

ONSRUD

ONSRUD CUTTER LP

Machine Tool Accessories



AHB

Tooling & Machinery, Inc.

Complete Metalworking Solutions

Roseville Saginaw & Jackson, MI

ISO Certified

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33-00 Fiber Adapter Bushing



Used to downsize the bore for smaller shank diameters. Bushings are not recommended for production routing. They should be used only as a temporary substitute for the proper size collet.

Usage: Temporary collet downsizing

Part #	OD	Hole	Length
33-01	1/4	1/8	1 1/4
33-02	1/4	3/16	1 1/4
33-03	1/2	1/4	1 1/2
33-04	1/2	5/16	1 1/2
33-05	1/2	3/8	1 1/2

33-10 Collet Brush Kit



Part #	Description
33-10	Collet Brush Kit (Includes 4 brushes in tube.)
33-15	1/4" Brush
33-16	3/8" Brush
33-17	1/2" Brush
33-18	3/4" Brush
33-19	1" Brush
33-25	Collet Brush Kit (Includes 5 brushes in tube.)
33-28	Brass Brush

33-21 Cleaning Solvent & Rust Protector

Part #	Description
33-21	Rust Free 8.45 oz. and T9 4 oz. drip RUST FREE is a cleaner designed to provide a simple solution to your collet cleaning needs. Use T-9 to protect parts from rust and corrosion. Designed to be used after RUST FREE – use on collets and tool holders.



33-30 Tool Extender



Designed to increase the overall reach of 3/8 and smaller router bits. These extensions are used mainly on CNC routers when routing three dimensional parts.

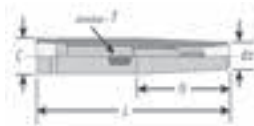
Part #	Ext OAL	Shank Dia	Shk Lgth	Head Dia	Collet	Nut	Wrench
33-30	5	3/8	4	1/2	ER8	34-720	34-760
33-32	6 9/16	1/2	5 1/2	5/8	ER11	34-721	34-761
33-34	6 1/4	5/8	5 1/2	5/8	ER11	34-721	34-761
33-36	7	1/2	5 1/2	7/8	ER16	34-722	34-762
33-38	6 9/16	3/4	5 1/2	7/8	ER16	34-722	34-762
33-37	6 5/8	1	5 1/2	1 1/8	ER20	34-723	34-763
33-39	5 1/2	3/4	4	1 3/8	ER25	34-724	34-764

NOTE – Tool extenders should be cut off to required length before use.

Extension should not exceed a 4 to 1 ratio. The 4 being the length and the 1 being the diameter. I.E. a 1/2" shank should not extend out over 2" in front of the holder. Recommended Spindle Speed 15,000 to 18,000 RPM.

33-40 Slim Fit Extensions

NEW



Part #	Description	L	I1	C	d2	T
33-40	1/2" x 5" Slim Fit Extension	5"	1 7/8"	1/2"	.472"	M6 x 1.0P
33-41	1/2" x 6" Slim Fit Extension	6"	1 7/8"	1/2"	.472"	M6 x 1.0P
33-42	5/8" x 5" Slim Fit Extension	5"	1 7/8"	5/8"	.472"	M6 x 1.0P
33-43	5/8" x 6" Slim Fit Extension	6"	1 7/8"	5/8"	.472"	M6 x 1.0P
33-44	5/8" x 8" Slim Fit Extension	8"	1 7/8"	5/8"	.472"	M6 x 1.0P

33-60 Spindle Taper Wiper

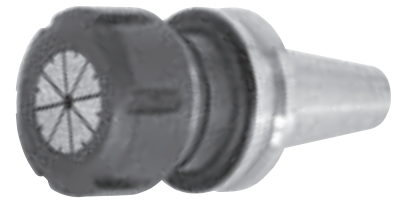
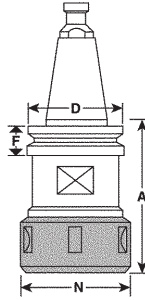
Spindle taper wipers are used to insure clean spindle taper before installing collet chucks into CNC router spindles.

Part #	Type	Total Length	Taper Length	Handle Dia	Taper Max Dia
33-60	ISO-30	6 5/8	2 3/8	1	1 1/4
33-62	ISO-40	7 1/2	3 1/16	1	1 3/4
33-64	ISO-60	9 1/2	4 3/4	1 3/16	2 3/4
33-66	HSK 63F	6 1/2	1 1/4	1	N/A



33-70 ISO Toolholders For CNC Routers

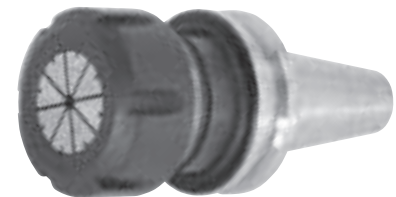
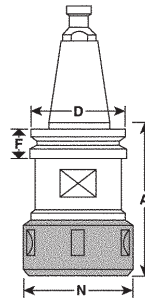
Note: Measure the A dimension with the collet in the nut.
Dimensions in Millimeters



