ANGLE HEADS FOR HAAS MACHINES

Tooling Technology

Metal Machining

BENZ TOOLING



HAAS OEM SUPPLIER

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ANGLE HEADS FOR HAAS MACHINING CENTERS WITH INTEGRATED C-AXIS

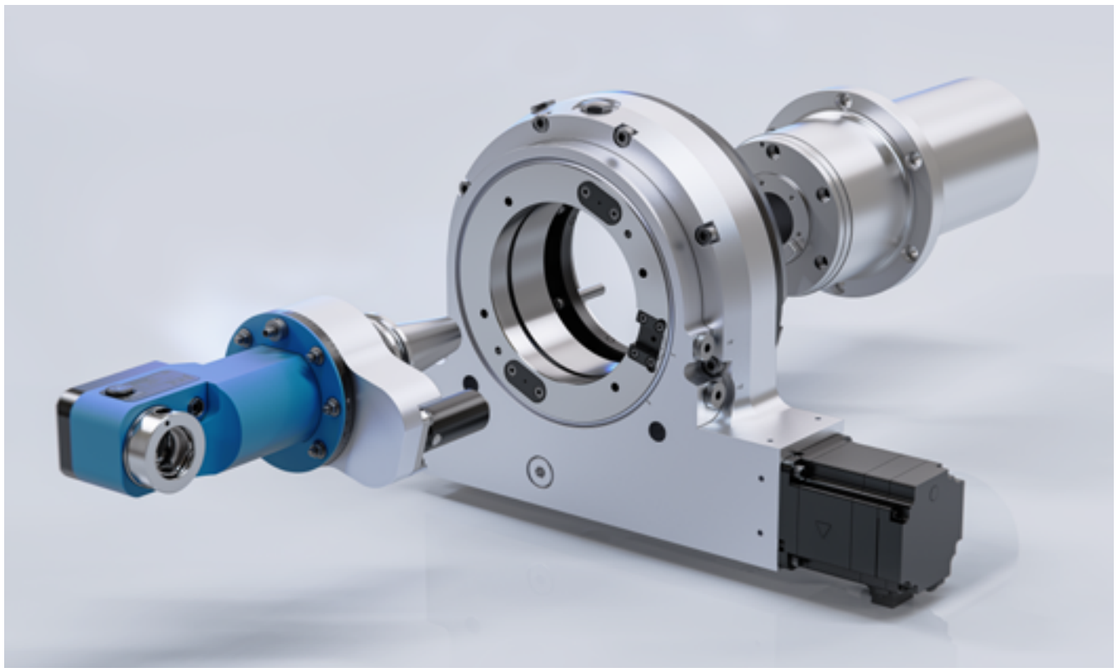
INNOVATION. PRECISION. PASSION

At BENZ Tooling 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 metal machining, woodworking and composite material processing for more than 75 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.

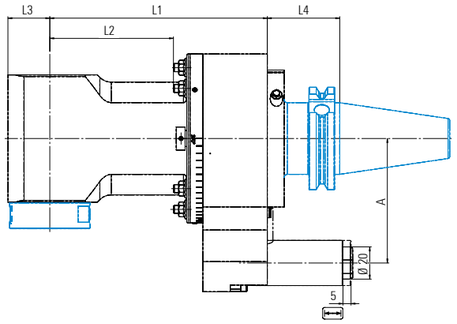
BENEFITS OF THE C-AXIS – YOUR COMPETITIVE EDGE

+ additional axis for machining complex parts
+ retrofittable for Haas 3-axis CNC machines
+ continuous use thanks to integrated oil mist lubrication
+ increased efficiency, precision and productivity
+ additional support for extra stability during challenging milling operations
+ improved accuracy during milling operations



