



ARNO flange-mounted holders and tools for Doosan machines.

PERFECT FIT

ARNO FLANGE-MOUNTED HOLDERS AND TOOLS FOR DOOSAN MACHINES.

Our goal with ARNO tools is always to offer you the optimal machining solution for your requirements. For example, with special tools and direct attachments for your Doosan machines. The right interfaces ensure maximum stability and rigidity, from the machine right down to the workpiece. In addition, our patented ACS – ARNO Cooling System increases tool life. Which means you benefit from maximum precision, efficiency and process reliability in your production process.

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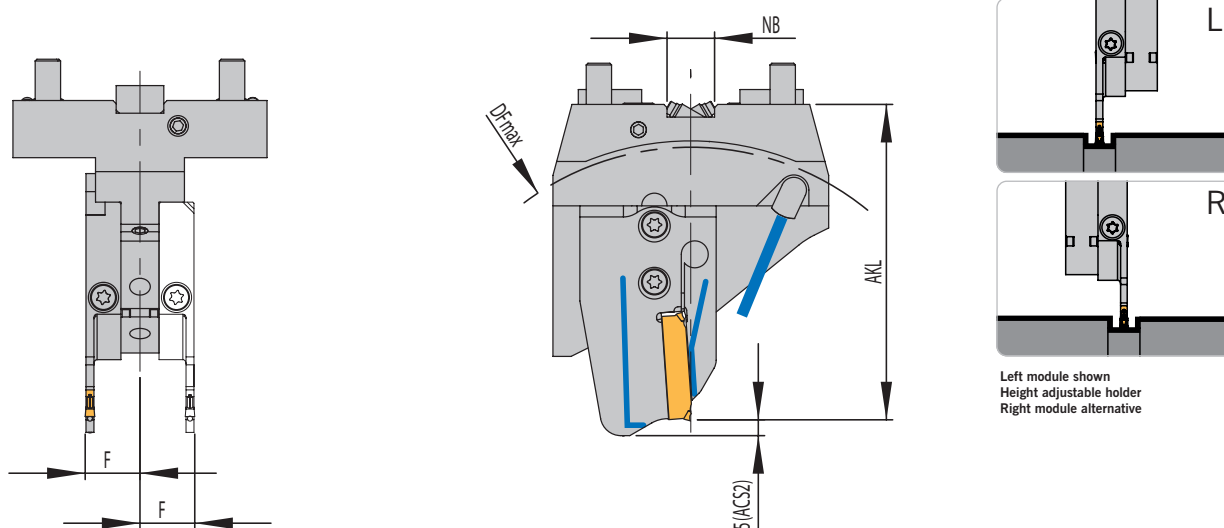
04 Part-off holders and flange-mounted holders

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BMT – with internal coolant and ACS



Basic holders

Article	NB	F	Module
HDD-BMT45-SDS-ACS	15	17,3	MSA-...-ACS.
HDD-BMT55-SDS-150-ACS	15	17,3	MSA-...-ACS.
HDD-BMT55-SDS-ACS	15	17,3	MSA-...-ACS.
HDD-BMT65-SDS-ACS	18	17,3	MSA-...-ACS.

Module

DF_{max} = maximum chuck diameter and AKL = Overhang length with modules MSA-...

Article	BMT45...		BMT55...		BMT55...-150		BMT65...	
	AKL	DF_{max}	AKL	DF_{max}	AKL	DF_{max}	AKL	DF_{max}
MSA-...-32-ACS.	84,0	140	114,5	185	134,5	225	131,5	215
MSA-...-44-ACS.	89,0	150	119,5	195	139,5	235	136,5	225
MSA-...-52-ACS.	99,5	170	130,0	215	150,0	255	147,0	245
MSA-...-65-ACS.	99,5	170	130,0	215	150,0	255	147,0	245
MSA-...-69-ACS.	101,5	175	132,0	220	152,0	260	149,0	250
MSA-...-80-ACS.	107,0	185	137,5	230	157,5	270	154,5	260
MSA-...-90-ACS.	112,0	195	142,5	240	162,5	280	159,5	270
MSA-...-105-ACS.	120,0	210	150,5	255	170,5	295	167,5	285

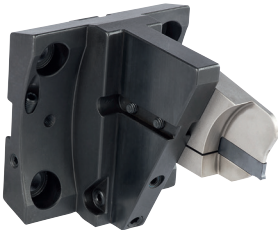
Note: Compatible modules can be found on pages 12 and 13, or in the SA chapter of the grooving catalogue.

Spare Parts

Holder	Screw for module	Key	O-ring	Ugello refrigerante
HDD-BMT45-SDS-ACS	AS 0070	T5220-IP	OR 7X1,5 P	KMD 0825-3E
HDD-BMT55-SDS..-ACS	AS 0070	T5220-IP	OR 8X1,5 P	KMD 0825-3E
HDD-BMT65-SDS-ACS	AS 0070	T5220-IP	OR 9X1,5 P	KMD 0825-3E

Module	Screw for insert	Key
MSA-...	SA5T	T5220-IP

Assembly options

Left module shown	Right module shown
	
Normal assembly	Normal assembly
	
Upside down assembly	Upside down assembly

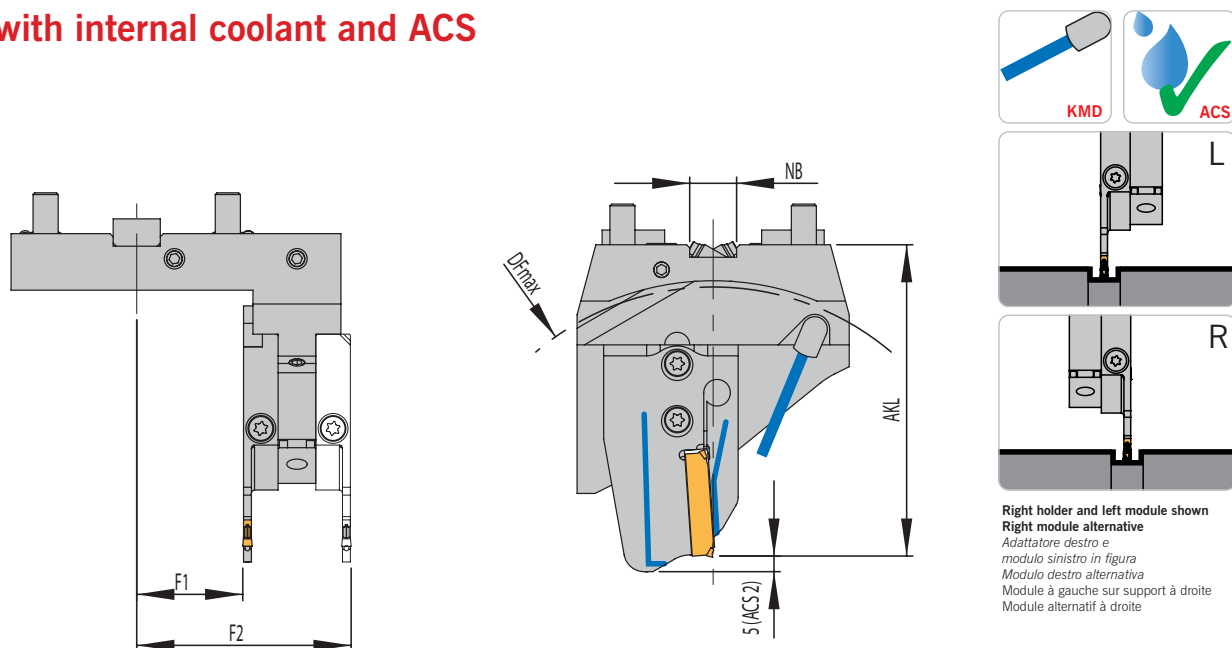
Note: All variants shown can be mounted with a holder.

