

bilz

# 3D Synchro

Synchro tapping chuck  
Tapping and thread forming

M0,5 to M42



RENEWABLE  
ENERGIES



GENERAL  
MECHANICAL  
ENGINEERING



AUTOMOTIVE



ELECTRONICS



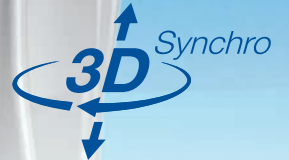
OPTICS



FINE MECHANICS



TOOLMAKING



## Features

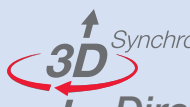
- Minimum length compensation in tension and compression direction
- Ball bearing (i.e. torque-independent) suspension
- Suitable for internal coolant supply up to 80 bar
- Suitable for taps and thread formers
- Suitable for right-hand and left-hand threads
- Optimised spring/damper technology ( $\pm 0.5\text{mm}$ ) 3D Synchro
- Fully encapsulated functional space (washable up to  $80^{\circ}\text{C}$ )
- Optimised seal (comparable to IP68)
- 100% SCK compatible

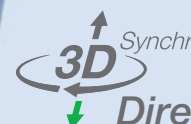
Tool presetting possible from both sides via axial adjustment screw  
(screw is not included in the scope of delivery)

## Advantages

- Drastically reduced pressure on machined thread flanks.
- Compensation of synchronisation errors
- Increased process stability
- Extended tool life of the Tap or Former
- Better thread quality

Our Spring-damper technology reduces loads for tapping and thread forming

 **3D<sup>Synchro</sup>**  
**Direction of rotation**  
Damping during chip breaking

 **3D<sup>Synchro</sup>**  
**Direction of pull**  
Compensate the synchronization errors (Out-feed)

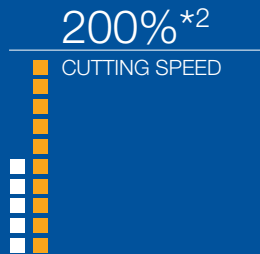
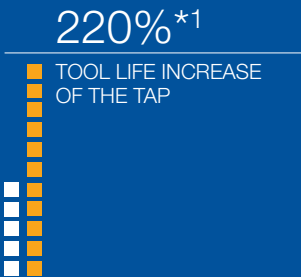
 **3D<sup>Synchro</sup>**  
**Compression dampening**  
Compensates synchronisation errors (In-feed)



# Best application



You can use our 3D-Synchro chuck as a collet chuck for driven tool holders as well as for direct clamping in machine spindles.

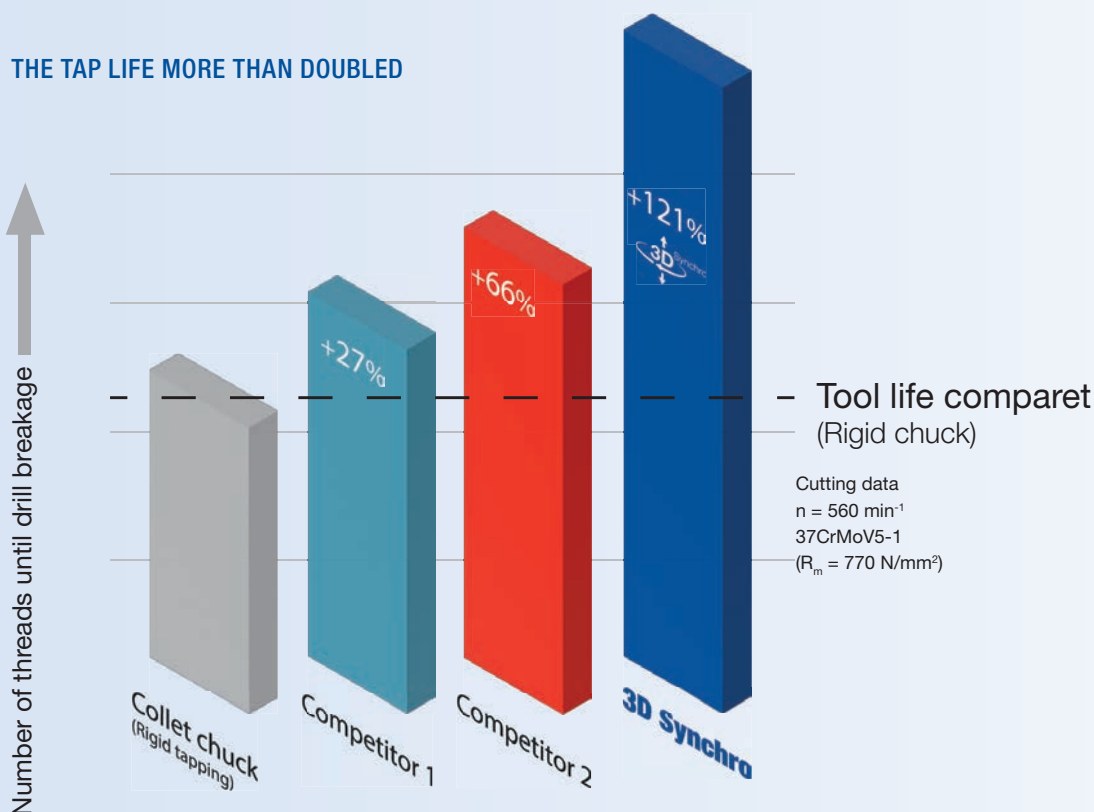


## HIGHER PROCESS STABILITY BETTER THREAD QUALITY LONGER SERVICE LIFE

The latest generation S3D- Synchro chuck has been adapted to the current market requirements. Tool presetting is possible from the machine side and the tool side, the lubricant feed-through has been optimized, thus ensuring a leakage-free transfer to the tap.

The length compensation on tension and compression (e.g. +/- 0.5 mm), as well as the damping in the direction of rotation compensate for the smallest synchronization errors and position deviations. This reduces the pressure on the thread flanks of the tool and minimizes the required

