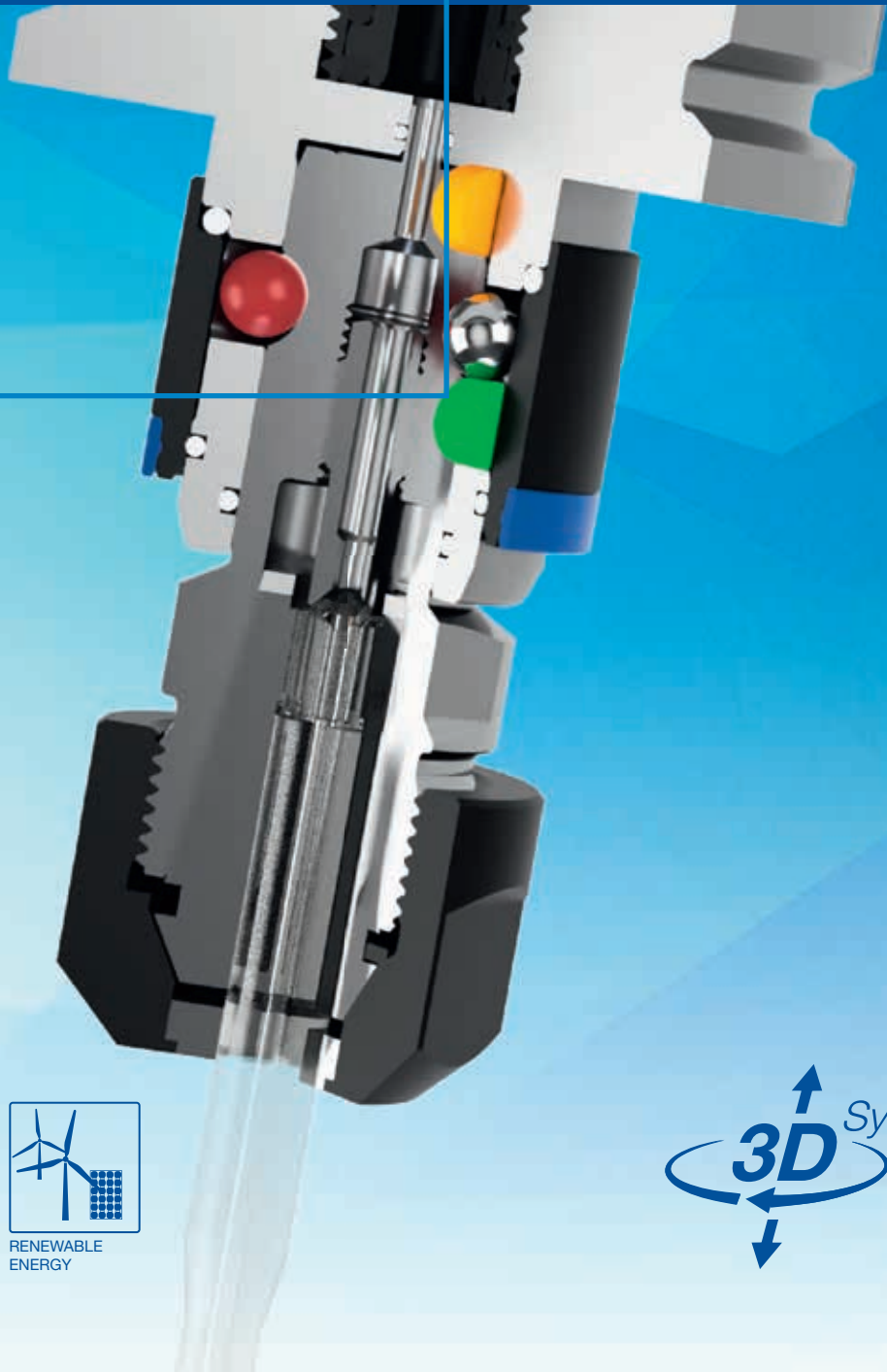


# 3D Synchro

Synchro tapping chuck



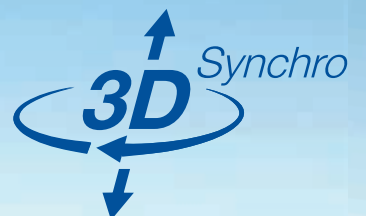
AUTOMOTIVE



GENERAL  
MECHANICAL  
ENGINEERING



RENEWABLE  
ENERGY



## Features

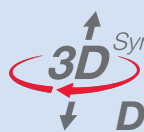
- Minimum length compensation in compression and tension direction
- Ball bearing mounted (i.e. torque independent) suspension
- Suitable for internal coolant supply up to 80 bar
- Suitable for taps and thread formers
- Suitable for right-hand and left-hand threads
- Optimized spring-damper technology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

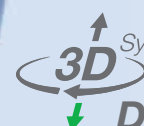
Tool presetting via axial adjustment screw possible from both sides  
(screw is not included in the scope of delivery)

## Advantag

- Reduction of the pressure on the thread flanks Compensation of synchronization errors
- Higher process stability  
Longer tap life
- Better thread quality

The patented  
spring-damper technology  
reduces stresses during  
tapping and forming