Remark: Custom made part-off holders for other machine manufactures are available on request.

A request sheet can be found on the Internet at: www.arno.de/service/downloads

See page 19 for assembly instructions.

BMT – with internal coolant and ACS



Basic holders

Article	NB	F1	F2	Module
HDD-BMT45-SD-ACS	15	33,8	68,3	MSA-...-ACS.
HDD-BMT55-SD-ACS	15	46,3	80,8	MSA-...-ACS.
HDD-BMT55-SDL-ACS	15	46,3	80,8	MSA-...-ACS.
HDD-BMT55-SD-150-ACS	15	46,3	80,8	MSA-...-ACS.
HDD-BMT65-SD-ACS	18	48,8	83,3	MSA-...-ACS.

Module

DF_{max} = maximum chuck diameter and AKL = Overhang length with modules MSA-...

Article Articolo Désignation	BMT45...		BMT55...		BMT55...-150		BMT65...	
	AKL	DF_{max}	AKL	DF_{max}	AKL	DF_{max}	AKL	DF_{max}
MSA-...-32-ACS.	84,0	140	114,5	185	134,5	225	131,5	215
MSA-...-44-ACS.	89,0	150	119,5	195	139,5	235	136,5	225
MSA-...-52-ACS.	99,5	170	130,0	215	150,0	255	147,0	245
MSA-...-65-ACS.	99,5	170	130,0	215	150,0	255	147,0	245
MSA-...-69-ACS.	101,5	175	132,0	220	152,0	260	149,0	250
MSA-...-80-ACS.	107,0	185	137,5	230	157,5	270	154,5	260
MSA-...-90-ACS.	112,0	195	142,5	240	162,5	280	159,5	270
MSA-...-105-ACS.	120,0	210	150,5	255	170,5	295	167,5	285

Note: Compatible modules can be found on pages 12 and 13, or in the SA chapter of the grooving catalogue.

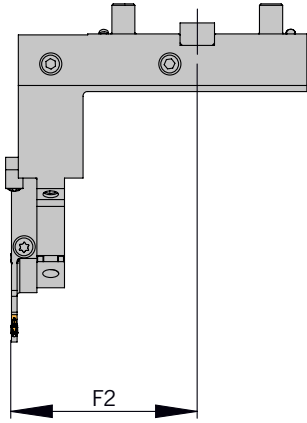
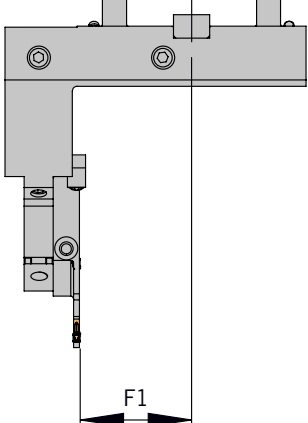
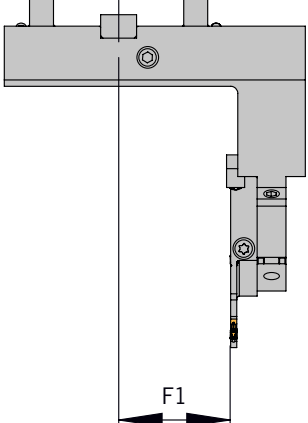
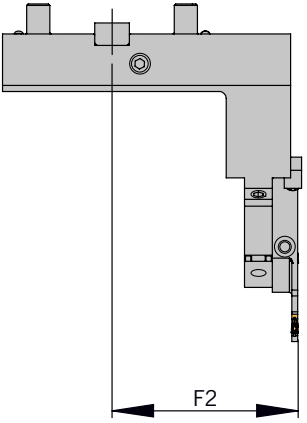
Spare Parts

Holder	Screw for module	Key	O-ring	Ugello refrigerante
HDD-BMT45-SD	AS 0070	T5220-IP	OR 7X1,5 P	KMD 0825-3E
HDD-BMT55-SD.	AS 0070	T5220-IP	OR 8X1,5 P	KMD 0825-3E
HDD-BMT65-SD	AS 0070	T5220-IP	OR 9X1,5 P	KMD 0825-3E

Spare Parts

Module	Screw for insert	Key
MSA-...	SA5T	T5220-IP

Assembly options

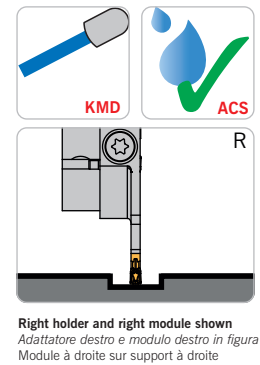
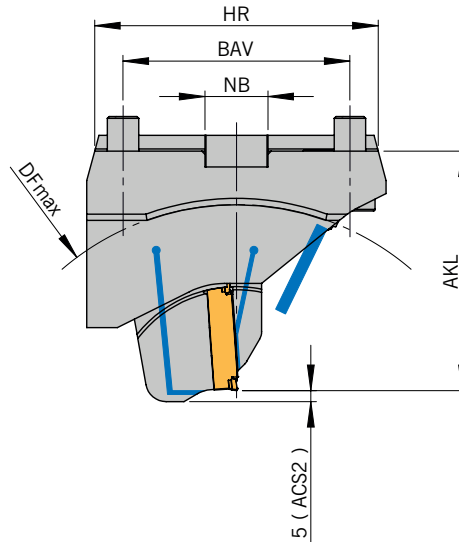
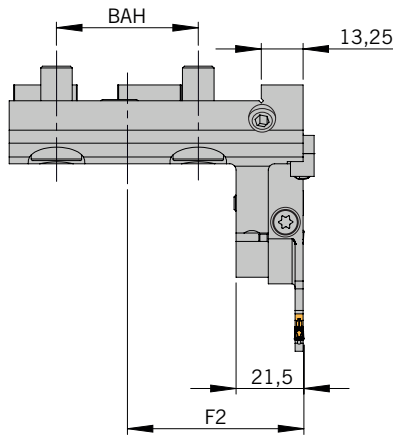
Left-hand holder		Right-hand holder	
HDD-BMT55-SDL-ACS	HDD-BMT55-SDL-ACS	HDD-BMT45-SD-ACS	HDD-BMT45-SD-ACS
		HDD-BMT55-SD-ACS	HDD-BMT55-SD-ACS
		HDD-BMT55-SD-150-ACS	HDD-BMT55-SD-150-ACS
		HDD-BMT65-SD-ACS	HDD-BMT65-SD-ACS
			
Left module shown	Right module shown	Left module shown	Right module shown
			
Normal assembly	Normal assembly	Normal assembly	Normal assembly
			
Upside down assembly	Upside down assembly	Upside down assembly	Upside down assembly

Remark: Custom made part-off holders for other machine manufactures are available on request.

