

# SYNCHRO TAP CHUCKS



PERFORMANCE  
★★★★★



## FEATURES

- $\pm 0.5\text{mm}$  length compensation which reduces synchronization errors
- ER collet output
- Available with taper shank (e.g. BT40) or Weldon shank (for use with side lock arbor)

## BENEFITS

- Better quality threads
- Prevention of broken taps
- Longer tap tool life
- Possible to use Synchro Taps for high speed tapping

## High Performance SYNCHRO TAP CHUCKS for RIGID tapping

Synchro Tap Chucks are the simple answer to the problem of broken taps, oversized or poor quality threads and insufficient tool life in rigid tapping applications.

The special design has  $\pm 0.5\text{mm}$  tension and compression which compensates for any error in the synchronisation cycle or play in the spindle.

The result is reliable tapping, with better quality threads and longer tool life.



# CONTENTS

BT MAS BT30, BT40, BT50..... P1074	WELDON Syter Series..... P1076
DIN 69871 SK40, SK50..... P1075	TAPPING ER COLLETS ER-MD Series ..... P1077
HSK-A HSK63-A..... P1076	TAPPING ER COLLET SETS ER-MD Series ..... P1077

## HIGH PERFORMANCE SYNCHRO TAP CHUCKS FOR RIGID TAPPING



Modern CNC machines allow synchronous thread tapping without a tension & compression chuck, also called "rigid tapping". The backlash of the spindle causes stress to one side of the tap. This may result in reduced tool life and lack of quality in the thread form.

Synchro tapping chucks compensate for the length errors caused by backlash and achieve optimum performance from your taps.

- For tapping with synchronized feed mechanism
- For high speed tapping or normal speed rigid tapping
- Reduced tapping load during inversion phase
- Minimal synchronization error by special design
- Minimum length compensation (+/-<0.5mm)
- Through coolant
- For use with ER-MD square drive tapping ER collets



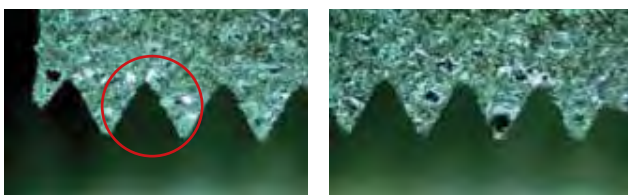
## COMPARISON OF THREAD FORMS

When tapping under the same cutting conditions the threads formed using ER Collet Chucks seem to be damaged and out of form due to synchronization error, when compared to those machined using Synchro Tap Chucks.

SYNCHRO TAP CHUCK



Excellent cutting face



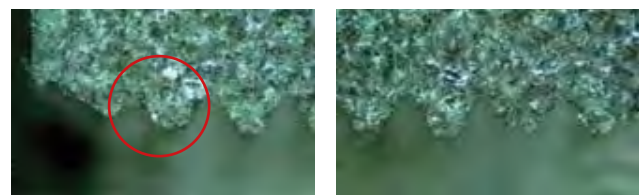
Intro part after 1 time use

End part after 1 time use

ER COLLET CHUCK



Poor cutting face



Intro part after 1 time use

End part after 1 time use

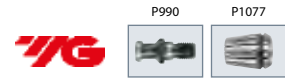
## SYNCHRO TAP CHUCKS BT MAS

For Reliable Rigid Tapping with ER Collets at Conventional or High Speeds



### SYTER SERIES

- ▶ ER output - use with ER-MD style collets
- ▶ AD/B though coolant
- ▶ BT MAS taper