ANGLE HEAD MONO WSX

TECHNICAL DATA



04

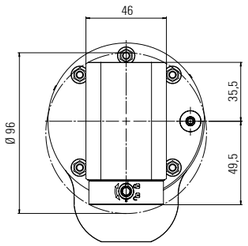
M_{max}	15
i	1:1
n_{max}	10,000 rpm

05

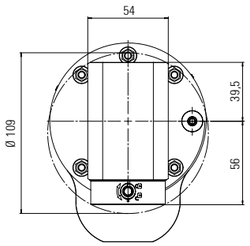
M_{max}	30 Nm
i	1:1
n_{max}	8,000 rpm

OUTPUT SPINDLE

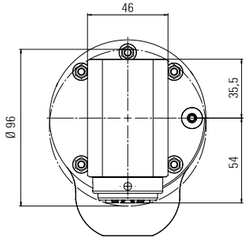
BENZ Solidfix® S2



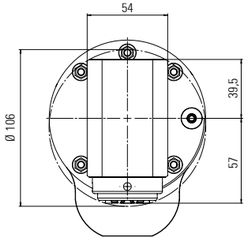
BENZ Solidfix® S3



Collet chuck ER20A



Collet chuck ER25A



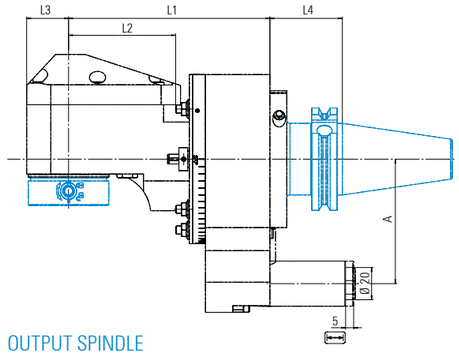
Type	Output spindle	Angle head	Taper	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	A [mm]	n {rpm}	Cooling -	Cooling EC/IC	+ KG	Order number
MONO WSX	S2	04	CAT40	145	97	24	45	80	10,000	●		4.3	377WSX04104S2-145
Size 04	ER20A	04	CAT40	145	97	24	45	80	10,000	●		4.3	377WSX04104E4A-145
	S2	04	BT40	145	97	24	53	80	10,000	●		4.6	039WSX19404S2-145
	ER20A	04	BT40	145	97	24	53	80	10,000	●		4.6	039WSX19404E4A-145
	S2	04	HSK63	145	97	24	52	80	10,000	●		4.2	771WSX68604S2-145
	ER20A	04	HSK63	145	97	24	52	80	10,000	●		4.2	771WSX68604E4A-145
MONO WSX	S3	05	CAT40	135	76	26	45	80	8,000	●		5.8	377WSX04105S3-135
Size 05	ER25A	05	CAT40	135	76	26	45	80	8,000	●		5.7	377WSX04105E5A-135
	S3	05	BT40	135	76	26	53	80	8,000	●		6.1	039WSX19405S3-135
	ER25A	05	BT40	135	76	26	53	80	8,000	●		6.0	039WSX19405E5A-135
	S3	05	HSK63	135	76	26	52	80	8,000	●		5.7	771WSX68605S3-135
	ER25A	05	HSK63	135	76	26	52	80	8,000	●		5.6	771WSX68605E5A-135

i Weights of quick-change adapter and cutting tool are not considered.

i If you purchase an angle head with BENZ Solidfix®, please mind, that adapters are not included.

