different types and sizes of design available for delivery according to application

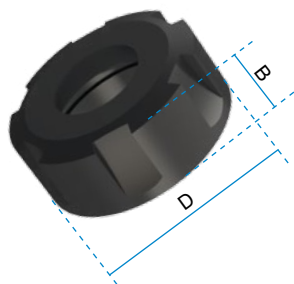
ANGLE HEADS ACCESSORIES



Clamping nut: **internal**

► Technical data

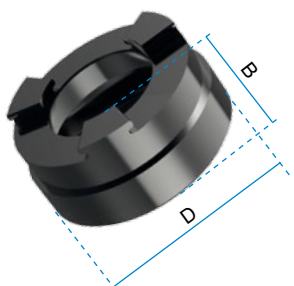
Order No.	ER	D	B
B135-E1AX	11	M18x1	7.5
B135-E3AX	16	M24x1	7.6
B135-E4AX	20	M28x1.5	8.5
B135-E5AX	25	M32x1.5	8.8
B135-E6AX	32	M40x1.5	9.8
B135-E7AX	40	M50x1.5	11.7



Clamping nuts: **Shape D+E**

► Technical data

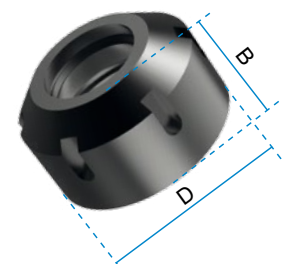
Order No.	ER	D	B
B135-E1	11	19	11
B135-E3	16	28	17
B135-E4	20	34	19
B135-E5	25	42	20
B135-E6	32	50	22
B135-E7	40	63	25
B135-E8	50	78	35



Clamping nut for internally cooled tools: **Internal Regifix system**

► Technical data

Order No.	ER	D	B
B135-E3AXC	16	M18x1	12.5
B135-E4AXC	20	M24x1	13.5
B135-E5AXC	25	M28x1.5	13.8
B135-E6AXC	32	M32x1.5	14.9
B135-E7AXC	40	M40x1.5	16.6



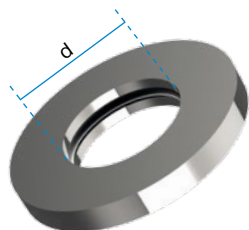
Clamping nut for internally cooled tools: **External Regifix system**

► Technical data

Order No.	ER	D	B
on request	11		
B135-H3A	16	28	22.5
B135-H4A	20	34	24
B135-H5A	25	42	25
B135-H6A	32	50	27.5
B135-H7A	40	63	30.5

A sealing disc is required when using angle heads with internal cooling.

Sealing discs



► Technical data

Order No.	ER	d
B137-E3-...	16	1-10
B137-E4-...	20	1-13
B137-E5-...	25	2-16
B137-E6-...	32	2-20
B137-E7-...	40	4-26

Sealing area up to 0.5 mm smaller than nominal dimension d can be used

Order No.		
ER 16	B137-E3-	<input type="checkbox"/>
d=6	0600	

Collet chuck: Regofix shape B



► Technical data

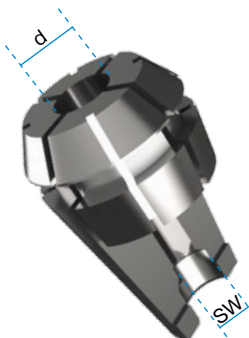
Order No.	ER	d	increasing by
B134-424E-...	11	1-7 ¹	0.5
B134-426E-...	16	1-10 ¹	0.5
B134-428E-...	20	1-13 ²	1
B134-430E-...	25	1-16 ²	1
B134-470E-...	32	3-20 ²	1
B134-472E-...	40	4-26 ²	1

¹ Collet chuck can clamp up to 0.5 mm smaller than nominal dimension

² Collet chuck can clamp up to 1 mm smaller than nominal dimension

Order No.		
ER 16	B134-426E-	<input type="checkbox"/>
d=6	0600	

Collet chuck for screw tap: Regofix with internal square drive



► Technical data

Order No.	ER	d	Wrench size (SW)
B134-E3...	16	1-10	4.5-9
B134-E4...	20	1-13	4.5-11
B134-E5...	25	1-16	4.5-16
B134-E6...	32	3-20	4.5-20
B134-E7...	40	4-26	7-22