 **Direction  
of rotation**  
Damping during  
chip breaking

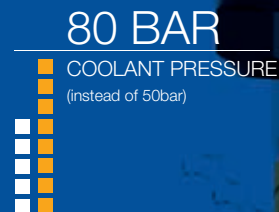
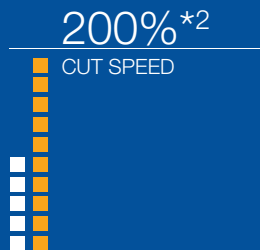
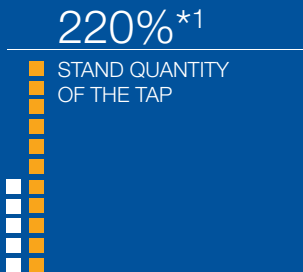
 **Direction of pull**  
Compensate  
the synchronization errors

 **Print direction**  
Steaming at the gate

# Best application

**bilz**

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

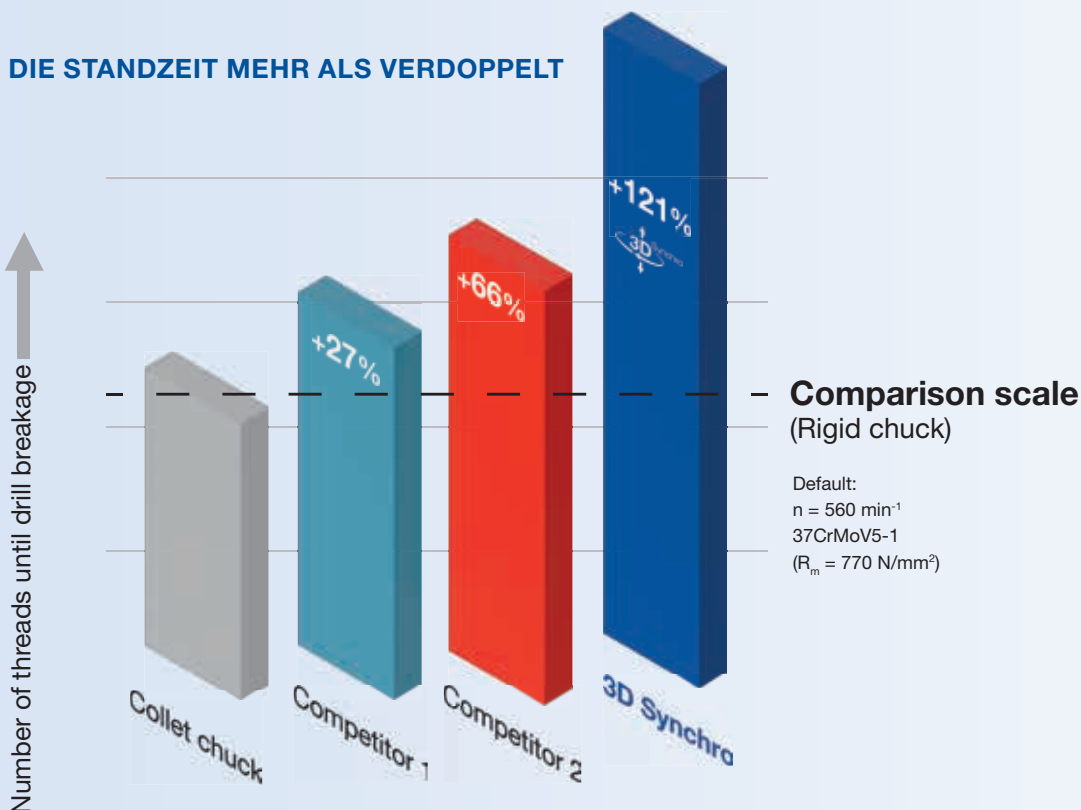


## HIGHER PROCESS STABILITY BETTER THREAD QUALITY LONGER SERVICE LIFE

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 compression and tension (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