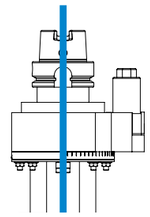
ANGLE HEAD FORTE WWX

TECHNICAL DATA

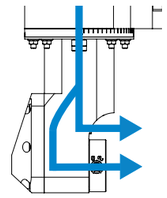


COOLANT SUPPLY

from the machine



to the cutting edge



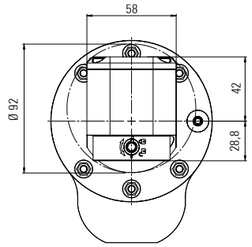
external / internal cooling

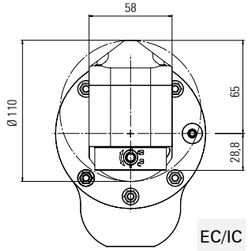
05

M_{max}	30 Nm
i	1:1
n_{max}	8,000 rpm

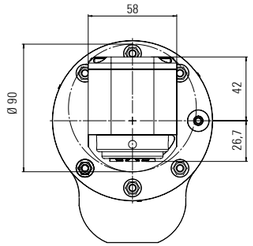
OUTPUT SPINDLE

BENZ Solidfix® S3





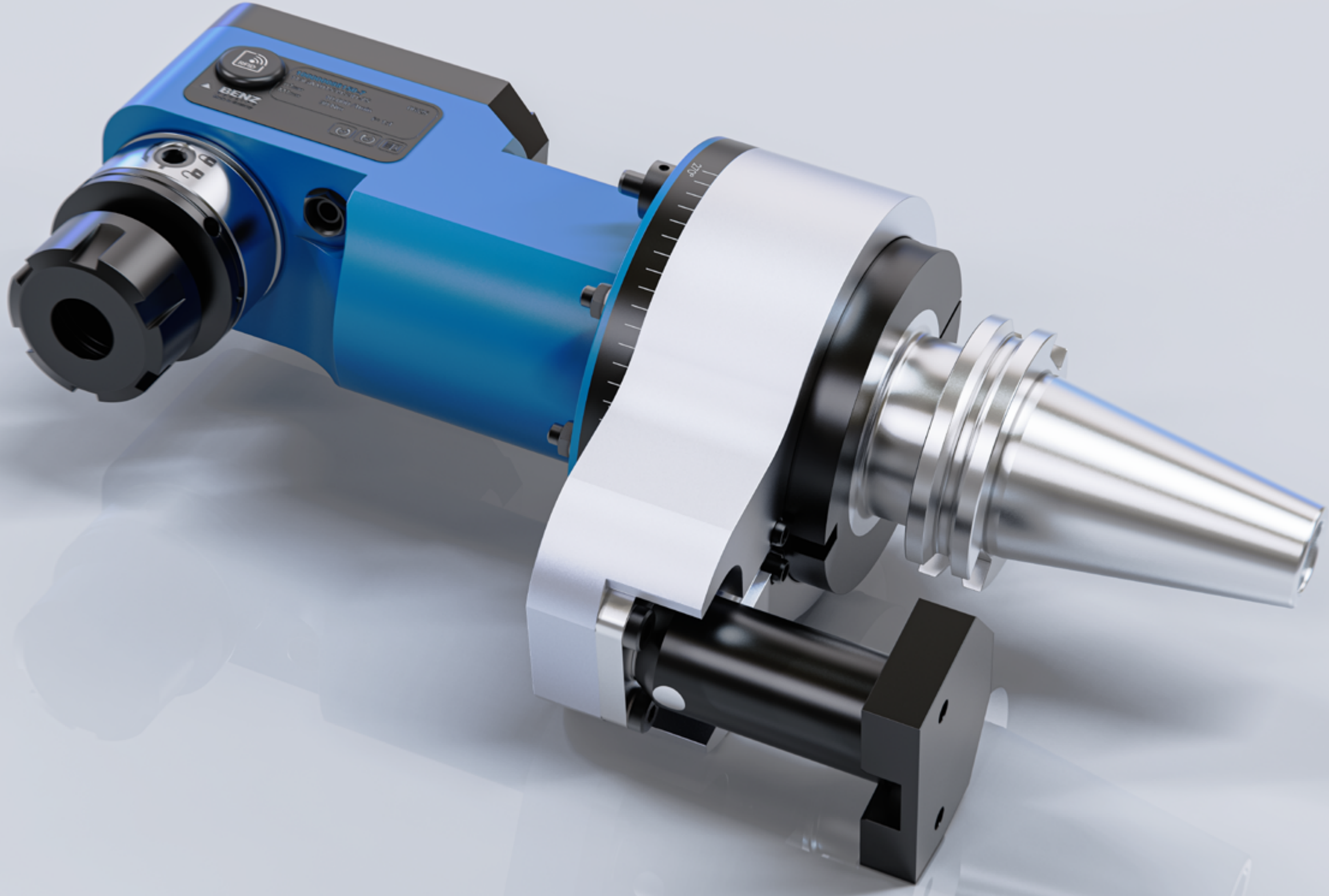
Collet chuck ER25A



Type	Output spindle	Angle head	Taper	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	A [mm]	n {rpm}	Cooling -	Cooling EC/IC	+ KG	Order number
FORTE WWX	S3	05	CAT40	172	113	26	45	80	8,000	●		6.0	377WWX04105S3-172
Size 05	S3	05	CAT40	172	113	26	45	80	8,000		●	6.2	378WWX04105S3-172
	ER25A	05	CAT40	172	113	26	45	80	8,000	●		6.0	377WWX04105E5A-172
	S3	05	BT40	172	113	26	53	80	8,000	●		6.3	039WWX19405S3-172
	S3	05	BT40	172	113	26	53	80	8,000		●	6.5	339WWX19405S3-172
	ER25A	05	BT40	172	113	26	53	80	8,000	●		6.3	039WWX19405E5A-172
	S3	05	HSK63	172	113	26	52	80	8,000	●		5.9	771WWX68605S3-172
	S3	05	HSK63	172	113	26	52	80	8,000		●	6.1	711WWX68605S3-172
	ER25A	05	HSK63	172	113	26	52	80	8,000	●		5.9	771WWX68605E5A-172

i Weights of quick-change adapter and cutting tool are not considered.

i If you purchase an angle head with BENZ Solidfix®, please mind, that adapters are not included.


