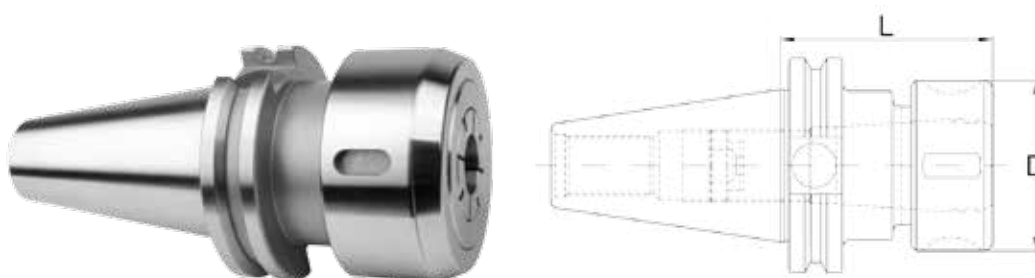


TG Collet Chucks & Accessories



TG Collet Chucks – CAT40 & CAT50

- Taper to taper runout: <0.0002"
- Coolant through spindle
- CAT40 balanced G2.5@20,000 RPM
- CAT50 balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- CAT40 draw bar threads: 5/8"-11
- CAT50 draw bar threads: 1"-8



NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	Nut	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	CAT40		CAT50	
								Weight (lbs)	Code	Weight (lbs)	Code
TG75	3/64 – 3/4	Round	1.97	2.54	301713	301708	301748	2.50	310998	7.30	312089
TG75	3/64 – 3/4	Hex	2.09	2.75	301733	300614	301748	2.41	310999	7.30	312090
TG75	3/64 – 3/4	Round	1.97	5.79	301713	301708	301748	4.40	312000	9.70	312091
TG75	3/64 – 3/4	Hex	2.09	6.00	301733	300614	301748	4.40	312001	9.70	312092
TG75	3/64 – 3/4	Round	1.97	6.00	301713	301708	301748	5.54	312002	–	–
TG75	3/64 – 3/4	Round	1.97	8.00	301713	301708	301748	–	–	11.50	300697
TG75	3/64 – 3/4	Round	1.97	10.00	301713	301708	301748	–	–	13.60	312088
TG100	5/64 – 1	Round	2.36	2.76	301714	301709	301749	2.69	312003	–	–
TG100	5/64 – 1	Round	2.36	3.26	301714	301709	301749	–	–	7.61	301767
TG100	5/64 – 1	Round	2.36	3.76	301714	301709	301749	3.23	312005	–	–
TG100	5/64 – 1	Hex	2.44	3.00	301734	300615	301749	2.77	312004	7.16	301768
TG100	5/64 – 1	Hex	2.44	4.00	301734	300615	301749	3.28	312006	8.00	312096
TG100	5/64 – 1	Round	2.36	5.76	301714	301709	301749	5.52	312007	–	–
TG100	5/64 – 1	Hex	2.44	6.00	301734	300615	301749	5.40	312008	9.76	312097
TG150	23/64 – 1-1/2	Round	3.50	4.88	301735	301712	301750	5.72	312009	10.10	312098

Spare Wrenches & Nuts for TG Collet Chucks



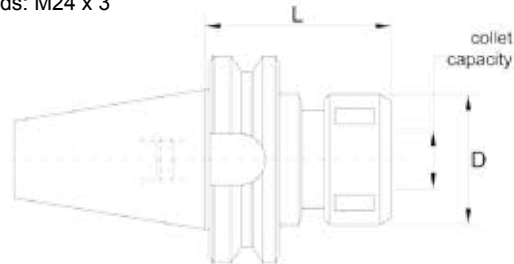
Nut Size	Hex		Round	
	Hex Nut	Wrench (Style 1)	Round Nut	Wrench Hook Style (Style 2)
	Code	Code	Code	Code
TG75	301733	300614	301713	301708
TG100	301734	300615	301714	301709
TG150	–	–	301717	301712

TG Collet Chucks & Accessories



TG Collet Chucks – BT40 & BT50

- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3

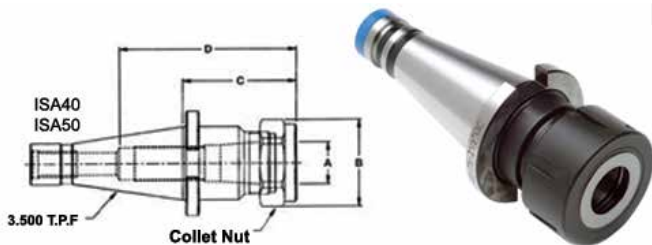


NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	BT40		BT50	
							Weight (lbs)	Code	Weight (lbs)	Code
TG75	7/64 – 25/32	1.969	2.756	301713	301708	301748	3.09	310899	–	–
TG100	7/64 – 1	2.362	3.150	301714	301709	301749	3.09	310900	–	–
TG100	7/64 – 1	2.362	3.543	301714	301709	301749	–	–	8.60	310930
TG100	7/64 – 1	2.362	3.937	301714	301709	301749	3.97	310901	–	–
TG100	7/64 – 1	2.362	5.906	301714	301709	301749	5.51	310902	11.46	310931
TG150	29/64 – 1-37/64	3.346	3.937	301717	301712	301751	–	–	9.48	310932

TG Collet Chucks

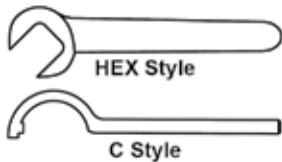
ISA



Taper	Collet	A Range (Inch)	B (Inch)	C (Inch)	D (Inch)	Code
ISA40	100	3/32 - 1	2.44	3.00	3.68	827322
ISA50	100	3/32 - 1	2.44	3.00	3.68	827323

Spare Parts

Wrenches

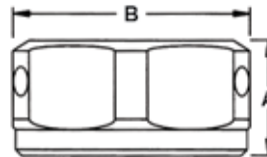


Collet	Style	Code
TG100	Hex	200619
TG150	C	201770



Collet	Code
TG100	827317
TG150	827318

Collet Nuts



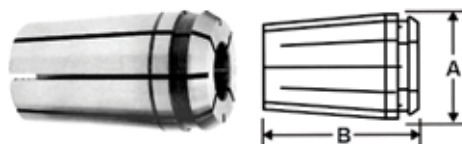
Collet	Style	A (Inch)	B (Inch)	Code
TG100	Hex	1.10	2.44	827333
TG150	C	1.25	3.25	827334



Collet	Thread	Code
TG150	ACME 2-5/8-12	827321

TG Collets

TG100 & TG150 Series – Inch

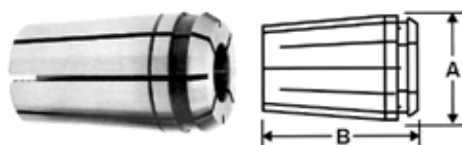


Collet	A (Inch)	B (Inch)
TG100	1.379	2.375
TG150	2.000	3.000

Size (Inch)	TG100 Code	TG150 Code	Size (Inch)	TG100 Code	TG150 Code	Size (Inch)	TG100 Code	TG150 Code	Size (Inch)	TG100 Code	TG150 Code
3/32	218201	–	15/32	218225	–	27/32	218249	218323	1-7/32	–	218347
7/64	218202	–	31/64	218226	–	55/64	218250	218324	1-15/64	–	218348
1/8	218203	–	1/2	218227	218301	7/8	218251	218325	1-1/4	–	218349
9/64	218204	–	33/64	218228	218302	57/64	218252	218326	1-17/64	–	218350
5/32	218205	–	17/32	218229	218303	29/32	218253	218327	1-9/32	–	218351
11/64	218206	–	35/64	218230	218304	59/64	218254	218328	1-19/64	–	218352
3/16	218207	–	9/16	218231	218305	15/16	218255	218329	1-5/16	–	218353
13/64	218208	–	37/64	218232	218306	61/64	218256	218330	1-21/64	–	218354
7/32	218209	–	19/32	218233	218307	31/32	218257	218331	1-11/32	–	218355
15/64	218210	–	39/64	218234	218308	63/64	218258	218332	1-23/64	–	218356
1/4	218211	–	5/8	218235	218309	1	–	218333	1-3/8	–	218357
17/64	218212	–	41/64	218236	218310	1-1/64	–	218334	1-25/64	–	218358
9/32	218213	–	21/32	218237	218311	1-1/32	–	218335	1-13/32	–	218359
19/64	218214	–	43/64	218238	218312	1-3/64	–	218336	1-27/64	–	218360
5/16	218215	–	11/16	218239	218313	1-1/16	–	218337	1-7/16	–	218361
21/64	218216	–	45/64	218240	218314	1-5/64	–	218338	1-29/64	–	218362
11/32	218217	–	23/32	218241	218315	1-3/32	–	218339	1-15/32	–	218363
23/64	218218	–	47/64	218242	218316	1-7/64	–	218340	1-31/64	–	218364
3/8	218219	–	3/4	218243	218317	1-1/8	–	218341	1-1/2	–	218365
25/64	218220	–	49/64	218244	218318	1-9/64	–	218342			
13/32	218221	–	25/32	218245	218319	1-5/32	–	218343			
27/64	218222	–	51/64	218246	218320	1-11/64	–	218344			
7/16	218223	–	13/16	218247	218321	1-3/16	–	218345			
29/64	218224	–	53/64	218248	218322	1-13/64	–	218346			