## DIE STANDZEIT MEHR ALS VERDOPPELT

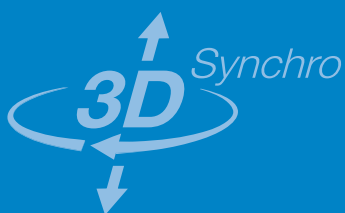
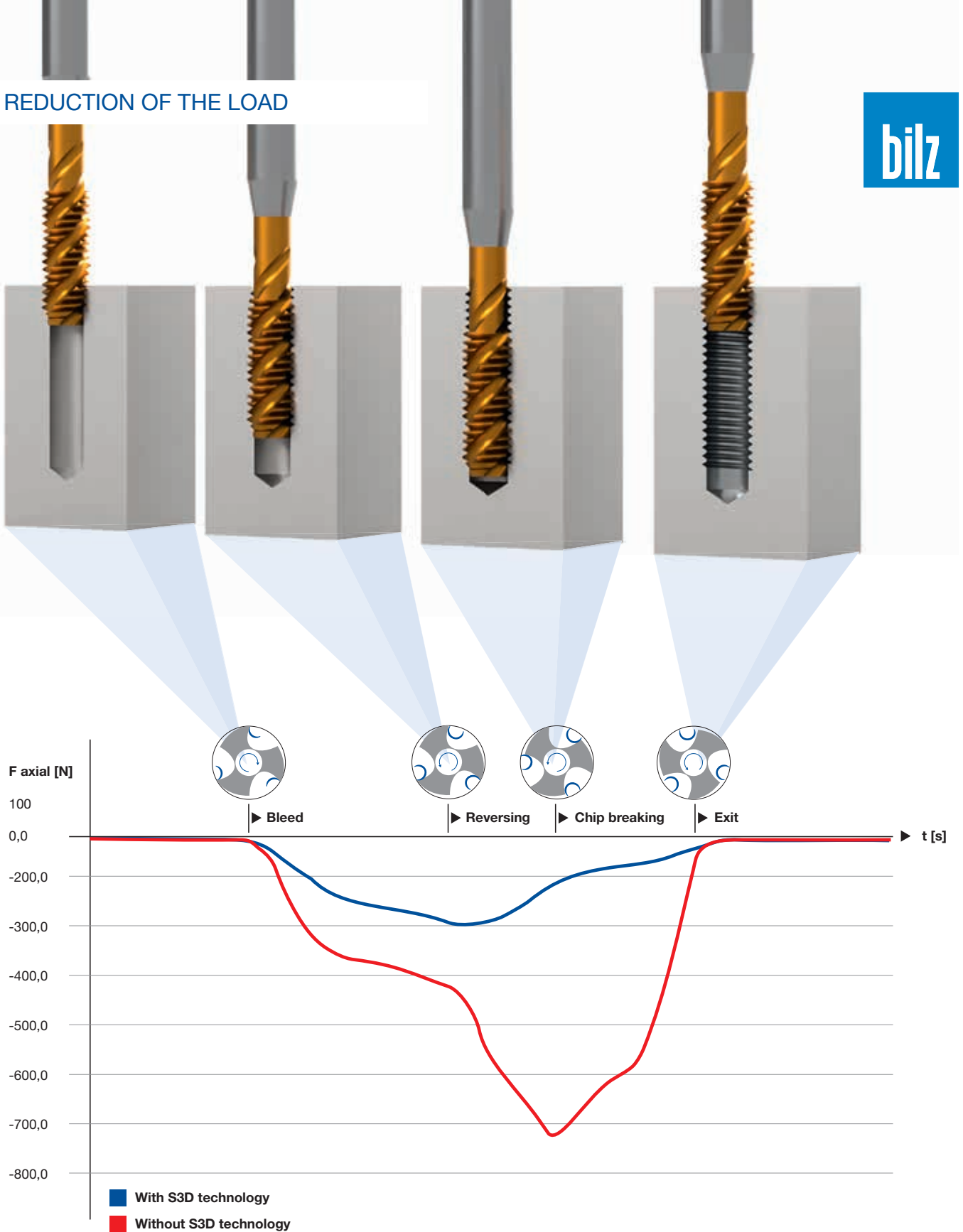


\*<sup>1</sup> 220% tool life of M8 tap in endurance test at  $n = 560 \text{ min}^{-1}$  in X37CrMoV5-1 ( $R_m = 770 \text{ N/mm}^2$ ) with the S3D Synchro chuck compared to 100% tool life with a standard collet holder.

\*<sup>2</sup> 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, otherwise the threads would no longer be within tolerance.

## REDUCTION OF THE LOAD

**bilz**



The elastomers used are dimensionally 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.

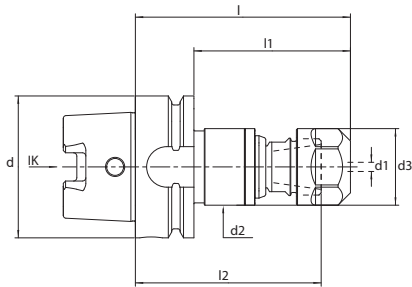
Synchro Chuck M4-M12 HSK-A IC	Page 8
Synchro Chuck M8-M20 HSK-A IC	Page 9
Synchro Chuck M4-M12 Weldon IC DIN1835B+E	Page 10
Synchro Chuck M8-M20 Weldon IC DIN1835B+E	Page 11
Synchro Chuck M4-M12 HSK-A MQL 1-Channel	Page 12
Synchro Chuck M8-M20 HSK-A MQL 1-Channel	Page 13
Synchro Chuck M4-M12 HSK-A MQL 2-Channel	Page 14
Synchro Chuck M8-M20 HSK-A MQL 2-Channel	Page 15
Synchro Chuck M10-M30 HSK-A IC	Page 16
Synchro Chuck M30-M42 HSK-A IC	Page 17
Accessories	from Page 18

## THREAD RANGES AND CHUCK SIZES

Which areas can we cover?