A request sheet can be found on the Internet at: www.arno.de/service/downloads

See page 19 for assembly instructions.

HDD – with internal coolant and ACS



Basic holders

Article	BAH	BAV	HR	NB	F2	Module
HDD-45-72-R-MSA-SR-ACS	45	72	90	20	56	MSA-SR-...-ACS.
HDD-55-80-R-MSA-SR-ACS	55	80	97	20	71	MSA-SR-...-ACS.

Module

DF_{max} = maximum chuck diameter and AKL = Overhang length with modules MSA-...

Article	HDD45...		HDD55...	
	AKL	DF_{max}	AKL	DF_{max}
MSA-...-32-ACS.	60,5	85	117,0	180
MSA-...-44-ACS.	65,5	95	122,0	190
MSA-...-52-ACS.	76,0	115	132,5	210
MSA-...-65-ACS.	76,0	115	132,5	210
MSA-...-69-ACS.	78,0	120	134,5	215
MSA-...-80-ACS.	83,5	130	140,0	225
MSA-...-90-ACS.	88,5	140	145,0	235
MSA-...-105-ACS.	96,5	155	153,0	250

Note: Compatible modules can be found on pages 12 and 13, or in the SA chapter of the grooving catalogue.

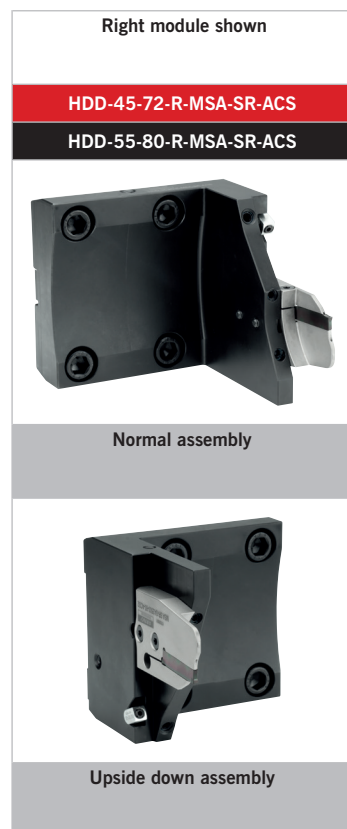
Spare Parts

Holder	Screw for module	Key	O-ring	Ugello refrigerante	Locking pin
HDD-45-72-R-MSA-SR-ACS	AS 0070	T5220-IP	OR 9X1,5 P	KMD 0820-4BJ	ZS0820G
HDD-55-80-R-MSA-SR-ACS	AS 0070	T5220-IP	OR 22X3,5P	KMD 0820-4BJ	ZS0820G

Spare Parts

Module	Screw for insert	Key
MSA-...	SA5T	T5220-IP

Assembly options



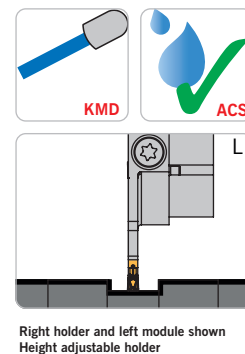
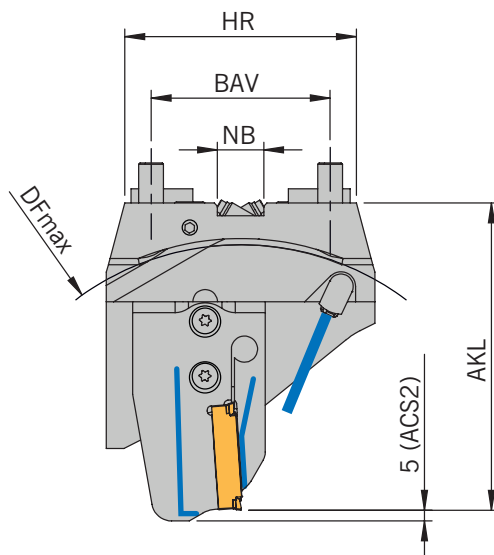
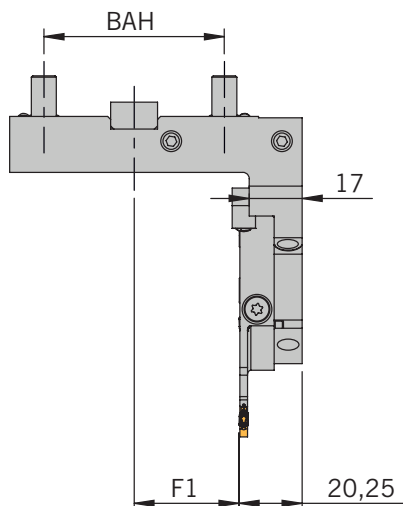
Note: All variants shown can be mounted with a holder.

Remark: Custom made part-off holders for other machine manufactures are available on request.

A request sheet can be found on the Internet at: www.arno.de/service/downloads

See page 19 for assembly instructions.

BMT – with internal coolant and ACS



Basic holders

Article	BAH	BAV	HR	NB	F1	Module
HDD-58-58-R-MSA-SL-ACS	58	58	75	12	33,8	MSA-SL-...-ACS.

Module

DF_{max} = maximum chuck diameter and AKL = Overhang length with modules MSA-...

Article	HDD58...	
	AKL	DF_{max}
MSA-...-32-ACS.	84,0	140
MSA-...-44-ACS.	89,0	150
MSA-...-52-ACS.	99,5	170
MSA-...-65-ACS.	99,5	170
MSA-...-69-ACS.	101,5	175
MSA-...-80-ACS.	107,0	185
MSA-...-90-ACS.	112,0	195
MSA-...-105-ACS.	120,0	210

Note: Compatible modules can be found on pages 12 and 13, or in the SA chapter of the grooving catalogue.