TG Collets

TG100 Series – Metric



Collet	A (Inch/mm)	B (Inch/mm)
TG100	1.379/35	2.375/60

Size (mm)	TG100 Code	Size (mm)	TG100 Code	Size (mm)	TG100 Code	Size (mm)	TG100 Code	Size (mm)	TG100 Code	Size (mm)	TG100 Code
3	218103	7	218107	11	218111	15	218115	19	218119	23	218123
4	218104	8	218108	12	218112	16	218116	20	218120	24	218124
5	218105	9	218109	13	218113	17	218117	21	218121	25	218125
6	218106	10	218110	14	218114	18	218118	22	218122		

TG Rigid Tapping Collets

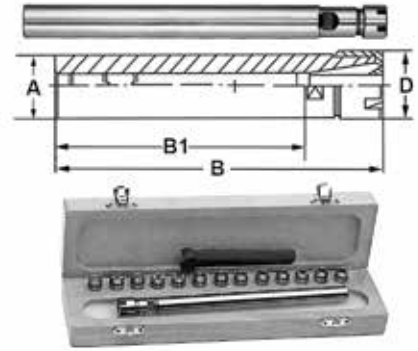
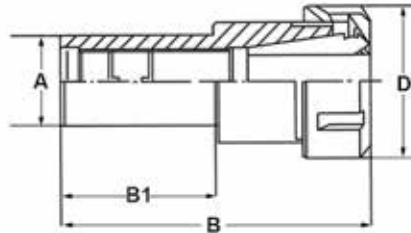
TG100 with Square Drive



- Manufactured to ANSI tap standards
- For synchronous tapping operations using any TG collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity

ANSI Tap Size	Shank Diameter (Inch)	Drive Square (Inch)	Code	ANSI Tap Size	Shank Diameter (Inch)	Drive Square (Inch)	Code	ANSI Tap Size	Shank Diameter (Inch)	Drive Square (Inch)	Code
0-6	0.141	0.110	826500	1/2"	0.367	0.275	826508	1"	0.800	0.600	826514
#8	0.168	0.131	826501	9/16"	0.429	0.322	826509	1/8" PS	0.312	0.234	826515
#10	0.194	0.152	826502	5/8"	0.480	0.360	826510	1/8" PL	0.437	0.328	826516
#12	0.220	0.165	826503	11/16"	0.542	0.406	826511	1/4" P	0.562	0.421	826517
1/4"	0.255	0.191	826504	3/4"	0.590	0.442	826512	3/8" P	0.700	0.531	826518
5/16"	0.318	0.238	826505	7/8"	0.697	0.523	826513	1/2" P	0.687	0.515	826519
3/8"	0.381	0.286	826506								
7/16"	0.323	0.242	826507								

ER Collet Chucks Straight Shank



Sets include: wrench, chuck and collets (inch) and supplied in a fitted storage case

A (Inch)	B (Inch)	B1 (Inch)	D Diameter (Inch)	Nut Style	ER16		ER20	ER25	ER32		ER40
					Chuck Onlu	Set	Chuck Onlu	Chuck Only	Chuck Onlu	Set	Chuck Onlu
					Code	Code	Code	Code	Code	Code	Code
3/8	2-3/4	1-3/4	0.87	Mini	356900	-	-	-	-	-	-
1/2	6-1/2	6	0.87	Mini	356901	-	-	-	-	-	-
5/8	4	3	1.10	Hex	356902	-	-	-	-	-	-
3/4	3	2	1.10	Hex	356904	-	-	-	-	-	-
3/4	5	4	1.10	Hex	356905	-	-	-	-	-	-
1-1/4	3-1/4	2-1/4	1.10	Hex	356908	356945	-	-	-	-	-
5/8	6-1/4	5-1/2	1.10	Hex	356903	-	-	-	-	-	-
3/4	6-1/2	5-1/4	0.87	Mini	356906	-	-	-	-	-	-
1	6-1/4	5-1/2	1.10	Hex	356907	-	-	-	-	-	-
5/8	5-1/2	4	1.10	Mini	-	-	356925	-	-	-	-
3/4	5-1/2	4	1.10	Mini	-	-	356934	-	-	-	-
1	6-1/4	5-1/4	1.10	Mini	-	-	356926	-	-	-	-
5/8	3-1/4	2	1.65	E25	-	-	-	356935	-	-	-
3/4	5-1/4	2	1.65	E25	-	-	-	356936	-	-	-
1	5-1/4	4	1.38	Mini	-	-	-	356937	-	-	-
1	5-1/4	4	1.65	E25	-	-	-	356941	-	-	-
1	3-3/4	2	1.97	E32	-	-	-	-	356917	356919	-
1-1/4	4-1/4	2-1/4	1.97	E32	-	-	-	-	356918	-	-
1	3-3/4	2	2.48	E40	-	-	-	-	-	-	356922
1-1/4	4-1/4	2-1/4	2.48	E40	-	-	-	-	-	-	356923

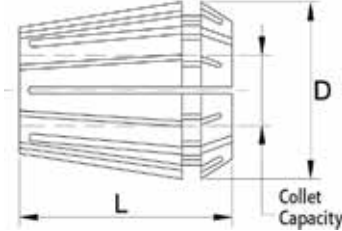
Collet Storage Boxes

ER16		ER20		ER25		ER32		ER40	
Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code
10	356929	12	356930	15	356933	18	356931	23	356932

ER Collets

Inch & Metric

- Precision collets
- Collet accuracy: 0.0003" to 0.0004" T.I.R.
- Wide clamping ranges: 0.02" to 0.039" collapsibility
- Made of high quality spring steel



Collet Dimensions

Style	D (Inch)	L (Inch)
ER11	0.453	0.709
ER16	0.669	1.062
ER20	0.826	1.220
ER25	1.024	1.378
ER32	1.299	1.574
ER40	1.614	1.811

Inch

Nominal Diameter (Inch)	ER11	ER16	ER20	ER25	ER32	ER40
	Code	Code	Code	Code	Code	Code
1/32	–	826520	–	–	–	–
1/16	300641	826521	826532	826547	–	–
3/32	300642	826522	826533	826548	826566	–
1/8	300643	826523	826534	826549	826567	826588
5/32	300644	826524	826535	826550	826568	826589
3/16	300645	826525	826536	826551	826569	826590
7/32	300646	826526	826537	826552	826570	826591
1/4	300647	826527	826538	826553	826571	826592
9/32	–	826528	826539	826554	826572	826593
5/16	–	826529	826540	826555	826573	826594
11/32	–	826530	826541	826556	826574	826595
3/8	–	826531	826542	826557	826575	826596
13/32	–	–	826543	826558	826576	826597
7/16	–	–	826544	826559	826577	826598
15/32	–	–	826545	826560	826578	826599
1/2	–	–	826546	826561	826579	826600
17/32	–	–	–	826562	826580	826601
9/16	–	–	–	826563	826581	826602
19/32	–	–	–	826564	826582	826603
5/8	–	–	–	826565	826583	826604
21/32	–	–	–	–	826584	826605
11/16	–	–	–	–	826585	826606
23/32	–	–	–	–	826586	826607
3/4	–	–	–	–	826587	826608
25/32	–	–	–	–	–	826609
13/16	–	–	–	–	–	826610
27/32	–	–	–	–	–	826611
7/8	–	–	–	–	–	826612
29/32	–	–	–	–	–	826613
15/16	–	–	–	–	–	826614
31/32	–	–	–	–	–	826615
1	–	–	–	–	–	826616

