



TOOLING SYSTEMS

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Accessories

Shrink Fit Axial Adjustment Gages	J2-J3
TG Balanceable Round Locknuts	J3
Balance Screw Sets	J4
HC Hydraulic Chuck Test Pins	J4
HC Hydraulic Chuck Cleaning Brushes	J5
Collet Extractors TG	J5
TG Round Flush-Face Locknuts	J6
Coolant Disk Assemblies	J7
TG Standard Round and Hex Locknuts	J8
ER Standard Short and Slim Locknuts	J9
ER Slim Coolant and Hex Locknuts	J10
ER Coolant Hex and Standard Round Locknuts	J11
ER Coolant Round Locknuts	J12
Coolant Locknut Sealing Disks and Disk Sets	J13-J19
ER16	J13
ER20	J14
ER25	J15
ER32	J16-J17
ER40	J18-J19
Stop Screws	J20
Coolant and Blank Caps	J22
Extended Caps	J23
Shell Mill Adapter Lock Screws	J24-J25
Shell Mill Coolant Lock Screws	J26
Tightening Fixtures	J26-J29
KM Vise Mounts	J26
KM4X and HSK Vise Mounts	J27
HSK Universal Mounts and Sleeves	J28
7/24 Steep Taper Vises and Universal Mounts	J29
P-KM Spindle and HSK Plugs	J30
KM, HSK, and 7/24 Steep Taper Spindle Wipers	J31
HSK Coolant Supply Unit and Wrenches	J32
Retention Knobs	J33-J38
Socket Wrenches	J39
KM Manual Torque Wrenches	J40
KM-LOC II and KM-LOC Wrenches	J40
T-Handle Hex Wrench Sets	J41
Universal Bit Drivers	J42
Driver Bits	J42
Open-Ended Wrenches	J44
Pin Spanner and Hook Spanner Wrenches	J45



Shrink Fit Axial Adjustment Gages

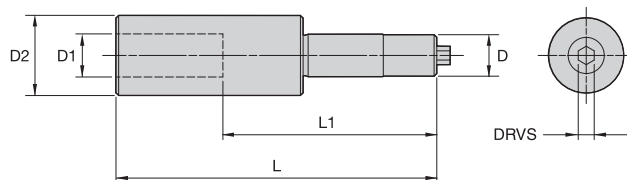
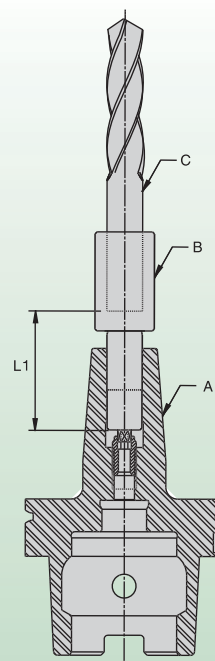
Cutting tool length adjustment is performed using a special axial adjusting gage (B) before shrinking the cutting tool into the toolholder.

An axial adjustment gage is placed in the toolholder (A) along with the cutting tool (C). Length difference of the setting gage (L1) is calculated into the required tool assembly length.

The whole assembly then can be placed into a length presetter for adjustment.

Rotating the gage moves the axial stop screw and presets the assembled tool to the required length. Remove the gage; the cutting tool can then be shrunk into the toolholder.

In some cases, there are two different gage options for the D bore size. The only difference is the DRVS hex drive size to accommodate a recent DIN standard change.



ERICKSON

■ TTAAG • Metric

order number	catalog number	D	D1	D2	L	L1	DRVS
2441761	TTAAG03M	3	3	20	50	40	3mm
2456185	TTAAG04M	4	4	20	52	40	4mm
2456186	TTAAG05M	5	5	20	55	40	3mm
1801298	TTAAG06M	6	6	25	110	80	2,5mm
1775603	TTAAG08M	8	8	25	112	80	3mm
1775604	TTAAG10M	10	10	30	117	80	4mm
1775605	TTAAG12M	12	12	30	117	80	4mm
3110267	TTAAG12MX1	12	12	30	117	80	5mm
1775606	TTAAG14M	14	14	30	117	80	4mm
3110268	TTAAG14MX1	14	14	30	117	80	5mm
1775608	TTAAG16M	16	16	30	120	80	6mm
1775609	TTAAG18M	18	16	30	120	80	6mm
1775610	TTAAG20M	20	20	40	120	80	8mm
1784105	TTAAG25M	25	25	40	124	80	8mm
1775611	TTAAG32M	32	32	40	124	80	8mm

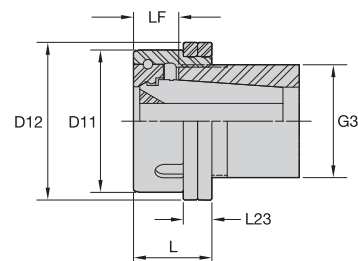
(continued)

(TTAAG continued)


TTAAG • Inch

order number	catalog number	D	D1	D2	L	L1	DRVS
1765666	TTAAG025	1/4	.250	.984	4.33	3.15	2,5mm
1765669	TTAAG031	5/16	.313	.984	4.41	3.15	3mm
1765670	TTAAG038	3/8	.375	1.181	4.61	3.15	4mm
1765671	TTAAG044	7/16	.438	1.181	4.41	3.15	4mm
3110269	TTAAG044X1	7/16	.438	1.181	4.41	3.15	5mm
1765702	TTAAG050	1/2	.500	1.181	4.61	3.15	4mm
3110270	TTAAG050X1	1/2	.500	1.181	4.61	3.15	5mm
1765703	TTAAG056	9/16	.563	1.181	4.61	3.15	4mm
3110271	TTAAG056X1	9/16	.563	1.181	4.61	3.15	5mm
1765704	TTAAG062	5/8	.625	1.181	4.72	3.15	6mm
1765705	TTAAG068	11/16	.688	1.181	4.72	3.15	6mm
1765707	TTAAG075	3/4	.750	1.575	4.72	3.15	8mm
1765708	TTAAG088	7/8	.875	1.575	4.72	3.15	8mm
1765709	TTAAG100	1	1.000	1.575	4.88	3.15	8mm
1765710	TTAAG125	1 1/4	1.250	1.850	4.88	3.15	8mm

- Balanceable and interchangeable locknuts can be ordered separately as an option to the original standard locknut supplied on collet chucks.


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TG Locknut Round — Balanceable

		D11		D12		L		L23		LF						
order number	catalog number	mm	in	mm	in	mm	in	mm	in	mm	in	G3	wrench size	Nm	ft. lbs.	balance ring set
1020465	HPVLNA050G	38,0	1.50	42,5	1.67	20,0	.79	10,05	.40	9,7	.38	15/16-20 UNEF	HSW34M	81	60	SHVBR0325M
1091592	HPVLNA075G	50,0	1.97	56,5	2.22	25,0	.98	12,05	.47	14,4	.57	1 1/2-12 ACME	HSW45M	150	110	SHVBR0445M
1020466	HPVLNA100G	60,0	2.36	66,5	2.62	33,0	1.30	12,05	.47	19,1	.75	1 7/8-12 ACME	HSW58M	203	150	SHVBR0545M

Note: Collet must be loaded into locknut first. Before loading into the chuck body, insert the cutting tool, then tighten according to torque recommendations.

Collet chuck technical section, see page K74.

Locknut wrench must be ordered separately.

Balance rings are supplied with locknut and adjustment directions.

Accessories

Balance Screw Sets • HC Hydraulic Chuck Test Pins



- Standard balance screw set is used on HPMC bearing milling chuck.
- Total number of screws in each set is 110.
- All are M6 screws.
- Eleven different lengths from 3,5–8mm.
- Eleven different weights, 10 of each, varying between 0,047–1,138 grams.
- Set comes complete in a divider box and screwdriver.
- For high-performance milling choices.

ERICKSON™

■ Balance Screw Set

POS. 1 M6X3,5 M: 0,478g 3,5	POS. 2 M6X4,0 M: 0,524g 4	POS. 3 M6X5,0 M: 0,640g 5	POS. 4 M6X5,5 M: 0,728g 5,5
POS. 5 M6X5,75 M: 0,780g 5,75	POS. 6 M6X6,0 M: 0,808g 6	POS. 7 M6X6,25 M: 0,832g 6,25	POS. 8 M6X6,5 M: 0,894g 6,5
POS. 9 M6X7,0 M: 0,978g 7	POS. 10 M6X7,5 M: 1,066g 7,5	POS. 11 M6X8,0 M: 1,138g 8	

order number	catalog number
3367391	HPMCBALSCREWSET

- It is important to periodically check the clamping function on a hydraulic chuck with a test pin for clamping clarity.
- The clamping grip can be checked quickly and easily by placing the correct test pin in the chuck bore and the turning the clamp screw to the limit stop. The chuck is functioning correctly if the testing pin cannot be moved by hand.



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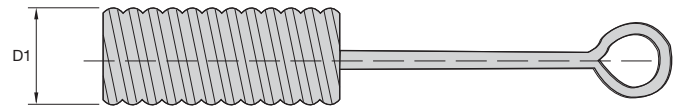
■ HC Test Pin • Metric

order number	catalog number	D
1191037	280.200	6
1191039	280.202	10
1191040	280.203	12
1245409	280.204	14
1191041	280.205	16
1245410	280.206	18
1191042	280.207	20
1245411	280.208	25
1191043	280.209	32

■ HC Test Pin • Inch

order number	catalog number	D
1247566	280.262	3/8
1247570	280.264	1/2
1247572	280.266	5/8
1247575	280.268	3/4
1247577	280.269	1

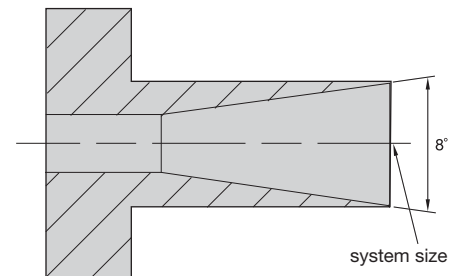
- Hydraulic chucks are maintenance-free and deliver a long service life.
A non-abrasive cleaning brush is recommended to help maintain the performance and accuracy of the clamping bore of the hydraulic chuck and reducing sleeves.


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■ Cleaning Brush

order number	catalog number	D1	
		mm	in
1138729	192.950	6	1/4
1138736	192.951	8	5/16
1138744	192.952	10	3/8
1138752	192.953	12	1/2
1138759	192.954	14	9/16
1138766	192.955	16	5/8
1138914	192.956	18	11/16
1138853	192.957	20	3/4
1138922	192.958	25	1
1138930	192.959	32	1 1/4

- Assists with collet extraction from locknut.


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■ TG • CE

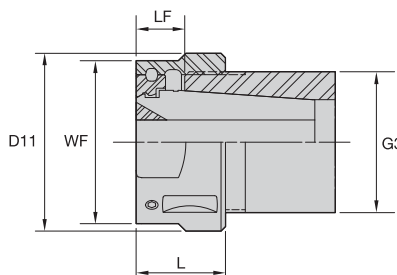
order number	catalog number	system size
1106809	50TGCE	TG50
1106812	75TGCE	TG75
1106813	100TGCE	TG100
1106814	150TGCE	TG150

Accessories

TG Round Flush-Face Locknuts



- TG flush mount, coolant-capable locknuts, and coolant disks/caps can be used on all standard WIDIA™ collet chucks to seal standard TG collets.
- Face is completely flush.
- Includes the WIDIA original ball bearing race design.
- External diameter is the same as existing global round TG locknut.
- Operated by a standard open-ended wrench or the original hook-style wrench.
- TG flush mount coolant capable locknuts and coolant disks/caps are interchangeable with existing designs.
- Utilizes standard TG collets.