Synchro Chuck	Thread range optimal	Spann Ø	Thread range permissible
S3D1...ER20	M4 - M12	Ø 4,5 - 11,2	M4-M12
S3D2...ER32	M8 - M20	Ø 4,5 - 18	M4-M20
SCK3...ER40	M10 - M30	Ø 10 - 20	M4-M30
SCK4...ER50	M22 - M48	Ø 22 - 36	M4-M42

## S3D – Synchro Chuck for M4-M12



### Accessories:

#### Allen key / length adjustment



Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199
SCK-2,5-180, (l > 160mm)	9172118

#### Coolant pipe / transfer unit



Designation	Id. No.
UE4/HSK63	5025376
UE4/HSK100	5028428

#### Mounting key

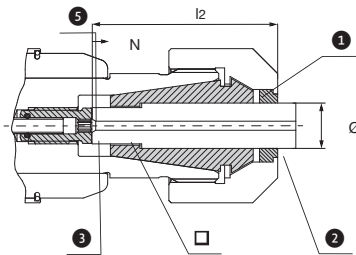


Designation	Id. No.
HSK63	6738421
HSK100	6738303

S3D1-ER20-K1-HSKA								
d1	Designation/Id. No.		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



### ER/ESX20 – Clamping units



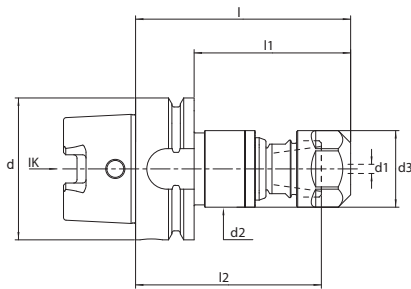
- 1 Collet chuck N = Adjustment
- 2 Screw l2 = Insert depth
- 3 Nut Ø = Shaft diameter
- = Drive square

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

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

 Ø x □	Designation/Id. No.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	 S
4,5 x 3,4	SPE4,5x3,4C-ESX20 5013770	ER20/ ESX20	M4	M6		29		2,5
5,0 x 4,0	SPE5x4C-ESX20 5013774				M5	30		
6,0 x 4,9	SPE6x4,9C-ESX20 5012479		M5, M6	M8		31		
6,3 x 5,0	SPE6,3x5C-ESX20 5073202				M6 M8			
7,0 x 5,5	SPE7x5,5C-ESX20 5012480		M7	M9, M10				
7,1 x 5,6	SPE7,1x5,6C-ESX20 5073203				M9			
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX20 5012481		M8	M11	M8 M10	36	3	
9,0 x 7,0/7,1	SPE9x7/7,1C-ESX20 5012482		M9	M12	M12	37		
10,0 x 8,0	SPE10x8C-ESX20 5012483		M10		M10	41		
11,0 x 9,0	SPE11x9C-ESX20 5013775			M14		42		
11,2 x 9,0	SPE11,2x9C-ESX20 5035343							

## S3D – Synchro Chuck for M8-M20



### Accessories:

#### Allen key / length adjustment



Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199
SCK-2,5-180, (l > 160mm)	9172118

#### Coolant pipe / transfer unit





Designation	Id. No.
UE4/HSK63	5025376
UE4/HSK100	5028428

#### Mounting key



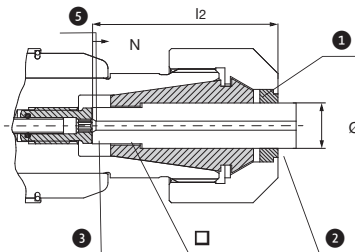
Designation	Id. No.
HSK63	6738421
HSK100	6738303

### S3D2-ER32-K1-HSKA

	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M8-M24	S3D2-ER32-109-K1-HSKA63 5190093	+/-0,5	63	50	50	109	83	94,5
M8-M24	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



### ER/ESX32 – Clamping units



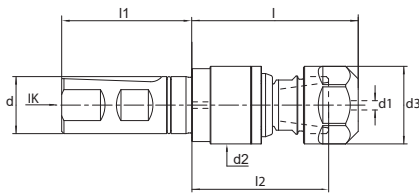
- 1 Collet chuck N = Adjustment
- 2 Screw l2 = Insert depth
- 3 Nut Ø = Shaft diameter
- = Drive square

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



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

 Ø x □	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	
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							
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX32 5013823		M8	M11	M8 M10	36		
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							
12,0 x 9,0	SPE12x9C-ESX32 5012488		M12	M16				
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		4






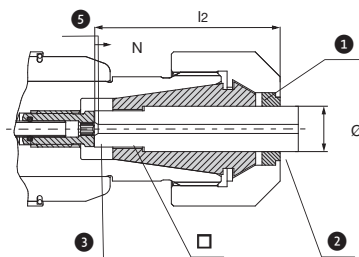
Accessories:




S3D1-ER20-K1-W DIN1835B+E								
	Designation/Id. No.		d	d2	d3	l	l1	l2
M4-M12	S3D1-ER20-73-K1-W20 5185755	+/-0,5	25	34	34	73		60
M4-M12	S3D1-ER20-73-K1-W25 5185749	+/-0,5	25	34	34	73		60



Allen key is not included in delivery

Allen key / length adjustment	
	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199

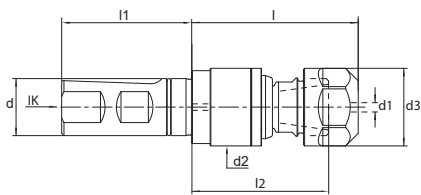
ER/ESX20 – Clamping units



-  Collet chuck
  -  Screw
  -  Nut
- N = Adjustment  
l2 = Insert depth  
Ø = Shaft diameter  
□ = Drive square

