



INNOVATIONS **CATALOG**

Synchro Plus™

2014

www.kennametal.com



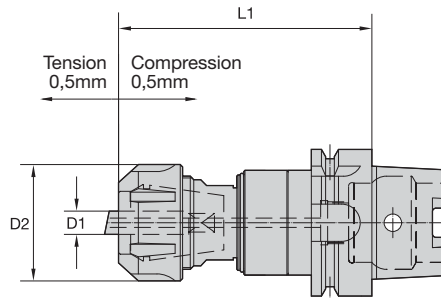
Synchro Plus™ Tap Holders

Primary Application

- Minimum length compensation reduces axial forces on the cutting edges of the tap.
- Constructive separation of the torque and axial force transmission.
- C-axis zero backlash due to positive fitting torque transmission via steel balls.
- Minimal length compensation and axial force transmission via pre-loadable elastomer springs.
- Soft reaction of the minimal length compensation due to low roll-friction of the torque transmission balls in their tracks.
- Elastomer springs avoid a swing up of the cutting edge due to their damping features.

Features and Benefits

Features	Benefits
<ul style="list-style-type: none"> • Collet seat holder in two sizes with various clamping ranges for thread production. 	<ul style="list-style-type: none"> • Longer tool life.
<ul style="list-style-type: none"> • Basic holder with internal coolant supply. 	<ul style="list-style-type: none"> • Better thread quality. • Reliable production process.
<ul style="list-style-type: none"> • Accessory — tap length adjustment screw. 	<ul style="list-style-type: none"> • Adjustable tool length with adjusting screws. • Interchangeability of adjusting screws for different tool diameters. • Possibility of flexible production lines.
<ul style="list-style-type: none"> • Modular system for HSK pipes for internal coolant supply. 	<ul style="list-style-type: none"> • Modular usage for internal coolant supply and minimum quantity lubrication.



■ **HSK63 Synchro Plus • Metric**

order number	catalog number	collet size	D1	D2	L1	tap size
5525685	HSK63ASYTER20095M	ER20	4,5–10	34,00	99,10	M4 - M12
5525686	HSK63ASYTER32108M	ER32	4,5–16	45,00	112,40	M4 - M20

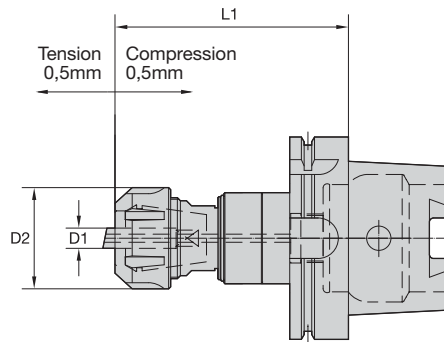
NOTE: For ER Collets, see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) pages J58–J59.
Coolant tube must be ordered separately; see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) page L44.
Need two adjustment wrenches to properly tighten; option to use tightening device with new torque wrench possible.
Adjustment screws ordered separately.
Adjustment range for length adjusting screw is +2mm for both ER20 and ER32.

■ **Length Adjustment**

	clamping range	catalog number	adjustment screw wrench
ER 20:	6–7mm	ASER20006M	TWASER20
	8–9mm	ASER20008M	TWASER20
ER 32:	10mm	ASER20010M	TWASER20
	9mm	ASER32009M	TWASER32
	10–12mm	ASER32010M	TWASER32
	14–16mm	ASER32014M	TWASER32

■ **Optional Accessories**

holder description	locknut	adjustment wrench set	tightening device	torque wrench	torque wrench adapter	HSK coolant tube	HSK wrench
HSK63ER20	1859410	CWER20SYT -SET	TFSYT	TWTF2	TWAHEX	1132145	1134161
HSK63ER32	1128857	CWER32SYT -SET	TFSYT	TWTF2	TWAROUND	1132145	1134161



■ HSK100 Synchro Plus • Metric

order number	catalog number	collet size	D1	D2	L1	tap size
5525687	HSK100ASYTER20102M	ER20	4,5–10	34,00	105,60	M4 - M12
5525688	HSK100ASYTER32115M	ER32	4,5–16	45,00	118,90	M4 - M20

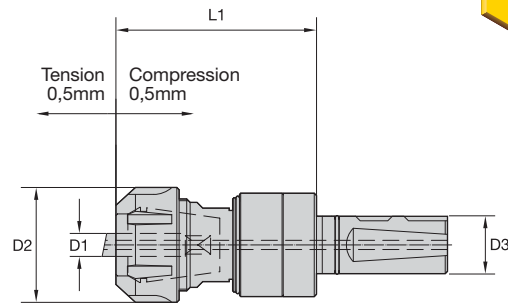
NOTE: For ER Collets, see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) pages J58–J59.
Coolant tube must be ordered separately; see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) page L44.
Need two adjustment wrenches to properly tighten; option to use tightening device with new torque wrench possible.
Adjustment screws ordered separately.
Adjustment range for length adjusting screw is +2mm for both ER20 and ER32.