Spare Parts

Holder	Screw for module	Key	O-ring	Ugello refrigerante
HDD-58-58-R-MSA-SL-ACS	AS 0070	T5220-IP	OR 7X1,5 P	KMD 0820-4BJ

Spare Parts

Module	Screw for insert	Key
MSA-...-	SA5T	T5220-IP

Assembly options



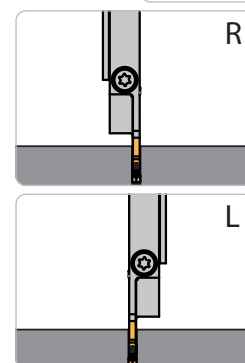
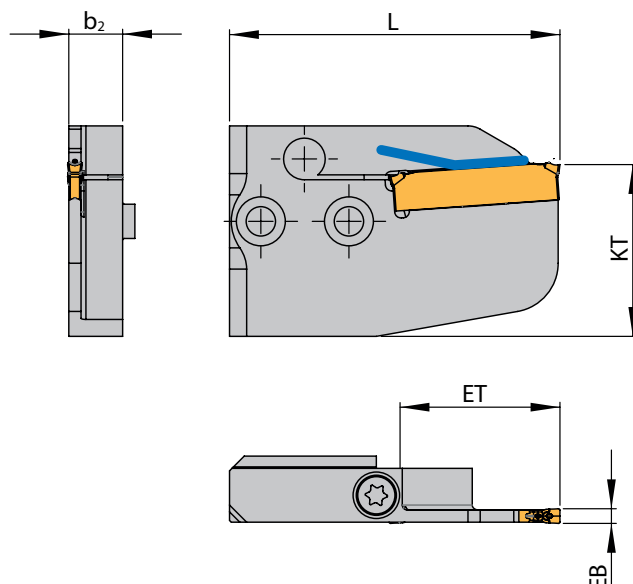
Remark: Custom made part-off holders for other machine manufactures are available on request.

A request sheet can be found on the Internet at: www.arno.de/service/downloads

See page 19 for assembly instructions.

MSA-ACS1

Module with through tool coolant – ACS1



Left-hand execution shown

Holders

Article	EB	ET	D _{max}	D _R	b ₂	L	KT	Insert
MSA-SL/R-SA2402-44-ACS1	2	22,0	44	61	11	57,0	35	SA24-20...
MSA-SL/R-SA2403-44-ACS1	3	22,0	44	61	11	57,0	35	SA24-30...
MSA-SL/R-SA3502-65-ACS1	2	32,5	65	80	11	67,5	35	SA35-20...
MSA-SL/R-SA3502-90-ACS1	2	45,0	90	90	11	80,0	35	SA35-20...
MSA-SL/R-SA3503-52-ACS1	3	26	52	62	11	67,5	35	SA 35-30...
MSA-SL/R-SA3503-65-ACS1	3	32,5	65	80	11	67,5	35	SA35-30...
MSA-SL/R-SA3503-80-ACS1	3	40	80	80	11	75,0	35	SA 35-30...
MSA-SL/R-SA3503-105-ACS1	3	52,5	105	105	11	88,0	35	SA35-30...
MSA-SL-SA3504-105-ACS1	4	52,5	105	105	11	88,0	35	SA35-40...
MSA-SL-SA3506-65-ACS1	6	32,5	65	80	12	67,5	35	SA35-60...
MSA-SL-SA3506-105-ACS1	6	52,5	105	105	12	88,0	35	SA35-60...

D_{max} = maximum diameter for solid material, D_R = maximum penetration diameter for tubes

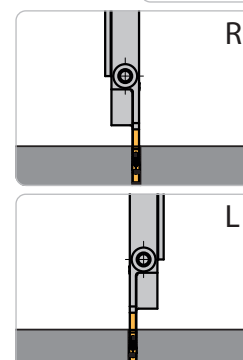
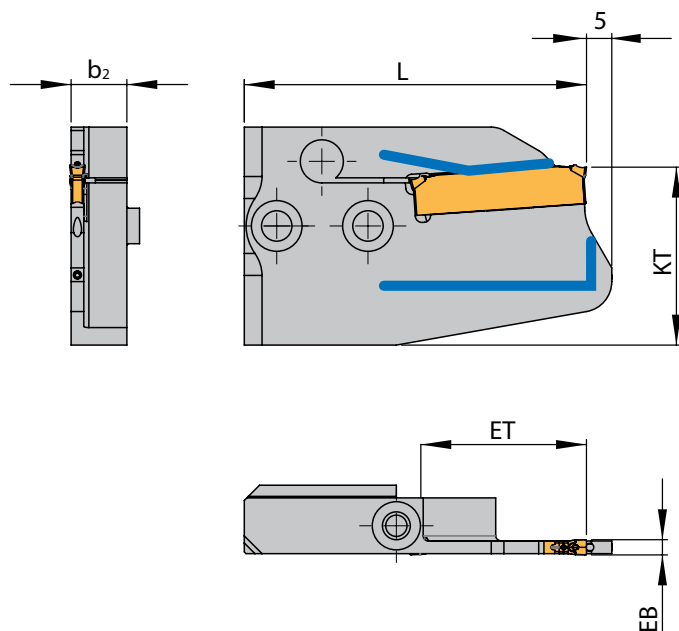
For modules with a grooving ø of 105 mm or larger, a torque wrench must be used. Tightening torque 3 Nm.

Spare Parts

Holder	Screw	Key
MSA-S R/L..	SA5T	T5220-IP

MSA-ACS2

Module with through tool coolant – ACS2



Left-hand execution shown

Holders

Article	EB	ET	D _{max}	D _R	b ₂	L	KT	Insert
MSA-SL/R-SA2402-32-ACS2	2	16,0	32	48	11	52,0	35	SA24-20...
MSA-SL/R-SA2402-44-ACS2	2	22,0	44	61	11	57,0	35	SA24-20...
MSA-SL/R-SA2403-32-ACS2	3	16,0	32	48	11	52,0	35	SA24-30...
MSA-SL/R-SA2403-44-ACS2	3	22,0	44	61	11	57,0	35	SA24-30...
MSA-SL/R-SA3503-52-ACS2	3	26,0	52	68	11	67,5	35	SA35-30...
MSA-SL/R-SA3503-65-ACS2	3	32,5	65	80	11	67,5	35	SA35-30...
MSA-SL/R-SA3503-69-ACS2	3	34,5	69	80	11	69,5	35	SA35-30...
MSA-SL/R-SA3503-80-ACS2	3	40,0	80	80	11	75,0	35	SA35-30...
MSA-SL/R-SA3503-90-ACS2	3	45,0	90	90	11	80,0	35	SA35-30...
MSA-SL/R-SA3503-105-ACS2	3	52,5	105	105	11	88,0	35	SA35-30...
MSA-SL/R-SA3504-65-ACS2	4	32,5	65	80	11	67,5	35	SA35-40...
MSA-SL/R-SA3504-105-ACS2	4	52,5	105	105	11	88,0	35	SA35-40...