ER/ESX..GB at DIN6499B / ISO15488B / 428E								
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)								
 Ø x □	Designation/Id. No.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l2	N	 S
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	30		
6,0 x 4,9	SPE6x4,9C-ESX20 5012479		M5, M6	M8		31		
6,3 x 5,0	SPE6,3x5C-ESX20 5073202				M6 M8			
7,0 x 5,5	SPE7x5,5C-ESX20 5012480		M7	M9, M10				
7,1 x 5,6	SPE7,1x5,6C-ESX20 5073203				M9			
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX20 5012481		M8	M11	M8 M10	36		
9,0 x 7,0/7,1	SPE9x7/7,1C-ESX20 5012482		M9	M12	M12	37		
10,0 x 8,0	SPE10x8C-ESX20 5012483		M10		M10	41		
11,0 x 9,0	SPE11x9C-ESX20 5013775			M14		42		
11,2 x 9,0	SPE11,2x9C-ESX20 5035343							





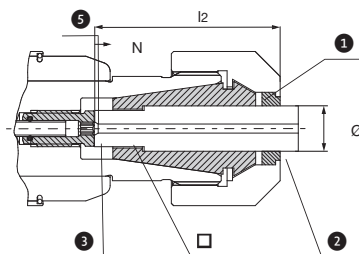
## Accessories:

S3D2-ER32-K1-W DIN1835B+E								
d1	Designation/Id. No.		d	d2	d3	l	l1	l2
M4-M12	S3D2-ER32-87,5-K1-W25 5190629	+/-0,5	25	50	50	87,5		73



Allen key is not included in delivery

Allen key / length adjustment	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199

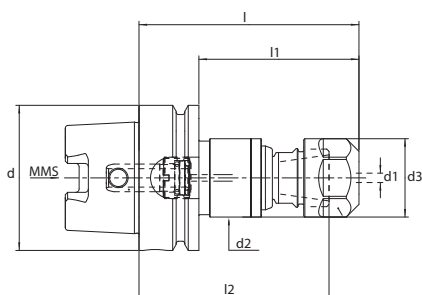
## ER/ESX32 – Clamping units





- Collet chuck      N = Adjustment
- Screw      l2 = Insert depth
- Nut      Ø = Shaft diameter
- Drive square

ER/ESX..GB at DIN6499B / ISO15488B / 428E									
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)									
 Ø x □	Designation/Id. No.	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								
8,0 x 6,2/6,3	SPE8x6,2/6,3C-ESX32 5013823		M8	M11	M8 M10	36			
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								
12,0 x 9,0	SPE12x9C-ESX32 5012488		M12	M16					
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	4

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




### Accessories:

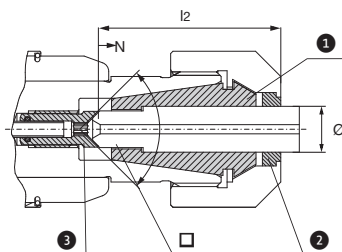
S3D1-ER20-M1-HSKA								
	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M4-M12	S3D1-ER20-95,5-M1-HSKA63 5190093	+/-0,5	63	34	34	95,5	69,5	82,5
M4-M12	S3D1-ER20-160-M1-HSKA63 5185771	+/-0,5	63	34	34	160	134	147
M4-M12	S3D1-ER20-102-M1-HSKA100 5194488	+/-0,5	100	34	34	102	73	89





MQL transfer unit included



Allen key is not included in delivery

Allen key / length adjustment	
	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199
SCK-2,5-180, (l > 160mm)	9172118

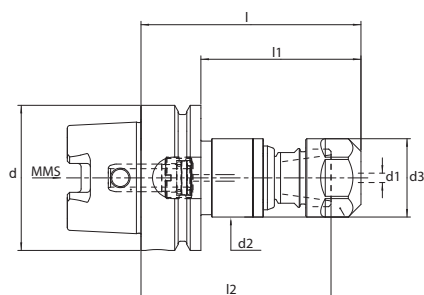
## ER/ESX20 – Clamping units MQL Version





-  Collet chuck      N = Adjustment
-  Screw      l2 = Insert depth
-  Nut      Ø = Shaft diameter
-  = Drive square

ER/ESX..GB at DIN6499B / ISO15488B / 428E								
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)								
 Ø x □	Designation/Id. No.	S3D.../ ER...	DIN 371	DIN 374 DIN 376	ISO	l <sub>2</sub>	N	 5
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		


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



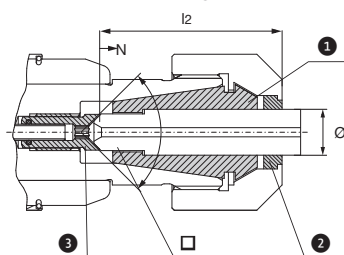
### Accessories:





S3D2-ER32-M1-HSKA								
	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M8-M24	S3D2-ER32-109-M1-HSKA63 5189297	+/-0,5	63	50	50	109	83	94,5
M8-M24	S3D2-ER32-115,5-M1-HSKA100 5190128	+/-0,5	100	50	50	115,5	86,5	101