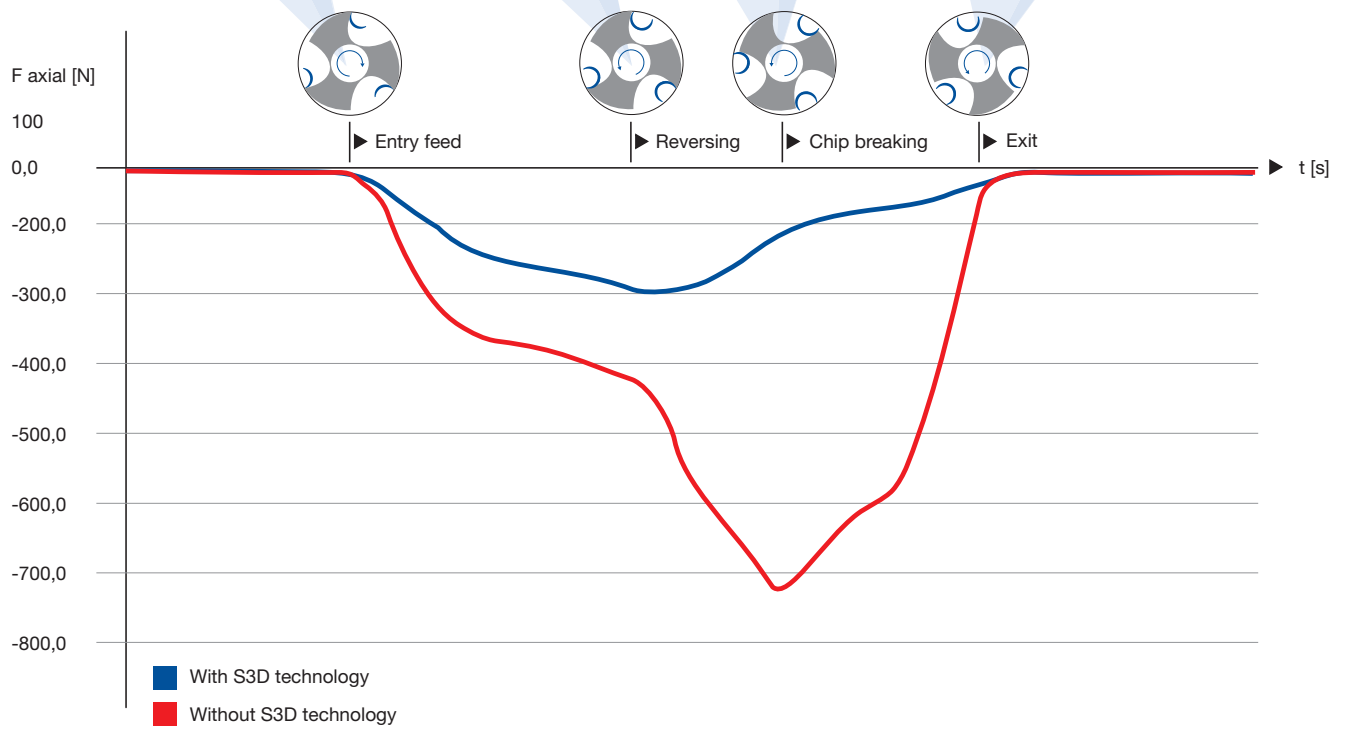
### THE TAP LIFE MORE THAN DOUBLED



\*1 220% tool life of M8 tap in endurance test at  $n = 560 \text{ min}^{-1}$  in X37CrMoV5-1 ( $R_m = 770 \text{ N/mm}^2$ ) with the S3D Synchro chuck compared to 100% tool life with a standard collet holder.

\*2 200% cutting speed = 25 m/min with M10 tap in grey cast iron GG20 ( $R_m > 200 \text{ N/mm}^2$ ) with the S3D Synchro chuck compared to 100% = 12.5 25 m/min with a standard collet holder while maintaining thread quality and tolerance. With the standard collet chuck, the cutting speed could not be increased because the thread forms would no longer be in tolerance.

# REDUCTION OF THE CUTTING LOAD



**3D Synchro** The elastomers used are design stable and resistant to all coolants/lubricants. Due to the defined length compensation, plastic deformation of the damping elements is excluded.

This results in consistent cutting behavior over the entire life of the tool.

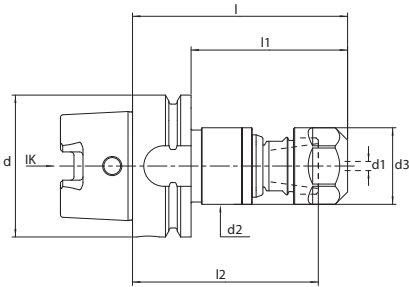
Synchro Chuck	Ideal Thread range	Machine interface	Cooling	Features	Page
S3D	M4-M12	HSK-A	IC		6
S3D	M8-M20	HSK-A	IC		7
S3D	M4-M12	Weldon	IC	DIN1835B+E	9
S3D	M8-M20	Weldon	IC	DIN1835B+E	10
S3D	M4-M12	HSK-A	MQL	1-Channel	11
S3D	M8-M20	HSK-A	MQL	1-Channel	12
S3D	M4-M12	HSK-A	MQL	2-Channel	13
S3D	M8-M20	HSK-A	MQL	2-Channel	14
SCK	M14-M30	HSK-A	IC		15
SCK	M30-M42	HSK-A	IC		16
SCK	M14-M30	Weldon	IC	DIN1835B+E	17
SCK	M30-M42	Weldon	IC	DIN1835B+E	18
S3D	M4-M10	HSK-A	IC	Slim design	20
nano	M0,5-M4,0	Weldon	IC	DIN1835B+E	22
Accessories					21

## THREAD RANGES AND CHUCK SIZES

Which areas can we cover?

Synchro Chuck	Ideal Thread range	Clamping Ø	Thread range permissible
S3D0...ER11	M0,5 - M4	Ø 1 - 5	M0,5 - M4
S3D1...ER20	M4 - M12	Ø 4,5 - 12	M4-M12
S3D2...ER32	M8 - M20	Ø 4,5 - 18	M4-M20
SCK3...ER40	M14 - M30	Ø 10 - 22	M4-M30
SCK4...ER50	M30 - M42	Ø 22 - 32	M4-M42

# S3D – Synchro Chuck for M4-M12



### Accessories:

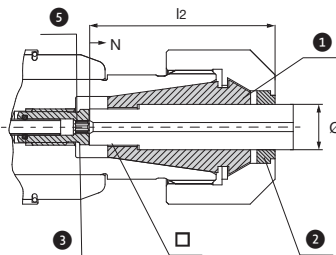
Allen key / length adjustment	
Designation	Id. Nr.
SCK-2,5-90, (l < 104mm)	5012199
SCK-2,5-180, (l > 104mm)	9172118

S3D1-ER20-K1-HSKA									
d1	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
M4-M12	S3D1-ER20-95,5-K1-HSKA63 5181691	+/-0,5	63	34	34	95,5	69,5	82,5	
M4-M12	S3D1-ER20-160-K1-HSKA63 5185749	+/-0,5	63	34	34	160	134	147	
M4-M12	S3D1-ER20-102-K1-HSKA100 5185751	+/-0,5	100	34	34	102	73	89	

Coolant tube, transfer unit and key are not included in the scope of delivery

Coolant pipe / transfer unit	
Designation	Id. Nr.
UE4/HSK63	5025376
UE4/HSK100	5028428

### ER/ESX20 – Clamping units



- 1** Collet      N = Adjustment
  - 2** Sealing disc      l2 = Insert depth
  - 3** Screw      Ø = Shaft diameter
- = Drive square

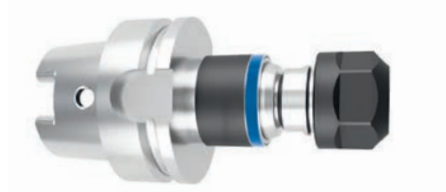
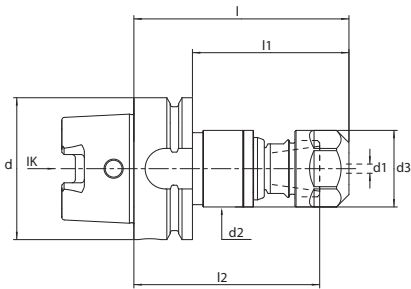
Mounting key	
Designation	Id. Nr.
HSK63	6738421
HSK100	6738303

### ER/ESX..GB auf DIN6499B / ISO15488B / 428E

#### Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)