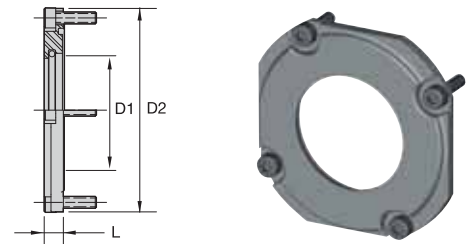
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■ TG Locknut • Round Flush Face

order number	catalog number	D11		L		LF		WF	G3	wrench size	Nm	ft. lbs.
		mm	in	mm	in	mm	in					
2980879	LNATGF050M	38	1.50	18,3	.72	10,6	.42	34	15/16-20 UNEF	HSW34M	81	60
2980880	LNATGF075M	50	1.97	23,4	.92	13,0	.51	46	1 1/2-12 ACME	HSW45M	150	110
2980881	LNATGF100M	60	2.36	30,2	1.19	16,4	.65	55	1 7/8-12 ACME	HSW58M	203	150

NOTE: Locknut wrench must be ordered separately.
WF = Open-ended wrench size.

- TG coolant disk cap assemblies are used in conjunction with the TG flush-style locknuts and collet chucks to seal standard TG collets.
- Utilizes the ER coolant disks.
- High-pressure coolant up to 150 bar (1,500 psi).
- Withstands most of today's coolants.
- Seals against chip packing and machined contaminants.



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■ TG Nut • Coolant Disk Assembly

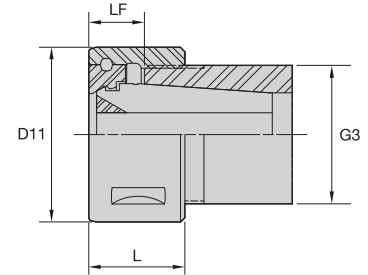
order number	catalog number	D1		D2		L		lock screw	locknut reference	ER coolant disk reference	Nm ft. lbs.	
		mm	in	mm	in	mm	in					
2980882	TG050CDA	21,0	.827	40	1.6	5,7	.22	MS311	LNATGF050M	ER25	25	18
2980893	TG075CDA	27,0	1.063	50	2.0	5,7	.22	MS1488	LNATGF075M	ER32	25	18
2980894	TG100CDA	33,5	1.319	60	2.4	5,7	.22	MS1488	LNATGF100M	ER40	25	18

NOTE: Tighten the four assembly screws to the recommended tightening torque.
 Assembly screws to locknuts are supplied with the appropriate wrench.
 ER coolant disks must be ordered separately; see page J13.
 Collet must be loaded into locknut first. Before loading into the chuck body, insert the cutting tool, then tighten to torque recommendations.
 Collet chuck technical section, see page K74.
 Locknut wrench must be ordered separately.

Accessories

TG Standard Round Locknuts • Hex Locknuts

- Standard and replaceable locknuts are usually supplied as the standard option with the original collet chuck.

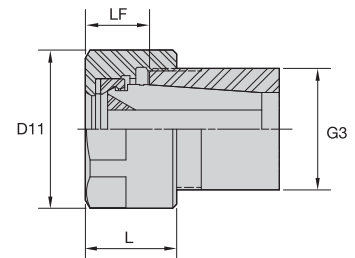


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■ TG Locknut • Round

order number	catalog number	D11		L		LF		G3	locknut wrench	Nm	ft. lbs.
		mm	in	mm	in	mm	in				
1013486	LNA075M	50,0	1.97	25,0	.98	14,4	.57	1 1/2-12 ACME	HSW45M	136	100
1013485	LNA100M	60,0	2.36	33,0	1.30	19,1	.75	1 7/8-12 ACME	HSW58M	203	150
1013484	LNA150M	85,0	3.35	37,0	1.46	18,0	.71	2 5/8-12 ACME	HSW80M	271	200
1020326	NPA150	88,3	3.48	34,9	1.38	18,6	.73	2 5/8-12 ACME	PSW350	271	200

NOTE: Locknut wrench must be ordered separately.



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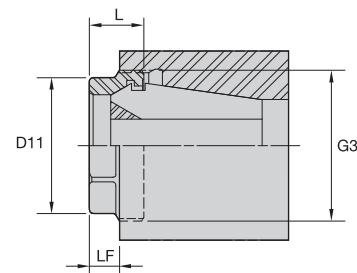
■ TG Locknut • Hex

order number	catalog number	D11		L		LF		G3	locknut wrench	WF	Nm	ft. lbs.
		mm	in	mm	in	mm	in					
1020290	NPA050	30,2	1.19	21,4	.84	14,6	.58	15/16-20 2B	OEW106	1 1/16	102	75
4134686	LN050M	34,0	1.34	19,0	.75	9,8	.38	15/16-20 UNEF	OEW30M	30mm	136	100
1020289	NPA075	53,2	2.09	28,4	1.12	19,7	.78	1 1/2-12 ACME	OEW188	1 7/8	136	100
1020331	NPA100	61,9	2.44	35,7	1.41	25,1	.99	1 7/8-12 ACME	OEW225	2 1/4	203	150

NOTE: Locknut wrench must be ordered separately.
WF = Open-ended wrench size.



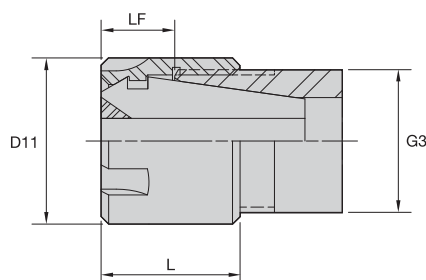
- Standard and replaceable locknuts are supplied as the standard option with the original short-style collet chuck.


ERICKSON

■ ER Locknut • Short

order number	catalog number	collet series	D11		L		LF		G3	locknut wrench	wrench size	Nm	ft. lbs.
			mm	in	mm	in	mm	in					
2978768	LNECSE32M	ER32	35,9	1.41	14,4	.57	8	.32	M40 x 1.5	OEW32M	32	136	100
2978769	LNECSE40M	ER40	46,0	1.81	16,0	.63	8	.32	M50 x 1.5	OEW168	1 11/16	176	130

NOTE: Locknut wrench must be ordered separately.


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■ ER Locknut • Slim

order number	catalog number	collet series	D11		L		LF		G3	locknut wrench	counterbore collet torque (Nm)	straight collet torque (Nm)	counterbore collet torque (in. lbs.)	straight collet torque (in. lbs.)
			mm	in	mm	in	mm	in						
1024642	LER08M	ER08	12	.47	10,8	.43	6,1	.24	M10 X .75	ER08WEM	5	5	42	42
1024643	LER11M	ER11	16	.63	12,0	.47	7,5	.30	M13 X .75	ER11WEM	12	16	106	142
1016342	LER16M	ER16	22	.87	18,4	.72	11,5	.45	M19 X 1	ER16WEM	24	24	212	212
1799219	LER20M	ER20	28	1.10	19,0	.75	11,5	.45	M24 X 1	ER20WEM	28	28	248	248

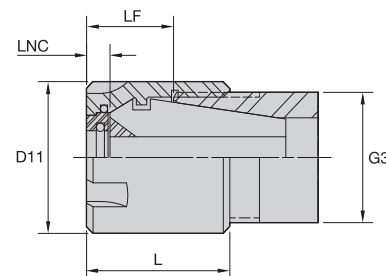
NOTE: Locknut wrench must be ordered separately.

Accessories

ER Slim Coolant Locknuts • Hex Locknuts



- Interchangeable with slim locknuts.
- Must be ordered separately.
- Used in conjunction with ER coolant-sealing disks for high-pressure coolant applications up to 150 bar (2,000 psi). Must be ordered separately; see page J13.



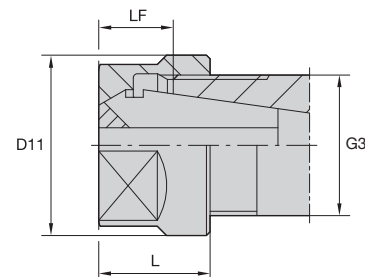
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■ ER Locknut • Slim Coolant

order number	catalog number	collet series	D11		L		LNC		LF		G3	locknut wrench	Nm	in. lbs.
			mm	in	mm	in	mm	in	mm	in				
2255307	LABER16M	ER16	22	.87	22	.87	4,5	.18	11,5	.45	M19 X 1	ER16WEM	24	212
2398953	LABER20M	ER20	28	1.10	24	.94	5,0	.20	13,0	.51	M24 X 1	ER20WEM	28	248

NOTE: Locknut wrench must be ordered separately.

- Standard and replaceable locknuts are usually supplied as the standard option with the original collet chuck.



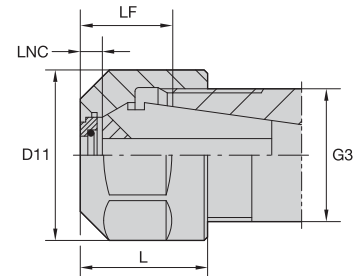
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■ ER Locknut • Hex

order number	catalog number	collet series	D11		L		LF		G3	locknut wrench	wrench size	Nm	ft. lbs.	counterbore collet torque (Nm)	straight collet torque (Nm)	counterbore collet torque (ft. lbs.)	straight collet torque (ft. lbs.)
			mm	in	mm	in	mm	in									
3062811	LNHSER16M	ER16	28,0	1.10	17,5	.69	10,5	.41	M22 X 1.5	OEWS25M	25mm	56	42	40	56	30	42
3062812	LNHSER20M	ER20	34,0	1.34	19,0	.75	11,5	.45	M25 X 1.5	OEWS30M	30mm	80	59	32	80	24	59

NOTE: Locknut wrench must be ordered separately.

- Interchangeable with standard locknuts.
- Must be ordered separately.
- Used in conjunction with ER coolant-sealing disks for high-pressure coolant applications up to 150 bar (2,000 psi). Must be ordered separately; see page J13.

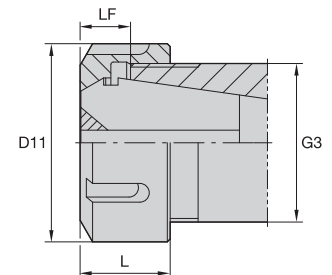

ERICKSON

■ ER Locknut Hex • Coolant

order number	catalog number	collet series	D11		L		LNC		LF		G3	locknut wrench	wrench size	counterbore collet torque (Nm)	straight collet torque (Nm)	counterbore collet torque (ft. lbs.)	straight collet torque (ft. lbs.)
			mm	in	mm	in	mm	in	mm	in							
1854738	LNHABER16M	ER16	28,0	1.10	22,5	.89	5,0	.20	15,5	.61	M22 X 1.5	OE25M	25mm	40	56	30	42
1859410	LNHABER20M	ER20	34,0	1.34	24,0	.94	5,0	.20	16,5	.65	M25 X 1.5	OE25M	30mm	32	80	24	59

NOTE: Locknut wrench must be ordered separately.

- Standard and replaceable locknuts are usually supplied as the standard option with the original collet chuck.


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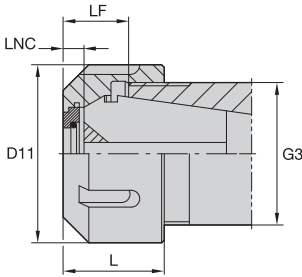
■ ER Locknut • Round

order number	catalog number	collet series	D11		L		LF		G3	locknut wrench	Nm	ft. lbs.
			mm	in	mm	in	mm	in				
3063113	LSER25M	ER25	42	1.65	20	.79	12	.47	M32 X 1.5	ER25WM	104	77
3063114	LSER32M	ER32	50	1.97	23	.89	13	.51	M40 X 1.5	ER32WM	136	100
3063115	LSER40M	ER40	63	2.48	26	1.00	15	.59	M50 X 1.5	ER40WM	176	130

NOTE: Locknut wrench must be ordered separately.