MQL transfer unit included  
Allen key is not included in delivery

Allen key / length adjustment	
	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199

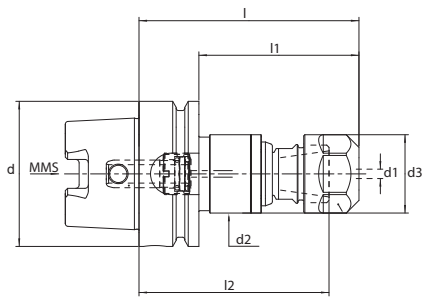
## ER/ESX32 – Clamping units MQL Version





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

ER/ESX..GB at DIN6499B / ISO15488B / 470E								
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)								
	Designation/Id. No.	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		44		
14,0 x 11,0	SPE14x11B-ESX32 5012112			M18	M18	45		
16,0 x 12,0/12,5	SPE16x12,5B-ESX32 5012113			M20	M22			


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



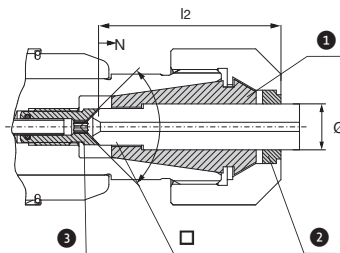
### Accessories:




S3D1-ER20-M2-HSKA								
	Designation/Id. No.		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



MQL transfer unit included  
Allen key is not included in delivery

Allen key / length adjustment	
	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199
SCK-2,5-180, (l > 160mm)	9172118

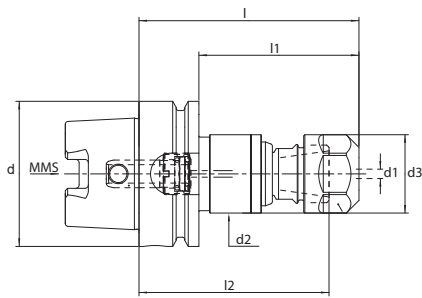
### ER/ESX20 – Clamping units MQL Version





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

ER/ESX..GB at DIN6499B / ISO15488B / 428E								
Clamping unit– ER Version B (consisting of collet, sealing washer, adjusting screw)								
 Ø x □	Designation/Id. No.	S3D.../ ER...	DIN371	DIN374 DIN376	ISO	l2	N	 5
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		


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



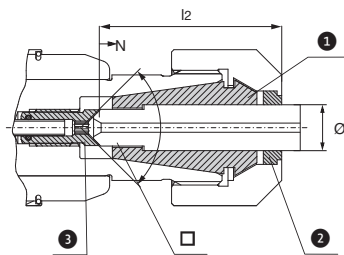
#### Accessories:




S3D1-ER32-M2-HSKA								
	Designation/Id. No.		d	d2	d3	l	l1	l2
M4-M12	S3D2-ER32-109-M2-HSKA63 5190631	+/-0,5	63	50	50	109	83	94,5
M4-M12	S3D2-ER32-115,5-M2-HSKA100 5194491	+/-0,5	100	34	34	115,5	86,5	101



MQL transfer unit included  
Allen key is not included in delivery

Allen key / length adjustment	
	
Designation	Id. No.
SCK-2,5-90, (l < 160mm)	5012199

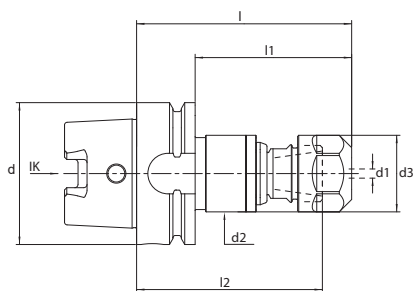
### ER/ESX32 – Clamping units MQL Version





-  Collet chuck
  -  Screw
  -  Nut
- N = Adjustment  
l2 = Insert depth  
Ø = Shaft diameter  
□ = Drive square

ER/ESX..GB at DIN6499B / ISO15488B / 470E								
Clamping unit– ER Version B (consisting of collet, sealing washer, adjusting screw)								
	Designation/Id. No.	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		44		
14,0 x 11,0	SPE14x11B-ESX32 5012112			M18	M18	45		
16,0 x 12,0/12,5	SPE16x12,5B-ESX32 5012113			M20	M22			

## SCK – Synchro Chuck for M10-M30

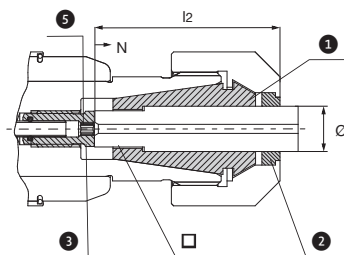





### SCK3/HSK-A – ESX40

	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M14-M30 11 - 22	SCK3-146,5/HSK-A63-ESX40-BL 5017524	+/-0,8	63	63	58,5	146,5	120,5	50,3
M14-M30 11 - 22	SCK3-136/HSK-A80-ESX40-BL 5040638	+/-0,8	80	63	58,5	136	110	50,3
M14-M30 11 - 22	SCK3-138/HSK-A100-ESX40-BL 5017526	+/-0,8	100	63	58,5	138	109	50,3