Part #	Description	D	A	F	N	Collet Nut	Wrench	Pull Stud Provided
33-71*	ISO 30 x ER 32-CMS	46	58	15.9	50	34-705	34-757	N/A
33-72*	ISO 30 x ER 40-CMS	46	66	15.9	63	34-706	34-758	N/A
33-73	ISO 30 x ER 32-50mm	50	50	15.9	50	34-705	34-757	33-114
33-74	ISO 30 x ER 32-50mm Left	50	50	15.9	50	41932-L	34-757	33-114
33-75	ISO 30 x ER 32-63mm	50	63	15.9	50	34-705	34-757	33-112
33-76	ISO 30 x ER 32-63mm Left	50	63	15.9	50	41932-L	34-757	33-112
33-77	ISO 30 x ER 32-90mm	50	90	15.9	50	34-705	34-757	33-112
33-78	ISO 40 x ER 40-70mm	63.55	70	15.9	63	34-706	34-758	33-118

33-80 BT Toolholders For CNC Routers

Note: Measure the A dimension with the collet in the nut.
Dimensions in Millimeters



Part #	Description	D	A	F	N	Collet Nut	Wrench	Pull Stud Provided
33-81	BT 30 x ER 32-60mm w/o slots	46	60	20	50	34-705	34-757	33-111
33-82	BT 30 x ER 32-90mm w/o slots	46	90	20	50	34-705	34-757	33-111
33-83	BT 30 x ER 32-60mm Left Hand	46	60	20	50	41932-L	34-757	33-111
33-84	BT 35 x ER 32-76mm	53	76	22	50	34-705	34-757	33-117
33-85	BT 30 x ER 32-70mm	46	70	20	50	34-705	34-757	33-117
33-86	BT40 x ER32-70mm	50	70	25.3	50	34-705	34-757	-
33-87	BT40 x ER40-80mm	50	80	25.3	63	34-706	34-758	-

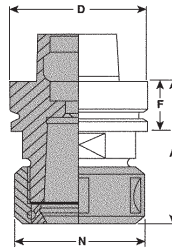
NEW

Toolholder s priced as assemblies (toolholder, pull stud and collet nut).

* Without pull stud, please purchase from CMS.

33-90 HSK 63F Toolholders For CNC Routers

Note: Measure the A dimension with the collet in the nut.
Dimensions in Millimeters

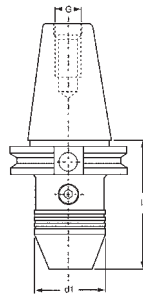


Part #	Description	D	A	F	N	Collet Nut	Wrench
33-90	HSK 50F x ER32 - 80mm	50	80	26	50	34-705	24-757
33-91	HSK 63F x ER40 - 76mm	63	76	26	63	34-706	34-758
33-92	HSK 63F x ER40 - 90mm	63	90	26	63	34-706	34-758
33-93	HSK 63 F x SYOZ 25 - 80mm	63	80	26	60	34-708	34-758
33-94	HSK 63 F x ER32 - 70mm	63	70	26	50	34-705	34-757
33-95	HSK 63 F x ER40 - 125mm	63	125	26	63	34-706	34-758

33-100 HP3 Precision Drill Toolholders (ISO, HSK)

HP3 Means:
High Precision
High Power
High Performance

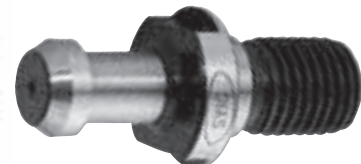
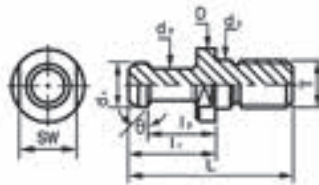
- Wow! Capacity from 1/16" to 1/2"
- 0.0008" Maximum TIR (runout)
- 4 times the holding power of normal drill chucks
- High speed design for 10,000 RPM
- Integrated design, chuck will not come off during operation (Safety First)



Dimensions in Millimeters

Part #	Description	d1	l2	G
33-101	ISO 30 HP3 drill chuck 1/2	50	103	M12
33-102	HSK 63F HP3 drill chuck 1/2	50	123.5	-
33-103	BT40 HP3 DRILL CHUCK 1/2	50	4 3/8	-
33-105	CAT40 SPU 13-4 DRILL CHUCK	50	101.6	-
33-106	BT30 SPU 13--110 DRILL CHUCK	50	110	-
33-107	BT40 SPU 13--110 DRILL CHUCK	50	100	-
33-109	Replacement Drill Chuck for 33-105, 106, 107			