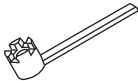
ER Coolant Round Locknuts

- Interchangeable with standard locknuts; must be ordered separately.
- Used in conjunction with ER coolant-sealing disks for high-pressure coolant applications up to 150 bar (2,000 psi). Must be ordered separately; see page J13.



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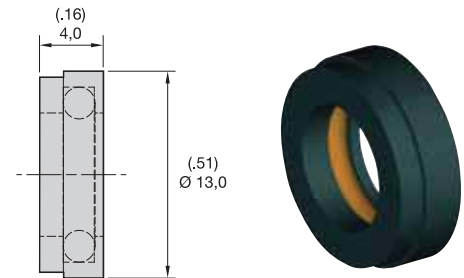
ER Locknut Round • Coolant



order number	catalog number	collet series	D11		L		LNC		LF		G3	locknut wrench	Nm	ft. lbs.
			mm	in	mm	in	mm	in	mm	in				
1127154	LNABER25M	ER25	42	1.65	25,0	.98	5	.20	17	.67	M32 X 1.5	ER25WM	104	77
1128857	LNABER32M	ER32	50	1.97	27,5	1.08	5	.20	18	.71	M40 X 1.5	ER32WM	136	100
1125692	LNABER40M	ER40	63	2.48	30,5	1.20	5	.20	20	.79	M50 X 1.5	ER40WM	176	130

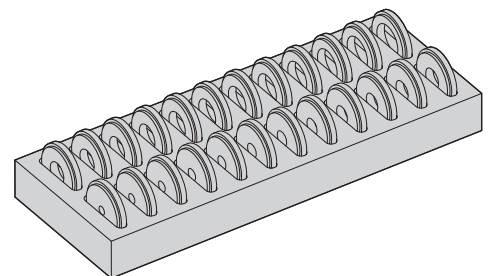
NOTE: Locknut wrench must be ordered separately.

- 0,5mm (.020") range of sealing per disk.
- High-pressure coolant up to 150 bar (2,000 psi).
- Accommodates both metric- and inch-sized cutting tool shanks.
- Standard-sized replaceable O-rings.


ERICKSON
ER16 Locknut Coolant Seal Disk

order number	catalog number	collet series	range metric	range inch	range fraction
1128244	CDER16035M	ER16	3,0–3,5	.1181–.1387	1/8
1122128	CDER16040M	ER16	3,5–4,0	.1378–.1575	5/32
1125973	CDER16045M	ER16	4,0–4,5	.1575–.1772	—
1125741	CDER16050M	ER16	4,5–5,0	.1772–.1969	3/16
1260100	CDER16055M	ER16	5,0–5,5	.1969–.2165	7/32
1130781	CDER16060M	ER16	5,5–6,0	.2165–.2362	—
1260101	CDER16065M	ER16	6,0–6,5	.2362–.2559	1/4
1260102	CDER16070M	ER16	6,5–7,0	.2559–.2756	—
1260103	CDER16075M	ER16	7,0–7,5	.2756–.2953	9/32
1124948	CDER16080M	ER16	7,5–8,0	.3150–.3347	5/16
1254499	CDER16085M	ER16	8,0–8,5	.3150–.3347	—
1120977	CDER16090M	ER16	8,5–9,0	.3347–.3543	11/32
1260104	CDER16095M	ER16	9,0–9,5	.3543–.3740	3/8
1128201	CDER16100M	ER16	9,5–10,0	.3740–.3937	—

- An economical way to purchase a group of coolant disks.


ERICKSON
ER16 Locknut Coolant Seal Disk Set

order number	catalog number	collet series	quantity	dimensional range	incremental division
1148501	CDER16000M	ER16	14	3,5mm–10mm	.5mm

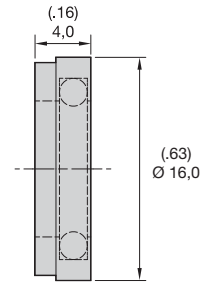
NOTE: ER coolant disk sets come complete with wooden protective tray.

Accessories

ER20 Coolant Locknut Sealing Disks • Disk Sets



- 0,5mm (.020") range of sealing per disk.
- High-pressure coolant up to 150 bar (2,000 psi).
- Accommodates both metric- and inch-sized cutting tool shanks.
- Standard-sized, replaceable O-rings.

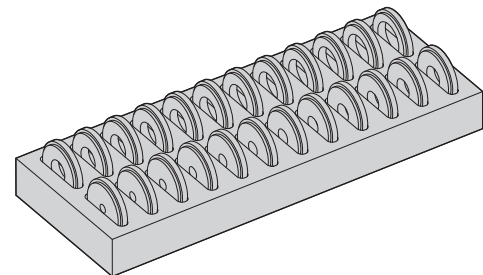


ERICKSON™

■ ER20 Locknut Coolant Seal Disk

order number	catalog number	collet series	range metric	range inch	range fraction
1882862	CDER20030M	ER20	2,5–3,0	.0984–.1181	—
2046541	CDER20035M	ER20	3,0–3,5	.1181–.1387	1/8
2046542	CDER20040M	ER20	3,5–4,0	.1378–.1575	5/32
1785844	CDER20045M	ER20	4,0–4,5	.1575–.1772	—
2046613	CDER20050M	ER20	4,5–5,0	.1772–.1969	3/16
2046614	CDER20055M	ER20	5,0–5,5	.1969–.2165	7/32
1600448	CDER20060M	ER20	5,5–6,0	.2165–.2362	—
2046615	CDER20065M	ER20	6,0–6,5	.2362–.2559	1/4
1821042	CDER20070M	ER20	6,5–7,0	.2559–.2756	—
2046616	CDER20075M	ER20	7,0–7,5	.2756–.2953	9/32
1568338	CDER20080M	ER20	7,5–8,0	.3150–.3347	5/16
2046617	CDER20085M	ER20	8,0–8,5	.3150–.3347	—
1567466	CDER20090M	ER20	8,5–9,0	.3347–.3543	11/32
2046618	CDER20095M	ER20	9,0–9,5	.3543–.3740	3/8
1747032	CDER20100M	ER20	9,5–10,0	.3740–.3937	—
2046619	CDER20105M	ER20	10,0–10,5	.3937–.4134	13/32
1923780	CDER20110M	ER20	10,5–11,0	.4314–.4330	—
2046620	CDER20115M	ER20	11,0–11,5	.4330–.4528	7/16
1883015	CDER20120M	ER20	11,5–12,0	.4528–.4724	15/32
2046621	CDER20125M	ER20	12,0–12,5	.4724–.4921	—
2046622	CDER20130M	ER20	12,5–13,0	.4921–.5118	1/2

- An economical way to purchase a group of coolant disks.



ERICKSON™

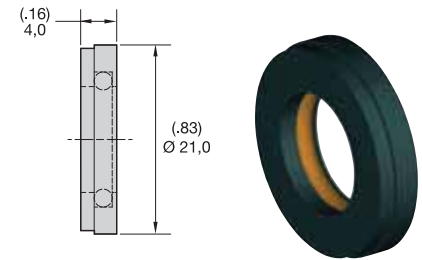
■ ER20 Locknut Coolant Seal Disk Set

order number	catalog number	collet series	quantity	dimensional range	incremental division
1720848	CDER20000M	ER20	20	3,5mm–13mm	.5mm

NOTE: ER coolant disk sets come complete with wooden protective tray.

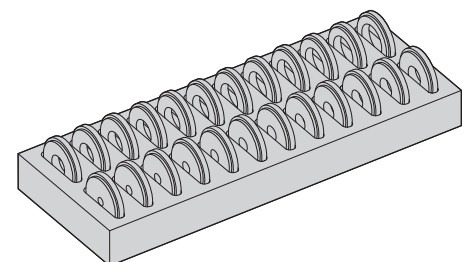


- 0,5mm (.020") range of sealing per disk.
- High-pressure coolant up to 150 bar (2,000 psi).
- Accommodates both metric- and inch-sized cutting tool shanks.
- Standard-sized, replaceable O-rings.


ERICKSON
ER25 Locknut Coolant Seal Disk

order number	catalog number	collet series	range metric	range inch	range fraction
1820323	CDER25035M	ER25	3,0–3,5	.1181–.1387	1/8
1136043	CDER25040M	ER25	3,5–4,0	.1378–.1575	5/32
1260105	CDER25045M	ER25	4,0–4,5	.1575–.1772	—
1130194	CDER25050M	ER25	4,5–5,0	.1772–.1969	3/16
1260114	CDER25150M	ER25	4,5–5,0	.1772–.1969	3/16
1260115	CDER25155M	ER25	5,0–5,5	.1969–.2165	7/32
1260106	CDER25055M	ER25	5,0–5,5	.1969–.2165	7/32
1127146	CDER25060M	ER25	5,5–6,0	.2165–.2362	—
1260107	CDER25065M	ER25	6,0–6,5	.2263–.2559	1/4
1126670	CDER25070M	ER25	6,5–7,0	.2559–.2756	—
1260108	CDER25075M	ER25	7,0–7,5	.2756–.2953	9/32
1126599	CDER25080M	ER25	7,5–8,0	.3150–.3347	—
1126607	CDER25085M	ER25	8,0–8,5	.3150–.3347	—
1129478	CDER25090M	ER25	8,5–9,0	.3347–.3543	11/32
1260109	CDER25095M	ER25	9,0–9,5	.3543–.3740	3/8
1126613	CDER25100M	ER25	9,5–10,0	.3740–.3937	—
1124966	CDER25105M	ER25	10,0–10,5	.3937–.4134	13/32
1126677	CDER25110M	ER25	10,5–11,0	.4134–.4330	—
1260110	CDER25115M	ER25	11,0–11,5	.4330–.4528	7/16
1125474	CDER25120M	ER25	11,5–12,0	.4528–.4724	15/32
1260111	CDER25125M	ER25	12,0–12,5	.4724–.4921	—
1129141	CDER25130M	ER25	12,5–13,0	.4921–.5118	1/2
1260112	CDER25135M	ER25	13,0–13,5	.5118–.5315	17/32
1125481	CDER25140M	ER25	13,5–14,0	.5315–.5512	—
1260113	CDER25145M	ER25	14,0–14,5	.5512–.5709	9/16
1128486	CDER25160M	ER25	15,5–16,0	.6102–.6300	5/8

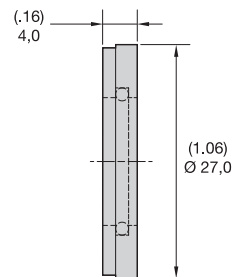
- An economical way to purchase a group of coolant disks.


ERICKSON
ER25 Locknut Coolant Seal Disk Set

order number	catalog number	collet series	quantity	dimensional range	incremental division
1254501	CDER25000M	ER25	26	3,5mm–16mm	.5mm

NOTE: ER coolant disk sets come complete with wooden protective tray.

- 0,5mm (.020") range of sealing per disk.
- High-pressure coolant up to 150 bar (2,000 psi).
- Accommodates both metric- and inch-sized cutting tool shanks.
- Standard-sized, replaceable O-rings.