BENZ

NOTES

ANGLE HEADS
FOR HAAS MACHING CENTERS

BENZ SELECT LINE: QUICK DELIVERY. ATTRACTIVE PRICING. BENZ SOLIDFIX®

Our most popular angle heads MONO WSX and FORTE WWX are available in the BENZ Select Line program for HAAS machining centers.

Benefit from attractive prices and fast delivery times thanks to the pre-configuration of the most common features: size, output spindle, taper and torque support.

BENZ Select Line products are equipped with our quick-change system BENZ Solidfix®. Benefits for you are even more flexibility and further cost savings – all in the well-know BENZ quality.

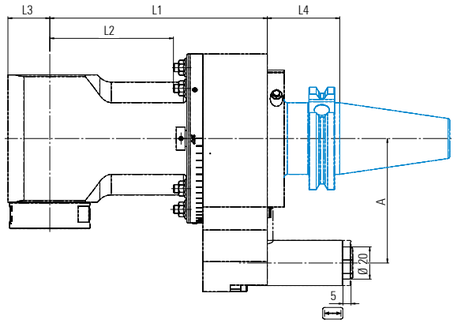
including adapter and stop block



see video to learn more

BENZ SELECT LINE – MONO WSX

TECHNICAL DATA



04

M_{max}	15 Nm
i	1:1
n_{max}	10,000 rpm

05

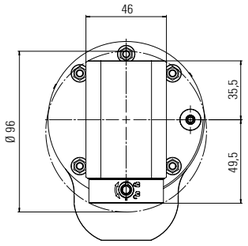
M_{max}	30 Nm
i	1:1
n_{max}	8,000 rpm

07

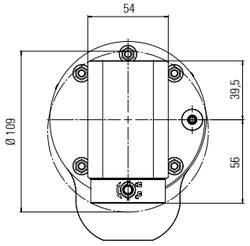
M_{max}	70 Nm
i	1:1
n_{max}	6,000 rpm

OUTPUT SPINDLE

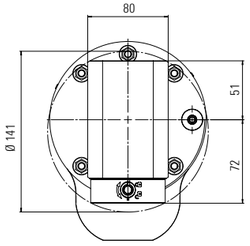
BENZ Solidfix® S2



BENZ Solidfix® S3



BENZ Solidfix® S4



Type	Output spindle	Angle head	Taper	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	A [mm]	n {rpm}	Cooling -	Cooling EC/IC	+ KG	Order number
MONO WSX Size 04	S2 x ER20A	04	CAT40	145	97	24	45	65	10,000	●		4.4	377WSX00204S2-145HAA
MONO WSX Size 05	S3 x ER25A	05	SK40	135	77	26	45	65	8,000	●		6.0	040WSX00205S3-135HAA
	S3 x ER25A	05	CAT40	135	77	26	45	65	8,000	●		6.0	377WSX00205S3-135HAA
	S3 x ER25A	05	CAT50	135	77	26	45	110	8,000	●		8.6	107WSX00405S3-135HAA
MONO WSX Size 07	S4 x ER32A	07	BT40	150	88	35	53	65	6,000	●		9.6	039WSX00207S4-150HAA
	S4 x ER32A	07	CAT50	150	88	35	45	110	6,000	●		12.1	107WSX00407S4-150HAA

Please mind the changing weight of the tool changer.

i Weights of quick-change adapter and cutting tool are not considered.

SCOPE OF DELIVERY

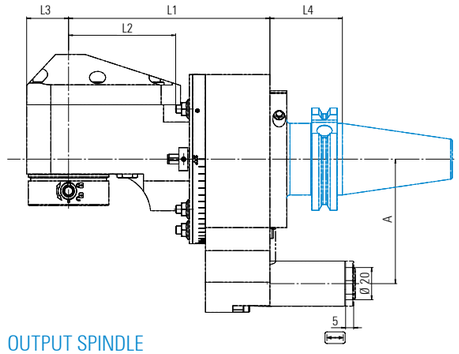
Angle head with modular quick-change system BENZ Solidfix®
incl. 1 adapter (Type Collet Chuck ER) and 1 stop block

OPTIONAL ACCESSORIES

Type		Size	Order number
Startup kit			
Mounting block	Allen key	S3 x ER25	S3-SET-0001
Hook wrench	Clamping wrench	S4 x ER32	S4-SET-0001