33-110 Pull Studs For CNC Router



Dimensions in Millimeters

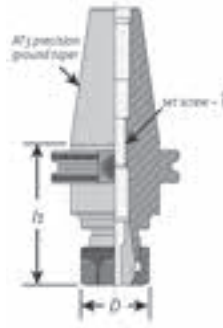
Part #	Type	D	d1	d2	d3	L	l1	l2	O	T
33-111	KOMO 30-A 12.5	17	13	9	12.5	44	23.4	18.2	15°	M12
33-112	DAT 30- A	17	13	9	13	44	24	19	15°	M12
33-113	Colombo 30- Ball	17	12.8	9	13	44	24	19	45°	M12
33-114	HSD ISO 30	17	12	8	13	44	23.9	-	radius	M12
33-115	DAT-A PULL STUD	36	28	21	25	74	34	25	30°	M24
33-117	BT 35- Heian	20	13	8.5	12.5	43	28	22.5	-	M12
33-118	DAT 40 - A	23	19	14	17	54	26	20	15°	M16

13001 – Colombo Spindles (Billet spindle)
750-19 – KOMO router for BT 30 tool holder

13001-45 – Colombo Spindles clamping by ball (RS spindle)
13019 – HSD Spindle

33-120
NEW

Cat 40 Precision Toolholder



Part #	Description	L1	D	Collet	Wrench
33-120	CAT 40 x ER 32-4	4"	1.97"	ER32	34-757
33-121	CAT 40 x ER 32-6	6"	1.97"	ER32	34-757
33-122	CAT 40 x ER 32-8	8"	2.48"	ER32	34-757
33-123	CAT 40 x ER 40-4	4"	2.48"	ER40	34-758

33-140
NEW

HSK 63F Shrink Fit Toolholder

Note: Max T.I.R. 0.0001"
Balanced 24,000 rpm at G2.5



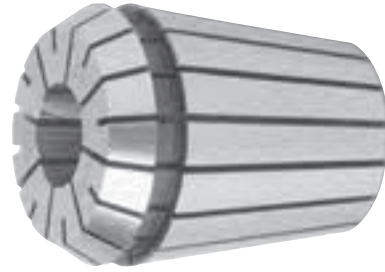
Part #	Description	d1	d2	d3	l1	l2
33-140	HSK 63F x 1/4"	1/4"	21mm	27mm	80mm	36mm
33-141	HSK 63F x 3/8"	3/8"	24mm	32mm	95mm	42mm
33-142	HSK 63F x 1/2"	1/2"	24mm	32mm	95mm	47mm
33-143	HSK 63F x 3/4"	3/4"	33mm	42mm	100mm	52mm
33-144	HSK 63F x 1"	1"	44mm	53mm	115mm	53mm

Benefits of Shrink Fit Tooling

- Allows for increased speeds & feeds
- Improves tool life
- Reduces the chance of tool slippage.
- Works with carbide or HSS tools.

Collets ER Precision Inch

- Standard 0.0004" T.I.R.
- Collapse range: 0.039"



Collet ID	33-50 ER8	34-60 ER11	34-70 ER16	34-90 ER20	34-150 ER25	34-200 ER32	34-250 ER40	Collet Range
	Part #	Part #	Part #	Part #	Part #	Part #	Part #	
1/16		34-61	34-71					.043 - 1.062
3/32		34-62	34-72	34-92	34-151	34-201		.054 - .093
1/8	33-50	34-63	34-73	34-93	34-152	34-202	34-251	.086 - .125
5/32		34-64	34-74	34-94	34-153	34-203		.117 - .156
3/16		34-65	34-75	34-95	34-154	34-204	34-252	.148 - .187
7/32		34-66	34-76	34-96	34-155	34-205		.179 - .218
1/4		34-67	34-77	34-97	34-156	34-206	34-253	.211 - .250
9/32			34-78	34-98	34-157	34-207		.242 - .281
5/16			34-79	34-99	34-158	34-208	34-254	.273 - .312
11/32			34-80	34-100	34-159	34-209		.304 - .343
3/8			34-81	34-101	34-160	34-210	34-255	.336 - .375
13/32			34-82	34-102	34-161	34-211		.367 - .406
7/16				34-103	34-162	34-212	34-256	.398 - .437
15/32				34-104	34-163	34-213		.429 - .468
1/2				34-105	34-164	34-214	34-257	.461 - .500
17/32					34-165	34-215		.492 - .531
9/16					34-166	34-216	34-258	.523 - .562
19/32					34-167	34-217		.554 - .593
5/8					34-168	34-218	34-259	.586 - .625
21/32						34-219		.617 - .656
11/16						34-220	34-260	.648 - .687
23/32						34-221		.679 - .718
3/4						34-222	34-261	.711 - .750
7/8							34-262	.836 - .875
1							34-263	.961 - 1.000

34-50 Collet Life Plug

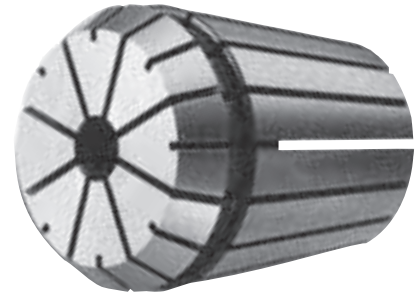
Collet plugs are designed to keep full grip collets from collapsing in the back when the router bit shank does not fill the full grip collet completely.