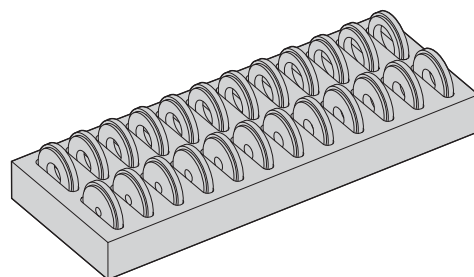


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■ ER32 Locknut Coolant Seal Disk

order number	catalog number	collet series	range metric	range inch	range fraction
1120969	CDER32035M	ER32	3,0–3,5	.1181–.1387	1/8
1125347	CDER32040M	ER32	3,5–4,0	.1378–.1575	5/32
1260116	CDER32045M	ER32	4,0–4,5	.1575–.1772	—
1148555	CDER32050M	ER32	4,5–5,0	.1772–.1969	3/16
1260117	CDER32055M	ER32	5,0–5,5	.1969–.2165	7/32
1121104	CDER32060M	ER32	5,5–6,0	.2165–.2362	—
1120661	CDER32065M	ER32	6,0–6,5	.2362–.2559	1/4
1131561	CDER32070M	ER32	6,5–7,0	.2559–.2756	—
1260118	CDER32075M	ER32	7,0–7,5	.2756–.2953	9/32
1132831	CDER32080M	ER32	7,5–8,0	.3150–.3347	5/16
1260119	CDER32085M	ER32	8,0–8,5	.3150–.3347	—
1122258	CDER32090M	ER32	8,5–9,0	.3347–.3543	11/32
1260120	CDER32095M	ER32	9,0–9,5	.3543–.3740	3/8
1136052	CDER32100M	ER32	9,5–10,0	.3740–.3937	—
1260121	CDER32105M	ER32	10,0–10,5	.3937–.4134	13/32
1135241	CDER32110M	ER32	10,5–11,0	.4134–.4330	—
1260122	CDER32115M	ER32	11,0–11,5	.4330–.4528	7/16
1128840	CDER32120M	ER32	11,5–12,0	.4528–.4724	15/32
1125490	CDER32125M	ER32	12,0–12,5	.4724–.4921	—
1126728	CDER32130M	ER32	12,5–13,0	.4921–.5118	1/2
1260123	CDER32135M	ER32	13,0–13,5	.5118–.5315	17/32
1132848	CDER32140M	ER32	13,5–14,0	.5315–.5512	—
1127692	CDER32145M	ER32	14,0–14,5	.5512–.5709	9/16
1232472	CDER32150M	ER32	14,5–15,0	.5709–.5905	—
1260124	CDER32155M	ER32	15,0–15,5	.5905–.6102	19/32
1125023	CDER32160M	ER32	15,5–16,0	.6102–.6300	5/8
1260125	CDER32165M	ER32	16,0–16,5	.6300–.6496	—
1260126	CDER32170M	ER32	16,5–17,0	.6496–.6693	21/32
1260127	CDER32175M	ER32	17,0–17,5	.6693–.6890	11/16
1126732	CDER32180M	ER32	17,5–18,0	.6890–.7087	—
1260128	CDER32185M	ER32	18,0–18,5	.7087–.7284	23/32
1155337	CDER32190M	ER32	18,5–19,0	.7284–.7480	3/4
1260129	CDER32195M	ER32	19,0–19,5	.7480–.7677	—
1124951	CDER32200M	ER32	19,5–20,0	.7677–.7874	25/32

- An economical way to purchase a group of coolant disks.



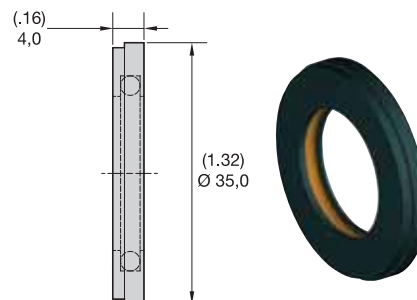
ERICKSON

■ ER32 Locknut Coolant Seal Disk Set

order number	catalog number	collet series	quantity	dimensional range	incremental division
1123496	CDER32000M	ER32	34	3,5mm–20mm	.5mm

NOTE: ER coolant disk sets come complete with wooden protective tray.

- 0,5mm (.020") range of sealing per disk.
- High-pressure coolant up to 150 bar (2,000 psi).
- Accommodates both metric- and inch-sized cutting tool shanks.
- Standard-sized, replaceable O-rings.



ERICKSON™

■ ER40 Locknut Coolant Seal Disk

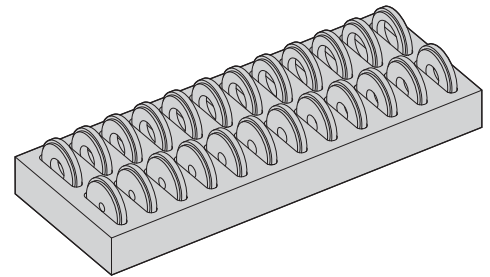
order number	catalog number	collet series	range metric	range inch	range fraction
1260131	CDER40035M	ER40	3,0–3,5	.1181–.1387	1/8
1260132	CDER40040M	ER40	3,5–4,0	.1378–.1575	5/32
1260133	CDER40045M	ER40	4,0–4,5	.1575–.1772	—
1260134	CDER40050M	ER40	4,5–5,0	.1772–.1969	3/16
1260135	CDER40055M	ER40	5,0–5,5	.1969–.2165	7/32
1128810	CDER40060M	ER40	5,5–6,0	.2165–.2362	—
1260136	CDER40065M	ER40	6,0–6,5	.2362–.2559	1/4
1128828	CDER40070M	ER40	6,5–7,0	.2559–.2756	—
1260137	CDER40075M	ER40	7,0–7,5	.2756–.2953	9/32
1126684	CDER40080M	ER40	7,5–8,0	.3150–.3347	5/16
1260138	CDER40085M	ER40	8,0–8,5	.3150–.3347	—
1129486	CDER40090M	ER40	8,5–9,0	.3347–.3543	11/32
1260139	CDER40095M	ER40	9,0–9,5	.3543–.3740	3/8
1128834	CDER40100M	ER40	9,5–10,0	.3740–.3937	—
1260140	CDER40105M	ER40	10,0–10,5	.3937–.4134	13/32
1125622	CDER40110M	ER40	10,5–11,0	.4134–.4330	—
1260141	CDER40115M	ER40	11,0–11,5	.4330–.4528	7/16
1125678	CDER40120M	ER40	11,5–12,0	.4528–.2724	15/32
1260142	CDER40125M	ER40	12,0–12,5	.4724–.4921	—
1260143	CDER40130M	ER40	12,5–13,0	.4921–.5118	1/2
1260144	CDER40135M	ER40	13,0–13,5	.5118–.5315	17/32
1128841	CDER40140M	ER40	13,5–14,0	.5315–.5512	—
1260145	CDER40145M	ER40	14,0–14,5	.5512–.5709	9/16
1128848	CDER40150M	ER40	14,5–15,0	.5709–.5905	—
1260146	CDER40155M	ER40	15,0–15,5	.5905–.6102	19/32
1125686	CDER40160M	ER40	15,5–16,0	.6102–.6300	5/8
1260147	CDER40165M	ER40	16,0–16,5	.6300–.6496	—
1125623	CDER40170M	ER40	16,5–17,0	.6496–.6693	21/32

(continued)

(ER40 Locknut Coolant Seal Disk continued)

order number	catalog number	collet series	range metric	range inch	range fraction
1260148	CDER40175M	ER40	17,0–17,5	.6693–.6890	11/16
1128856	CDER40180M	ER40	17,5–18,0	.6890–.7087	—
1260149	CDER40185M	ER40	18,0–18,5	.7087–.7248	23/32
1260150	CDER40190M	ER40	18,5–19,0	.7284–.7480	3/4
1260151	CDER40195M	ER40	19,0–19,5	.7480–.7677	—
1128845	CDER40200M	ER40	19,5–20,0	.7677–.7874	25/32
1260152	CDER40205M	ER40	20,0–20,5	.7874–.8071	—
1260153	CDER40215M	ER40	21,0–21,5	.7874–.8465	27/32
1129413	CDER40210M	ER40	20,5–21,0	.8071–.8268	13/16
1121616	CDER40220M	ER40	21,5–22,0	.8465–.8661	—
1254500	CDER40230M	ER40	22,5–23,0	.8858–.9055	29/32
1260154	CDER40225M	ER40	23,0–23,5	.9055–.9252	—
1260155	CDER40235M	ER40	23,0–23,5	.9055–.9252	—
1260156	CDER40240M	ER40	23,5–24,0	.9252–.9449	15/16
1260157	CDER40245M	ER40	24,0–24,5	.9449–.9646	—
1128850	CDER40250M	ER40	24,5–25,0	.9646–.9843	31/32
1971143	CDER40255M	ER40	25,0–25,5	.9843–1.0039	1
1124539	CDER40260M	ER40	25,5–26,0	1.0039–1.0236	—

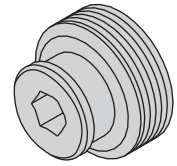
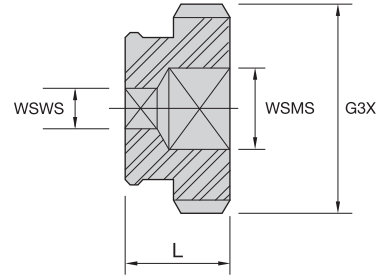
- An economical way to purchase a group of coolant disks.


ERICKSON
■ ER40 Locknut Coolant Seal Disk Set

order number	catalog number	collet series	quantity	dimensional range	incremental division
1260130	CDER40000M	ER40	46	3,5mm–26mm	.5mm

NOTE: ER coolant disk sets come complete with wooden protective tray.

- Replacement stop screws.
- Coolant, blank, and extended caps are available for added capabilities.



ERICKSON™

■ Stop Screw

order number	catalog number	L		WSWS wrench size	WSMS wrench size	G3X
		mm	in			
1019943	SS031031G	7,9	.31	4mm & 5/32	—	5/16-24UNF LH
1019975	SS038031G	7,9	.31	4mm & 5/32	—	3/8-24UNF LH
1019977	SS044038G	9,5	.38	4mm & 5/32	—	7/16-20UNF LH
1019979	SS050038G	9,5	.38	4mm & 5/32	—	1/2-20UNF LH
1019981	SS056041G	9,5	.38	4mm & 5/32	—	9/16-18UNF LH
1019983	SS062041G	9,5	.38	4mm & 5/32	—	5/8-18UNF LH
1019985	SS075041G	10,3	.41	4mm & 5/32	—	3/4-16UNF LH
1019987	SS081041G	10,3	.41	4mm & 5/32	8mm & 5/16	13/16-16UN LH
1019989	SS094041G	10,3	.41	4mm & 5/32	8mm & 5/16	15/16-16UN LH
1019991	SS112041G	10,3	.41	4mm & 5/32	8mm & 5/16	1 1/8-16UN LH
1020023	SS125050G	12,7	.50	4mm & 5/32	8mm & 5/16	1 1/4-12UNF LH
1020017	SS162062G	15,8	.62	4mm & 5/32	8mm & 5/16	1 5/8-12UN LH
1020049	SS175062G	15,8	.62	4mm & 5/32	8mm & 5/16	1 3/4-12UN LH

WIN WITH WIDIA™



WIDIA™ M690 90° Shoulder Mill Series

M690 SD1204.. | M690 SD1506..

Strong and specially designed to streamline most milling operations, M690 Series 90° shoulder mills enable excellent shoulder finishes, enhanced chip evacuation, and optimal insert support.

- Sturdy tool design for maximum safety and productivity.
- Four cutting edges for economical and reliable machining.
- Superior shoulder finishes and smooth cutting action.

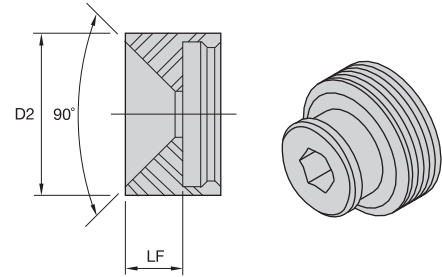
To learn more, contact your local Authorized Distributor or visit www.widia.com.