Order No.		
ER 16	B134-E3-	<input type="checkbox"/>
d=6	0600	
SW=4.9		49

Collet chuck for screw tap: Regofix square drive incl. length compensation



► Technical data

Order No.	ER	d
B134-A2...	11	1-7
B134-A3...	16	1-10
B134-A4...	20	1-13
B134-A5...	25	1-16
B134-A6...	32	3-20
B134-A7...	40	4-26

Order No.		
ER 16	B134-A2-	<input type="checkbox"/>
d=6	0600	

ANGLE HEADS

ACCESSORIES



Clamping wrench: for external clamping nut

► Technical data	
Order No.	ER
B136-E1	11
B136-E3	16
B136-E4	20
B136-E5	25
B136-E6	32
B136-E7	40
B136-E8	50



Clamping wrench: for internal clamping nut

► Technical data	
Order No.	ER
B136-E1AX	11
B136-E3AX	16
B136-E4AX	20
B136-E5AX	25
B136-E6AX	32
B136-E7AX	40
B136-E8AX	50



Hook wrench

► Technical data	
Order No.	Ø
D01810B012014	12-14
D01810B016018	16-18
D01810B020022	20-22
D01810B025028	25-28
D01810B030032	30-32
D01810B034036	34-36
D01810B040042	40-42
D01810B045050	45-50
D01810B052055	52-55
D01810B058062	58-62
D01810B068075	68-75
D01810B080090	80-90
D01810B095100	95-100



**BENZ ANGLE HEADS ENABLE THE MACHINING
OF DIFFICULT TO ACCESS PARTS OF A WORK-
PIECE, E.G. IN INTERNAL MACHINING**

ANGLE HEADS SERVICE

► SERVICES: CUSTOMIZED, VALUE-RETAINING, COST-EFFECTIVE



► Service repair

Fast and professional analysis of damage
Findings and repair recommendations within 5 working days
on request: general maintenance or refurbishing



► ExpressService

Exceptionally fast and efficient turnaround
Repair at a fixed price
48-hour ExpressService available for select units



► Individual crash package

Keep machine downtime and lost profits to a minimum
Highly recommended for customer-specific solutions
Includes regular wear and tear as well as special parts



► Preventive maintenance

Prevention: Reduce unplanned downtime, increase unit operating times and unit life cycle
Maintain proper product performance / general maintenance or refurbishing
Replacement of wear parts during your planned downtime



► **Spare part management**

Immediate availability / delivery of original precision spare parts
 Comprehensive inventory of spare parts / High availability
 Spare parts express shipment as needed



► **Global service**

Service technicians visit you on site



► **Service Hotline**

Skilled service representatives answer your questions and provide additional support in the event of a problem
 Contact information: www.benz-tools.com

INQUIRY FORM










EXCHANGEABLE UNITS

Customer number	<input type="text"/>	Telephone number	<input type="text"/>
Company	<input type="text"/>	Fax number	<input type="text"/>
Contact Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>	<input type="text"/>	E-mail	<input type="text"/>
BENZ retailer (if known)	<input type="text"/>	Date	<input type="text"/>

Machine information/Tool data

Machine manufacturer	<input type="text"/>	Serial number	<input type="text"/>
Machine model	<input type="text"/>	Spindle input	<input type="text"/>
Are BENZ angle heads already in use on the machine?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Drawing number/ Unit number	<input type="text"/>		
Stop block present	<input type="checkbox"/> Yes ▶ Please send us the drawing of the spindle with the stop block	<input type="checkbox"/> Nein ▶ Please send us the machine adaptation drawing	
Additional support	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Tool change	<input type="checkbox"/> Manual	<input type="checkbox"/> Automatic ▶ max. <input type="text"/> kg	max. Ø <input type="text"/> mm