Part #	Size
34-51	1/4
34-52	3/8
34-53	1/2
34-54	5/8
34-55	3/4



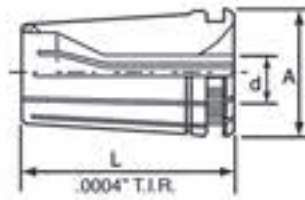
Collets ER 20, 25, 32, 40 Precision Metric

- Standard 0.0004 T.I.R.
- Collapse range: 0.039



Collet ID	34-300 ER20	34-350 ER25	34-400 ER32	34-450 ER40	Inch	Collet Range
	Part #	Part #	Part #	Part #		
0.5-1					1/32	.019 - .039
1-2	34-301	34-351			1/16	.039 - .079
2-3	34-302	34-352	34-401		7/64	.079 - .118
3-4	34-303	34-353	34-402	34-451	1/8	.118 - .157
4-5	34-304	34-354	34-403	34-452	3/16	.157 - .197
5-6	34-305	34-355	34-404	34-453	7/32	.197 - .236
6-7	34-306	34-356	34-405	34-454	1/4	.236 - .276
7-8	34-307	34-357	34-406	34-455	5/16	.276 - .315
8-9	34-308	34-358	34-407	34-456	11/32	.315 - .354
9-10	34-309	34-359	34-408	34-457	3/8	.354 - .394
10-11	34-310	34-360	34-409	34-458	13/32	.394 - .433
11-12	34-311	34-361	34-410	34-459	7/16	.433 - .472
12-13	34-312	34-362	34-411	34-460	1/2	.472 - .512
13-14		34-363	34-412	34-461	17/32	.512 - .551
14-15		34-364	34-413	34-462	9/16	.551 - .591
15-16		34-365	34-414	34-463	5/8	.591 - .630
16-17			34-415	34-464	21/32	.630 - .669
17-18			34-416	34-465	11/16	.669 - .709
18-19			34-417	34-466	3/4	.709 - .748
19-20			34-418	34-467	25/32	.748 - .787
20-21				34-468	13/16	.787 - .827
21-22				34-469	27/32	.827 - .866
22-23				34-470	7/8	.866 - .906
23-24				34-471	15/16	.906 - .945
24-25				34-472	31/32	.945 - .984
25-26				34-473	1	.984 - 1.024

34-500 TG100 Collets



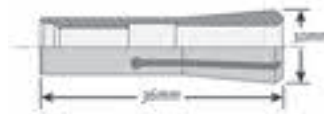
Part #	ID Size D	L	A
34-501	1/8	2.375	1.379
34-502	3/16	2.375	1.379
34-503	1/4	2.375	1.379
34-504	5/16	2.375	1.379
34-505	3/8	2.375	1.379
34-506	7/16	2.375	1.379
34-507	1/2	2.375	1.379
34-508	9/16	2.375	1.379
34-509	5/8	2.375	1.379
34-510	3/4	2.375	1.379
34-511	1	2.375	1.379

TG 100 Nut

Part #
34-714

34- 520 Slim Fit 6 Collets

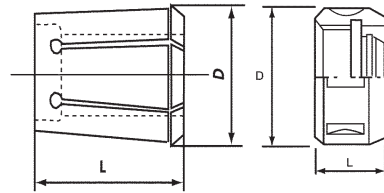
NEW



Part #	ID Size D	L	A
34-520	3 mm	36mm	10mm
34-521	4 mm	36mm	10mm
34-522	5 mm	36mm	10mm
34-523	5.5 mm	36mm	10mm
34-524	6 mm	36mm	10mm
34-531	7/64"	36mm	10mm
34-526	1/8	36mm	10mm
34-532	9/64"	36mm	10mm
34-527	11/64	36mm	10mm
34-530	3/16"	36mm	10mm
34-528	13/64"	36mm	10mm
34-529	15/64	36mm	10mm
34-525	1/4	36mm	10mm

34-550 Perske (SYOZ)/DIN6388 Collets and Nuts

Snap collet into the nut before screwing nut onto spindle or collet holder.
 SYOZ 20 - L=34 D=20, SYOZ 25 - L=52 D=35



Perske (SYOZ) collets

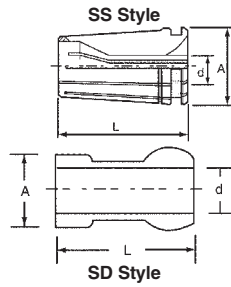
Collet ID	Part # for SYOZ 20	Part # for SYOZ 25
1/8	34-551	34-601
3/16	34-552	34-602
1/4	34-553	34-603
5/16	34-554	34-604
3/8	34-555	34-605
7/16	34-556	34-606
1/2	34-557	34-607
9/16		34-608
5/8		34-609
3/4		34-610
7/8		34-611
1"		34-612
10 mm	34-558	34-613
16 mm		34-614
20 mm		34-615
25 mm		34-616

Perske (SYOZ) nut

Part # for SYOZ 20	Description	Part # for SYOZ 25	Description
34-707	SYOZ 20 RH Collet Nut	34-715	SYOZ 20 LH Collet Nut
34-708	SYOZ 25 RH Collet Nut	34-716	SYOZ 25 LH Collet Nut

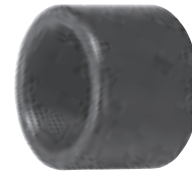
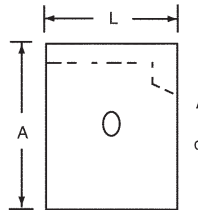
34-650 Shoda Collets

Our Shoda collets are the most accurate in the industry. We use only the best metal and a Swiss grinding technique that ensures accuracy on each grind.