Metric – Collapsible 1 mm

Decimal Range (mm)	Size (mm)	ER16	ER20	ER25	ER32	ER40
		Code	Code	Code	Code	Code
0.04 – 0.08	1 – 2	–	–	302081	–	–
0.08 – 0.12	2 – 3	302001	302011	302082	302031	–
0.12 – 0.16	3 – 4	302002	302012	302083	302032	302052
0.16 – 0.20	4 – 5	302003	302013	302084	302033	302053

ER Collets

Inch & Metric

Metric – Collapsible 1 mm (continued)

Decimal Range (mm)	Size (mm)	ER16	ER20	ER25	ER32	ER40
		Code	Code	Code	Code	Code
0.20 – 0.24	5 – 6	302008	302014	302085	302034	302054
0.24 – 0.28	6 – 7	302004	302015	302086	302035	302055
0.28 – 0.32	7 – 8	302005	302016	302087	302036	302056
0.32 – 0.35	8 – 9	302006	302017	302088	302037	302057
0.35 – 0.39	9 – 10	302007	302018	302089	302038	302058
0.39 – 0.43	10 – 11	–	302019	302090	302039	302059
0.43 – 0.47	11 – 12	–	302020	302091	302040	302060
0.47 – 0.51	12 – 13	–	302021	302092	302041	302061
0.51 – 0.55	13 – 14	–	–	302093	302042	302062
0.55 – 0.59	14 – 15	–	–	302094	302043	302063
0.59 – 0.63	15 – 16	–	–	302095	302044	302064
0.63 – 0.67	16 – 17	–	–	–	302045	302065
0.67 – 0.71	17 – 18	–	–	–	302046	302066
0.71 – 0.75	18 – 19	–	–	–	302047	302067
0.75 – 0.79	19 – 20	–	–	–	302048	302068
0.79 – 0.83	20 – 21	–	–	–	–	302069
0.83 – 0.87	21 – 22	–	–	–	–	302070
0.87 – 0.91	22 – 23	–	–	–	–	302071
0.91 – 0.95	23 – 24	–	–	–	–	302072
0.95 – 0.98	24 – 25	–	–	–	–	302073
0.98 – 1.02	25 – 26	–	–	–	–	302074

ER Rigid Tapping Collets

With Square Drive



- For taps with ANSI shanks
- For synchronous tapping operations using any ER collet chuck
- Collet bore is exact tool diameter, with square drive, for accuracy and rigidity

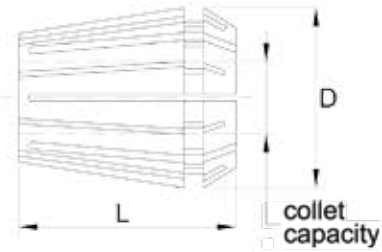
Tap Size	Tap Shank Diameter (Inch)	Tap Shank Square (Inch)	ER16	ER20	ER25	ER32	ER40
			Code	Code	Code	Code	Code
0 – 6"	0.141	0.110	356200	356210	356220	356240	356270
#8	0.168	0.131	356201	356211	356221	356241	356271
#10	0.194	0.152	356202	356212	356222	356242	356272
#12	0.220	0.165	356203	356213	356223	356243	356273
1/4"	0.255	0.191	356204	356214	356224	356244	356274
5/16"	0.318	0.238	356205	356215	356225	356245	356275
3/8"	0.381	0.286	–	356216	356226	356246	356276
7/16"	0.323	0.242	–	356217	356227	356247	356277
1/2"	0.367	0.275	–	356218	356228	356248	356278
9/16"	0.429	0.322	–	–	356229	356249	356279
5/8"	0.480	0.360	–	–	356230	356250	356280
3/4"	0.590	0.442	–	–	–	356251	356281
7/8"	0.697	0.523	–	–	–	–	356282
1"	0.800	0.600	–	–	–	–	356283
1/8" Pipe SS	0.312	0.234	–	–	356231	356261	356291
1/8" Pipe LS	0.438	0.328	–	–	356232	356262	356292
1/4" Pipe	0.562	0.421	–	–	–	356263	356293
3/8" Pipe	0.700	0.531	–	–	–	–	356294
1/2" Pipe	0.687	0.515	–	–	–	–	356295

ER Collets – Steel Sealed

Inch & Metric



- Collet accuracy: 0.0003" to 0.0004" T.I.R. (0.008 mm to 0.010 mm)
- For optimal collet performance use tools with shank diameter equal to the collet nominal size
- Coolant allowable pressure: 1,500 PSI
- Made from high quality spring steel



Inch

Nominal Diameter (Inch)	ER16	ER20	ER25	ER32	ER40
	D = 0.669"/L = 1.083"	D = 0.827"/L = 1.240"	D = 1.024"/L = 1.339"	D = 1.299"/L = 1.575"	D = 1.614"/L = 1.811"
	Code	Code	Code	Code	Code
1/8	312211	312235	312259	312290	312331
5/32	312212	312236	312260	312291	312332
3/16	312213	312237	312261	312292	312333
7/32	312214	312238	312262	312293	312334
1/4	312215	312239	312263	312294	312335
9/32	312216	312240	312264	312295	312336
5/16	312217	312241	312265	312296	312337
11/32	312218	312242	312266	312297	312338
3/8	312219	312243	312267	312298	312339
13/32	312220	312244	312268	312299	312340
7/16	–	312245	312269	312300	312341
15/32	–	312246	312270	312301	312342
1/2	–	312247	312271	312302	312343
17/32	–	–	312272	312303	312344
9/16	–	–	312273	312304	312345
19/32	–	–	312274	312305	312346
5/8	–	–	312275	312306	312347
21/32	–	–	–	312307	312348
11/16	–	–	–	312308	312349
23/32	–	–	–	312309	312350
3/4	–	–	–	312310	312351
25/32	–	–	–	312311	312352
13/16	–	–	–	312312	312353
27/32	–	–	–	–	312354
7/8	–	–	–	–	312355
25/32	–	–	–	–	312356
15/16	–	–	–	–	312357
31/32	–	–	–	–	312358
1	–	–	–	–	312359

Metric

Nominal Diameter (mm)	ER16	ER20	ER25	ER32	ER40
	D = 17mm/L = 27.5mm	D = 21mm/L = 31.5mm	D = 26mm/L = 34mm	D = 33mm/L = 40mm	D = 41mm/L = 46mm
	Code	Code	Code	Code	Code
3.0	312221	312248	312276	312313	–
3.5	300841	–	–	–	–
4.0	312222	312249	312277	312314	312360
4.5	312223	–	–	–	–
5.0	312224	312250	312278	312315	312361
5.5	312225	–	–	–	–
6.0	312226	312251	312279	312316	312362
6.5	312227	–	–	–	–
7.0	312228	312252	312280	312317	312363
7.5	312229	–	–	–	–
8.0	312230	312253	312281	312318	312364
8.5	312231	–	–	–	–

ER Collets – Steel Sealed

Inch & Metric



Metric (continued)

Nominal Diameter (mm)	ER16 D = 17mm/L = 27.5mm	ER20 D = 21mm/L = 31.5mm	ER25 D = 26mm/L = 34mm	ER32 D = 33mm/L = 40mm	ER40 D = 41mm/L = 46mm
	Code	Code	Code	Code	Code
9.0	312232	312254	312282	312319	312365
9.5	312233	–	–	–	–
10.0	312234	312255	312283	312320	312366
11.0	–	312256	312284	312321	312367
12.0	–	312257	312285	312322	312368
13.0	–	312258	312286	312323	312369
14.0	–	–	312287	312324	312370
15.0	–	–	312288	312325	312371
16.0	–	–	312289	312326	312372
17.0	–	–	–	312327	312373
18.0	–	–	–	312328	312374
19.0	–	–	–	312329	312375
20.0	–	–	–	312330	312376
21.0	–	–	–	–	312377
22.0	–	–	–	–	312378
23.0	–	–	–	–	312379
24.0	–	–	–	–	312380
25.0	–	–	–	–	312381
26.0	–	–	–	–	312382