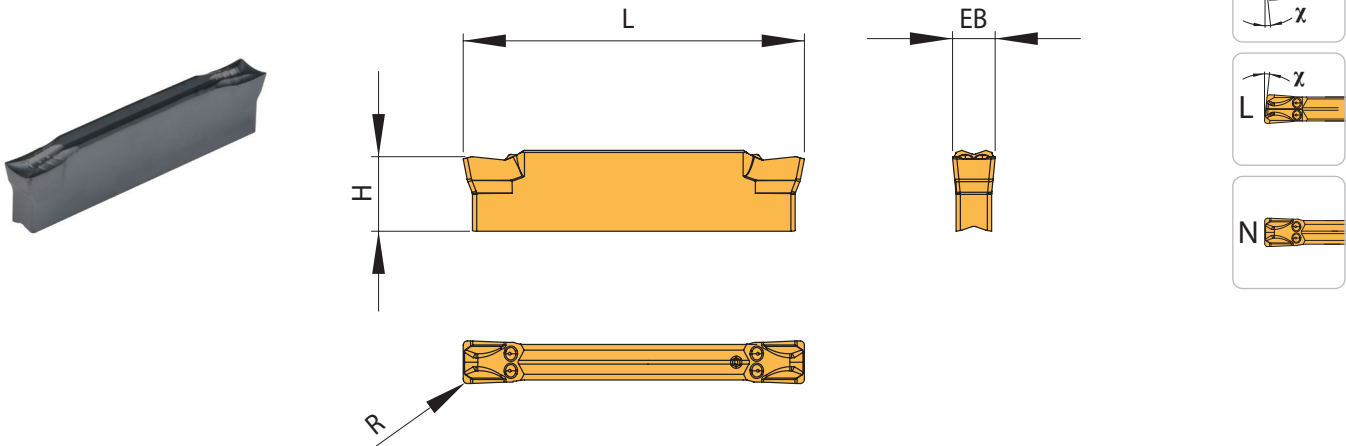
D_{max} = maximum diameter for solid material, D_R = maximum penetration diameter for tubes

For modules with a grooving ϕ of 105 mm or larger, a torque wrench must be used. Tightening torque 3 Nm.

Spare Parts

Holder	Screw	Key
MSA-S R/L..	SA5T	T5220-IP

SA24



Sintered version

Article	EB ± 0,04	H	L	R	χ	coated					
						AM5040	AP2220	AP2240	AP5020	AP5030	AP5820+
SA24-2002N-F1	2,0	5,5	24	0,2	0°		●		●		
SA24-2002N-M1	2,0	5,5	24	0,2	0°		●	●	●		
SA24-2002N-S1	2,0	5,5	24	0,2	0°	●		●	●	●	
SA24-2002N-T1	2,0	5,5	24	0,2	0°	●	●	●	●		●
SA24-3003L/R-M1	3,0	5,5	24	0,3	6°	●*	●	●	●		
SA24-3003L/R-S1	3,0	5,5	24	0,3	6°	●		●	●		
SA24-3003L/R-T1	3,0	5,5	24	0,3	6°	●*	●	●*	●	●	●
SA24-3003N-M1	3,0	5,5	24	0,3	0°		●	●	●		
SA24-3003N-S1	3,0	5,5	24	0,3	0°	●		●	●	●	
SA24-3003N-T1	3,0	5,5	24	0,3	0°	●	●	●	●	●	●

Remark: When using left- or right-handed inserts the holder may need modification.

* Only available as a right-hand cutting insert.

P	○	●	●	●	●	●
M	●		○	○	○	○
K		●	●			
N				○		
S				○	○	●
H						

● Main application

○ Secondary application

SA24

Ground version

coated							
Article	EB - 0,15	H	L	R	χ	AM5040	AP5020
SA24-2000R-T1-15G	2,0	5,5	24	0,00	15°		●
SA24-2001L/R-S1-12G	2,0	5,5	24	0,10	12°	●	
SA24-2001L/R-S1-15G	2,0	5,5	24	0,10	15°		●
SA24-2001L/R-T1-15G	2,0	5,5	24	0,10	15°		●
SA24-2002L/R-S1-8G	2,0	5,5	24	0,20	8°		●
SA24-3002L/R-S1-12G	3,0	5,5	24	0,20	12°	●	
SA24-3002L-T1-15G	3,0	5,5	24	0,20	15°		●

Remark: When using left- or right-handed inserts the holder may need modification.

Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.

Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

P	○	●
M	●	○
K		
N		○
S		○
H		

● Main application

○ Secondary application

Precision-ground version

Article	EB ± 0,02	H	L	R	χ	AN8020 (PG 41)	AN1015 (PG 38)
SA24-2001L/R-ALU-15	2,0	5,5	24	0,1	15°		●
SA24-2002N	2,0	5,5	24	0,2	0°	●	
SA24-2002N-ALU	2,0	5,5	24	0,2	0°		●
SA24-2002R-20	2,0	5,5	24	0,2	20°	●	
SA24-3002L/R-ALU-15	3,0	5,5	24	0,2	15°		●
SA24-3003N-ALU	3,0	5,5	24	0,3	0°		●

Remark: When using left- or right-handed inserts the holder may need modification.

Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.

Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

Note for AN8020: Single-sided fitted cutting insert with a rake angle of 0°.

Avvertenza AN8020: Inserto riportato su un lato con un angolo di spoglia superiore di 0°.

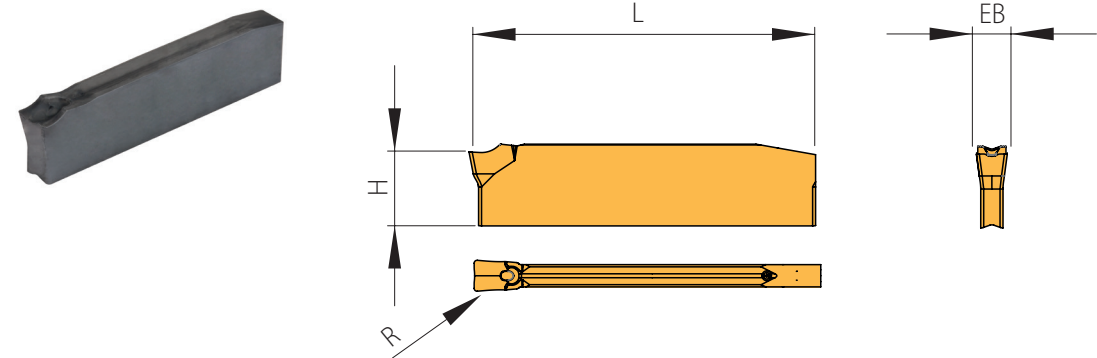
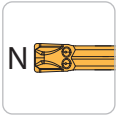
Remarque AN8020 : Plaquette à une seule arête de coupe, angle de coupe 0°