WIDIA 

Accessories

Coolant Caps • Blank Caps

- Stop screw caps can easily be snapped onto their respective stop screws, referenced in the first column in respective tables below, for added capabilities.

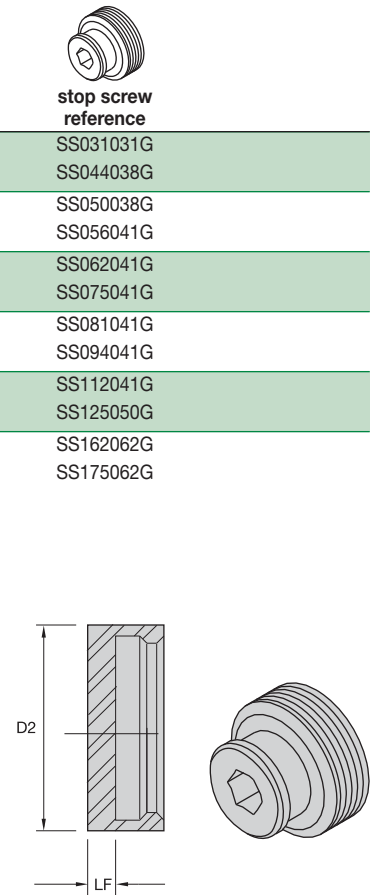


ERICKSON™

■ Coolant Cap

order number	catalog number	D2		LF		stop screw reference
		mm	in	mm	in	
1021134	SSCC031	6,5	.25	2,4	.09	SS031031G
1021138	SSCC044	9,5	.37	3,0	.12	SS044038G
1021140	SSCC050	11,0	.43	3,0	.12	SS050038G
1021142	SSCC056	12,0	.47	4,0	.16	SS056041G
1092046	SSCC062	14,0	.55	4,5	.18	SS062041G
1021154	SSCC075	17,0	.67	6,0	.24	SS075041G
1021156	SSCC081	17,0	.67	6,0	.24	SS081041G
1021158	SSCC094	21,8	.86	8,5	.33	SS094041G
1021160	SSCC112	24,5	.97	9,8	.38	SS112041G
1021162	SSCC125	29,0	1.14	12,0	.47	SS125050G
1021176	SSCC162	37,0	1.46	15,5	.61	SS162062G
1021178	SSCC175	42,0	1.65	18,5	.73	SS175062G

NOTE: For use with through-coolant applications for improved sealing.



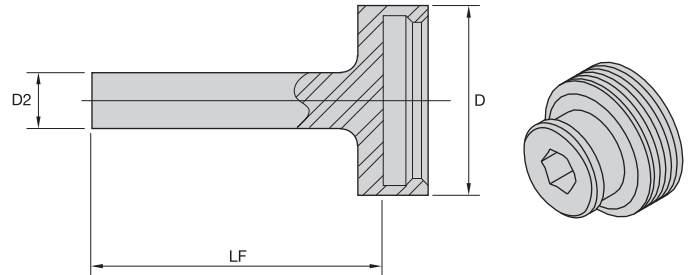
■ Blank Cap

order number	catalog number	D2		LF		stop screw reference
		mm	in	mm	in	
1021180	SSC031	6,5	.26	2,2	.09	SS031031G
1021204	SSC044	9,5	.37	2,2	.09	SS044038G,SS0500384
1021206	SSC056	12,0	.47	2,2	.09	SS075041G,SS056041G,SS062041G
1021208	SSC081	17,0	.67	2,2	.09	SS081041G,SS094041G

NOTE: A solid cap for small-diameter cutting tools with no through-coolant capability.



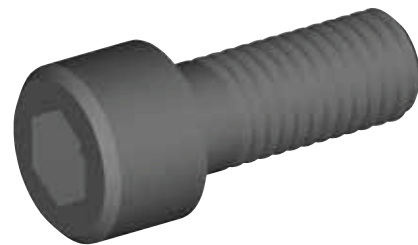
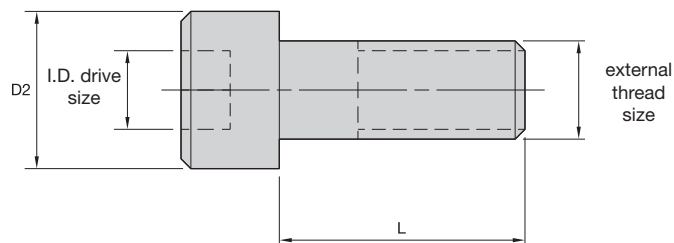
- Stop screw caps can easily be snapped onto their respective stop screws, referenced in the first column in respective tables below, for added capabilities.



■ Extended Cap

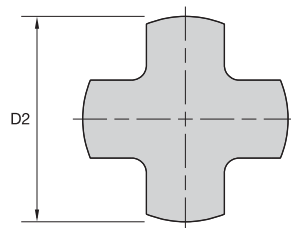
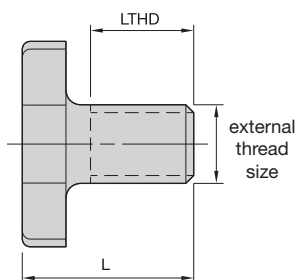
order number	catalog number	D		D2		LF		stop screw reference
		mm	in	mm	in	mm	in	
1021216	SSC038081	8,1	.32	8,1	.32	20,5	.81	SS038031G
1021220	SSC056066	12,0	.47	5,0	.20	16,7	.66	SS094041G,SS075041G,SS056041G
1021222	SSC081103	17,0	.67	5,0	.20	26,2	1.03	SS094041G,SS081041G
1021254	SSC112150	24,5	.96	12,0	.47	38,1	1.50	SS150062G,SS125050G,SS112041G

NOTE: For greater access and reaching inside collet cavities.



■ SM Cap Lock Screw • Metric

order number	catalog number	external thread size	D2	L	I.D. drive size
1905810	MS1294	M8X1.25	13,0	25,0	6mm
1129648	MS1234	M10X1.5	16,0	25,0	8mm

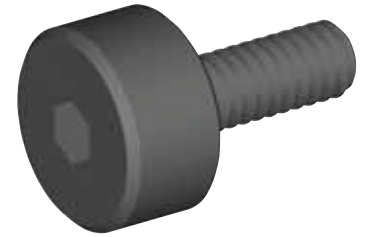
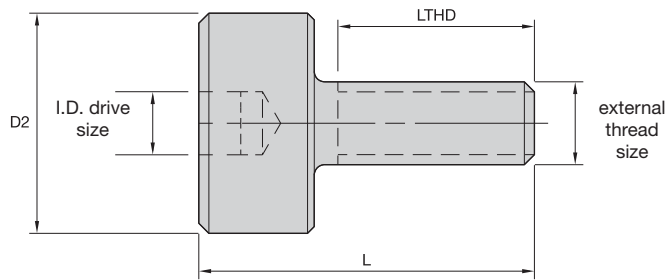


■ SM Lock Screw • Metric

order number	catalog number	external thread size	D2	L	LTHD
1147969	KLS27MPKG	M12X1.75	34,8	29,9	17,5
1736199	KLS32M	M16X2.0	41,8	34,9	20,5
1016374	KLS40M	M20X2.5	51,8	39,9	24,0
1178775	KLS50M	M24X3	62,8	47,9	28,5

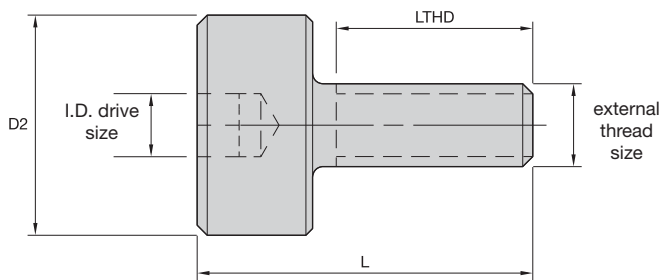
(continued)

(SM Lock Screws continued)



■ SM Round Lock Screw • Metric

order number	catalog number	external thread size	D2	L	LTHD	I.D. drive size
4078806	KLSS27M	M12X1.75	35,0	30,9	22,0	10mm
4078807	KLSS32M	M16X2.0	42,0	37,9	26,0	14mm
4078808	KLSS40M	M20X2.5	52,0	44,9	30,0	17mm



■ SM Lock Screw • Inch

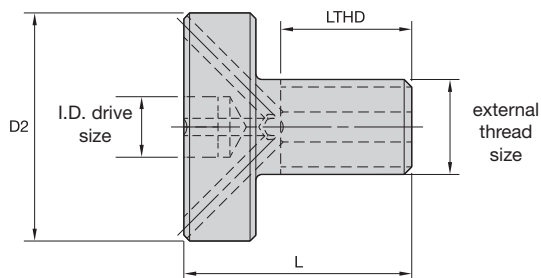
order number	catalog number	external thread size	D2	L	LTHD	I.D. drive size
1020548	KLS05	.250-28 UNF	.656	1.000	.656	3/16
1020550	KLS07	.375 - 24 UNF	.875	1.062	.687	1/4
1020552	KLS10	.500 - 20 UNF	1.188	1.187	.812	5/16
1020574	KLS12	.625 - 18 UNF	1.500	1.535	1.040	5/16
1020576	KLS15	3/4 - 16 UNF	1.875	1.516	1.016	3/8
1020578	KLS20	1.000 - 14 UNS	—	—	—	9/16

Accessories

Shell Mill Coolant Lock Screws • Tightening Fixtures, KM™ Vise Mounts



- Coolant lock screw to convert a standard shell mill adapter into a through-coolant version.

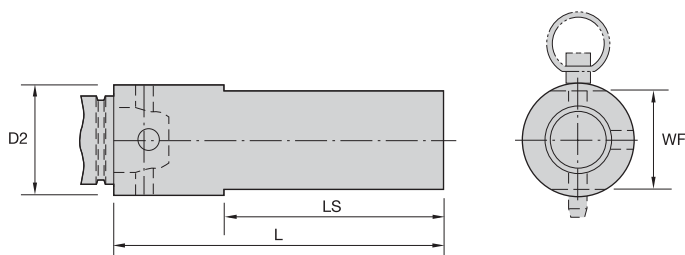


ERICKSON™

■ SM Lock Screw Coolant • Inch

order number	catalog number	external thread size	D2	L	LTHD	I.D. drive size
1151259	KLSSH10	.500-20 UNF	1.2	1.2	.8	5/16
1151260	KLSSH12	.625-18 UNF	1.5	1.5	1.0	5/16
1151261	KLSSH15	.750-16 UNF	1.9	1.5	1.0	3/8
1151262	KLSSH20	1.000-14 UNS	2.5	1.5	1.0	9/16
1151315	KLSSH25	1.000-14 UNS	3.1	2.0	1.5	9/16

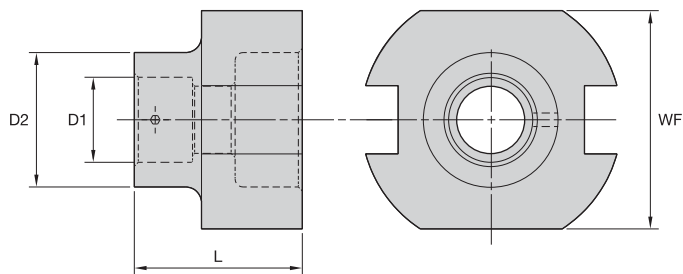
- Vise mount pot to hold KM™ toolholders for tightening/locking operations.