Sets – Inch & Metric

Collet	Inch		Metric	
	Nominal Diameter Range (Inch)	Code	Diameter Range (mm)	Code
ER16	1/8 – 13/32 by 32nds (10-pc)	312200	3.0 – 10.0 (8-pc)	312206
ER20	1/8 – 1/2 by 16ths (7-pc)	312201	3.0 – 13.0 (11-pc)	312207
ER25	1/8 – 5/8 by 16ths (9-pc)	312202	3.0 – 16.0 (14-pc)	312208
ER32	1/8 – 13/16 by 16ths (12-pc)	312203	3.0 – 20.0 (18-pc)	312209
ER32	7/32 – 3/4 by 32nds (18-pc)	312204	–	–
ER40	1/8 – 1 by 16ths (15-pc)	312205	3.0 – 26.0 (23-pc)	312210

Collet Storage Tray

Allows you to build and store your own collet set



ER16		ER20		ER25		ER32		ER40	
Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code	Collet Capacity	Code
10	302009	12	302022	15	302097	18	302049	24	302075

ER Collet Sets

Inch & Metric

- Accuracy: 0.00039"



ER20 Inch Collet Set shown

Inch Sets

ER16		ER20		ER25		ER32		ER40	
Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code
7	826617	10	826618	12	826619	11	826620	15	826621

Metric Sets

ER16		ER20		ER25		ER32		ER40	
Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code	Quantity per Set	Code
8	302685	10	302686	15	302689	18	302687	23	302688

ER Collet Chucks, Sets & Accessories

ER Chucks – R8, ISA & Morse Taper Shanks



R8



ISA



MT

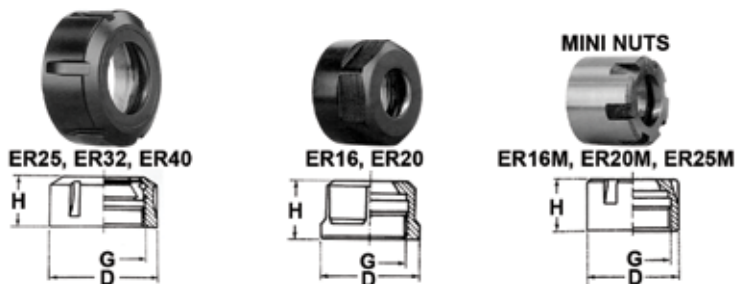


Sets include: Shank, collets, wrench, supplied in storage case

Shank	Collet Style	Collet Range (Inch)	Collet Chuck Only		Collet Chuck Sets	
			Collet Range (mm)	Code	Quantity per Set	Code
R8	ER32	0.08-0.79	2-20	302600	18	302610
ISA40	ER32	0.08-0.79	2-20	302601	18	302611
MT3	ER32	0.08-0.79	2-20	302605	–	–
MT4	ER32	0.08-0.79	2-20	302606	–	–
R8	ER40	0.12-1	3-25	302604	15	302614
ISA40	ER40	0.12-1	3-25	302602	15	302612
ISA50	ER40	0.12-1	3-25	302603	15	302613
MT3	ER40	0.12-1	3-25	302607	–	–
MT4	ER40	0.12-1	3-25	302608	–	–

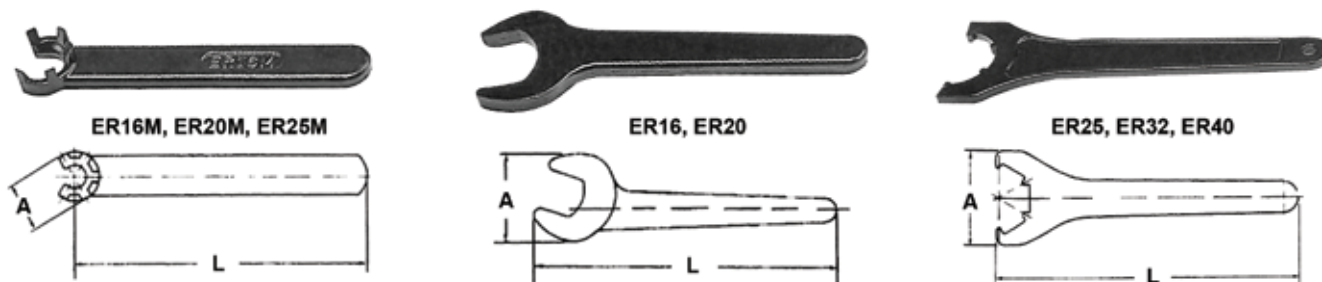
ER Collet Chucks, Sets & Accessories

ER Clamping Nuts



Type	D (mm)	H (mm)	G	Code	Type	D (mm)	H (mm)	G	Code
ER16M	22	22	M19 x 1.0	827000	ER25M	35	20	M30 x 1.0	827004
ER16	28	17	M22 x 1.5	827001	ER25	42	20	M32 x 1.5	827005
ER20M	28	19	M24 x 1.0	827002	ER32	50	22	M40 x 1.5	827006
ER20	34	19	M25 x 1.5	827003	ER40	63	25	M50 x 1.5	827007

ER Collet Wrenches



Type	A (mm)	L (mm)	Code	Type	A (mm)	L (mm)	Code	Type	A (mm)	L (mm)	Code
ER16M	22.5	110	827008	ER20	60.0	135	827011	ER32	75.0	250	827014
ER16	42.0	140	827009	ER25M	36.0	150	827012	ER40	90.0	290	827015
ER20M	29.0	120	827010	ER25	75.0	250	827013				

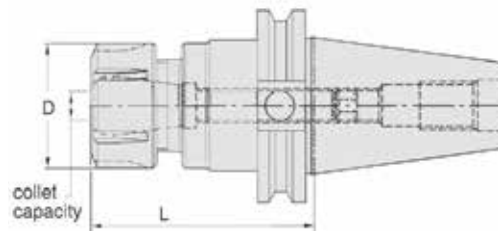
ER Collet Chucks & Accessories



ER Collet Chucks – CAT40 & CAT50



- Constructed of high quality alloy steel - SAE8620/20MnCR5
- Taper to taper runout: <0.0002"
- Coolant through spindle
- CAT40 balanced G2.5@20,000 RPM
- CAT50 balanced G6.3@15,000 RPM
- Balanced tools supplied with QA certificates
- Supplied with depth set screws
- Supplied with high torque hard coat power nuts
- Taper shank ground to AT3 accuracy or better
- DIN AD+B flange coolant



NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	Nut	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	CAT40		CAT50	
								Weight (lbs)	Code	Weight (lbs)	Code
ER11	0.02-0.28	Hex	0.79	2.50	301731	301731	301790	2.0	300681	–	–
ER11	0.02-0.28	Hex	0.79	4.00	301731	301731	301790	2.2	300682	–	–
ER11	0.02-0.28	Hex	0.79	6.00	301731	301731	301790	2.4	300683	–	–
ER16	0.02-0.41	Hex	1.10	2.50	312182	312174	312184	2.4	310965	–	–
ER16	0.02-0.41	Hex	1.10	4.00	312182	312174	312184	3.2	310966	7.3	312054
ER16	0.02-0.41	Hex	1.10	5.00	312182	312174	312184	3.2	310967	–	–
ER16	0.02-0.41	Hex	1.10	6.00	312182	312174	312184	–	–	7.9	312055
ER16	0.02-0.41	Hex	1.10	8.00	312182	312174	312184	3.6	300685	8.5	300691
ER16	0.02-0.41	Hex	1.10	12.00	312182	312174	312184	–	–	9.5	300690
ER20	0.02-0.50	Hex	1.34	2.50	312183	312175	312185	2.4	310968	–	–
ER20	0.02-0.50	Hex	1.34	4.00	312183	312175	312185	3.5	310969	7.4	312056
ER20	0.02-0.50	Hex	1.34	6.00	312183	312175	312185	3.7	310970	8.1	312057
ER20	0.02-0.50	Hex	1.34	8.00	312183	312175	312185	4.1	300686	8.8	300692
ER25	0.04-0.63	Round	1.65	2.50	312179	312171	312186	2.6	310971	–	–
ER25	0.04-0.63	Round	1.65	4.00	312179	312171	312186	4.5	310972	7.8	312058
ER25	0.04-0.63	Round	1.65	6.00	312179	312171	312186	4.4	310973	8.8	312059
ER25	0.04-0.63	Round	1.65	8.00	312179	312171	312186	4.7	300687	9.5	300693
ER32	0.04-0.81	Round	1.97	2.75	312180	312172	312187	2.6	310974	–	–
ER32	0.04-0.81	Round	1.97	4.00	312180	312172	312187	6.8	310975	8.1	312060
ER32	0.04-0.81	Round	1.97	6.00	312180	312172	312187	4.4	310976	9.5	312061
ER32	0.04-0.81	Round	1.97	8.00	312180	312172	312187	5.0	300688	10.1	300695
ER32	0.04-0.81	Round	1.97	12.00	312180	312172	312187	–	–	10.9	300694
ER40	0.12-1.00	Round	2.48	3.00	312181	312173	312188	3.0	310977	–	–
ER40	0.12-1.00	Round	2.48	4.00	312181	312173	312188	–	–	8.9	312062
ER40	0.12-1.00	Round	2.48	6.00	312181	312173	312188	3.0	310978	11.8	312063
ER40	0.12-1.00	Round	2.48	8.00	312181	312173	312188	5.2	300689	12.5	300696

Spare Wrenches & Nuts for ER Collet Chucks



Nut Size	Hex		Round		
	Hex Nut	Wrench (Style 1)	Round Nut	Wrench Hook Style (Style 2)	Wrench U-Style (Style 3)
	Code	Code	Code	Code	Code
ER11	301731	301790	–	–	–
ER16	312182	312174	301725	–	301705
ER20	312183	312175	301726	–	301706
ER25	–	–	301727	301707	312171
ER32	301732	312176	301728	301708	312172
ER40	–	–	301729	301709	312173

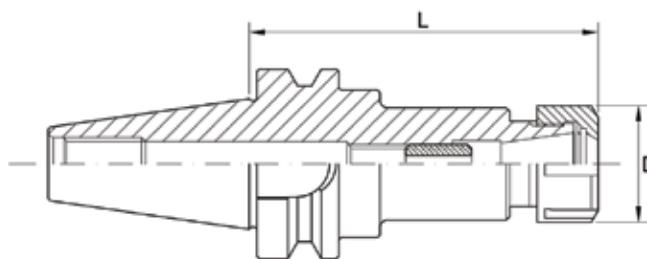


ER Collet Chucks & Accessories

ER Collet Chucks – BT40 & BT50



- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- BT30 draw bar threads: M12 x 1.75
- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3



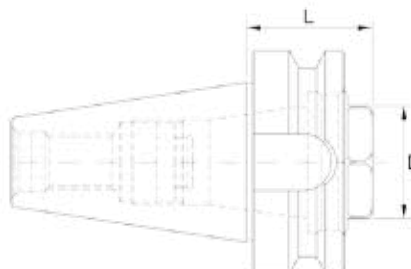
**BT30
ER COLLET CHUCKS
ALSO AVAILABLE**

NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	Nut	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	BT40		BT50	
								Weight (lbs)	Code	Weight (lbs)	Code
ER16	1/64 – 25/64	Hex	1.102	3.937	312182	312174	301752	–	–	7.05	310912
ER16	1/64 – 25/64	Hex	1.102	4.724	312182	312174	301752	3.53	310877	–	–
ER16	1/64 – 25/64	Hex	1.102	5.906	312182	312174	301752	–	–	7.94	310913
ER20	1/64 – 33/64	Hex	1.338	3.937	312183	312175	301753	3.50	300731	–	–
ER25	3/64 – 5/8	Round	1.654	2.756	312179	301707	301754	2.87	310878	–	–
ER25	3/64 – 5/8	Round	1.654	4.724	312179	301707	301754	3.53	310879	–	–
ER32	5/64 – 25/32	Round	1.969	2.756	312180	301708	301704	3.09	310880	7.50	310914
ER32	5/64 – 25/32	Round	1.969	4.724	312180	301708	301704	3.75	310881	–	–
ER40	1/8 – 1-1/32	Round	2.480	3.150	312181	301709	301749	3.31	310882	7.94	310915
ER40	1/8 – 1-1/32	Round	2.480	4.724	312181	301709	301749	3.97	310883	–	–

ER Stub Collet Chucks – BT40

- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- BT40 draw bar threads: M16 x 2



NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	Nut	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	BT40	
								Weight (lbs)	Code
ER32	0 – 25/32	Hex	1.417	1.378	312177	312176	301752	1.65	310893

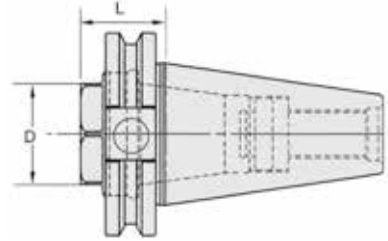
ER Collet Chucks & Accessories



ER Stub Collet Chucks – CAT40 & CAT50



- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Balanced tools supplied with QA certificates
- Supplied with depth set screws
- Supplied with high torque hard coat power nuts
- Taper shank ground to AT3 accuracy or better
- DIN AD+B flange coolant



NOTE: Collet wrench sold separately

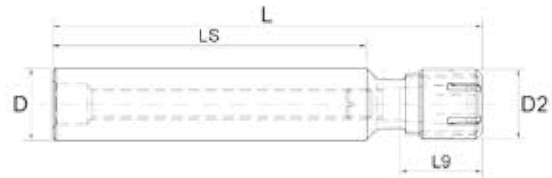
Collet Series	Collet Cap Min-Max (Inch)	Nut	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	CAT40		CAT50	
								Weight (lbs)	Code	Weight (lbs)	Code
ER32	0.08-0.81	Hex	1.41	1.69	312177	312176	312187	1.7	310988	6.3	312073

ER Straight Shank Collet Chucks



- Shank to taper runout: 0.0002"
- Coolant stop screw included

NOTE: Collet wrench sold separately



Collet Series	Collet Cap Min-Max (Inch)	D (Inch)	D2 (Inch)	L (Inch)	LS (Inch)	L9 (Inch)	Weight (lbs)	Locknut Type	Locknut Reference	Wrench Reference	Code
ER11	0.020-0.276	1/2	0.63	7.00	5.51	1.27	0.40	*Round Slim	301724	301746	312128
ER16	0.020-0.406	3/4	0.87	7.00	5.51	1.24	0.90	*Round Slim	301725	301747	312130
ER20	0.020-0.512	1	1.38	7.00	5.51	1.42	1.60	Hex	312183	312175	312133
ER25	0.040-0.630	1	1.65	7.50	5.69	1.57	1.70	Round	312179	301707	312134
ER32	0.040-0.810	3/4	1.97	6.00	4.65	1.34	1.10	Round	312180	301708	312131
ER32	0.040-0.810	1	1.97	7.50	5.69	1.93	1.83	Round	312180	301708	312135
ER32	0.040-0.810	1-1/4	1.97	4.50	2.75	1.72	1.60	Round	312180	301708	312139
ER32	0.040-0.810	1-1/4	1.97	6.00	3.10	1.72	2.10	Round	312180	301708	312140
ER40	0.120-1.000	1	2.47	4.50	2.38	2.17	2.30	Round	312181	301709	312136
ER40	0.120-1.000	1	2.47	7.00	4.87	1.77	2.70	Round	312181	301709	312137
ER40	0.120-1.000	1-1/4	2.47	4.50	2.38	2.17	1.90	Round	312181	301709	312141
ER40	0.120-1.000	1-1/4	2.47	6.50	4.87	2.17	3.10	Round	312181	301709	312142