	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
Ø x □	4,5 x 3,4 SPE4,5x3,4C-ESX20 5013770	ER20/ ESX20	M4	M6	M5	29	3	2,5
	6,0 x 4,9 SPE6x4,9C-ESX20 5012479		M7	M9, M10	M9			
						6,3 x 5,0 SPE6,3x5C-ESX20 5073202		
	7,0 x 5,5 SPE7x5,5C-ESX20 5208940		M9	M12	M10			
						7,1 x 5,6 SPE7,1x5,6C-ESX20 5073203		
	8,0 x 6,2/6,3 SPE8x6,2/6,3C-ESX20 5012481		M12					
						9,0 x 7,0/7,1 SPE9x7/7,1C-ESX20 5012482		
	10,0 x 8,0 SPE10x8C-ESX20 5012483							
						11,0 x 9,0 SPE11x9C-ESX20 5013775		
	11,2 x 9,0 SPE11,2x9C-ESX20 5035343							
						12 x 9,0 SPE12x9C-ESX20 5198365		

# S3D – Synchro Chuck for M8-M20



### Accessories:

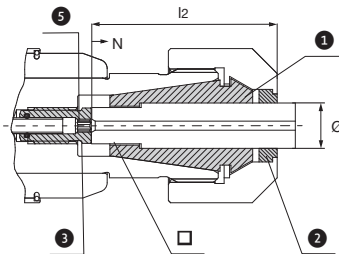
Allen key / length adjustment	
Designation	Id. Nr.
SCK-3-90, (l < 104mm)	5012201
SCK-3-180, (l > 104mm)	9172126

S3D2-ER32-K1-HSKA									
	Designation/Id. Nr.		d	d2	d3	l	l1	l2	d1
M8-M20	S3D2-ER32-109-K1-HSKA63 5190093	+/-0,5	63	50	50	109	83	94,5	
M8-M20	S3D2-ER32-115,5-K1-HSKA100 5190624	+/-0,5	100	50	50	115,5	86,5	101	

Coolant tube, transfer unit and key are not included in the scope of delivery

Coolant pipe / transfer unit	
Designation	Id. Nr.
UE4/HSK63	5025376
UE4/HSK100	5028428

### ER/ESX20 – Clamping units



- Collet
  - Sealing disc
  - Screw
- N = Adjustment  
l2 = Insert depth  
Ø = Shaft diameter  
□ = Drive square

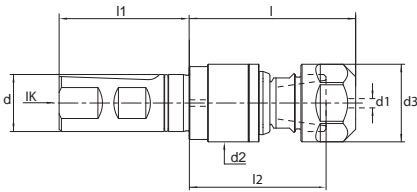
Mounting key	
Designation	Id. Nr.
HSK63	6738421
HSK100	6738303



### ER/ESX...GB auf DIN6499B / ISO15488B / 470E

#### Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)


	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
6,0 x 4,9	SPE6x4,9C-ESX32 5013821	ER32/ ESX32	M5, M6	M8		31	3	3
6,3 x 5,0	SPE6,3x5C-ESX32 5073204							
7,0 x 5,5	SPE7x5,5C-ESX32 5013822		M7	M9, M10				
7,1 x 5,6	SPE7,1x5,6C-ESX32 5073205					36		
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX32 5013823		M8	M11	M8 M10			
9,0 x 7,0/7,1	SPE9x7,7,1C-ESX32 5012485		M9	M12	M12	37		
10,0 x 8,0	SPE10x8C-ESX32 5012486		M10		M10	41		
11,0 x 9,0	SPE11x9C-ESX32 5012487			M14		42		
11,2 x 9,0	SPE11,2x9C-ESX32 5073206				M14			
12,0 x 9,0	SPE12x9C-ESX32 5012488		M12	M16		44		
12,5x10	SPE12,5x10C-ESX32 5035344				M16			
14,0 x 11,0/11,2	SPE14x11/11,2C-ESX32 5012489			M18	M18	45		
16,0 x 12,0/12,5	SPE16x12/12,5C-ESX32 5012490			M20	M22	47		
18,0 x 14,5	SPE18x14,5C-ESX32 5013787			M22, M24				

# S3D – Synchro Chuck for M4-M12



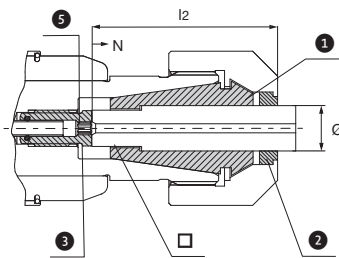
S3D1-ER20-K1-W DIN1835B+E									
	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
d1									
M4-M12	S3D1-ER20-73-K1-W20 5185755	+/-0,5	20	34	34	73		60	
M4-M12	S3D1-ER20-73-K1-W25 5181694	+/-0,5	25	34	34	73		60	





### Accessories:



Allen key / length adjustment	
	
Designation	Id. Nr.
SCK-2,5-90, (l < 104mm)	5012199
SCK-2,5-180, (l > 104mm)	9172118

Allen key is not included in delivery

### ER/ESX20 – Clamping units

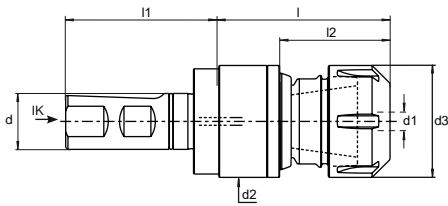


-  Collet      N = Adjustment
-  Sealing disc      l2 = Insert depth
-  Screw      Ø = Shaft diameter
-  Drive square

ER/ESX..GB auf DIN6499B / ISO15488B / 428E								
Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)								
	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
4,5 x 3,4	SPE4,5x3,4C-ESX20 5013770	ER20/ ESX20	M4	M6		29	3	2,5
5,0 x 4,0	SPE5x4C-ESX20 5013774		M5, M6	M8	M5	30		
6,0 x 4,9	SPE6x4,9C-ESX20 5012479				M6 M8	31		
6,3 x 5,0	SPE6,3x5C-ESX20 5073202		M7	M9, M10				
7,0 x 5,5	SPE7x5,5C-ESX20 5208940				M9			
7,1 x 5,6	SPE7,1x5,6C-ESX20 5073203		M8	M11	M8 M10	36		
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX20 5012481		M9	M12	M12	37		
9,0 x 7,0/7,1	SPE9x7,1C-ESX20 5012482		M10		M10	41		
10,0 x 8,0	SPE10x8C-ESX20 5012483				M14			
11,0 x 9,0	SPE11x9C-ESX20 5013775				M14	42		
11,2 x 9,0	SPE11,2x9C-ESX20 5035343							
12,0 x 9,0	SPE12x9C-ESX20 5198365		M12					



# S3D – Synchro Chuck for M8-M20



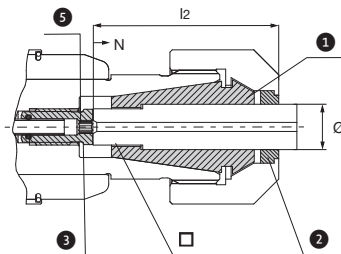
S3D2-ER32-K1-W DIN1835B+E								
d1	Designation/Id. Nr.		d	d2	d3	l	l1	l2
M8-M20	S3D2-ER32-87,5-K1-W25 5190629	+/-0,5	25	50	50	87,5		73