P		
M		
K		○
N	●	●
S		○
H		

③ ● Main application

○ Secondary application

SA24E



Sintered version

coated						
Article	EB ± 0,04	H	L	R	χ	AP5020
SA24E-2002N-S1	2	5,5	24	0,2	0°	●
SA24E-3003N-S1	3	5,5	24	0,3	0°	●

Remark: When using left- or right-handed inserts the holder may need modification.
Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.
Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

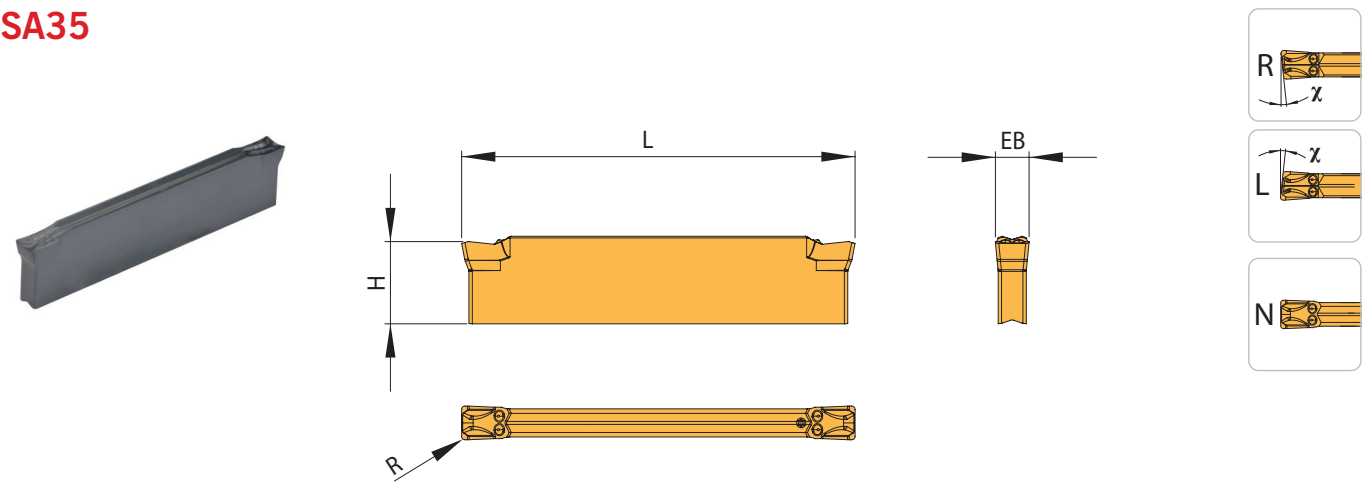
Cutting inserts for self-clamping blades
Inserti per lame autobloccanti
Plaquettes pour lames autobloquantes

P	●
M	○
K	
N	○
S	○
H	

● Main application

○ Secondary application

SA35



Sintered version

coated											
Article	EB ± 0,04	H	L	R	χ	AM5040	AP2220	AP2240	AP5020	AP5030	AP5820+
SA35-2002L/R-M1	2	7,5	35	0,2	6°				●		
SA35-2002L/R-S1-12	2	7,5	35	0,2	12°	●	●				
SA35-2002N-F1	2	7,5	35	0,2	0°		●		●		
SA35-2002N-M1	2	7,5	35	0,2	0°				●		
SA35-2002N-S1	2	7,5	35	0,2	0°	●		●	●		
SA35-2002N-T1	2	7,5	35	0,2	0°		●		●		
SA35-3002R-S1-12G	3	7,5	35	0,2	12°	●					
SA35-3003L/R-M1	3	7,5	35	0,3	6°		●	●	●		
SA35-3003L/R-S1	3	7,5	35	0,3	6°				●		
SA35-3003L/R-T1	3	7,5	35	0,3	6°		●		●		
SA35-3003N-M1	3	7,5	35	0,3	0°	●	●	●	●		
SA35-3003N-S1	3	7,5	35	0,3	0°	●		●	●	●	●
SA35-3003N-T1	3	7,5	35	0,3	0°	●		●	●		
SA35-4004N-M1	4	7,5	35	0,4	0°		●	●	●		
SA35-4004N-S1	4	7,5	35	0,4	0°	●					
SA35-4004N-T1	4	7,5	35	0,4	0°				●		
SA35-6006N-M1	6	7,5	35	0,6	0°				●		

Remark: When using left- or right-handed inserts the holder may need modification.
Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.
Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

P	○	●	●	●
M	●		○	○
K		●	●	
N				○
S				○
H				

● Main application

○ Secondary application

SA35

Ground version

coated							
Article	EB - 0,15	H	L	R	χ	AM5040	AP5020
SA35-2001L/R-S1-12G	2	7,5	35	0,1	12°	●	

Remark: When using left- or right-handed inserts the holder may need modification.
Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.
Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

P	○	●
M	●	○
K		
N		○
S		○
H		

● Main application

○ Secondary application

Precision-ground version

uncoated							
Article	EB ± 0,02	H	L	R	χ	AN8020 (PG 41)	AN1015 (PG 38)
SA35-2000L/R-ALU-15	2	7,5	35	0,0	15°		●
SA35-2001L/R-ALU-15	2	7,5	35	0,1	15°		●
SA35-2002N-ALU	2	7,5	35	0,2	0°		●
SA35-2002R-20	2	7,5	35	0,2	20°	●	
SA35-3002L/R-ALU-15	3	7,5	35	0,2	15°		●
SA35-3002L/R-ALU-6	3	7,5	35	0,2	6°		●
SA35-3003N-ALU	3	7,5	35	0,3	0°		●
SA35-4004N-ALU	4	7,5	35	0,4	0°		●

Remark: When using left- or right-handed inserts the holder may need modification.
Nota: Con l'utilizzo di inserti sinistri o destri può essere necessario modificare la lama.
Remarque: Pour l'utilisation de plaquette à gauche ou à droite le porte-outil doit être modifié frontalement.