Coolant tube, UE transfer unit and adjustment key included



## ER/ESX40 – Clamping units IK



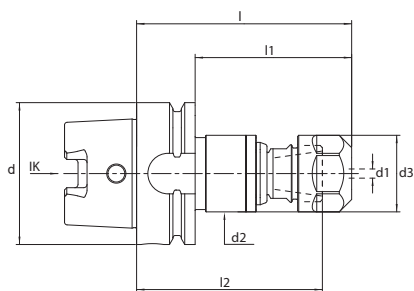
-  Collet chuck
  -  Screw
  -  Nut
- N = Adjustment  
l2 = Insert depth  
Ø = Shaft diameter  
□ = Drive square

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



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

 Ø x □	Designation/Id. No.	SCK.../ ESX...	DIN371	DIN374 DIN376	ISO	l2	N	 5	
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 M30	52			
22,0 x 18,0	SPE22x18C-ESX40 5016659				M30				54

## SCK – Synchro Chuck for M30-M42

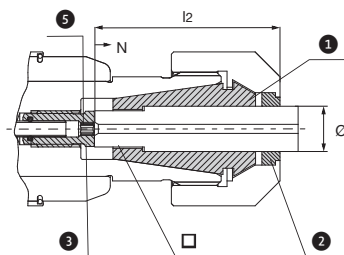


### SCK3/HSK-A – ESX50

	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M30-M42	SCK4-205/HSK-A100-ESX50-BL	+/-2,0	100	100	78	205	176	66
22 - 32	5085403							

Coolant tube, UE transfer unit and adjustment key included

## ER/ESX50 – Clamping units IK



Collet chuck

Screw

Nut

N = Adjustment



l2 = Insert depth

Ø = Shaft diameter

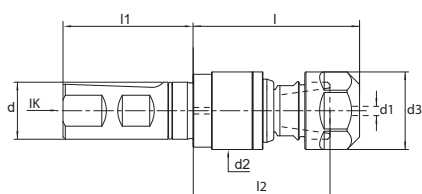
□ = Drive square



### ER/ESX..GB at DIN6499B / ISO15488B / 477E

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

	Designation/Id. No.	SCK.../ ESX...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
Ø x □								5
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		

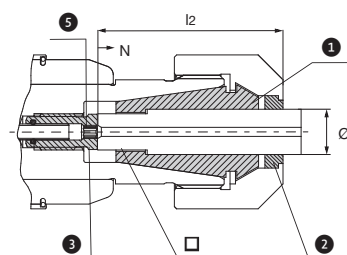




SCK3/HSK-W – ESX40 DIN1835B+E								
	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
M14-M30	SCK3-113,5/W32-ESX40-BL	+/-0,8	32	63	58,5	113,5	61	50,3
11 - 22	5085403							

Adjustment key included!

## ER/ESX40 – Clamping units IK



Collet chuck

Screw



Nut

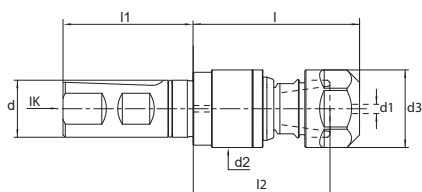
N = Adjustment



l2 = Insert depth

Ø = Shaft diameter

□ = Drive square

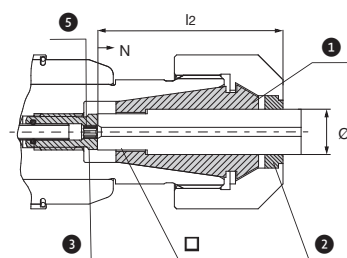
ER/ESX..GB at DIN6499B / ISO15488B / 472E								
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)								
 Ø x □	Designation/Id. No.	SCK.../ ESX...	DIN371	DIN 374 DIN 376	ISO	l2	N	 5
10,0 x 8,0	SPE10x8C-ESX40 5016652	ER40/ ESX40	M10		M10	41	3	6
11,0 x 9,0	SPE11x9C-ESX40 5016653			M14		42		
11,2 x 9	SPE11,2x9C-ESX40 5073207				M14			
12,0 x 9,0	SPE12x9C-ESX40 5016654		M12	M16				
14,0 x 11,0/11,2	SPE14x11/11,2C-ESX40 5016655			M18	M18	44		
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		









SCK4/HSK-W – ESX50 DIN1835B+E								
	Designation/Id. No.		d	d2	d3	l	l1	l2
d1								
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



-  Collet chuck
  -  Screw
  -  Nut
- N = Adjustment  
 l2 = Insert depth  
 Ø = Shaft diameter  
 = Drive square

ER/ESX..GB at DIN6499B /ISO15488B / 477E								
Clamping unit– ER Version C (consisting of collet, sealing washer, adjusting screw)								
	Designation/Id. No.	SCK.../ ESX...	DIN 371	DIN 374 DIN 376	ISO	l2	N	
Ø x □								5
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		