Part #	Description	A Dim	d Dim	L Dia
34-651	Shoda 20mm (SD Style) 1/4 Collet	20mm	.250	52mm
34-652	Shoda 20mm (SD Style) 5/16 Collet	20mm	.312	52mm
34-653	Shoda 20mm (SD Style) 3/8 Collet	20mm	.375	52mm
34-654	Shoda 20mm (SD Style) 1/2 Collet	20mm	.500	52mm
34-655	Shoda 20mm (SD Style) 5/8 Collet	20mm	.625	52mm
34-656	Shoda Piggyback 1/8 Collet	16mm	.125	52mm
34-657	Shoda Piggyback 3/16 Collet	16mm	.187	52mm
34-658	Shoda Piggyback 1/4 Collet	16mm	.250	52mm
34-659	Shoda Piggyback 5/16 Collet	16mm	.312	52mm
34-660	Shoda Piggyback 3/8 Collet	16mm	.375	52mm
34-661	Shoda Piggyback 1/2 Collet	16mm	.500	52mm
34-662	Shoda 24mm(SD Style) 1/8 Collet	24mm	.125	52mm
34-663	Shoda 24mm(SD Style) 1/4 Collet	24mm	.250	52mm
34-664	Shoda 24mm(SD Style) 5/16 Collet	24mm	.312	52mm
34-665	Shoda 24mm(SD Style) 3/8 Collet	24mm	.375	52mm
34-666	Shoda 24mm(SD Style) 1/2 Collet	24mm	.500	52mm
34-667	Shoda 24mm(SD Style) 5/8 Collet	24mm	.625	52mm
34-668	Shoda 24mm(SD Style) 3/4 Collet	24mm	.750	52mm
34-669	Super Shoda (SS Style) 1/4 Collet	23mm	1/4	40mm
34-670	Super Shoda (SS Style) 3/8 Collet	23mm	3/8	40mm
34-671	Super Shoda (SS Style) 1/2 Collet	23mm	1/2	40mm
34-672	Super Shoda (SS Style) 10mm Collet	23mm	10mm	40mm

34-700 Shoda Nuts

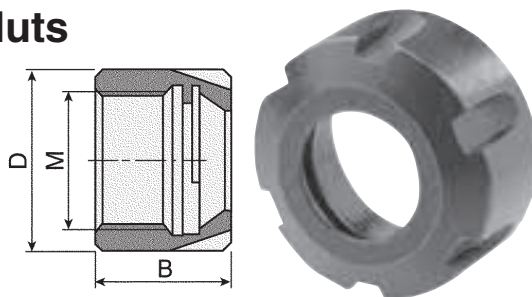


Part #	Description	A Dim	d Dim	L Dim
34-710	Shoda piggy back collet nut	36mm	14mm	30mm
34-711	Shoda old style collet nut	41mm	19mm	30mm
34-712	Shoda new style collet nut	46mm	22mm	30mm
34-713	Super Shoda collet nut	36mm	12.5mm	15mm

34-700 Ultra High-Speed ER Coated Nuts

Use RH-B nuts for applications where speeds exceed 15,000 RPM s to maintain tool balance. RH-B series nuts are manufactured to the closest tolerance for ultra high speeds. The eccentric ring is perfectly round and all parts of the nut are totally ground.

- Reduce TIR by increasing holding power!
- Increase tool life by up to 20%
- Available for 60,000 rpm spindles



Part #	Description	D	B	M	Max Speed	Wrench	*Max Torque
34-701	ER RH 11 B Nut	19mm	11.8mm	M14 x 0.75	70,000	34-751	20 ft/lbs
34-702	ER RH 16 B Nut	32mm	18.0mm	M22 x 1.5	65,000	34-754	50 ft/lbs
34-703	ER RH 20 B Nut	35mm	19.5mm	M25 x 1.5	60,000	34-755	75 ft/lbs
34-704	ER RH 25 B Nut	42mm	20.5mm	M32 x 1.5	55,000	34-756	95 ft/lbs
34-705	ER RH 32 B Nut	50mm	23.0mm	M40 x 1.5	50,000	34-757	125 ft/lbs
34-706	ER RH 40 B Nut	63mm	26.0mm	M50 x 1.5	40,000	34-758	140 ft/lbs
34-720	ER 8 Mini Nut	12mm	11.0mm	M10 x 0.75	20,000	34-760	7 ft/lbs
34-721	ER 11 Mini Nut	16mm	12.0mm	M13 x 0.75	20,000	34-761	14 ft/lbs
34-722	ER 16 Mini Nut	22mm	18.0mm	M19 x 1.0	20,000	34-762	22 ft/lbs
34-723	ER 20 Mini Nut	28mm	19.5mm	M24 x 1.0	20,000	34-763	25 ft/lbs
34-724	ER 25 Mini Nut	36mm	21.0mm	M30 x 1.0	20,000	34-764	29 ft/lbs

* Recommended torque is 80-90% of max. value. See page 22 for torque wrench.