Design

Reference article No.	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> 						  		
Design	MONO WSX	DUO WZX	FORTE WWX	SLIM WGX	FIX WFX	FLEX WDX	MULTI	RAPIDO	BENZ LinS
Effective length	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Quantity	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Spindle form / Type	BENZ Solidfix[®]	BENZ CAPTO[™]	Collet chuck	Weldon	Whistle Notch	Milling arbor	KM[™]	Other
Size	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Coolant supply ☐ No ☐ Yes ▶ ☐ EC ☐ IC

Machining

Application Please specify the tool Ø	<input type="checkbox"/> Drilling	▶	Ø <input type="text"/>	Material	<input type="text"/>
	<input type="checkbox"/> Milling - Finishing	▶	Ø <input type="text"/>	Speed max.	<input type="text"/> rpm
	<input type="checkbox"/> Milling - Roughing	▶	Ø <input type="text"/>	Torque max.	<input type="text"/> Nm
	<input type="checkbox"/> Tapping	▶	Ø <input type="text"/>	Duty / Off time cycle	<input type="text"/> / <input type="text"/> min

Comments
e.g. requests for accessories, special processing details

☐ Drawing of workpiece enclosed

☐ 3D model enclosed

Desired delivery date

INQUIRY FORM

EXCHANGEABLE UNITS - SUPPLEMENT

i Please do only attach this form if you would like to order equipment versions or accessories.

Equipment versions

- | | | | | |
|--|---|----------------------------------|----------------------------------|---|
| <input type="checkbox"/> Additional support | ▶ | <input type="checkbox"/> 3-point | <input type="checkbox"/> 4-point | <input type="checkbox"/> Mechanical/hydraulic |
| <input type="checkbox"/> Stop block | ▶ | <input type="checkbox"/> A=65 | <input type="checkbox"/> A=80 | <input type="checkbox"/> A=110 |
| <input type="checkbox"/> Operating hours counter | | | | |
| <input type="checkbox"/> C-axis functionality | | | | |

Accessories

				Order No.
Collet chuck	<input type="checkbox"/> Regofix Form B	▶		qty
	<input type="checkbox"/> Regofix with internal square drive	▶		qty
	<input type="checkbox"/> Regofix with internal square drive incl. length compensation	▶		qty
Clamping nut	<input type="checkbox"/> Form D+E	▶		qty
	<input type="checkbox"/> for internally cooled tools / External Regofix system	▶		qty
	<input type="checkbox"/> internal	▶		qty
	<input type="checkbox"/> for internally cooled tools / Internal Regofix system	▶		qty
Sealing disc				
				qty
Wrench	<input type="checkbox"/> Clamping wrench: for external clamping nut	▶		qty
	<input type="checkbox"/> Clamping wrench: for internal clamping nut	▶		qty
	<input type="checkbox"/> Hook wrench	▶		qty

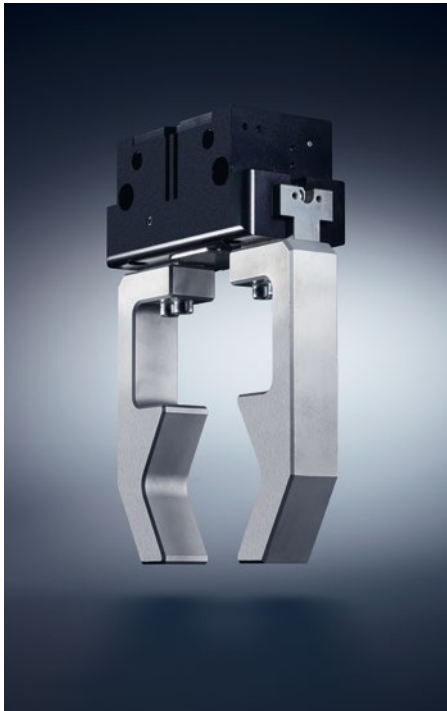
TECHNOLOGIES

ZIMMER GROUP

SOMMER **S**
automatic

ZIMMER

ZIMMER



HANDLING TECHNOLOGY

WITH MORE THAN 30 YEARS OF EXPERIENCE AND INDUSTRY KNOWLEDGE, OUR PNEUMATIC, HYDRAULIC AND ELECTRICAL HANDLING COMPONENTS AND SYSTEMS ARE GLOBAL LEADERS.