*Round slim nut for close center work

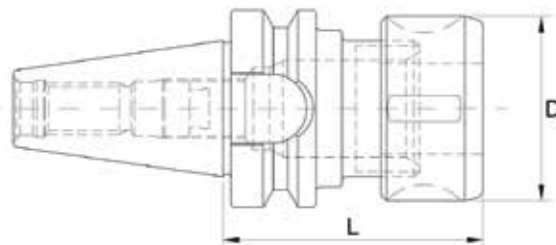


DA Collet Chucks & Accessories

DA Collet Chucks – CAT40 & CAT50



- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- CAT40 draw bar threads: 5/8"-11
- CAT50 draw bar threads: 1"-8



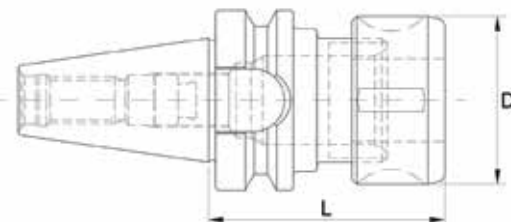
NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	CAT40		CAT50	
							Weight (lbs)	Code	Weight (lbs)	Code
DA200	1/64 – 25/64	1.15	3.00	301721	300612	301752	2.41	310937	–	–
DA200	1/64 – 25/64	1.15	5.00	301721	300612	301752	3.05	310938	–	–
DA180	1/64 – 3/4	1.73	3.00	301716	300613	301748	2.42	310935	7.03	312026
DA180	1/64 – 3/4	1.73	6.00	301716	300613	301748	3.60	310936	8.21	312027

DA Collet Chucks – BT40



- Taper to taper runout: <0.0002"
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- BT40 draw bar threads: M16 x 2



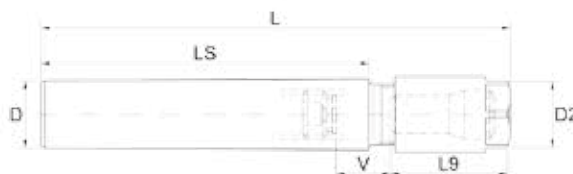
NOTE: Collet wrench sold separately

Collet Series	Collet Cap Min-Max (Inch)	D (Inch)	L (Inch)	Locknut Reference	Wrench Reference	Stop Screw Reference	BT40	
							Weight (lbs)	Code
DA180	3/32 – 25/32	1.693	2.756	301719	301707	301748	2.65	310860
DA180	3/32 – 25/32	1.693	3.937	301719	301707	301748	3.09	310861

DA Straight Shank Collet Chucks

- Shank to taper runout: 0.0004"
- Coolant stop screw included

NOTE: Collet wrench sold separately



Collet Series	Collet Cap Min-Max (Inch)	D (Inch)	D2 (Inch)	L (Inch)	LS (Inch)	L9 (Inch)	V (Inch)	Weight (lbs)	Locknut Reference	Wrench Reference	Code
DA300	1/64 – 1/4	1/2	0.56	6.81	5.42	1.50	2.75	0.37	301722	301736	312127
DA200	1/64 – 25/64	3/4	0.84	7.12	5.50	1.56	3.19	0.89	301720	301737	312129
DA100	1/64 – 9/16	1	1.06	7.31	5.40	1.94	4.68	1.62	301715	301738	312132
DA180	1/64 – 3/4	1-1/4	1.44	7.38	5.41	1.88	4.74	2.56	301718	301739	312138

Spare Wrenches & Nuts for DA Collet Chucks



DA Style 1

Nut Size	Hex		Round
	Hex Nut Code	Wrench Size (Inch)	Wrench (Style 1) Code
DA180	301716	1-1/4	300613
DA200	301721	1	300612

Full Grip Collet Chucks

OZ25 & OZ32



Sets include: chuck, wrench, collets (10 with OZ25, 15 with OZ32) and supplied in storage case

Chuck Size	Capacity	Taper Shanks	Collets for Cylindrical Shanks		Collets for Threaded End Mills	Shank	OZ25		OZ32	
			Inch	Metric (mm)			Chuck Only	Sets	Chuck Only	Sets
							Code	Code	Code	Code
OZ25	1/8 – 1	ISA 30, 40, 50 MT 3, 4, R8	1/8, 3/16, 1/4, 5/16 3/8, 1/2, 5/8, 3/4, 7/8, 1	2-25 x 1	1/4, 3/8, 1/2, 5/8, 3/4	ISA30	215010	215110	–	–
						ISA40	215011	215111	215411	215421
						ISA50	215012	215112	215412	215422
						MT3	215013	215113	–	–
						MT4	215014	215114	–	–
OZ32	1/4 – 1-1/4	ISA 40, 50	1/4, 5/16, 3/8, 7/16 1/2, 9/16, 5/8, 11/16 3/4, 13/16, 7/8, 15/16 1, 1-1/8, 1-1/4	6-32 x 1	1/4, 3/8, 1/2, 5/8, 3/4, 1	R8	215019	215119	–	–
						Wrench	215320	–	–	–

Full Grip Collets

For Cylindrical Shanks – Inch & Metric

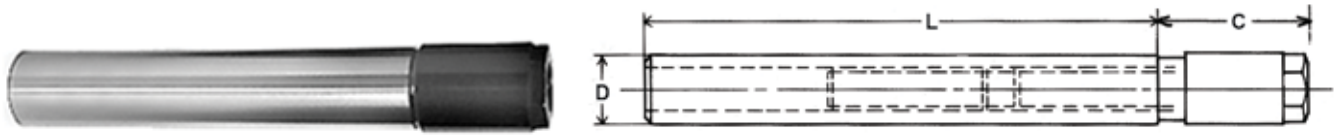


a Collet Size	
OZ25	1.36"/34.5 mm
OZ32	1.71"/43.4 mm

OZ25		OZ32		OZ25		OZ32	
Diameter (Inch)	Code	Diameter (Inch)	Code	Diameter (Inch)	Code	Diameter (Inch)	Code
1/8	215201	–	–	5/8	215209	5/8	215509
3/16	215202	–	–	11/16	215210	11/16	215510
1/4	215203	1/4	215503	3/4	215211	3/4	215511
5/16	215204	5/16	215504	13/16	215212	13/16	215512
3/8	215205	3/8	215505	7/8	215213	7/8	215513
7/16	215206	7/16	215506	15/16	215214	15/16	215514
1/2	215207	1/2	215507	1	215215	1	215515
9/16	215208	9/16	215508	–	–	1-1/8	215516
–	–	–	–	–	–	1-1/4	215517

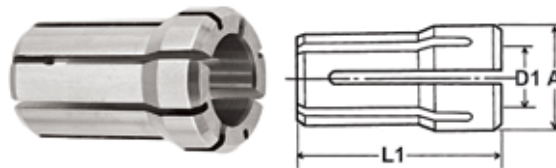
Double Angle Collet Extensions

Collets & Nuts



Collet Style	Range (Inch)	D (Inch)	L (Inch)	C (Inch)	Extension	Nut
					Code	Code
300 DA	0.031 – 0.250	1/2	5-1/2	1-5/16	304001	304011
200 DA	0.047 – 0.375	3/4	5-1/2	1-5/8	304002	304012
100 DA	0.047 – 0.562	1	5-1/2	1-13/16	304003	304013
180 DA	0.047 – 0.750	1-1/4	5-1/2	1-13/16	304004	304014

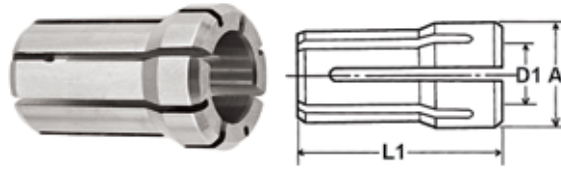
Double Angle Collets



D1 (Inch)	300DA	200DA	100DA	180DA
	L1 = 1.000" A Max. Diameter = 0.375"	L1 = 1.188" A Max. Diameter = 0.531"	L1 = 1.438" A Max. Diameter = 0.769"	L1 = 1.625" A Max. Diameter = 1.035"
	Code	Code	Code	Code
1/32	826622	-	-	-
3/64	826623	826637	826659	826693
1/16	826624	826638	826660	826694
5/64	826625	826639	826661	826695
3/32	826626	826640	826662	826696
7/64	826627	826641	826663	826697
1/8	826628	826642	826664	826698
9/64	826629	826643	826665	826699
5/32	826630	826644	826666	826700
11/64	826631	826645	826667	826701
3/16	826632	826646	826668	826702
13/64	826633	826647	826669	826703
7/32	826634	826648	826670	826704
15/64	826635	826649	826671	826705
1/4	826636	826650	826672	826706
17/64	-	826651	826673	826707
9/32	-	826652	826674	826708
19/64	-	826653	826675	826709
5/16	-	826654	826676	826710
21/64	-	826655	826677	826711
11/32	-	826656	826678	826712
23/64	-	826657	826679	826713
3/8	-	826658	826680	826714
25/64	-	-	826681	826715
13/32	-	-	826682	826716
27/64	-	-	826683	826717
7/16	-	-	826684	826718
29/64	-	-	826685	826719
15/32	-	-	826686	826720
31/64	-	-	826687	826721
1/2	-	-	826688	826722
33/64	-	-	826689	826723
17/32	-	-	826690	826724
35/64	-	-	826691	826725