34-743 Dust Cover

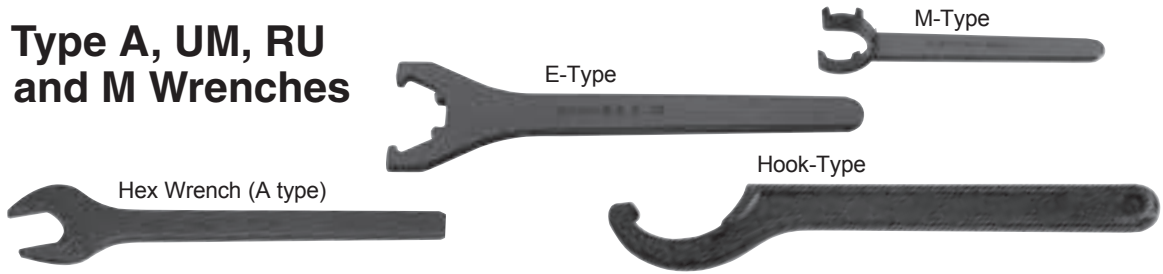
NEW

- Keeps dust and chips from entering collet.
- Keeps tool balanced.



Part #	Description
34-740	Dust cover for 3/16" tool shank
34-741	Dust cover for 1/4" tool shank
34-742	Dust cover for 5/16" tool shank
34-743	Dust cover for 3/8" tool shank
34-744	Dust cover for 1/2" tool shank
34-745	Dust cover for 5/8" tool shank
34-746	Dust cover for 3/4" tool shank

34-750 Type A, UM, RU and M Wrenches



Part #	Description	Nut Type	Length (mm)	Width (mm)
34-751	ER 11-A Wrench	A (Hex)	120	40
34-752	ER 16-A Wrench	A (Hex)	140	53
34-753	ER 20-A Wrench	A (Hex)	160	60
34-754	ER 16-E Wrench	UM or RU	160	55
34-755	ER 20-E Wrench	UM or RU	180	60
34-756	ER 25-E Wrench	UM or RU	206	65
34-757	ER 32-E Wrench	UM or RU	253	75
34-758	ER 40-E Wrench	UM or RU	289	90
34-760	ER 8-M Wrench	M	75	13
34-761	ER 11-M Wrench	M	95	17
34-762	ER 16-M Wrench	M	117	22.5
34-763	ER 20-M Wrench	M	129	28.5
34-764	ER 25-M Wrench	M	142.5	35.5
34-765	TG100 Wrench	Hook Type	253	46
34-766	PIN STYLE SHODA Wrench	Pin Type	158	45
34-767	DRILL CHUCK Wrench for 33-105, 106, 107	-	152	31.7

34-800 Universal Torque Wrench



Part #	Description	Torque Range	Length	Weight	Spigot
34-801	Torque Wrench	30-150 ft/lbs	16.5	1.75 lbs.	16mm round
34-802	Torque Wrench	45-228 ft/lbs	21.5	2.5 lbs.	16mm round

34-810 Adapter Socket

Part #	Description
34-810	3/8 Square Drive
34-812	1/2 Square Drive
34-813	3/8 - 1/4 Reducer



34-820 Pull Stud Socket

Part #	Description	Square Drive
34-820	BT30 Taper Pull Stud	1/4
34-822	ISO30 Taper Pull Stud	3/8
34-824	BT40 Taper Pull Stud	1/4
34-826	ISO40 Taper Pull Stud	3/8



34-850 Collet Keys for Torque Wrenches



Part #	Collet Nut Size	Wrench Type	Max. Torque
34-851	ER 16 Hex	Hex	50 ft/lbs
34-852	ER 20 Hex	Hex	75 ft/lbs
34-853	ER 25 Spanner	E Type	95 ft/lbs
34-854	ER 32 Spanner	E Type	125 ft/lbs
34-855	ER 40 Spanner	E Type	140 ft/lbs
34-856	SYOZ 25/TG 100	Hook	100 ft/lbs
34-857	TG 75 Hex	Hex	100 ft/lbs
34-858	TG 100 Hex	Hex	100 ft/lbs

*Recommended Torque is 80-90 % of value given

34-901 Axial Preset Gauge

NEW

How to use the Axial Preset Gauge

1. Use the gauge pin included to press down on the spring-loaded center piece. Please be sure the gauge pin is placed on the shiny surface.
2. Turn the indicator to read "0", then remove the gauge pin.
3. Put the unit on the workpiece and carefully jog the tool down to make contact with the gauge face. When the gauge reads "0" the tool is 2" above the workpiece.