Allen key is not included in delivery

### Accessories:

Allen key / length adjustment	
Designation	Id. Nr.
SCK-3-90, (l < 104mm)	5012201
SCK-3-180, (l > 104mm)	9172126

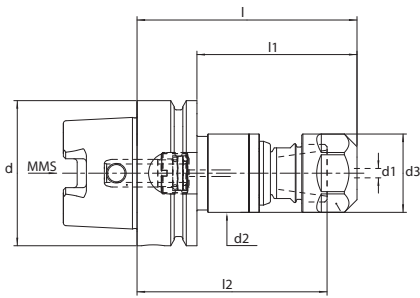
### ER/ESX32 – Clamping units





- 1 Collet      N = Adjustment
- 2 Sealing disc      l2 = Insert depth
- 3 Screw      Ø = Shaft diameter
- = Drive square


ER/ESX..GB auf DIN6499B / ISO15488B / 428E									
Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)									
Ø x □	Designation/Id. Nr. Designation/Id. No.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	5	
6,0 x 4,9	SPE6x4,9C-ESX32 5013821	ER32/ ESX32	M5, M6	M8		31	3	3	
6,3 x 5,0	SPE6,3x5C-ESX32 5073204								
7,0 x 5,5	SPE7x5,5C-ESX32 5013822		M7	M9, M10					
7,1 x 5,6	SPE7,1x5,6C-ESX32 5073205					36			
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX32 5013823		M8	M11	M8 M10				
9,0 x 7,0/7,1	SPE9x7/7,1C-ESX32 5012485		M9	M12	M12	37			
10,0 x 8,0	SPE10x8C-ESX32 5012486		M10		M10	41			
11,0 x 9,0	SPE11x9C-ESX32 5012487			M14		42			
11,2 x 9,0	SPE11,2x9C-ESX32 5073206				M14				
12,0 x 9,0	SPE12x9C-ESX32 5012488		M12	M16		44			
12,5x10	SPE12,5x10C-ESX32 5035344				M16				
14,0 x 11,0/11,2	SPE14x11/11,2C-ESX32 5012489				M18	M18			44
16,0 x 12,0/12,5	SPE16x12/12,5C-ESX32 5012490				M20	M22			45
18,0 x 14,5	SPE18x14,5C-ESX32 5013787				M22, M24				47

# S3D – Synchro Chuck for M4-M12 MQL-1 Channel Version



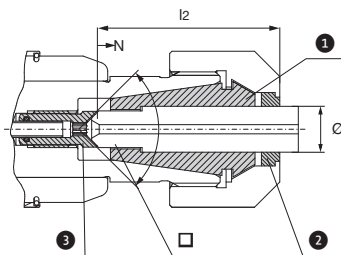
S3D1-ER20-M1-HSKA									
	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
d1									
M4-M12	S3D1-ER20-95,5-M1-HSKA63 5181692	+/-0,5	63	34	34	95,5	69,5	82,5	
M4-M12	S3D1-ER20-160-M1-HSKA63 5185771	+/-0,5	63	34	34	160	134	147	
M4-M12	S3D1-ER20-102-M1-HSKA100 5194488	+/-0,5	100	34	34	102	73	89	





### Accessories:

Allen key / length adjustment	
	
Designation	Id. Nr.
SCK-2,5-90, (l < 104mm)	5012199
SCK-2,5-180, (l > 104mm)	9172118

MQL transfer unit included  
Allen key is not included in delivery



### ER/ESX20 – Clamping units MQL Ausführung



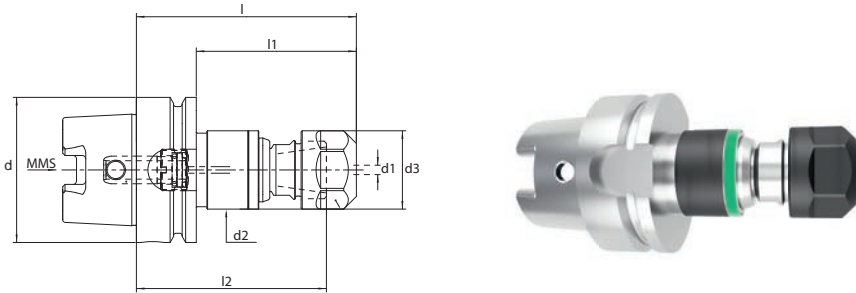
-  Collet      N = Adjustment
  -  Sealing disc      l2 = Insert depth
  -  Screw      Ø = Shaft diameter
-  = Drive square

ER/ESX..GB auf DIN6499B / ISO15488B / 428E

Clamping unit– ER Version B (consisting of collet, sealing disc, adjusting screw)

	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
4,5 x 3,4	SPE4,5x3,4B-ESX20 5047586	ER20/ ESX20	M4	M6		29	2	2,5
5,0 x 4,0	SPE5x4B-ESX20 5047587				M5	30		
6,0 x 4,9	SPE6x4,9B-ESX20 5011485		M5, M6	M8		31	3	
7,0 x 5,5	SPE7x5,5B-ESX20 5011486		M7	M9, M10		31		
8,0 x 6,2/6,3	SPE8x6,2/6,3B-ESX20 5011487		M8	M11	M8, M10	36	3	
9,0 x 7,0/7,1	SPE9x7/7,1B-ESX20 5011488		M9	M12	M12	37		
10,0 x 8,0	SPE10x8B-ESX20 5011489		M10		M10	41		
11,0 x 9,0	SPE11x9B-ESX20 5045461			M14		42		
12,0 x 9,0	SPE12x9B-ESX20 517747		M12					

# S3D – Synchro Chuck for M8-M20 MQL-1 Channel Version



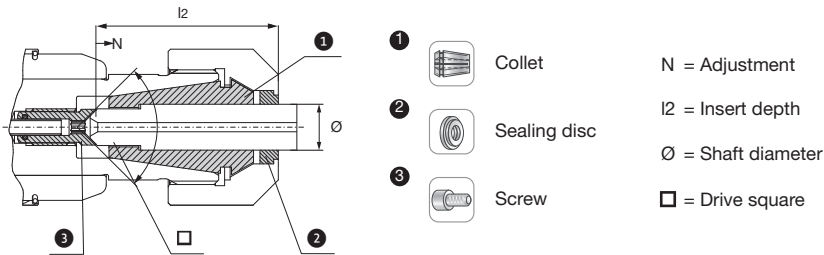
S3D2-ER32-M1-HSKA									
d1	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
M8-M20	S3D2-ER32-109-M1-HSKA63 5189297	+/-0,5	63	50	50	109	83	94,5	
M8-M20	S3D2-ER32-115,5-M1-HSKA100 5190128	+/-0,5	100	50	50	115,5	86,5	101	

### Accessories:

Allen key / length adjustment	
Designation	Id. Nr.
SCK-3-90, (l < 104mm)	5012201
SCK-3-180, (l > 104mm)	9172126