Designation/Id. No.		A	B	C	L1	L2	SW
<b>Clamping Nut for sealing disc / wrench</b>							
EX16-IC 6931372		28	22,5	M22x1,5	12,0–15,5	5	25
EX20-IC 6931227		34	24	M25x1,5	13,0–16,5	5	30
EX25-IC 6941678		42	25	M32x1,5	13,5–17,0	5	
EX32-IC 6933897		50	27,5	M40x1,5	14,5–18,0	5	
EX40-IC 6948425		63	30,5	M50x1,5	16,5–20,0	5	
EX50-IC 5085410		78	40,3	M64x2	19,0–26,0	7	

<b>Torque wrench TORCO-FIX</b>				
	Designation	Id.No.	I 1	Torque Nm
	TORCO-FIX I	6734177	335	5 – 50
	TORCO-FIX II	6734178	465	20 – 200
	TORCO-FIX III	6734179	565	60 – 300

<b>Fitting keys TORCO-FIX</b>					
	Bez. Des.	Nr No	TORCO-FIX	a	b
	A-E11P	5047900	I	32	61
	A-E16P	6953670	I, II	44	71
	A-E20P	5003125	II	52	81
	A-E25	6953671	II	70	72
	A-E32	6952304	II, III	80	72
	A-E40	5000742	II, III	96	82
	A-E50	5003124	III	111	94
	A-E11M	5047901	I	16,8	54,4
	A-E16M	5047902	I, II	22,5	56,2
	A-E20M	5047903	I, II	29	68,2
	A-E25M	5076778	I, II	36	70,0
	16Z-SW15	5056892	I	34,5	32
	16Z-SW23	5056896	I, II	56	32
	16Z-SW30	5056897	I, II	68	32

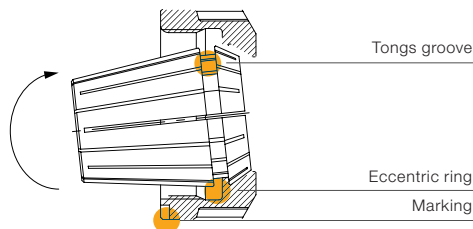


Mounting fixture for S3D1, S3D2, SCK3

Designation/Id. No.		h mm	l mm	b mm
S3D1-SCK3 5195314	SCK0-3	220	108	200

Id-No.			ESX	Ø mm	ESX-GB	Bez./Id.Nr.	TORCO-FIX Fitting key
Tightening torque collet nut							
E16P-25 5105244			8 Nm	1		A-E16P	
			20 Nm	1,5–3,5		6953670	
			40 Nm	4,0–4,5	40 Nm		
			56 Nm	5,0–10,0	44 Nm		
E20P-30 5105245			16 Nm	1		A-E20P	
			32 Nm	1,5–6,5	32 Nm	5003125	
			80 Nm	7,0–13,0	35 Nm		
E25 6921608			24 Nm	1,0–3,5		A-E 25	
			56 Nm	4,0–4,5	56 Nm	6953671	
			80 Nm	5,0–7,5	80 Nm		
			104 Nm	8,0–17,0	80 Nm		
E32 6921609			24 Nm	2,0–2,5	24 Nm	A-E 32	
			136 Nm	3,0–22,0	136 Nm	6952304	
E40 6921610			176 Nm	3,0–26,0	176 Nm	A-E 40	
						5000742	
E50 6951711			240 Nm	22,0–32,0	300 Nm	A-E 50	
						5003124	

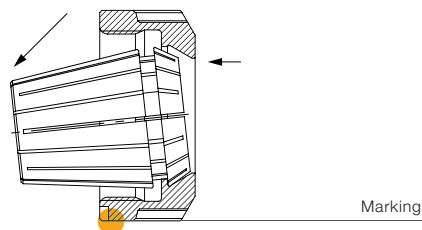
## Important notes



### Assembling Collet:

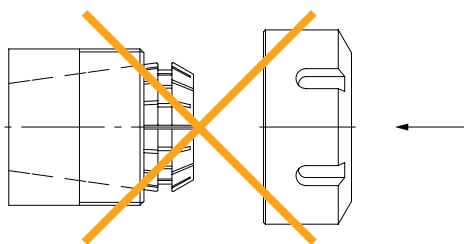
Insert groove of the collet into eccentric ring of the clamping nut at the mark on the bottom of the nut. Push collet in the direction of the arrow until it clicks in.

Insert tool. Screw nut with collet onto tool holder.



### Removing Collet:

After the nut is unscrewed from the toolholder, press on the face of the collet while simultaneously pushing sideways on the back of the collet opposite the mark until it disengages from the clamping nut.



**Improper assembly** can permanently damage the concentricity of the collet and may result in the destruction of the clamping nut. Only mount nuts with correctly inserted collets. Never place the collet into the holder without first assembling into the nut.

Customer proximity and innovative spirit  
have characterized our actions since 1919.

**bilz**

- Thermogrip® shrink fit machines
- Thread tensioning technology
- Pendulum holder
- Special tools
- Shrink fit chucks
- Complete supplier for
- Tool clamping technology

## Our novelties at a glance



- **Engraving chuck - ETO**  
Engraving at almost all surfaces
- **ThermoGrip® Corona Jet 2.0**  
Optimized coolant supply that sets standards
- **AOCS Quick Change System for industrial robots**  
Coupling and uncoupling of Machining tools
- **ThermoGrip® BIONICS**  
Shrink fit chucks with bionic Structural Optimization



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