Part #	Description
34-901	Indicator Type

34-900 HSK & ISO Tightening Stand

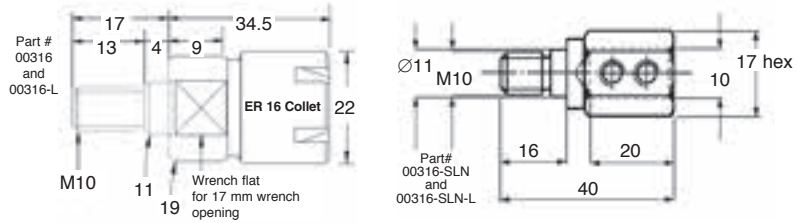
NEW

New design allows for easy access to pull studs from bottom. Securely bolts right on CNC Machine or workbench. Outstanding strength, speed and durability.



Part #	Description	Tool Holder Used For
34-911	ISO 30-36mm flats	33-71, 33-75, 33-76, 33-77
34-912	ISO 30-38mm flats	NT-5400130
34-913	ISO 30-47mm flats	33-73, 33-74
34-914	BT 30- taper 41mm flats	33-81, 33-83
34-915	HSK 63 F with 36mm flats	33-94
34-916	HSK 63 F with 38mm flats	33-93
34-917	HSK 63 F with 46mm flats	33-91, 33-92, 33-95

34-950 Spindle Drill Adapters



Part #	Description	Shank	Collet	Capacity	Thread
34-950	Inline Multi Spindles Drill Adapters	M10 x 1.05	ER16	3/8 or 10mm	RIGHT
34-951	Inline Multi Spindles Drill Adapters	M10 x 1.05	ER16	3/8 or 10mm	LEFT

Part #	Description	Shank	ID	Thread
34-952	Inline Multi Spindles Drill Adapters	M10 x 1.05	10MM	Right
34-953	Inline Multi Spindles Drill Adapters	M10 x 1.05	10MM	Left

Technical Section

Spoilboard Preparation

Good part holding is essential for routing products and the following steps will ensure you properly surface your new spoilboard to get maximum air flow.

1. Place your new sheet of MDF on the router table.
2. Turn on your vacuum
3. Use the 91-100 series spoilboard cutter and surface the top edge.
4. Flip over the sheet of MDF and turn the vacuum on again
5. Surface the top side.
6. Tape or seal the edges of the spoilboard to prevent air leakage.

The following benefits will be achieved if you surface your spoilboard daily:

- A level spoilboard allows for consistent cuts
- Removes grooves caused by routing
- Reduce vacuum loss due to clogged pores a the material surface due to dust and chips
- Preventing material warpage caused by humidity in summer time

Tool Holder Measuring Guide

Use this guide for measuring your tools to determine what you need to re-order.

COLLET

Make and model of CNC machine:

Toolholder Dimensions	Pull Stud Dimensions	Collet Dimensions
D = _____	P = _____	D = _____
F = _____	A = _____	L = _____
W = _____	L = _____	
A = _____	R = _____	
N = _____		

GAUGE LENGTH IS FROM FACE OF SPINDLE TO FACE OF COLLET NUT
MEASURE GAUGE LENGTH WITH COLLET AND NUT INSTALLED IN TOOLHOLDER

COLLETING

Collet Life Span

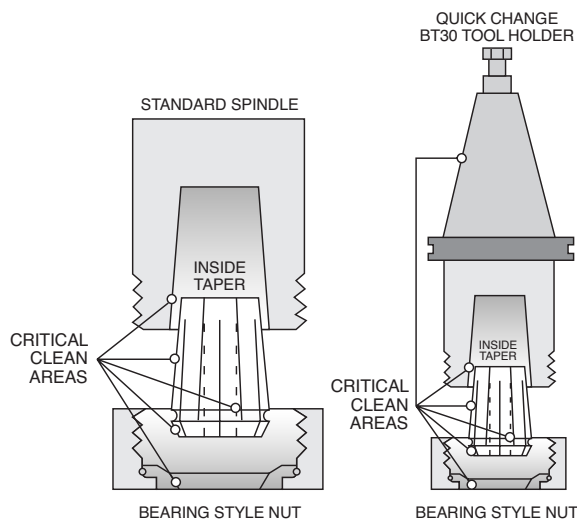
Collets have a life span of 3 months if used 8 hours a day. Replacing the collets will ensure your operation runs consistently and prevents tool breakage. When inserting a tool into the collet make sure the flute fadeout does not enter the collet. This will cause run out and potentially lead to tool breakage. To ensure proper clamping the tool shank should fill, at the minimum, 80% of the depth of the collet. If this can not be achieved, use a collet life plug to ensure a proper clamping effect.