■ TF • KM Vise Mount

order number	catalog number	system size	D2		L		LS		WF	
			mm	in	mm	in	mm	in	mm	in
1021816	KM40TF	KM40	50,80	2.00	152,4	6.00	101,6	4.00	44,45	1.750
1021817	KM50TF	KM50	63,50	2.50	152,4	6.00	101,6	4.00	57,15	2.250
1021818	KM63TF	KM63	76,20	3.00	152,4	6.00	101,6	4.00	69,15	2.750
2606542	KM80TF	KM80	88,90	3.50	152,4	6.00	101,6	4.00	85,73	3.375

- Vise mount pot to hold HSK toolholders for tightening/locking operations.

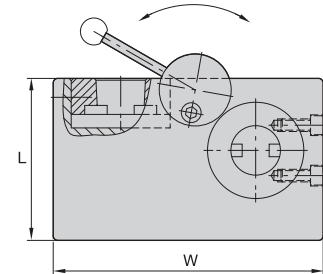

ERICKSON
■ TF • KM4X and HSK Vise Mount

order number	catalog number	D1		D2		L		WF		wrench size clamp screw
		mm	in	mm	in	mm	in	mm	in	
1013573	TFHSK32A	32,0	1.26	50,8	2.00	63,5	2.50	82,5	3.25	3mm & 1/8
1013584	TFHSK40A	40,0	1.57	60,0	2.36	63,5	2.50	82,5	3.25	4mm & 5/32
1013586	TFHSK63A	63,0	2.48	98,4	3.87	69,9	2.75	82,5	3.25	8mm & 5/16
1013587	TFHSK80A	80,0	3.15	108,0	4.25	120,7	4.75	82,5	3.25	8mm & 5/16
1013588	TFHSK100A	100,0	3.94	135,0	5.31	139,7	5.50	82,5	3.25	8mm & 5/16

Accessories

Tightening Fixtures, HSK Universal Mounts and Sleeves

- Universal vise to hold HSK forms A, C, and E toolholders for tightening/locking operations.
- Permits simultaneous access to the rear and front end of the toolholders.
- Replaces up to 15 separate tightening fixtures.
- Holds tools in the horizontal or vertical position.
- Can be used either right or left handed.
- Rigid aluminum construction with bolt holes to secure to bench.

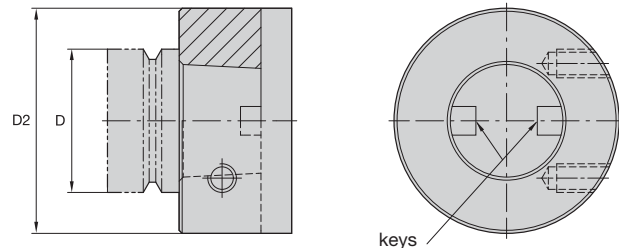


ERICKSON™

■ TF • HSK Universal Mount

order number	catalog number	CSWS	L		W	
			mm	in	mm	in
1254135	UTAV	ALL	160	6.30	260	10.24

- For HSK forms A and C, insert sleeve into fixture.
- For HSK form E, remove the drive keys before inserting the sleeve adapter.
- Sleeve adapters are made from hardened steel with removable keys.
- For sizes HSK32 and HSK40, a larger cam disk must be ordered when used in a horizontal position.



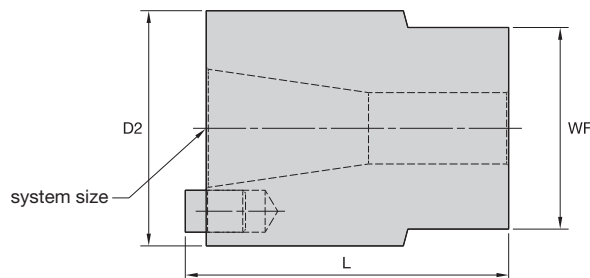
■ TF • HSK Universal Sleeve

order number	catalog number	system size	D		D2	
			mm	in	mm	in
1254136	HSK32AS	32	32,0	1.26	98,0	3.86
1254137	HSK40AS	40	40,0	1.57	98,0	3.86
1254158	HSK50AS	50	50,0	1.97	98,0	3.86
1254159	HSK63AS	63	63,0	2.48	98,0	3.86
1254160	HSK80AS	80	80,0	3.15	98,0	3.86
1254161	HSK100AS	100	100,0	3.94	98,0	3.86

cam disks needed to support HSK32 and HSK40

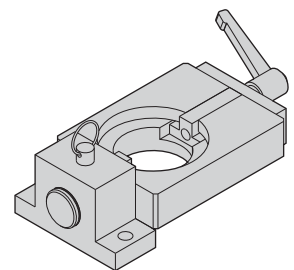
catalog number • sleeve	size reference • HSK	order number • cam disk	catalog number • cam disk
HSK32AS	HSK32	2241080	536.150
HSK40AS	HSK40	2241080	536.150

- Vise mount pot to hold steep taper toolholders for tightening/locking operations.


ERICKSON
TF • ST Vise Mount

order number	catalog number	system size	D2		L		WF	
			mm	in	mm	in	mm	in
1013620	TF30	30	88,9	3.50	109,5	4.31	76,2	3.00
1013636	TF40	40	88,9	3.50	122,2	4.81	76,2	3.00
1013638	TF50	50	133,4	5.25	165,1	6.50	114,3	4.50

- Universal vise to hold 30, 35, 40, 45, and 50 7/24 steep taper toolholders for tightening/locking operations.
- Permits simultaneous access to the retention knob and locknut.
- Replaces up to five separate tightening fixtures.
- Holds tools in the horizontal or vertical position.
- Can be used either right or left handed.
- Holds most 7/24 tapers including ANSI, ISO, DIN, V-flange, BT, and NMTB.
- Handle position is easily changed with a simple button push.
- No setups, bushings, or spare parts required.
- 400 Nm (300 ft. lbs.) maximum torque capacity.

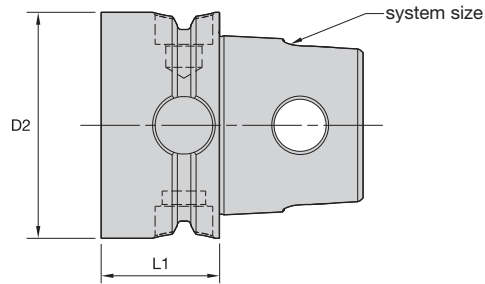

ERICKSON
TF • ST Universal Mount

order number	catalog number	system size
1013591	UTV5030	30, 35, 40, 45, & 50

Accessories

P-KM Spindle Plugs • HSK Spindle Plugs

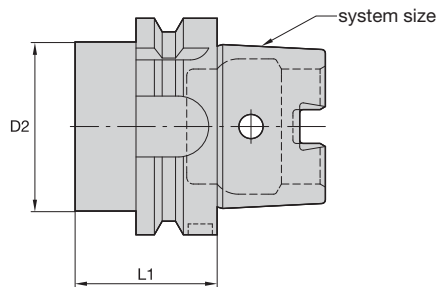
- Prevents machine tool spindle from becoming contaminated when not in use.



■ Spindle Plug • KM™

order number	catalog number	system size	D2		L1	
			mm	in	mm	in
1019237	KM32P	KM32	32	1.26	25	.98
1144452	KM40P	KM40	40	1.57	27	1.06
1144501	KM50P	KM50	50	1.97	31	1.22
1019945	KM63TSP	KM63TS	63	2.48	33	1.30
1144328	KM80P	KM80	80	3.15	37	1.46

- Prevents machine tool spindle from becoming contaminated when not in use.

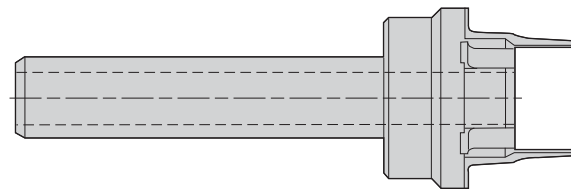


ERICKSON™

■ P-HSK • Form A

order number	catalog number	system size	D2		L1		kg
			mm	in	mm	in	
1256061	HSK63AP	63	50	1.97	42,3	1.66	0,7
1307767	HSK100AP	100	80	3.15	45,3	1.78	0,7

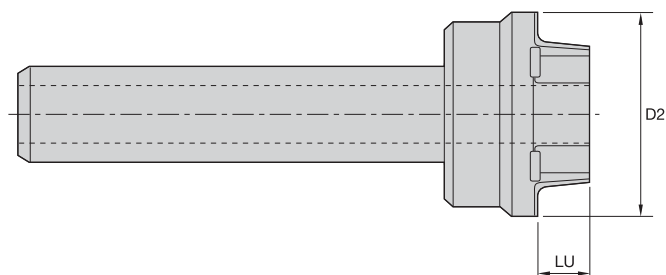
- Cleans taper and face of machine spindle and tool adapter.



■ SW-KM

order number	catalog number	system size
1727267	KMSW32	32
1606113	KMSW40	40
1612900	KMSW50	50
1612922	KMSW63	63
1612923	KMSW80	80

- Cleans taper and face of machine spindle and tool adapter.

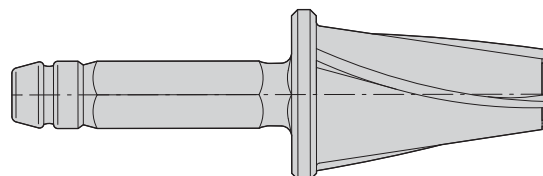


ERICKSON

■ SW-HSK

order number	catalog number	system size	D2		LU	
			mm	in	mm	in
1518662	HSK32SW	32	45	1.77	11	.43
1518630	HSK40SW	40	45	1.77	14	.55
1514497	HSK50SW	50	53	2.09	17	.67
1518677	HSK63SW	63	66	2.60	22	.87
1518681	HSK100SW	100	103	4.06	35	1.38

- Cleans taper of machine spindle and tool adapter.



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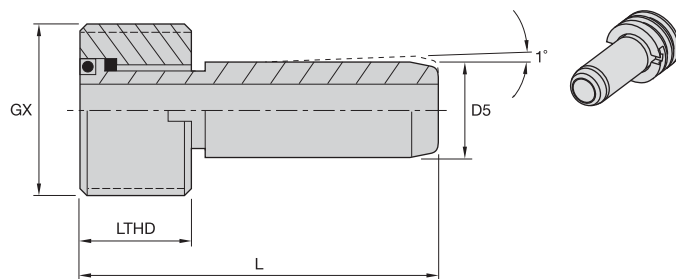
■ SW-ST

order number	catalog number	system size
1288838	SW30	30
1288842	SW40	40
1192562	SW50	50

Accessories

HSK Coolant Supply Units • Wrenches

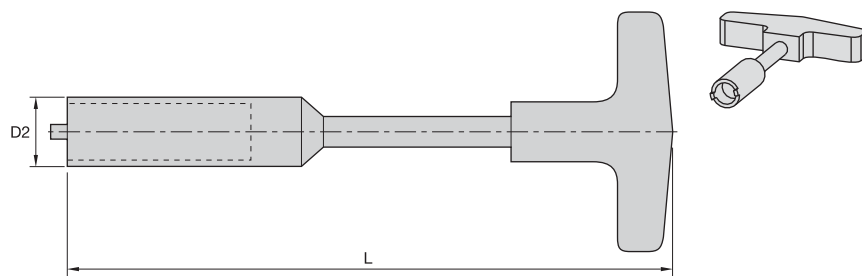
- Designed in accordance with DIN 69893.
- Withstand coolant pressure up to 80 bar (1,160 psi).
- Directs flow of coolant through the tool and avoids spindle mechanism contamination from flow-back.
- Standard-sized replaceable O-rings.