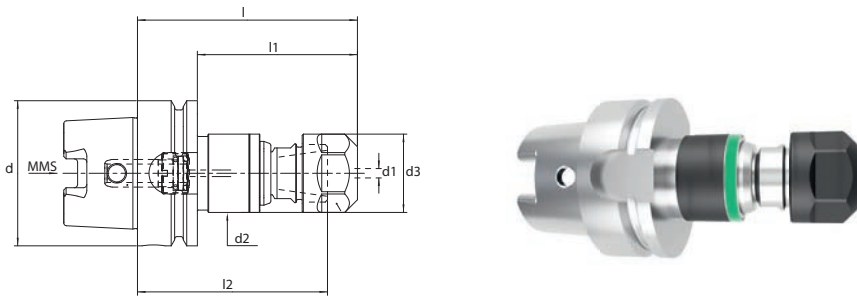
MQL transfer unit included  
Allen key is not included in delivery

### ER/ESX32 – Clamping units MQL Ausführung



ER/ESX..GB auf DIN6499B / ISO15488B / 470E								
Clamping unit– ER Version B (consisting of collet, sealing disc, adjusting screw)								
	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
9,0 x 7,0/7,1	SPE9x7/7,1B-ESX32 5012108	ER32/ ESX32	M9	M12	M12	37	3	3
10,0 x 8,0	SPE10x8B-ESX32 5012109		M10		M10	41		
11,0 x 9,0	SPE11x9B-ESX32 5012110			M14		42		
12,0 x 9,0	SPE12x9B-ESX32 5012111		M12	M16				
14,0 x 11,0	SPE14x11B-ESX32 5012112			M18	M18	44		
16,0 x 12,0/12,5	SPE16x12,5B-ESX32 5012113			M20	M22	45		

# S3D – Synchro Chuck for M4-M12 MQL-2 Channel Version



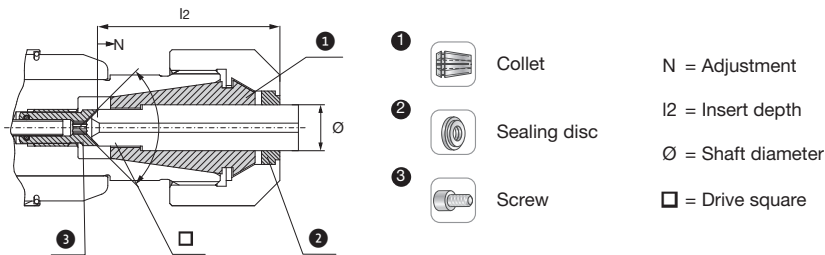
S3D1-ER20-M2-HSKA									
d1	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
M4-M12	S3D1-ER20-95,5-M2-HSKA63 5181693	+/-0,5	63	34	34	95,5	69,5	82,5	
M4-M12	S3D1-ER20-160-M2-HSKA63 5185773	+/-0,5	63	34	34	160	134	147	
M4-M12	S3D1-ER20-102-M2-HSKA100 5185772	+/-0,5	100	34	34	102	73	89	

## Accessories:

Allen key / length adjustment	
Designation	Id. Nr.
SCK-2,5-90, (l < 104mm)	5012199
SCK-2,5-180, (l > 104mm)	9172118

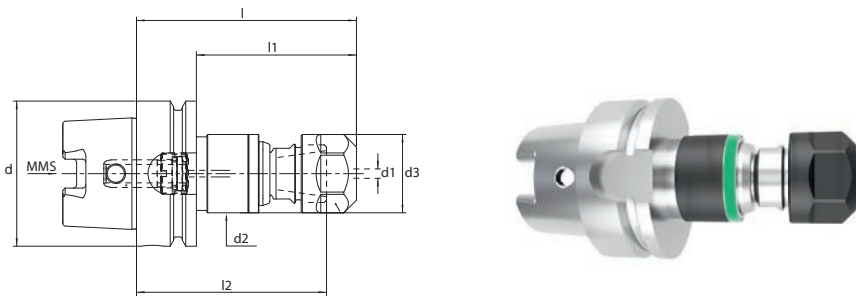
MQL transfer unit included  
Allen key is not included in delivery

## ER/ESX20 – Clamping units MQL Ausführung



ER/ESX..GB auf DIN6499B / ISO15488B / 428E									
Spanneinheit – ER Ausführung B (bestehend aus Collet chuck, Sealing disc, Screw)									
Ø x □	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	5	
4,5 x 3,4	SPE4,5x3,4B-ESX20 5047586	ER20/ ESX20	M4	M6,	M5	29	2	2,5	
5,0 x 4,0	SPE5x4B-ESX20 5047587					30			
6,0 x 4,9	SPE6x4,9B-ESX20 5011485		M5, M6	M8		31	3		
7,0 x 5,5	SPE7x5,5B-ESX20 5011486		M7	M9, M10		31			
8,0 x 6,2/6,3	SPE8x6,2/6,3B-ESX20 5011487		M8	M11	M8, M10	36	3		
9,0 x 7,0/7,1	SPE9x7/7,1B-ESX20 5011488		M9	M12	M12	37			
10,0 x 8,0	SPE10x8B-ESX20 5011489		M10		M10	41			
11,0 x 9,0	SPE11x9B-ESX20 5045461			M14		42			
12x9,0	SPE12x9B-ESX20 517747			M12					

# S3D – Synchro Chuck for M8-M20 MQL-2 Channel Version



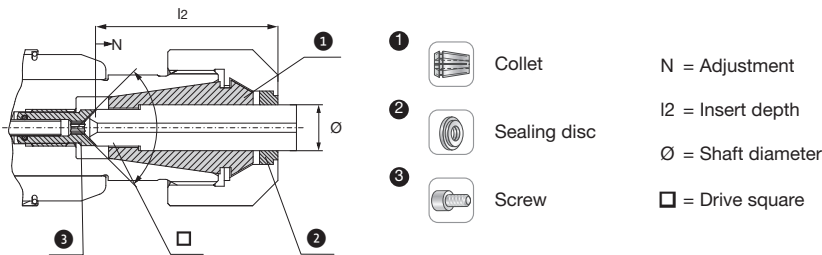
S3D2-ER32-M2-HSKA									
d1	Designation/Id. Nr.			d	d2	d3	l	l1	l2
M8-M20	S3D2-ER32-109-M2-HSKA63 5190631		+/-0,5	63	50	50	109	83	94,5
M8-M20	S3D2-ER32-115,5-M2-HSKA100 5194491		+/-0,5	100	50	50	115,5	86,5	101

Accessories:

Allen key / length adjustment	
Designation	Id. Nr.
SCK-3-90, (l < 104mm)	5012201
SCK-3-180, (l > 104mm)	9172126

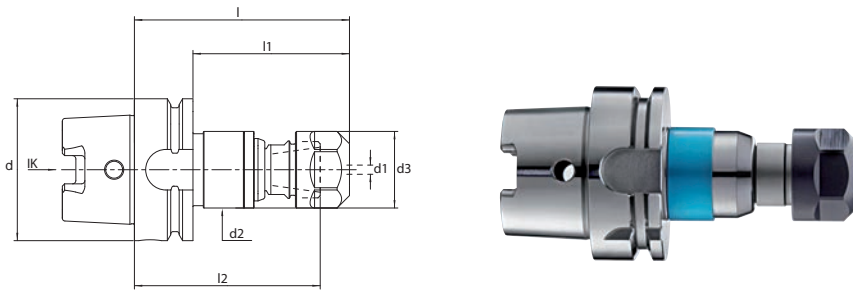
MQL transfer unit included  
Allen key is not included in delivery