■ Length Adjustment

	clamping range	catalog number	adjustment screw wrench
ER 20:	6–7mm	ASER20006M	TWASER20
	8–9mm	ASER20008M	TWASER20
ER 32:	10mm	ASER20010M	TWASER20
	9mm	ASER32009M	TWASER32
	10–12mm	ASER32010M	TWASER32
	14–16mm	ASER32014M	TWASER32

■ Optional Accessories

holder description	locknut	adjustment wrench set	tightening device	torque wrench	torque wrench adapter	HSK coolant tube	HSK wrench
HSK100ER20	1859410	CWER20SYT -SET	TFSYT	TWTF2	TWAHEX	1132147	1132993
HSK100ER32	1128857	CWER32SYT -SET	TFSYT	TWTF2	TWAROUND	1132147	1132993



■ **Straight Shank Synchro Plus • Metric**

order number	catalog number	collet size	D1	D2	D3	L1	tap size
5525781	SS25SYTER20073M	ER20	4,5–10	34,00	25,00	76,60	M4 - M12
5525782	SS25SYTER32087M	ER32	4,5–16	45,00	25,00	90,90	M4 - M20

NOTE: For ER Collets, see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) pages J58–J59.
Need two adjustment wrenches to properly tighten; option to use tightening device with new torque wrench possible.
Adjustment screws ordered separately.
Adjustment range for length adjusting screw is +2mm for both ER20 and ER32.



■ **Shank Adapters**

spindle connection	Whistle Notch adapter catalog number	Kennametal Tooling Systems catalog page
BT40	1126479	E42
BT50	1134607	E82
CV40	1549330	F26
CV50	1804515	F66
DV40	1135273	G27
DV40 • Short	1134537	G28
DV50	1136842	G63
DV50 • Short	1134539	G64

NOTE: Use straight shank in combination with shank adaptor to accommodate the appropriate steep taper spindle connection.

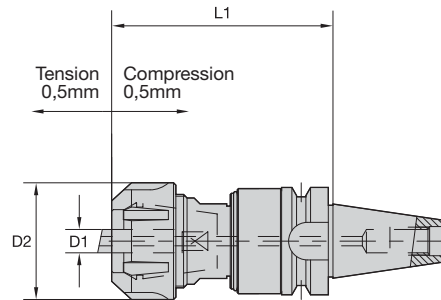
■ **Optional Accessories**

holder description	locknut	adjustment wrenches	tightening device	torque wrench	torque wrench adapter
SS25ER20	1859410	CWER20SYT -SET	TFSYT	TWTF2	TWAHEX
SS25ER32	1128857	CWER32SYT -SET	TFSYT	TWTF2	TWAROUND

NOTE: To tighten or loosen, place one wrench on flat below the nut and the other wrench on the nut. Use opposing force to tighten or loosen.

■ **Length Adjustment**

	clamping range	catalog number	adjustment screw wrench
ER 20:	6–7mm	ASER20006M	TWASER20
	8–9mm	ASER20008M	TWASER20
	10mm	ASER20010M	TWASER20
ER 32:	9mm	ASER32009M	TWASER32
	10–12mm	ASER32010M	TWASER32
	14–16mm	ASER32014M	TWASER32



■ BT Synchro Plus • Metric

order number	catalog number	collet size	D1	D2	L1	tap size
5525689	BT30BSYTER20085M	ER20	4,5–10	34,00	90,10	M4 - M12
5525780	BT30BSYTER32073M	ER32	4,5–16	45,00	98,40	M4 - M20

NOTE: For ER Collets, see the Kennametal Innovations Master Catalog Tooling Systems 2013 (A-12-02809) pages J58–J59.
 Need two adjustment wrenches to properly tighten; option to use tightening device with new torque wrench possible.
 Adjustment screws ordered separately.
 Adjustment range for length adjusting screw is +2mm for both ER20 and ER32.

■ Optional Accessories

holder description	locknut	adjustment wrenches	tightening device	torque wrench	torque wrench adapter
BT30ER20	1859410	CWER20SYT -SET	TFSYT	TWTF2	TWAHEX
BT30ER32	1128857	CWER32SYT -SET	TFSYT	TWTF2	TWAROUND

■ Length Adjustment

	clamping range	catalog number	adjustment screw wrench
ER 20:	6–7mm	ASER20006M	TWASER20
	8–9mm	ASER20008M	TWASER20
	10mm	ASER20010M	TWASER20
ER 32:	9mm	ASER32009M	TWASER32
	10–12mm	ASER32010M	TWASER32
	14–16mm	ASER32014M	TWASER32

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