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
BT40	ER16MD	28	79	3.5 - 8	M3 - M8	Hex	BT40AD/B-SYTER12-79	▲
	ER20MD	34	85	3.5 - 10	M3 - M10	Hex	BT40AD/B-SYTER16-85	▲
	ER25MD	42	90	3.5 - 12	M3 - M16	Std	BT40AD/B-SYTER20-90	▲
	ER32MD	50	100	3.5 - 16	M3 - M20	Std	BT40AD/B-SYTER27-100	▲
	ER40MD	63	125	6 - 20	M4.5 - M27	Std	BT40AD/B-SYTER33-125	▲
BT50	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	BT50AD/B-SYTER12-100	▲
	ER20MD	34	100	3.5 - 10	M3 - M10	Hex	BT50AD/B-SYTER16-100	▲
	ER25MD	42	100	3.5 - 12	M3 - M16	Std	BT50AD/B-SYTER20-100	▲
	ER32MD	50	110	3.5 - 16	M3 - M20	Std	BT50AD/B-SYTER27-110	▲
	ER40MD	63	125	6 - 20	M4.5 - M27	Std	BT50AD/B-SYTER33-125	▲

### DST SERIES

- ▶ ER output - use with ER-MD style collets
- ▶ AD though coolant
- ▶ BT MAS taper



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
BT30	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	BT30-DST10-100	▲
BT40	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	BT40-DST10-100	▲
	ER32MD	50	110	3.5 - 16	M3 - M20	Std	BT40-DST22-110	▲
BT50	ER16MD	28	110	3.5 - 8	M3 - M8	Hex	BT50-DST10-110	▲
	ER32MD	50	125	3.5 - 16	M3 - M20	Std	BT50-DST22-130	▲

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

### ER WRENCHES & NUTS SYNCHRO TAP CHUCKS

	HEXAGON NUT		STANDARD NUT		
	ER16	ER20	ER25	ER32	ER40
Wrench	WER16	WER20	WER25	WER32	WER40
Nut	CN16	CN20	CN25	CN32	CN40

## SYNCHRO TAPS FOR HIGH SPEED TAPPING



See Page 868



### S24/S80 TXC SERIES



<45m/min on Carbon Steel  
<30m/min on Alloy Steel  
<25m/min on Stainless Steel

### S20 TXC SERIES



<30m/min on Grey Cast Iron  
<30m/min on Aluminium Alloys  
<40m/min on Copper Alloys

### K24/K25/K82/K83 X-TXC INOX SERIES



<15m/min on Stainless Steel  
<25m/min on Alloy Steel



**SYNCHRO TAP CHUCKS DIN 69871**

For Reliable Rigid Tapping with ER Collets at Conventional or High Speeds



**SYTER SERIES**

- ▶ ER output - use with ER-MD style collets
- ▶ AD/B though coolant
- ▶ DIN 69871 taper



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
SK40	ER16MD	28	79	3.5 - 8	M3 - M8	Hex	SK40AD/B-SYTER12-79	▲
	ER20MD	34	85	3.5 - 10	M3 - M10	Hex	SK40AD/B-SYTER16-85	▲
	ER25MD	42	90	3.5 - 12	M3 - M16	Std	SK40AD/B-SYTER20-90	▲
	ER32MD	50	100	3.5 - 16	M3 - M20	Std	SK40AD/B-SYTER27-100	▲
	ER40MD	63	125	6 - 20	M4.5 - M27	Std	SK40AD/B-SYTER33-105	▲
SK50	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	SK50AD/B-SYTER12-79	▲
	ER20MD	34	100	3.5 - 10	M3 - M10	Hex	SK50AD/B-SYTER16-85	▲
	ER25MD	42	100	3.5 - 12	M3 - M16	Std	SK50AD/B-SYTER20-90	▲
	ER32MD	50	110	3.5 - 16	M3 - M20	Std	SK50AD/B-SYTER27-100	▲
	ER40MD	63	125	6 - 20	M4.5 - M27	Std	SK50AD/B-SYTER33-105	▲

**DST SERIES**

- ▶ ER output - use with ER-MD style collets
- ▶ AD though coolant
- ▶ DIN 69871 taper