## ER/ESX32 – Clamping units MQL Ausführung



ER/ESX..GB auf DIN6499B / ISO15488B / 470E									
Spanneinheit – ER Ausführung B (bestehend aus Collet chuck, Sealing disc, Screw)									
Ø x □	Designation/Id. Nr.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	5	
9,0 x 7,0/7,1	SPE9x7/7,1B-ESX32 5012108	ER32/ ESX32	M9	M12	M12	37	3	3	
10,0 x 8,0	SPE10x8B-ESX32 5012109		M10		M10	41			
11,0 x 9,0	SPE11x9B-ESX32 5012110				M14	42			
12,0 x 9,0	SPE12x9B-ESX32 5012111		M12	M16					
14,0 x 11,0	SPE14x11B-ESX32 5012112				M18	M18			44
16,0 x 12,0/12,5	SPE16x12,5B-ESX32 5012113				M20	M22			45

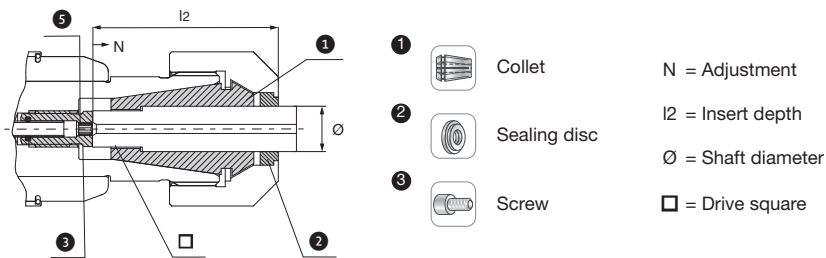
# SCK – Synchro Chuck for M14-M30



SCK3/HSK-A – ESX40									
	Designation/Id. Nr.			d	d2	d3	l	l1	l2
M14-M30 11 - 22	SCK3-146,5/HSK-A63-ESX40-BL 5017524	+/-0,8		63	63	63	146,5	120,5	50,3
M14-M30 11 - 22	SCK3-136/HSK-A80-ESX40-BL 5040638	+/-0,8		80	63	63	136	110	50,3
M14-M30 11 - 22	SCK3-138/HSK-A100-ESX40-BL 5017526	+/-0,8		100	63	63	138	109	50,3

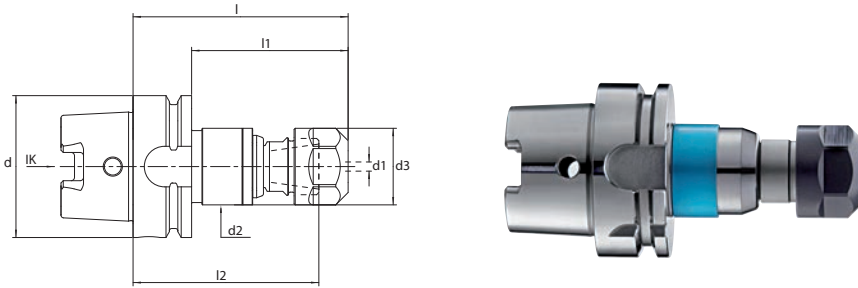
Coolant tube, coolant transfer unit (CT) and adjustment key included



## ER/ESX40 – Clamping units IK



ER/ESX..GB auf DIN6499B /ISO15488B / 472E								
Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)								
	Designation/Id. Nr.	SCK.../ ESX...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
10,0 x 8,0	SPE10x8C-ESX40 5016652	ER40/ ESX40	M10		M10	41	3	3
11,0 x 9,0	SPE11x9C-ESX40 5016653			M14		42		
11,2 x 9	SPE11,2x9C-ESX40 5073207				M14			
12,0 x 9,0	SPE12x9C-ESX40 5016654		M12	M16		44		
14,0 x 11,0/11,2	SPE14x11/11,2C-ESX40 5016655			M18	M20			
16,0 x 12,0/12,5	SPE16x12/12,5C-ESX40 5016656			M20	M22	45		
18,0 x 14,5	SPE18x14,5C-ESX40 5016657			M22		47		
20,0 x 16,0	SPE20x16C-ESX40 5016658			M27	M27 M30	52		
22,0 x 18,0	SPE22x18C-ESX40 5016659			M30		54		

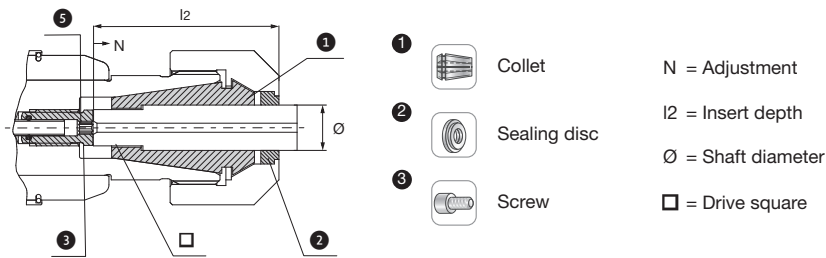
# SCK – Synchro Chuck for M30-M42




SCK3/HSK-A – ESX50								
	Designation/Id. Nr.		d	d2	d3	l	l1	l2
M30-M42	SCK4-205/HSK-A100-ESX50-BL	+/-2,0	100	100	78	205	176	66
22 - 32	5085403							

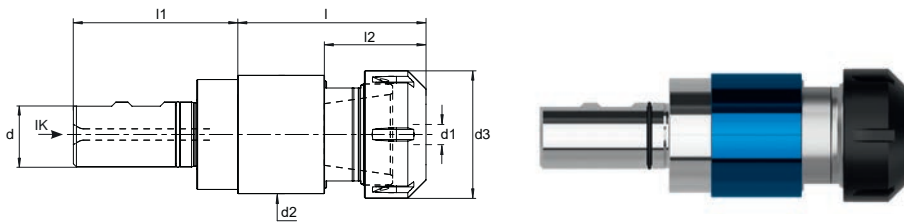
Coolant tube, coolant transfer unit (CT) and adjustment key included

## ER/ESX50 – Clamping units IK



ER/ESX..GB auf DIN6499B /ISO15488B / 477E								
Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)								
	Designation/Id. Nr.	SCK.../ ESX...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
22 x 18	SPE22x18C-ESX50 5085426	ER50/ ESX50		M30		69	4	6
25 x 20	SPE25x20C-ESX50 5085427			M33	M36	71		
28 x 22	SPE28x22C-ESX50 5085428			M36		73		
32 x 24	SPE32x24C-ESX50 5085429			M39 M42		75		

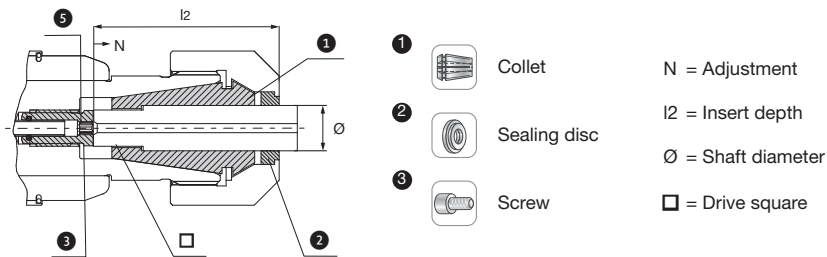
# SCK – Synchro Chuck for M14-M30



SCK3/W – ESX40 DIN1835B+E								
	Designation/Id. Nr.		d	d2	d3	l	l1	l2
M14-M30	SCK3-113,5//W32-ESX40-BL	+/-0,8	32	63	63	113,5	61	50,3
11 - 22	5017528							

Adjustment key included!