Components. More than 2000 standardized gripper systems, positioning systems, robotools and much more. We offer a complete selection of technologically superior products that are ready for rapid delivery.

Semistandard. Our modular approach to design enables custom configurations and high rates of innovation for process automation.

Systems. We are particularly strong in providing custom system solutions for handling technologies, robotics and vacuum engineering.

DAMPING TECHNOLOGY

INDUSTRIAL DAMPING TECHNOLOGY AND SOFT CLOSE PRODUCTS EXEMPLIFY THE INNOVATION AND PIONEERING SPIRIT OF THE KNOW-HOW FACTORY.

Industrial damping technology. Whether standard or customized solutions, our products stand for the highest cycle rates and maximum energy absorption with minimal space requirements.

Soft Close. Development and mass production of pneumatic and hydraulic dampers with extraordinary quality and rapid delivery.

OEM and direct. Whether they need components, returning mechanisms or complete production lines – we are the trusted partner of many prestigious customers.

LINEAR TECHNOLOGY

WE DEVELOP LINEAR COMPONENTS AND SYSTEMS THAT ARE INDIVIDUALLY ADAPTED TO OUR CUSTOMERS' NEEDS.

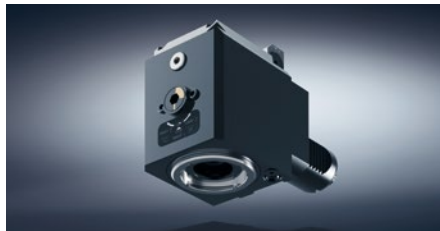
Clamping and braking elements. We offer you more than 4000 types for profiled and rounded rails as well as for a variety of guide systems from all manufacturers. It makes no difference whether you prefer a manual, automatic, electric or hydraulic drive.

Individualized systems. The unique functionality and precision of our clamping and breaking elements open up numerous possibilities for custom applications such as active or semi-active braking and damping.

ZIMMER

BENZ[®]
Werkzeugsysteme

BENZ[®]
Werkzeugsysteme



PROCESS TECHNOLOGY

MAXIMUM EFFICIENCY IS ESSENTIAL FOR SYSTEMS AND COMPONENTS USED IN PROCESS TECHNOLOGY. HIGH-LEVEL CUSTOM SOLUTIONS ARE OUR TRADEMARK.

A rich reservoir of experience. Our know-how ranges from the development of materials, processes and tools through product design to production of series products. Challenge us.

Deep production capabilities. The Zimmer Group pairs these capabilities with flexibility, quality and precision, even when making custom products.

Series production. We manufacture demanding products out of metal (MIM), elastomers and plastics with flexibility and speed.

TOOLING TECHNOLOGY

ZIMMER GROUP DEVELOPS INNOVATIVE WOOD, METAL AND COMPOSITE PROCESSING TOOL SYSTEMS FOR ALL INDUSTRIES. NUMEROUS CUSTOMERS CHOOSE US AS THEIR SYSTEMS AND INNOVATION PARTNER.

Knowledge and experience. Industry knowledge and a decades-long development partnership for exchangeable assemblies, tool interfaces and tool systems make us the ideal choice for new challenges around the world.

Components. We deliver numerous standard components from stock and develop innovative, customized systems for OEM and end customers – far beyond just the metal- and wood-processing industries.

Variety. Whether you have machining centers, lathes or flexible production cells, the power tools, holders, assemblies and drilling heads of Zimmer Group are ready for action.

MACHINE TOOLING TECHNOLOGY

AS A DRIVING FORCE IN OUR INDUSTRY, WE DELIVER HIGH-VALUE SOLUTIONS IN THE FIELD OF MECHANICAL ENGINEERING, FULLY ACCORDING TO THE NEEDS OF OUR CUSTOMERS.