BENZ SELECT LINE – FORTE WWX

TECHNICAL DATA



05

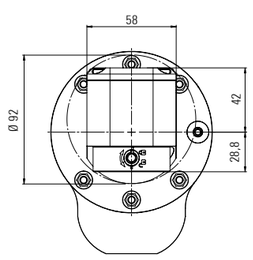
M_{max}	30 Nm
i	1:1
n_{max}	8,000 rpm

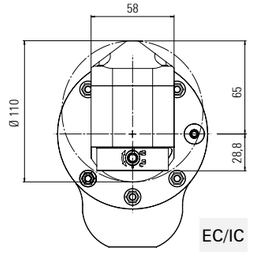
07

M_{max}	70 Nm
i	1:1
n_{max}	6,000 rpm

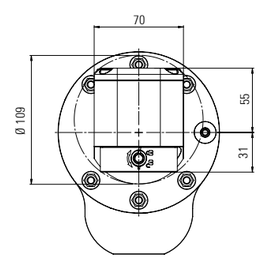
OUTPUT SPINDLE

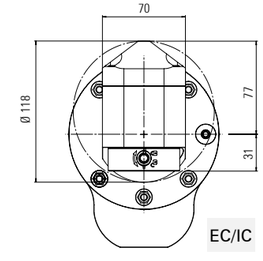
BENZ Solidfix® S3





BENZ Solidfix® S4





Type	Output spindle	Angle head	Taper	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	A [mm]	n {rpm}	Cooling -	Cooling EC/IC	+ KG	Order number
FORTE WWX Size 05	S3 x ER25A	05	SK40	172	113	26	45	65	8,000	●		6.1	040WWX00205S3-135HAA
	S3 x ER25A	05	SK40	172	113	26	45	65	8,000		●	6.3	240WWX00205S3-172HAA
	S3 x ER25A	05	CAT40	172	113	26	45	65	8,000	●		6.1	377WWX00205S3-172HAA
	S3 x ER25A	05	CAT40	172	113	26	45	65	8,000		●	6.2	378WWX00205S3-172HAA
	S3 x ER25A	05	CAT50	172	113	26	45	110	8,000	●		8.9	107WWX00405S3-172HAA
	S3 x ER25A	05	CAT50	172	113	26	45	110	8,000		●	9.1	354WWX00405S3-172HAA
FORTE WWX Size 07	S4 x ER32A	07	CAT50	200	138	35	45	110	6,000	●		12.1	107WWX00407S4-200HAA
	S4 x ER32A	07	CAT50	200	138	35	45	110	6,000		●	12.3	354WWX00407S4-200HAA

Please mind the changing weight of the tool changer.

i Weights of quick-change adapter and cutting tool are not considered.

SCOPE OF DELIVERY

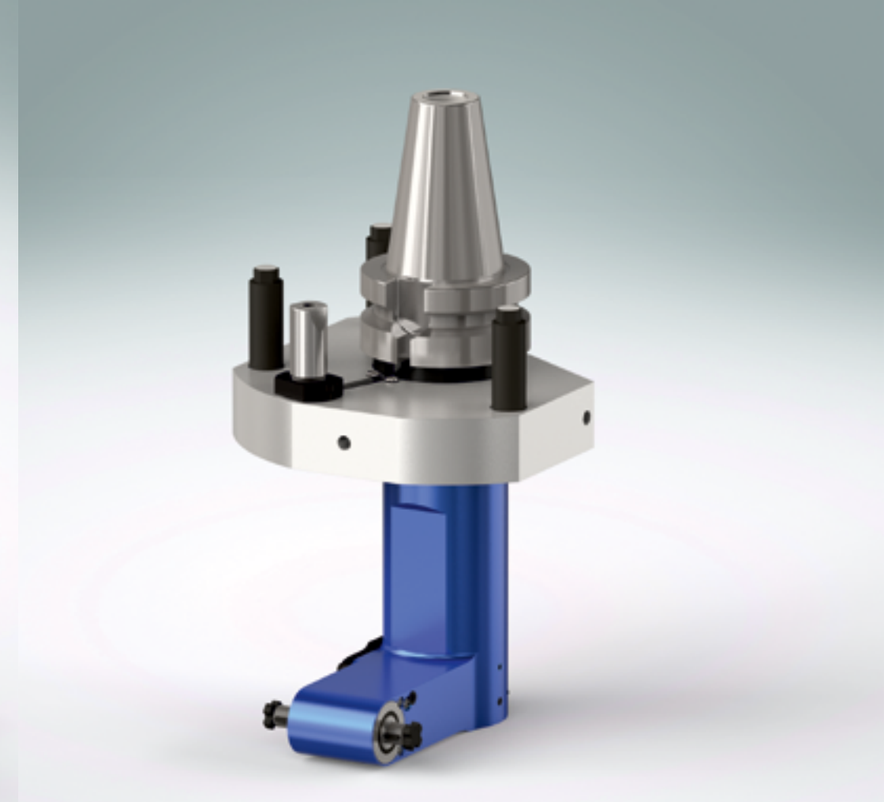
Angle head with modular quick-change system BENZ Solidfix®
incl. 1 adapter (Type Collet Chuck ER) and 1 stop block