## ER/ESX40 – Clamping units IK



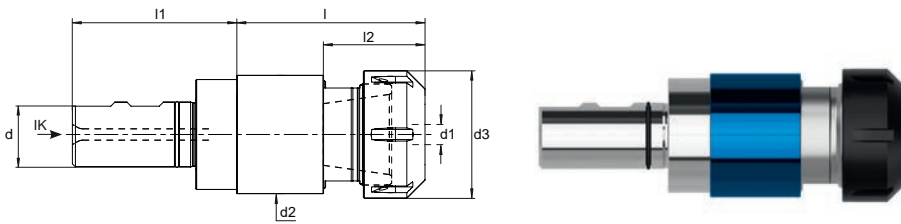
## ER/ESX..GB auf DIN6499B /ISO15488B / 472E

Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)

	Designation/Id. Nr.	SCK.../ ESX...	DIN 371	DIN374 DIN 376	ISO	l2	N		
10,0 x 8,0	SPE10x8C-ESX40 5016652	ER40/ ESX40	M10		M10	41	3	6	
11,0 x 9,0	SPE11x9C-ESX40 5016653			M14		42			
11,2 x 9	SPE11,2x9C-ESX40 5073207				M14				
12,0 x 9,0	SPE12x9C-ESX40 5016654		M12	M16		44			
14,0 x 11,0/11,2	SPE14x11/11,2C-ESX40 5016655			M18	M18				
16,0 x 12,0/12,5	SPE16x12/12,5C-ESX40 5016656			M20	M22				45
18,0 x 14,5	SPE18x14,5C-ESX40 5016657			M22					47
20,0 x 16,0	SPE20x16C-ESX40 5016658				M27 M30	52			
22,0 x 18,0	SPE22x18C-ESX40 5016659				M30	54			



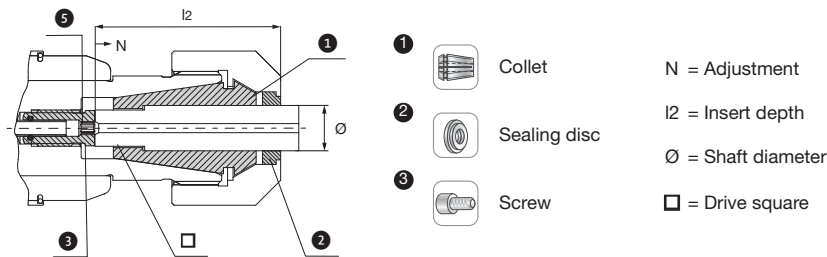
# SCK – Synchro Chuck for M30-M42



SCK4/W – ESX50 DIN1835B+E									
	Designation/Id. Nr.		d	d2	d3	l	l1	l2	
M30-M42	SCK4-176/W40-ESX50-BL	+/-2,0	40	100	78	176	71	66	
22 - 32	5085404								

Adjustment key included!

## ER/ESX50 – Clamping units IK



ER/ESX..GB auf DIN6499B /ISO15488B / 477E								
Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)								
	Designation/Id. Nr.	SCK.../ ESX...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
22 x 18	SPE22x18C-ESX50 5085426	ER50/ ESX50		M30		69	4	6
25 x 20	SPE25x20C-ESX50 5085427			M33	M36	71		
28 x 22	SPE28x22C-ESX50 5085428			M36		73		
32 x 24	SPE32x24C-ESX50 5085429			M39 M42		75		

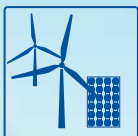
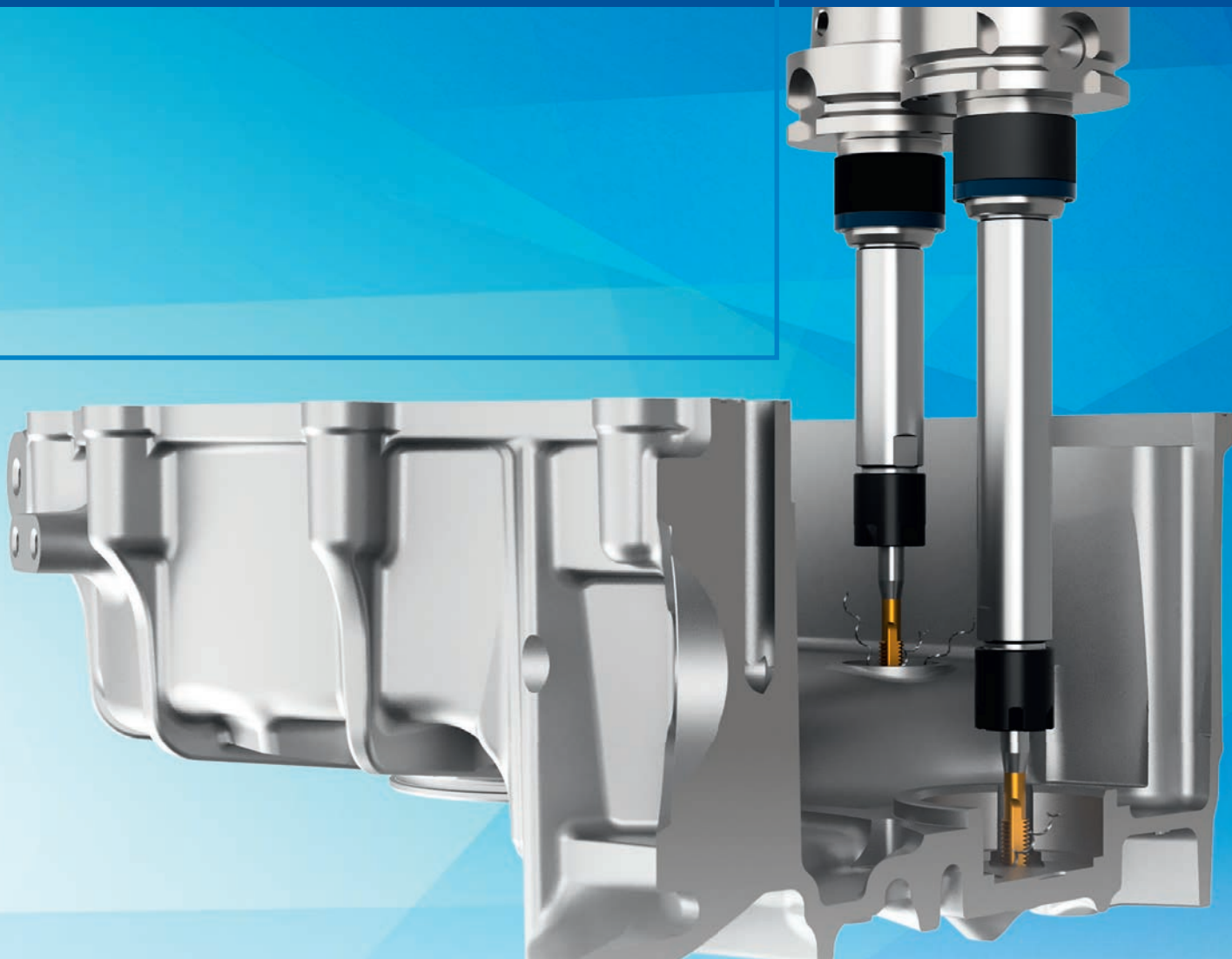
# 3D Synchro