Hinweis AN8020: Einseitig bestückter Schneideinsatz mit einem Spanwinkel von 0°

P		
M		
K		○
N	●	●
S		○
H		

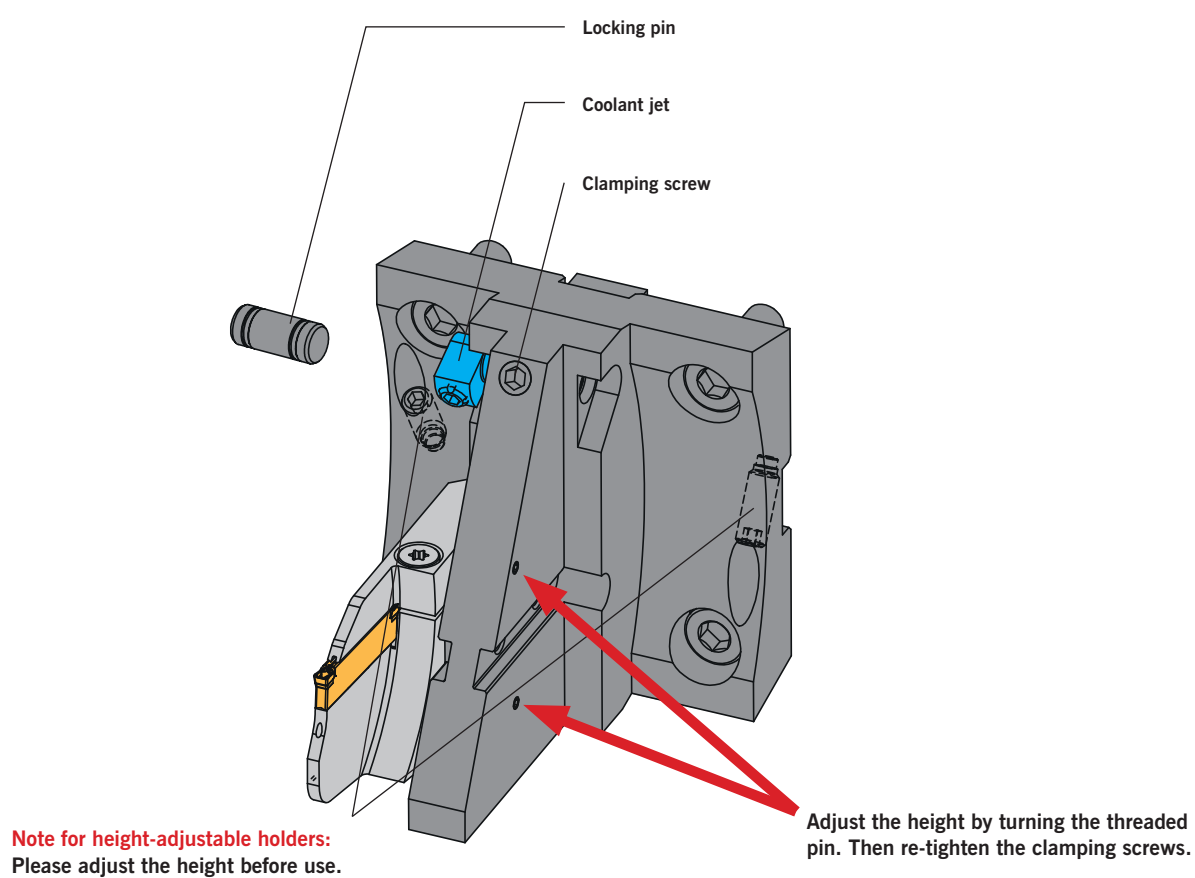
● Main application

○ Secondary application

HDD – Instruction for mounting

Option 1 – left-hand module: cooling with ACS2 and additional jet nozzle

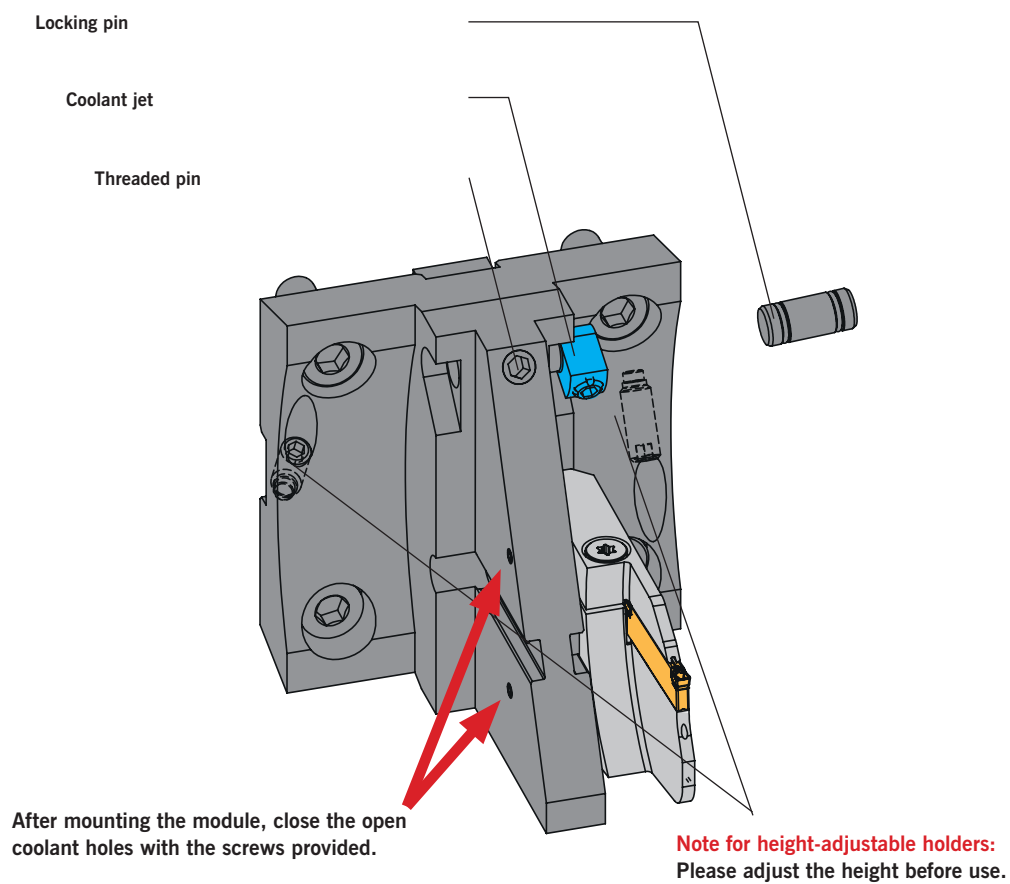
If an additional coolant jet via the mounted coolant nozzle is not desired, please loosen the threaded pin and remove the nozzle. Then insert the enclosed locking pin in the centre and re-tighten the threaded pin.



HDD – Instruction for mounting

Option 2: Right module: coolant with ACS2 and additional coolant jet

If an additional coolant jet via the mounted coolant nozzle is not desired, please loosen the threaded pin and remove the nozzle. Then insert the enclosed locking pin in the centre and re-tighten the threaded pin.