Development partner. We accompany you from brainstorming to inspection of the final machine, always to your expectations.

Components. We deliver series products and modules, five-axis heads, motor spindles, gearbox swiveling heads, add-on assemblies and motors.

Systems. The Know-how Factory stands for solutions in the fields of mechanical engineering systems, specialty solutions, custom assemblies and mechanical modules. We manufacture and configure multiple-spindle and large-angle heads as well as large boring heads.

USAGE NOTE

GENERAL

The contents of this catalog are not legally binding and are intended solely for informational purposes. Any final agreement will be in the form of a written order confirmation from BENZ GmbH, which occurs only subject to the respective current General Terms and Conditions of Sale and Delivery of BENZ GmbH. These can be found online at www.benz-tools.com.

All of the products listed in this catalog are designed for their intended use, e.g. machines for precision machining. The recognized technical regulations for safety and professional work must be followed for use and installation.

Furthermore, the respective laws, guidelines from TÜV, guidelines from the respective trade association and VDE stipulations shall apply.

The technical data listed in this catalog must be observed by the user. The conditions of use may not fall below or exceed the specified data. If information is missing, it cannot be assumed that there are no upper or lower limits or no limitations for specific use cases. Consultation is required in these cases.

Disposal is not included in the price, which would have to be taken into account accordingly in the event of return to or disposal by BENZ GmbH.

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The technical data and figures have been compiled with great care and to the best of our knowledge. We cannot guarantee that the information is up to date, correct or complete.

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USAGE NOTE

INDIVIDUAL

DECLARATION OF INCORPORATION IN TERMS OF THE EC DIRECTIVE 2006/42/EC ON MACHINERY (ANNEX II 1 B)

We hereby declare that our products meet the basic requirements of the Machinery Directive 2006/42/EC as an incomplete machine to the extent that this is possible as part of delivery.

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with versions of the incomplete machine's special documents via our documentation department should they have reason to request them.

The incomplete machine also satisfies the stipulations of EC Directive 2004/108/EC on electromagnetic compatibility. The protective goals of EC Directive 2006/95/EC regarding electronic equipment have been met.

The incomplete machine may only be commissioned if it has been ascertained, if applicable, that the machine or system in which the incomplete machine is to be installed satisfies the requirements of Directive 2006/42/EC on Machinery and an EC declaration of conformity has been drawn up in accordance with Annex II.

ARE YOU ALREADY FAMILIAR WITH OUR EXPERTISE?

- ▶ **TEAMS OF EXPERTS WITH INDUSTRY EXPERIENCE**
- ▶ **INTERNATIONALLY NETWORKED THROUGH WORLD-WIDE LOCATIONS AND PARTNERS**
- ▶ **THE HIGHEST QUALITY FOR ALL PRODUCTS AND SERVICES**
- ▶ **PRECISE, CUSTOMER-SPECIFIC SOLUTIONS**
- ▶ **CONSTANT DEVELOPMENT OF OUR INDUSTRY EXPERTISE**

The contents and data correspond to the status as of printing. Edition 09/2014

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BENZ GMBH WERKZEUGSYSTEME

BENZ PRECISION TOOLS PROVIDE REFINED SOLUTIONS, INNOVATIVE TECHNOLOGY AND THE HIGHEST LEVELS OF QUALITY IN PRECISION MACHINING.

AS PART OF THE ZIMMER GROUP, WE GO ONE STEP FURTHER. THE NEW **ZIMMER GROUP** UMBRELLA BRAND COMBINES THE COMPANIES ZIMMER GMBH, ZIMMER KUNSTSTOFFTECHNIK, ZIMMER DAEMPFUNGSYSTEME AND BENZ WERKZEUGSYSTEME INTO ONE PARTNER FOR YOUR PROJECTS: THE KNOW-HOW FACTORY.

CHALLENGE US. DISCOVER THE ENTIRE WORLD OF ZIMMER GROUP! IF YOU HAVE QUESTIONS ABOUT THE NEW ZIMMER GROUP AND OUR TECHNOLOGY, WE WOULD BE HAPPY TO ANSWER THEM.

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group