■ HSK Coolant Supply Unit • Assembly

order number	catalog number	system size	D5		L		LTHD		GX	Nm in. lbs.	
			mm	in	mm	in	mm	in			
1132083	193.158	40A & 40E	8,0	.3	29,5	1.2	7,5	.30	M12 X 1	3	30
1132144	193.159	50A & 50E & 63F	10,0	.4	32,7	1.3	9,5	.37	M16 X 1	4	35
1132145	193.160	63A & 80F	12,0	.5	36,2	1.4	11,5	.45	M18 X 1	6	53
1132146	193.161	80A	14,0	.6	40,2	1.6	13,5	.53	M20 X 1.5	8	70
1132147	193.162	100A	16,0	.6	43,6	1.7	15,5	.61	M24 X 1.5	12	106

- Designed to lock and unlock the HSK coolant supply units.



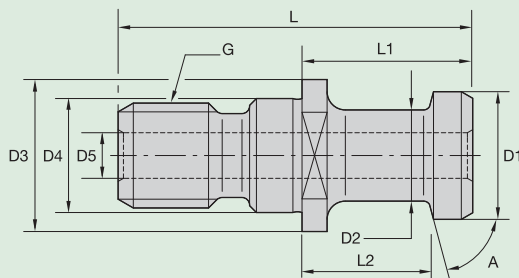
■ HSK Wrench

order number	catalog number	CSWS	D2		L		Nm	in. lbs.
			mm	in	mm	in		
1176487	170.195	40A & 40E	13,0	.51	120	4.72	3	30
1132992	170.196	50A & 50E & 63F	14,5	.57	114	4.49	4	35
1134161	170.197	63A & 80F	16,5	.65	122	4.80	6	53
1127524	170.198	80A	19,0	.75	130	5.12	8	70
1132993	170.199	100A	22,0	.87	141	5.55	12	106

WARNING

Retention knobs are available in various styles and are not always interchangeable because all are machine and spindle specific. The proper retention knob must be used at all times with the appropriate adapter, according to machine specifications as provided by the machine's original manufacturer. Failure to use the correct retention knob, or to adequately install and tighten the correct retention knob, may result in an adapter loosening. Using a combination of metric and non-metric components can result in an inadequate coupling of the adapter to the spindle during machining, causing the component to fail.

While WIDIA™ has endeavored to obtain accurate and up-to-date information regarding retention knob selection based on individual machine tool builder specifications, we cannot guarantee that the information and specifications contained in this catalog are complete and that they have not been modified or superseded by the manufacturer. **You, the machine tool operator, are ultimately responsible for proper selection and use of retention knobs.** The purchase of retention knobs from WIDIA is subject to WIDIA's Standard Terms and Conditions of Sale.



Machining center manufacturers use numerous types and styles of retention knobs. WIDIA has listed some of the most popular retention knobs in the industry on the next few pages.

If a retention knob is not shown, please contact your WIDIA Representative or call WIDIA's Customer Service and have the following information available:

machine builder	machine builder's drawing and/or numbers		machine model number	
taper size	G thread		A angle	
D1	D2	D3	D4	D5
L	L1	L2	through coolant needed?	O-ring needed?

The machine builder should recommend the required tightening torque for the retention knobs. This information is not always available.

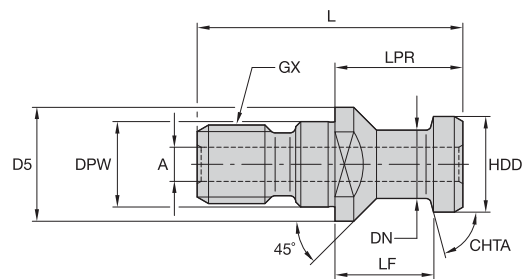
WIDIA has referenced a suggested maximum torque setting and offers a specialized socket just for retention knobs. Please see these socket wrench sizes listed against each knob.

	taper size	suggested torque max (ft. lbs.)	suggested torque max (Nm)	
	30	40	54	
	40	85	115	
	50	110	149	

Accessories

Retention Knobs DIN 69872 Form A • Form B Metric

- Metric thread.
- Piloted.
- Through coolant.



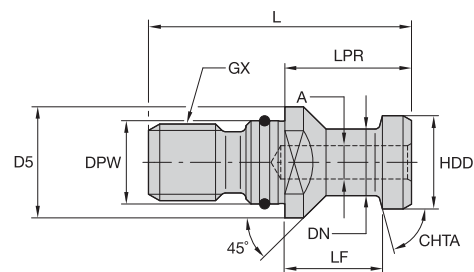
■ RK DIN 69872 Form A • Metric



order number	catalog number	system size	GX	A	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1192424	RK40DVM	40	M16 X 2	7,05	75°	23	13,95	16,97	18,97	20,0	26,00	54	RKW40	115
1192430	RK50DVM	50	M24 X 3	11,55	75°	36	20,95	24,97	27,97	25,0	34,00	74	RKW50M	143

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Metric thread.
- Piloted with O-ring.
- No through coolant.



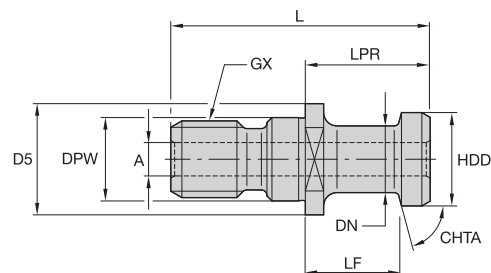
■ RK DIN 69872 Form B • Metric



order number	catalog number	system size	GX	A	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1192423	RK40DVBM	40	M16 X 2	7,05	75°	22,9	13,95	16,97	18,97	20	26	54	RKW40	115
1192429	RK50DVBM	50	M24 X 3	11,55	75°	35,9	20,95	24,97	27,97	25	34	74	RKW50M	143

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Metric thread.
- Piloted.
- Through coolant.



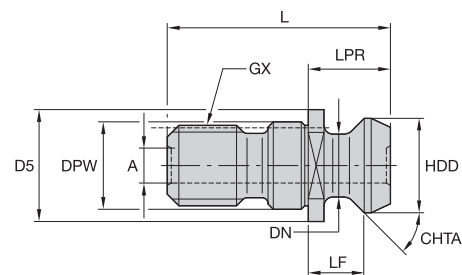
■ RK ISO 7388/2 Type A • Metric



order number	catalog number	system size	GX	A	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1285460	RK40ISAM	40	M16 X 2	7,05	75°	22,9	13,95	16,99	18,95	20	26	54	RKW40	115
1285502	RK50ISAM	50	M24 X 3	11,55	75°	35,9	20,95	24,99	27,95	25	34	74	RKW50M	143

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Metric thread.
- Piloted.
- Through coolant.



■ RK • ISO 7388/2 Type B • Metric



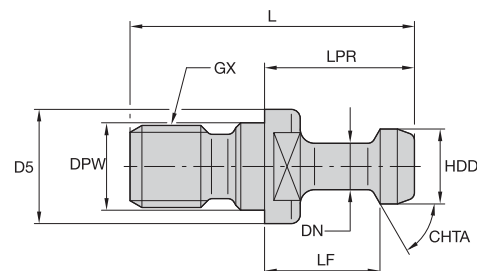
order number	catalog number	system size	GX	A	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1192425	RK40ISBM	40	M16 X 2	7,5	45°	22	12,80	16,99	18,80	11,0	16,25	44,50	RKW40	115
1192431	RK50ISBM	50	M24 X 3	11,7	45°	36	19,45	24,99	28,95	17,8	25,40	65,50	RKW50M	143

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

Accessories

Retention Knobs BT-MAS-Style with Pilot Metric

- Metric thread.
- Piloted.
- No through coolant.



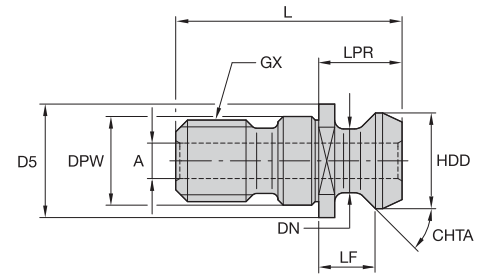
■ RK BT-MAS-Style with Pilot • Metric



order number	catalog number	system size	GX	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1192417	RK30BT1M	30	M12 X 1.75	45°	16,4	6,95	12,49	10,95	17,95	22,95	43,0	RKW30	54
1285416	RK30BT2M	30	M12 X 1.75	60°	16,4	6,95	12,49	10,95	17,95	22,95	43,0	RKW30	54
1192419	RK40BT1M	40	M16 X 2	45°	22,9	9,95	16,99	14,95	27,95	34,95	60,0	RKW40	115
1192420	RK40BT2M	40	M16 X 2	60°	22,9	9,95	16,99	14,95	27,95	34,95	60,0	RKW40	115
1285441	RK40BT3M	40	M16 X 2	90°	22,9	9,95	16,99	14,95	27,95	34,95	60,0	RKW40	115
1192426	RK50BT1M	50	M24 X 3	45°	37,9	16,95	24,99	22,95	34,95	44,95	85,0	RKW50M	143
1192427	RK50BT2M	50	M24 X 3	60°	37,9	16,95	24,99	22,95	34,95	44,95	85,0	RKW50M	143
1285482	RK50BT3M	50	M24 X 3	90°	37,9	16,95	24,99	22,95	34,95	44,95	85,0	RKW50M	143

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Metric thread.
- Piloted.
- Through coolant.



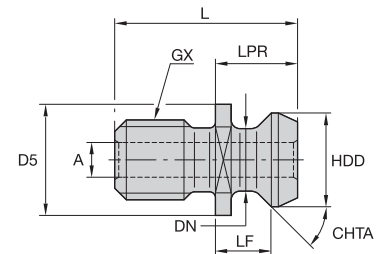
■ RK Short CV with Pilot • Metric



order number	catalog number	system size	GX	A	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	Nm
1192422	RK40CV3M	40	M16 X 2	7,14	45°	23,63	12,45	16,98	18,80	11,18	16,26	41,26	RKW40	115
1026734	RK50HPCV	50	M24 X 3	11,89	45°	36,32	20,83	24,99	28,96	17,78	25,40	65,41	RKW50	143

NOTE: WF = width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Metric thread.
- No pilot.
- Through coolant.



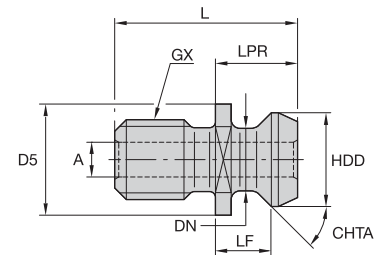
■ RK Short CV without Pilot • Metric



order number	catalog number	system size	GX	A	CHTA	D5	DN	HDD	LF	LPR	L	wrench socket	Nm
1192421	RK40CV1M	40	M16 X 2	6,95	45°	22,5	12,4	18,8	11,20	16,30	38,1	RKW40	115
1285478	RK50AV1M	50	M24 X 3	11,55	45°	37,0	19,6	29,1	17,95	25,55	60,0	RKW50M	143

NOTE: WF = width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Inch thread.
- No pilot.
- Through coolant.



■ RK Short CV without Pilot • Inch



order number	catalog number	system size	GX	A	CHTA	D5	DN	HDD	LF	LPR	L	wrench socket	ft. lbs.
1026590	RK40CV	40	5/8 - 11	.281	45°	.900	.490	.740	.440	.640	1.500	RKW40	85
1026690	RK50CV	50	1 - 8	.500	45°	1.400	.820	1.140	.700	1.000	2.300	RKW50	110

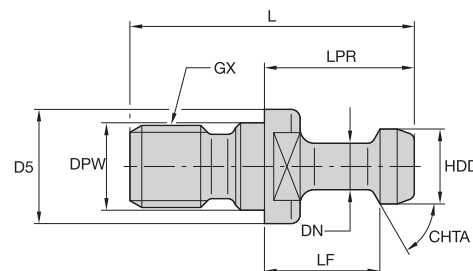
NOTE: WF = width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

Accessories

Retention Knobs BT-MAS Style



- Inch thread.
- Piloted.
- No through coolant.