OPTIONAL ACCESSORIES

Type		Size	Order number
Startup kit			
Mounting block	Allen key	S3 x ER25	S3-SET-0001
Hook wrench	Clamping wrench	S4 x ER32	S4-SET-0001







BENZ ANGLE HEADS
TO MACHINE YOUR PRODUCTS

BENZ SELECT LINE
PREDEFINED STANDARD

Most popular angle head configurations

CUSTOMIZABLE PRODUCTS
ADAPTABLE

Adaptable standard angle heads

UNIQUE SOLUTIONS
CUSTOM-MADE

Individual products for your needs

angle head program

MODULAR QUICK CHANGE SYSTEM
BENZ SOLIDFIX® TO SAVE YOUR TIME

AN INVESTMENT WORTH MAKING

Beside higher rpms and higher accuracy the reduction of set up and machine downtimes is the main focus in the manufacturing industry. A crucial component is the integration of a modular tool interface.

The basic principle and key advantage is that the tool adapters can be preset outside the machine during the machining process. The preset adapters are ready-to-use and can be changed very quickly on the basic unit once needed.

BENZ SOLIDFIX®

As a customer, you enhance the operating times of your machine and save costs at the same time.

Thanks to the modular design, only the adapters need to be changed – the basic tool remains on the machine. Additionally the purchase of extra units can be reduced to a minimum.

Using BENZ Solidfix® you benefit from one of the most efficient quick-change systems in the world.



PERFORMANCE. PRECISION. HANDLING. SAFETY.

Minimize setup & non-productive time

increase productivity by changing the preset tool within seconds

Low investment overhead

angle head remains on the machine and only the adapter needs to be changed; fewer angle heads are needed overall

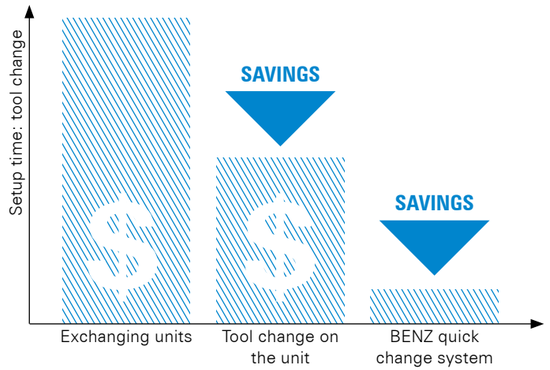
Easy handling

one-hand operation without a special tool

Operating safety

cannot come off accidentally

REDUCE SETUP TIME AND SAVE COSTS WITH BENZ QUICK CHANGE SYSTEMS



A tool change, during which the entire unit is removed from the machine, results in high machine downtimes. By changing the cutting tool directly on the unit, set-up costs can already be reduced by 40%.

This savings can be extended with modular quick-change systems. Here the cutting tool is measured outside the machine in the presetting device. Therefore replacing the adapter only requires a few seconds.

You save 90% of your original setup costs! Additionally you reduce your reject rate as the first part is already a good part.

OUTPUT SPINDLES ACCESSORIES

Please see our catalog for detailed information on our modular quick change systems as well as all accessories.



- adapters BENZ Solidfix®
- accessories for collet chucks
- wrenches
- miscellaneous

download catalog



M-HAAS-AH-B-US-26-06

BENZ Tooling
a business unit of Schenck USA Corp.
1232 Commerce Street SW
Conover, N.C. 28613
United States

+1 704 529 5300
salesus@benztooling.com
www.benztooling.com

BENZ GmbH Werkzeugsysteme
Kinzigpark 3
77723 Gengenbach
Germany

+49 7803 504 300-0
info@benztooling.com
www.benztooling.com

BENZ TOOLING