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
SK40	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	SK40-DST10-110	▲
	ER32MD	50	110	3.5 - 16	M3 - M20	Std	SK40-DST22-120	▲
SK50	ER16MD	28	110	3.5 - 8	M3 - M8	Hex	SK50-DST10-110	▲
	ER32MD	50	125	3.5 - 16	M3 - M20	Std	SK50-DST22-120	▲

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

**ER WRENCHES & NUTS SYNCHRO TAP CHUCKS**

	HEXAGON NUT		STANDARD NUT		
	ER16	ER20	ER25	ER32	ER40
Wrench	WER16	WER20	WER25	WER32	WER40
Nut	CN16	CN20	CN25	CN32	CN40

**SYNCHRO TAPS FOR HIGH SPEED TAPPING**



See Page 868



**TTS31/TTS33 SERIES**



<40m/min on Carbon Steel  
<33m/min on Alloy Steel  
<45m/min on Aluminium Alloys

**TKS 35 SERIES**



<33m/min on Cast Iron  
<40m/min on Carbon Steel  
<33m/min on Alloy Steel

**TTS37 SERIES ROLL TAPS**



<23m/min on Stainless Steel  
<27m/min on Copper Alloys  
<46m/min on Soft Steels



## SYNCHRO TAP CHUCKS HSK-A & WELDON

For Reliable Rigid Tapping with ER Collets at Conventional or High Speeds



### SYTER SERIES HSK-A

- ▶ ER output - use with ER-MD style collets
- ▶ AD though coolant
- ▶ HSK-A taper\*



P1077



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
HSK63A	ER20MD	34	90	3.5 - 10	M3 - M10	Hex	HSK63A-SYTER16-90	▲
	ER25MD	42	94	3.5 - 12	M3 - M16	Std	HSK63A-SYTER20-94	▲
	ER32MD	50	105	3.5 - 16	M3 - M20	Std	HSK63A-SYTER27-105	▲

\*For HSK100, use weldon shank Synchro Tap chuck and side lock arbor

### DST SERIES HSK-A

- ▶ ER output - use with ER-MD style collets
- ▶ AD though coolant
- ▶ HSK-A taper\*



P1077



Taper	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
HSK63A	ER16MD	28	100	3.5 - 8	M3 - M8	Hex	HSK63A-DST10-100	▲
	ER32MD	50	130	3.5 - 16	M3 - M20	Std	HSK63A-DST22-130	▲

\*For HSK100, use weldon shank Synchro Tap chuck and side lock arbor

### SYTER SERIES WELDON

- ▶ ER output - use with ER-MD style collets
- ▶ Though coolant
- ▶ Can be used on lathes or combined with side lock arbor on milling machines



P1077



Shank	ER	Nut Dia.	Gauge Length	Tap Shank Range	Tap Size Range	Nut Type	ORDER CODE	PRICE
20	ER20MD	34	58	3.5 - 10.0	M3 - M10	Hex	K20-SYTER16	▲
25	ER20MD	34	61	3.5 - 10.0	M3 - M10	Hex	K25-SYTER16	▲
25	ER32MD	50	69	3.5 - 16.0	M3 - M20	Std	K25-SYTER27	▲

▲ UK stock - Generally x-stock for next day delivery ▼ European stock - Generally 2-3 days delivery (please check for lead times)

### ER WRENCHES & NUTS SYNCHRO TAP CHUCKS

	HEXAGON NUT		STANDARD NUT	
	ER16	ER20	ER25	ER32
Wrench	WER16	WER20	WER25	WER32
Nut	CN16	CN20	CN25	CN32

### COOLANT TUBES & KEYS HSK-A

- ▶ For through coolant supply on HSK tool holders (sold separately)

	HSK50-A	HSK63-A	HSK100-A
COOLANT TUBE	950APR01	963APR01	910APR01
COOLANT TUBE KEY	950CHVAR	963CHVAR	910CHVAR





## TAPPING ER COLLETS & SETS

For Reliable Rigid Tapping with ER Collets at Conventional or High Speeds

### ER-MD SERIES

- ▶ Square drive prevents tap from slipping
- ▶ Recommended for use with all Synchro Tap Chucks for maximum reliability