Double Angle Collets

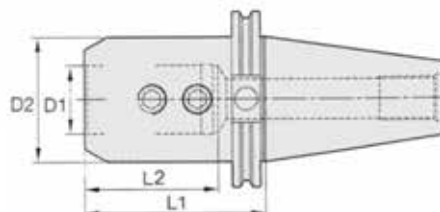
(continued)



D1 (Inch)	300DA	200DA	100DA	180DA
	L1 = 1.000" A Max. Diameter = 0.375"	L1 = 1.188" A Max. Diameter = 0.531"	L1 = 1.438" A Max. Diameter = 0.769"	L1 = 1.625" A Max. Diameter = 1.035"
	Code	Code	Code	Code
9/16	–	–	826692	826726
37/64	–	–	–	826727
19/32	–	–	–	826728
39/64	–	–	–	826729
5/8	–	–	–	826730
41/64	–	–	–	826731
21/32	–	–	–	826732
43/64	–	–	–	826733
11/16	–	–	–	826734
45/64	–	–	–	826735
23/32	–	–	–	826736
47/64	–	–	–	826737
3/4	–	–	–	826738

End Mill Holders

CAT40 & CAT50



- Taper to bore runout: <math><0.0002''</math>
- H5 bore tolerance
- Coolant through spindle
- CAT40 balanced G2.5@20,000 RPM
- CAT50 balanced G6.3@15,000 RPM
- Balanced tools supplied with QA certificates
- Taper shank ground to AT3 accuracy or better
- DIN AD+B flange coolant

D1 (Inch)	D2 (Inch)	L1 Gage Length (Inch)	Clamping Screw Reference	No. of Clamp Screws	Wrench Size (Allen Key)	CAT40			CAT50		
						L2 (Inch)	Weight (lbs)	Code	L2 (Inch)	Weight (lbs)	Code
1/8	0.69	1.38	312143	1	3/32	2.89	1.79	312010	-	-	-
1/8	0.69	4.50	312143	1	3/32	6.01	2.41	310940	-	-	-
3/16	0.69	1.38	312143	1	3/32	2.89	1.79	312011	-	-	-
3/16	0.69	2.50	312143	1	3/32	4.01	2.22	310941	4.69	6.55	312029
3/16	0.69	4.50	312143	1	3/32	6.01	2.41	310942	6.69	6.84	312030
3/16	0.69	6.00	312143	1	3/32	7.50	3.00	300698	-	-	-
1/4	0.78	1.38	312144	1	1/8	2.89	1.82	312012	-	-	-
1/4	0.78	2.50	312144	1	1/8	-	-	-	4.69	6.55	312031
1/4	1.00	2.50	312144	1	1/8	4.01	2.35	310943	-	-	-
1/4	0.78	4.50	312144	1	1/8	6.01	2.51	310944	6.69	7.17	312032
1/4	0.78	6.00	312144	1	1/8	7.50	3.10	300699	8.25	8.80	300708
1/4	0.78	8.00	312144	1	1/8	8.00	3.80	301769	-	-	-
5/16	1.00	1.38	312145	1	5/32	2.89	1.85	312013	-	-	-
5/16	1.00	4.50	312145	1	5/32	6.01	2.76	310945	6.69	7.15	312033
5/16	1.00	6.00	312145	1	5/32	7.50	3.20	300700	-	-	-
3/8	1.00	1.38	312146	1	3/8	2.89	1.85	312014	-	-	-
3/8	1.00	2.50	312146	1	3/16	4.01	2.32	310946	4.69	6.63	312034
3/8	1.00	4.50	312146	1	3/16	6.01	2.69	310947	6.69	7.07	312035
3/8	1.00	6.50	312146	1	3/16	8.01	3.17	310948	8.69	7.45	312036
3/8	1.00	8.00	312146	1	3/16	8.01	3.90	300701	10.25	9.00	300709
7/16	1.25	1.75	312147	1	7/32	3.26	2.00	312015	-	-	-
7/16	1.25	4.50	312147	1	7/32	6.01	3.04	310949	4.69	6.78	312037
1/2	1.75	1.75	312147	1	7/32	3.26	2.27	312016	-	-	-
1/2	1.38	2.62	312147	1	7/32	4.13	2.52	310950	4.81	6.82	312038
1/2	1.38	4.62	312147	1	7/32	-	-	-	6.81	7.52	312039
1/2	1.38	6.62	312147	1	7/32	-	-	-	8.81	8.21	312040
1/2	1.38	8.00	312147	1	7/32	-	-	-	10.25	9.30	300710
1/2	1.25	4.62	312147	1	7/32	6.13	3.05	310951	-	-	-
1/2	1.25	6.62	312147	1	7/32	8.13	3.83	310952	-	-	-
1/2	1.25	8.00	312147	1	7/32	8.13	4.30	300702	-	-	-
5/8	1.75	1.75	312149	1	1/4	3.56	2.19	312017	-	-	-
5/8	1.50	3.75	312149	1	1/4	3.56	2.96	310953	-	-	-
5/8	1.63	3.75	312149	1	1/4	-	-	-	5.94	7.53	312041
5/8	1.63	5.75	312149	1	1/4	3.56	4.21	310954	7.94	8.63	312042
5/8	1.63	8.00	312149	1	1/4	3.56	5.00	300703	-	-	-
3/4	1.75	1.75	312150	1	5/16	2.40	2.09	312018	-	-	-
3/4	1.75	3.75	312150	1	5/16	3.94	3.21	310955	5.94	7.65	312043
3/4	1.75	5.75	312150	1	5/16	3.94	4.44	310956	7.94	8.67	312044
3/4	1.75	8.00	312150	1	5/16	3.94	5.20	300704	7.94	10.00	300711
7/8	1.88	1.75	312150	1	5/16	2.27	2.31	312019	-	-	-
7/8	2.00	4.00	312150	1	5/16	4.19	3.65	310957	4.19	8.00	312045
7/8	1.88	6.00	312150	1	5/16	4.19	4.86	310958	-	-	-
7/8	2.00	6.00	312150	1	5/16	-	-	-	4.31	9.44	312046

End Mill Holders



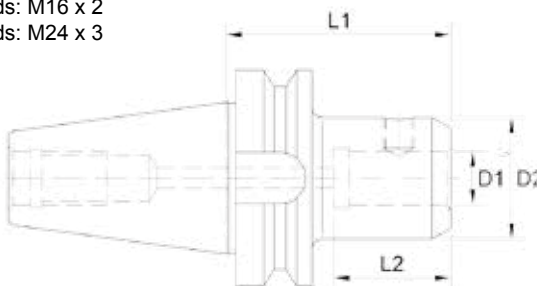
CAT40 & CAT50 (continued)