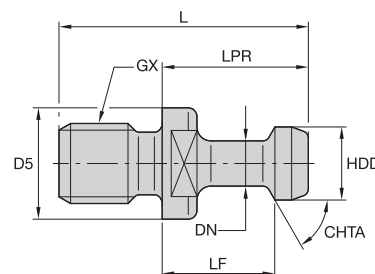
■ RK BT-MAS Style with Pilot • Inch



order number	catalog number	system size	GX	CHTA	D5	DN	DPW	HDD	LF	LPR	L	wrench socket	ft. lbs.
1026729	RK31114	40	5/8 - 11	45°	.938	.392	.636	.589	.988	1.264	2.250	RKW40	85
1025459	RK31114B	40	5/8 - 11	90°	.938	.392	.636	.589	.988	1.264	2.250	RKW40	85
1021844	RK31118	50	1 - 8	45°	1.438	.668	1.026	.903	1.384	1.778	3.355	RKW50	110
1021800	RK31118B	50	1 - 8	90°	1.438	.668	1.026	.903	1.384	1.778	3.355	RKW50	110

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Inch thread.
- Piloted.
- No through coolant.



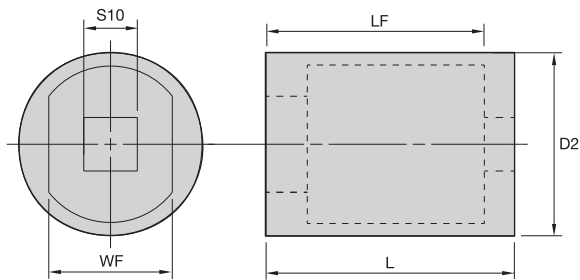
■ RK BT-MAS-Style without Pilot • Inch



order number	catalog number	system size	GX	CHTA	D5	DN	HDD	LF	LPR	L	wrench socket	ft. lbs.
1026730	RK32114	40	5/8 - 11	45°	.903	.392	.588	.990	1.266	2.125	RKW40	85

NOTE: WF = Width over flats for open-ended wrench or socket wrench.
For socket wrench, see page J39.

- Socket wrench with standard 1/2" drive to tighten retention knobs.



■ RK Socket • Metric

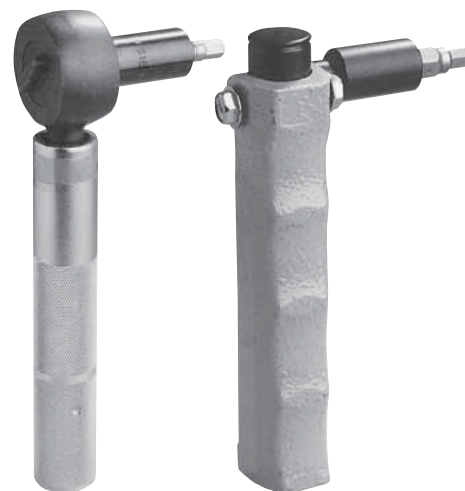
order number	catalog number	system size	D2	L	LF	S10		WF	Nm
						mm	in		
2407089	RKW40M	40	31,8	31,8	19,0	12,7	.50	18,1	115
2407091	RKW50M	50	44,5	60,3	47,6	12,7	.50	30,2	150

■ RK Socket • Inch

order number	catalog number	system size	D2	L	LF	S10	WF	ft. lbs.
2407087	RKW30	30	1.00	1.50	1.00	.50	.54	40
2407088	RKW40	40	1.25	1.94	1.44	.50	.76	85
2407090	RKW50	50	1.75	1.63	1.12	.50	1.26	110

Accessories

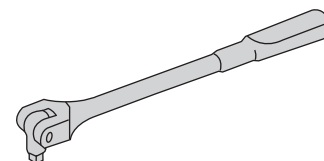
KM™ Manual Torque Wrenches • KM-LOC II™ and KM-LOC™ Wrenches



■ KM Manual Torque Wrench

order number	catalog number	KM size	wrench type	adapter	adapter drive size	driver bit	driver hex size	clamping unit hex size	torque ft. lbs.	torque Nm
2432682	TW628R	25 & 3225	ratchet	—	3/8"	301.362	5/16"	6mm	25	34
1291313	TW58	32	solid	—	—	301.361	5/16"	5mm	8	11
1099387	TW610	40	solid	—	—	301.362	5/16"	6mm	10	14
1291314	TW58R	32	ratchet	30137	3/8"	301.361	5/16"	5mm	8	11
1291316	TW610R	40	ratchet	30137	3/8"	301.362	5/16"	6mm	10	13
1291318	TW623R	50	ratchet	AHB375M10	3/8"	—	—	10mm	23	30
1291312	TW1237R	63	ratchet	AHB500M12	1/2"	—	—	12mm	37	50
1121108	TW1460R	80	ratchet	EBM14	1/2"	—	—	14mm	60	80

NOTE: All KM torque wrenches come complete with adapter and driver bit.



■ KM LOC II and LOC Wrench

wrench catalog number	drive hex bit			
	KM32	KM40	KM50	KM63
914-15	986-6 = hex size 6mm	986-8 = hex size 8mm	986-10 = hex size 10mm	986-10 = hex size 10mm



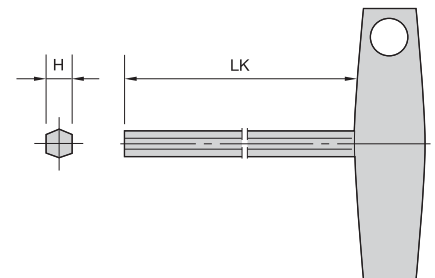
order number	drive hex bit catalog number
1863666	986-6
1131354	986-8
1131361	986-10

NOTE: Wrench and drive hex bit must be ordered separately.



■ T-Handle Hex Wrench Set • Metric

order number	catalog number	wrench set description
1192354	MW-9	set contains (mm) 1,27; 1,5; 2,0; 2,5; 3,0; 4,0; 5,0; 6,0; and 8,0



■ T-Handle Hex Wrench • Metric

order number	catalog number	hex size
1138748	170.135	5mm
1138755	170.136	6mm



■ T-Handle Wrench Set • Inch

order number	catalog number	wrench description
1192321	KW-7A	set contains sizes: 5/64, 3/32, 7/64, 1/8, 5/32, 3/16, and 7/32



■ Universal Bit Driver

order number	catalog number
1963869	driver



■ Driver Bit

order number	catalog number	hex size	Torx size	Torx Plus size
1138851	170.179	2,5mm	—	—
1150198	170.180	3mm	—	—
1138857	170.181	4mm	—	—
1962981	BT6	—	6	—
1963853	BT7	—	7	—
1963855	BT8	—	8	—
1963854	BT9	—	9	—
1963856	BT10	—	10	—
1138814	170.175	—	15	—
1138822	170.176	—	20	—
1994654	170.258	—	25	—
1984243	170.256	—	27	—
2244316	BT25IP	—	—	25IP
2244317	BT27IP	—	—	27IP

Achieve Victory with the WIDIA™ Modular Drill Family



WIDIA-Metcut™ Spade Blades

are the perfect compliment to TOP DRILL M1™ for an extensive portfolio of modular drilling.

WIDIA™ provides the complete modular holemaking solution portfolio from 8mm (.315") to 114mm (4.5") to cover a wide range of machining environments and materials.

- Fast penetration rates, less downtime, lower variability.
- Interchangeable with other conventional spade blade holders.
- Improved surface finish — elimination of secondary operations.
- Standard and special drill body/holder offering, including porting tool configurations.

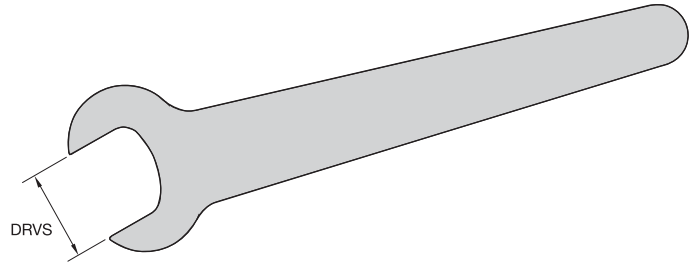
WIDIA-Metcut spade blades are great choices for:

- Cast iron and aluminum workpieces.
- Machining environments where rigidity, coolant supply, or speed and feed rates are limiting factors.
- Short run manufacturing and prototyping environments.

To learn more, contact your local Authorized Distributor or visit www.widia.com.

WIDIA 

- Standard open-ended wrenches.



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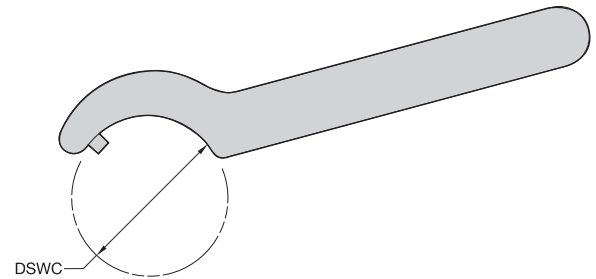
■ Wrench OEW • Metric

order number	catalog number	DRVS
1284020	OEW9M	9mm
1284011	OEW13M	13mm
1174217	OEW16M	16mm
1197387	OEW19M	19mm
1192371	OEW24M	24mm
1186649	OEW25M	25mm
1284014	OEW30M	30mm
1284015	OEW32M	32mm

■ Wrench OEW • Inch

order number	catalog number	DRVS
1025533	OEW044	7/16
1025544	OEW050	1/8
1025546	OEW062	5/8
1025547	OEW068	11/16
1025548	OEW075	3/4
1025550	OEW088	7/8
1025551	OEW094	15/16
1025552	OEW100	1
1025553	OEW106	1 1/16
1025574	OEW112	1 1/8
1025575	OEW119	1 3/16
1025576	OEW125	1 1/4
1025674	OEW138	1 3/8
1025581	OEW150	1 1/2
1025582	OEW162	1 5/8
1025583	OEW168	1 11/16
1025604	OEW175	1 3/4
1025605	OEW188	1 7/8
1025607	OEW225	2 1/4
1025608	OEW250	2 1/2

- Standard pin spanner wrenches.


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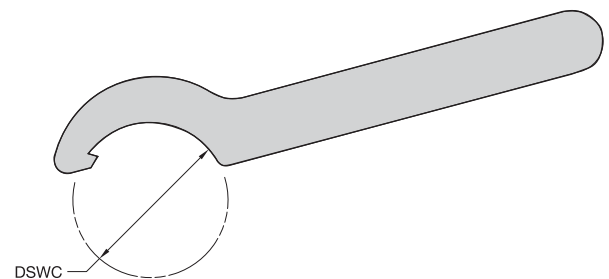
■ Wrench PSW • Metric

order number	catalog number	DSWC
3367387	PSW52M	58,0mm - 62,0mm
1284310	PSW58M	52,0mm - 55,0mm
1192392	PSW68M	68,0mm - 75,0mm
1284311	PSW80M	80,0mm - 90,0mm

■ Wrench PSW • Inch

order number	catalog number	DSWC
1013497	PSW350	3 1/2

- Standard hook spanner wrenches.


ERICKSON

■ Wrench HSW • Metric

order number	catalog number	DSWC
1273813	HSW25M	25,0mm - 28,0mm
1273814	HSW34M	34,0mm - 36,0mm
1192229	HSW45M	45,0mm - 50,0mm
1192230	HSW58M	58,0mm - 62,0mm
1273815	HSW68M	68,0mm - 75,0mm
1192231	HSW80M	80,0mm - 90,0mm