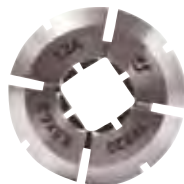


ER	Shank & Square	Square	ORDER CODE	PRICE
ER16	3.5	2.7	ER16MD03.5 ▲	
	4	3	ER16MD04 ▲	
	4.5	3.4	ER16MD04.5 ▲	
	5	4	ER16MD05 ▲	
	5.5	4.3	ER16MD05.5 ▲	
	6	4.9	ER16MD06 ▲	
	7	5.5	ER16MD07 ▲	
	8	6.2	ER16MD08 ▲	
ER20	3.5	2.7	ER20MD03.5 ▲	
	4	3	ER20MD04 ▲	
	4.5	3.4	ER20MD04.5 ▲	
	5	4	ER20MD05 ▲	
	5.5	4.3	ER20MD05.5 ▲	
	6	4.9	ER20MD06 ▲	
	7	5.5	ER20MD07 ▲	
	8	6.2	ER20MD08 ▲	
	9	7	ER20MD09 ▲	
	10	8	ER20MD10 ▲	
ER25	3.5	2.7	ER25MD03.5 ▲	
	4	3	ER25MD04 ▲	
	4.5	3.4	ER25MD04.5 ▲	
	5	4	ER25MD05 ▲	
	5.5	4.3	ER25MD05.5 ▲	
	6	4.9	ER25MD06 ▲	
	7	5.5	ER25MD07 ▲	
	8	6.2	ER25MD08 ▲	
	9	7	ER25MD09 ▲	
	10	8	ER25MD10 ▲	
	11	9	ER25MD11 ▲	
	12	9	ER25MD12 ▲	

ER	Shank Ø	Square	ORDER CODE	PRICE
ER32	3.5	2.7	ER32MD03.5 ▲	
	4	3	ER32MD04 ▲	
	4.5	3.4	ER32MD04.5 ▲	
	5	4	ER32MD05 ▲	
	5.5	4.3	ER32MD05.5 ▲	
	6	4.9	ER32MD06 ▲	
	7	5.5	ER32MD07 ▲	
	8	6.2	ER32MD08 ▲	
	9	7	ER32MD09 ▲	
	10	8	ER32MD10 ▲	
	11	9	ER32MD11 ▲	
	12	9	ER32MD12 ▲	
ER40	14	11	ER32MD14 ▲	
	16	12	ER32MD16 ▲	
	6	4.9	ER40MD06 ▲	
	7	5.5	ER40MD07 ▲	
	8	6.2	ER40MD08 ▲	
	9	7	ER40MD09 ▲	
	10	8	ER40MD10 ▲	
	11	9	ER40MD11 ▲	
	12	9	ER40MD12 ▲	
	14	11	ER40MD14 ▲	
	16	12	ER40MD16 ▲	
18	14.5	ER40MD18 ▲		
20	16	ER40MD20 ▲		

### ER-MD SERIES SETS

- ▶ Square drive prevents tap from slipping
- ▶ Recommended for use with all Synchro Tap Chucks for maximum reliability



ER	No of Collets	Sizes Included	ORDER CODE	PRICE
ER16	4	3.5, 4.5, 6, 7	ER16MD-4PCS ▲	
ER20	7	3.5, 4.5, 6, 7, 8, 9, 10	ER20MD-7PCS ▲	
ER25	9	3.5, 4.5, 6, 7, 8, 9, 10, 11, 12	ER25MD-9PCS ▲	
ER32	10	4.5, 6, 7, 8, 9, 10, 11, 12, 14, 16	ER32MD-10PCS ▲	
ER40	11	6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20	ER40MD-11PCS ▲	

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