Slim design

Synchro tapping chuck

Tapping and thread forming

M4 to M10



RENEWABLE  
ENERGY



GENERAL  
MECHANICAL  
ENGINEERING



AUTOMOTIVE



ELEKTRONIC



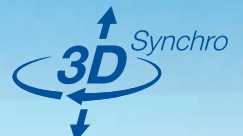
OPTICS



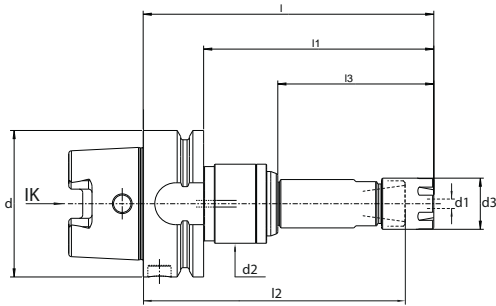
PRECISION  
ENGINEERING



TOOLMAKING



# S3D – Synchro Chuck for M4-M10 Slim design



### Accessories:

#### Allen key / length adjustment



Designation	Id. Nr.
SCK-2,5-90, l = (0 - 100mm)	5012201
SCK-2,5-190, l = (101 - 190mm)	9172126
SCK-2,5-320, l = (191 - 330mm)	9173934

#### Coolant pipe / transfer unit



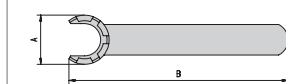
Designation	Id. Nr.
UE4/HSK63	5025376
UE4/HSK100	5028428

#### Mounting key



Designation	Id. Nr.
HSK63	6738421
HSK100	6738303

#### Wrench

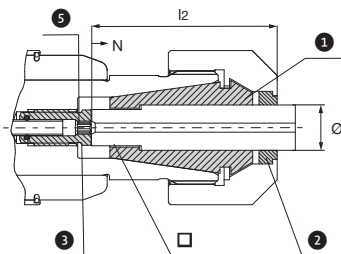


Designation	Id. Nr.
E16M	6932510

S3D1-ER16M-K1-HSKA63										
d1	Designation/Id. Nr.		d	d2	d3	l	l1	l2	l3	
M4-M10	S3D1-ER16M-125-K1-HSKA63 5216277	+/- 0,5	63	34	22	125	99	113,5	67,1	
	S3D1-ER16M-150-K1-HSKA63 5216278	+/- 0,5	63	34	22	150	124	138,5	92,1	
	S3D1-ER16M-175-K1-HSKA63 5216279	+/- 0,5	63	34	22	175	149	163,5	117,1	
	S3D1-ER16M-200-K1-HSKA63 5216280	+/- 0,5	63	34	22	200	174	188,5	142,1	
S3D1-ER16M-K1-HSKA100										
M4-M10	S3D1-ER16M-125-K1-HSKA100 5216329	+/- 0,5	63	34		125	99	113,5	60,6	
	S3D1-ER16M-150-K1-HSKA100 5216330	+/- 0,5	63	34	22	150	124	138,5	85,6	
	S3D1-ER16M-175-K1-HSKA100 5216331	+/- 0,5	63	34	22	175	149	163,5	110,6	
	S3D1-ER16M-200-K1-HSKA100 5216332	+/- 0,5	63	34	22	200	174	188,5	135,6	

Coolant tube, transfer unit and key are not included in the scope of delivery

### ER/ESX16 – Clamping units



- Collet      N = Adjustment
- Sealing disc      l2 = Insert depth
- Screw      Ø = Shaft diameter
- Drive square

ER/ESX...GB auf DIN6499B / ISO15488B / 470E

Clamping unit– ER Version C (consisting of collet, sealing disc, adjusting screw)

	Designation/Id. Nr.	S3D.../ ER...	DIN371	DIN374 DIN376	ISO	l2	N	
4,5x3,4	SPE4,5x3,4C-ESX16 5046280	ER16/ ESX16	M4	M6	M5	29	2	2
5,0x4,0	SPE5x4C-ESX16 5046279		M5, M6	M8		30	3	
6,0x4,9	SPE6x4,9C-ESX16 5046276				31			
7,0x5,5	SPE7x5,5C-ESX16 5046275				31			
8,0x6,2	SPE8x6,2C-ESX16 5046274				36			
9,0x7,0	SPE9x7C-ESX16 5033588				37			

\* For easy processing

Variant	Designation Id. Nr.		A	B	C	L1		L2	SW
						Collet chuck			
Clamping Nut for sealing disc						with Drive square	without Drive square		
S3D1 ER16*	EX16-IC 6931372		28	22,5	M22x1,5	12	12,0–15,5	5	25
S3D1 ER20	EX20-IC 6931227		34	24	M25x1,5	13	13,0–16,5	5	30
S3D2 ER25	EX25-IC 6941678		42	25	M32x1,5	13,5	13,5–17,0	5	
S3D2 ER32	EX32-IC 6933897		50	27,5	M40x1,5	14,5	14,5–18,0	5	
SCK3 ESX40	EX40-IC 6948425		63	30,5	M50x1,5	16,5	16,5–20,0	5	
SCK4 ESX50	EX50-IC 5085410		78	40,3	M64x2	19	19,0–26,0	7	

\* Not compatible with S3D...ER16M...

Torque wrench TORCO-FIX				
	Designation	Id.Nr.	L1	Torque Nm
	TORCO-FIX I	6734177	335	10 – 50
	TORCO-FIX II	6734178	465	40 – 200
	TORCO-FIX III	6734179	565	60 – 300

Variant	Assembly keys TORCO-FIX					
		Designation	Nr	TORCO-Fix	a	b
ER11		A-E11P	5047900	I	32	61
ER16		A-E16P	6953670	I, II	44	71
ER20		A-E20P	5003125	II	52	81
ER25		A-E25	6953671	II	70	72
ER32		A-E32	6952304	II, III	80	72
ESX40		A-E40	5000742	II, III	96	82
ESX50		A-E50	5003124	III	111	94
ER11M		A-E 11M	5047901	I	16,8	54,4
ER16M		A-E 16M	5047902	I, II	22,5	56,2
ER20M		A-E20M	5047903	I, II	29	68,2
ER25M		A-E25M	5076778	I, II	36	70,0



Mounting fixture			
Designation/Id. Nr.	h mm	l mm	b mm
S3D0-SCK3 5195314	220	108	200
Compatible with S3D... ER11M, ...ER16M, ...ER20, ... ER32 und SCK...ESX40			



**BILZ WERKZEUGFABRIK  
GmbH & Co. KG**  
Vogelsangstr. 8  
73760 Ostfildern  
Deutschland / Germany  
Telefon +49 711 348 01 - 0  
Telefax +49 711 348 12 56  
info@bilz.de  
www.bilz.de



台北 02-2703-0193  
台中 04-2463-6890  
www.gcarbideool.com



*Produktions- und Vertriebsstandorte der LEITZ-Group  
Production and sales locations of the LEITZ Group*

- **Bilz**
- **Boehlerit**
- **Leitz**