Collet Maintenance

Cleaning is an essential part of collet maintenance. As material is cut it causes the collet, tool holder, collet nut and spindle to become dirty. This causes your tool to cut in an elliptical fashion which will decrease tool life and cause inconsistency in your operation. Collets, tool holder, and collet nut should be cleaned daily using the Rust Free solvent and a brass brush (OC series 33-21 and 33-10). Refer to the critical areas diagram to see which surfaces must be clean.

Cleaning Instructions

1. Spray the cleaner on the surface and allow it to soak for a minute
2. Use a brass brush to clean the surface thoroughly.
3. Rinse off using denatured alcohol. Feel the surface using your fingers to make sure the surface is clean
4. Apply a small amount of Lubricant T-9 to prevent rusting.



Tool Breakage

If a condition arises where multiple tools should break, follow these steps to solve your problem:

1. Are you using the proper tool for the job?
2. Make sure your collets and tool holders are clean and the tool is colleted properly.
3. Check your speed and feed (is your tool hot?)
4. Is your depth of cut too excessive for the material you re cutting?
5. Do you have any part movement?
6. Do you have ample part hold down?
7. Stop running parts and check with your distributor or Onsrud s Technical Support.

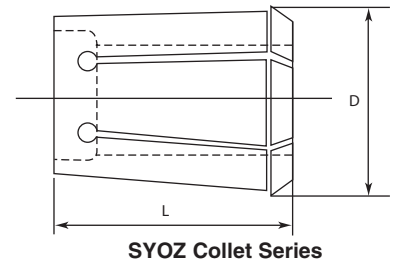
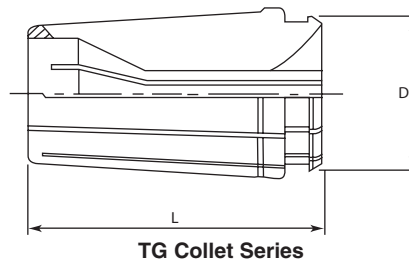
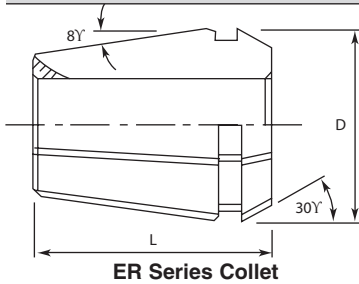
If you have to contact your distributor or Technical Support, have the following information:

1. Machine being used.
2. Material being cut.
3. Part number of tool along with the batch number which is below the part number.
4. Speed / Feed / Depth of cut.
5. Where did the tool break (flute, shank, or in the collet)?
6. How long did the tool work before it broke?
7. Have you done this operation in the past using this tool?

COLLET MEASURING GUIDE

The best way to tell what type of collet the machine has is to measure the length of the collet.
Almost all collets have a distinctive length and diameter. See Page 8 for collet drawing.

Collet Series	Length	(OD) Diameter	Onsrud Series	Page
ER 11	18mm (0.708)	11.5mm (0.45)	34-60	5-6
ER 16	27.5mm (1.08)	17mm (0.67)	34-70	5-6
ER 20	31.5mm (1.24)	21mm (0.83)	34-90/ 34-300	5-6
ER 25	34mm (1.34)	26mm (1.02)	34-150/34-350	5-6
ER 32	40mm (1.57)	33mm (1.3)	34-200/34-400	5-6
ER 40	46mm (1.81)	41mm (1.61)	34-250/34-450	5-6
ER 50	60mm (2.36)	52mm (2.05)	-	
EOC 8	26mm (1.026)	14.4mm (0.567)	-	
SYOZ 20 - RDO 20 - 407E-EOC12	34mm (1.34)	20mm (0.78)	34-550	8
EOC 16 - RDO 25	40mm (1.57)	25.5mm (1)	-	
SYOZ 25 - RDO 35 - 462E	52mm (2.06)	35mm (1.38)	34-550	8
EOC 32	60mm (2.36)	43.7mm (1.72)	-	
TG 75	47mm (1.85)	27mm (1.06)	-	
TG 100	60mm (2.36)	35mm (1.38)	34-500	7
Shoda Collets				
Shoda 20mm	52mm (2.06)	20mm (Back side)	34-650	9
Shoda Piggyback	52mm (2.06)	16mm (Back side)	34-650	9
Super Shoda	40mm (1.58)	23.5mm 0.925 (OD)	34-650	9
Shoda 24mm	52mm (2.06)	24mm (Back side)	34-650	9
SS-18	30mm (1.18)	19.5mm (.766)	-	
Heian Collets				
HN-24mm	55mm (2.16)	24mm(1.14)(Back side)	-	
HN-29mm	55mm (2.16)	24mm(1.14)(Back side)	-	
HN-Piggyback	36.5mm (1.43)	22mm (.886)	-	
Pin Router Collets				
A421-69	43.62mm (1.72)	28mm (1.1)	-	
A450-	41.3mm (1.62)	36mm (1.41)	-	



ONSRUD

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