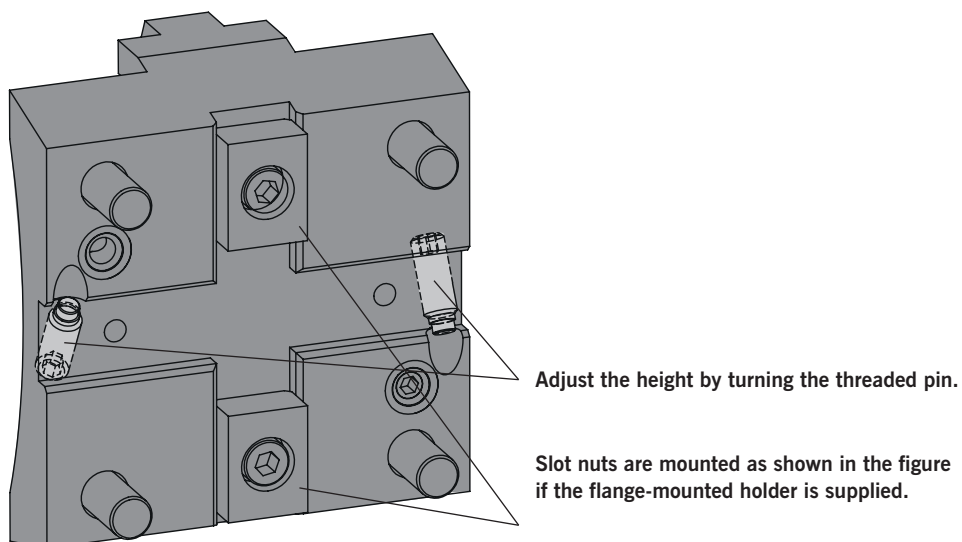


HDD – Instruction for mounting

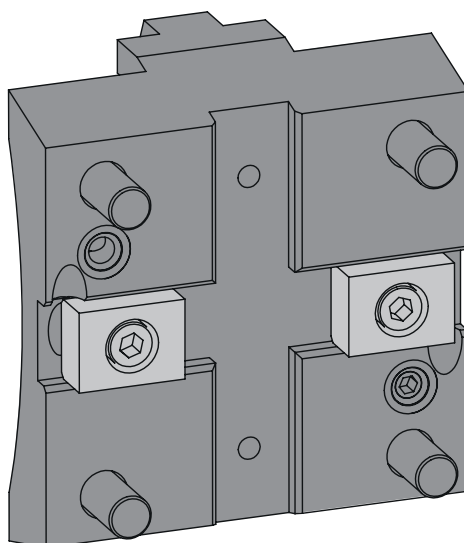
Option 1: height adjustable

Note for height-adjustable holders:
Please adjust the height before use.

Here by the example: HDD-BMT45-
SDS-ACS



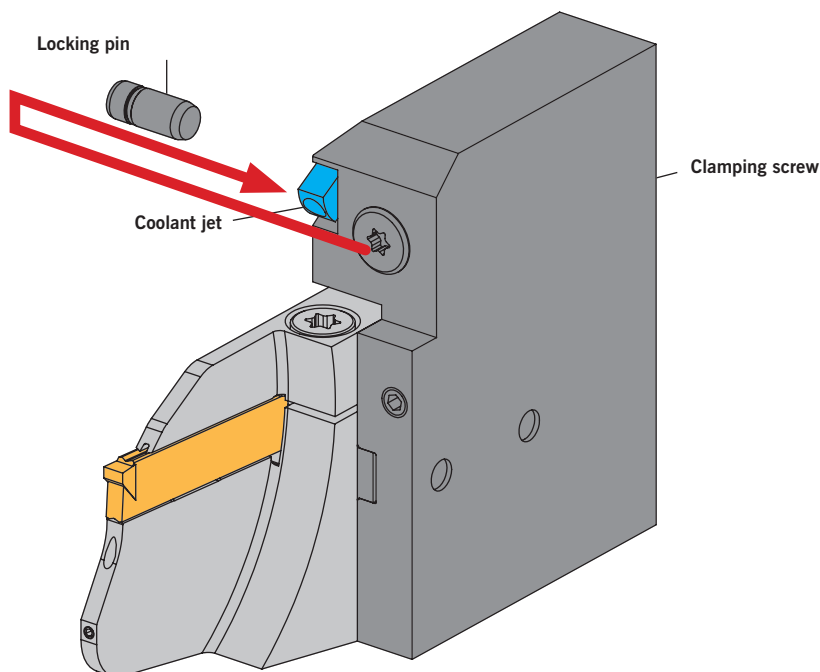
Option 2: height adjustable via machine axis



M9A 0002 – Instruction for mounting

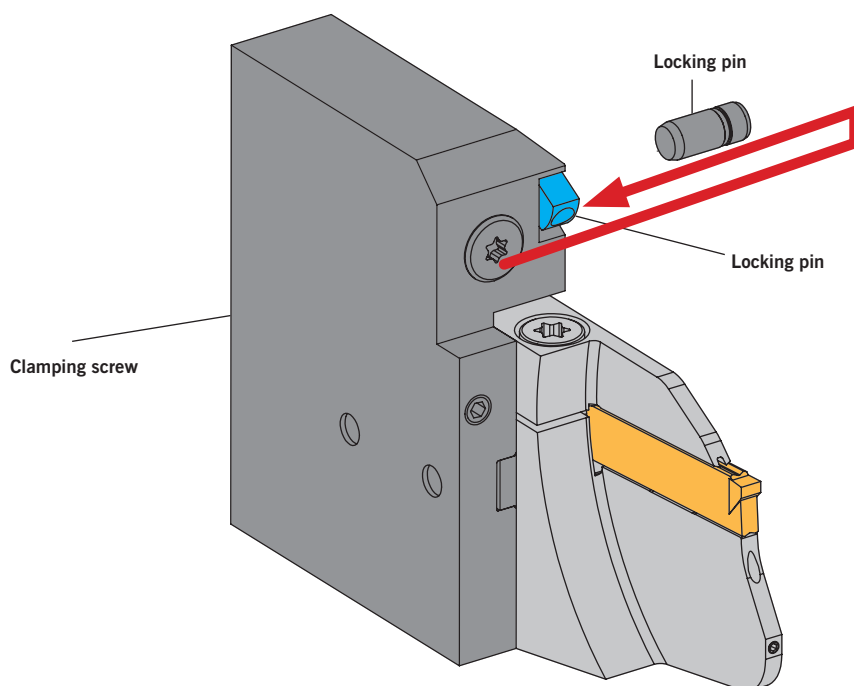
Option 1 – left-hand module:

If an additional coolant jet via the mounted coolant nozzle is not desired, please loosen the threaded pin and remove the nozzle. Then insert the enclosed locking pin in the centre and re-tighten the threaded pin.



Option 2 – right-hand module:

If an additional coolant jet via the mounted coolant nozzle is not desired, please loosen the threaded pin and remove the nozzle. Then insert the enclosed locking pin in the centre and re-tighten the threaded pin.





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