D1 (Inch)	D2 (Inch)	L1 Gage Length (Inch)	Clamping Screw Reference	No. of Clamp Screws	Wrench Size (Allen Key)	CAT40			CAT50		
						L2 (Inch)	Weight (lbs)	Code	L2 (Inch)	Weight (lbs)	Code
1	1.75	1.75	312151	2	3/8	2.64	1.78	312020	—	—	—
1	2.00	4.00	312153	2	3/8	4.43	3.39	310959	4.43	7.95	312047
1	2.00	6.00	312153	2	3/8	4.43	5.04	310960	4.43	9.39	312048
1	2.00	8.00	312153	2	3/8	4.43	6.10	300705	4.43	11.10	300712
1-1/4	2.25	2.00	312152	2	3/8	2.35	2.25	312021	—	—	—
1-1/4	2.50	4.25	312154	2	3/8	2.39	4.96	310961	2.39	8.98	312049
1-1/4	2.50	6.25	312154	2	3/8	2.39	7.47	310962	2.39	11.42	312050
1-1/4	2.50	8.00	312154	2	3/8	3.54	8.90	300706	3.35	13.00	300713
1-1/2	2.75	4.62	312155	2	3/8	2.82	5.80	310963	2.82	9.19	312051
1-1/2	2.75	6.62	312155	2	3/8	2.82	8.76	310964	2.82	12.21	312052
1-1/2	2.75	8.00	300707	2	3/8	3.15	10.50	300707	7.20	13.00	300714
2	3.94	5.62	312155	2	1/2	—	—	—	4.86	17.70	312053
2	3.94	8.00	312155	2	1/2	—	—	—	7.24	19.00	300715

BT40 & BT50

**BT30
END MILL HOLDERS
ALSO AVAILABLE**

- Taper to bore runout: <0.0002"
- H5 bore tolerance
- Coolant through spindle
- Balanced G6.3@15,000 RPM
- Taper shank ground to AT3 accuracy or better
- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3



D1 (Inch)	D2 (Inch)	L1 Gage Length (Inch)	Clamping Screw Reference	No. of Clamp Screws	Wrench Size (Allen Key)	BT40			BT50		
						L2 (Inch)	Weight (lbs)	Code	L2 (Inch)	Weight (lbs)	Code
1/4	1.00	2.55	312144	1	1/8	3.93	2.36	310863	—	—	—
5/16	1.00	2.55	312145	1	5/32	3.93	2.36	310864	—	—	—
3/8	1.00	2.55	312146	1	3/16	3.93	2.51	310865	—	—	—
1/2	1.38	2.55	312147	1	7/32	3.93	2.51	310866	5.16	8.14	310904
1/2	1.38	4.00	312147	1	7/32	5.38	3.02	310867	—	—	—
5/8	1.63	2.55	301755	1	1/4	2.09	2.69	310868	—	—	—
3/4	1.68	1.50	301756	1	5/16	2.22	2.09	310869	—	—	—
3/4	1.75	2.36	301756	1	5/16	2.22	2.50	310870	—	—	—
3/4	1.75	2.55	312150	1	5/16	2.22	2.73	310871	—	—	—
3/4	1.75	2.95	312150	1	5/16	—	—	—	5.16	8.36	310905
7/8	2.00	3.35	312150	1	5/16	2.22	3.57	310872	—	—	—
1	2.00	1.63	312153	2	3/8	2.46	2.01	310873	—	—	—
1	2.00	3.74	301757	2	3/8	2.56	3.75	310874	—	—	—
1	2.00	4.13	301758	2	3/8	—	—	—	2.56	9.30	310906
1	2.00	5.00	301757	2	3/8	4.49	4.54	310875	—	—	—
1	2.00	6.00	301758	2	3/8	—	—	—	4.30	10.54	310907
1-1/4	2.40	3.35	301758	2	3/8	2.51	3.95	310876	—	—	—
1-1/4	2.50	4.13	301758	2	3/8	—	—	—	2.51	10.23	310908
1-1/4	2.50	6.00	301758	2	3/8	—	—	—	2.51	12.54	310909
1-1/2	2.75	4.13	301759	2	3/8	—	—	—	2.93	10.41	310910
2	3.75	5.31	301760	2	1/2	—	—	—	3.53	16.00	310911

End Mill Holders

- Produced according to AT3 specifications and made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- End mill socket total indicator runout <0.0004"

R8, ISA (NMTB) 30, 40, 50 Shanks



R8

Draw Bar Threads

- ISA30 1/2"-13 UNC
- ISA40 5/8"-11 UNC
- ISA50 1"-8 UNC

R8 DRAW BAR THREAD

- 7/16"-20 UNF



ISA

Hole Diameter (Inch)	Set Screw Thread Reference	Set Screw Code Reference	ISA30	ISA40	ISA50	R8
			Code	Code	Code	Code
3/16	1/4-28 x 5/16	827105	827016	827024	827034	827044
1/4	1/4-28 x 1/4	827106	827017	827025	-	-
3/8	3/8-24 x 25/64	827107	827018	827026	827035	827045
1/2	7/16-20 x 15/32	827108	827019	827027	827036	827046
5/8	9/16-18 x 15/32	827109	827020	827028	827037	827047
3/4	5/8-18 x 33/64	827110	827021	827029	827038	827048
7/8	5/8-18 x 33/64	827110	827022	827030	827039	827049
1	3/4-16 x 19/32	827112	827023	827031	827040	827050
1-1/4	3/4-16 x 5/8	827113	-	827032	827041	827051
1-1/2	3/4-16 x 45/64	827114	-	827033	827042	827052
2	1-14 x 15/16	827118	-	-	827043	-

Morse Taper Shanks – Style A Tanged & Style B Threaded



Style A - Tanged

Draw Bar Threads

- MT2 3/8" – 16 UNC
- MT3 1/2" – 13 UNC
- MT4 5/8" – 11 UNC
- MT5 1" – 8 UNC



Style B - Threaded

NOTE: 5/8" holders with MT2 shank are for single end mills only

Shank	Hole Diameter (Inch)	Set Screw Thread Reference	Set Screw Code Reference	Style A Tanged	Style B Threaded	Shank	Hole Diameter (Inch)	Set Screw Thread Reference	Set Screw Code Reference	Style A Tanged	Style B Threaded
				Code	Code					Code	Code
MT2	3/16	1/4-28 x 5/16	827105	827053	827079	MT4	3/4	5/8-18 x 33/64	827110	827067	827093
MT2	1/4	1/4-28 x 1/4	827106	-	827080	MT4	7/8	5/8-18 x 33/64	827110	827068	827094
MT2	3/8	3/8-24 x 25/64	827107	827055	827081	MT4	1	3/4-16 x 19/32	827112	827069	827095
MT2	1/2	7/16-20 x 15/32	827108	827056	827082	MT5	3/8	3/8-24 x 25/64	827105	827070	827096
MT2	5/8	9/16-18 x 15/32	827109	827057	827083	MT5	1/2	7/16-20 x 15/32	827107	827071	-
MT3	3/16	1/4-28 x 5/16	827105	827058	827084	MT5	5/8	9/16-18 x 15/32	827108	827072	827098
MT3	1/4	1/4-28 x 1/4	827106	827059	827085	MT5	3/4	5/8-18 x 33/64	827110	827073	827099
MT3	3/8	3/8-24 x 25/64	827107	827060	827086	MT5	7/8	5/8-18 x 33/64	827110	827074	827100
MT3	1/2	7/16-20 x 15/32	827108	827061	827087	MT5	1	3/4-16 x 19/32	827112	827075	827101
MT3	5/8	9/16-18 x 15/32	827109	827062	827088	MT5	1-1/4	3/4-16 x 5/8	827113	827076	827102
MT3	3/4	5/8-18 x 33/64	827110	827063	827089	MT5	1-1/2	3/4-16 x 45/64	827114	827077	827103
MT4	3/8	3/8-24 x 25/64	827105	827064	827090	MT5	2	1-14 x 15/16	827118	827078	827104
MT4	1/2	7/16-20 x 15/32	827107	827065	827091						
MT4	5/8	9/16-18 x 15/32	827108	827066	827092						

Set Screws

NOTE: Holders 7/8" diameter and above furnished with 2 set screws



Thread	Code	Thread	Code	Thread	Code	Thread	Code	Thread	Code
1/4-28 x 5/16	827105	9/16-18 x 15/32	827109	3/4-16 x 19/32	827112	3/4-16 x 45/64	827114	3/4-16 x 1-1/4	827116
1/4-28 x 1/4	827106	5/8-18 x 33/64	827110	3/4-16 x 5/8	827113	3/4-16 x 1-3/16	827115	3/4-16 x 1-13/32	827117
3/8-24 x 25/64	827107							1-14 x 15/16	827118
7/16-20 x 15/32	827108								

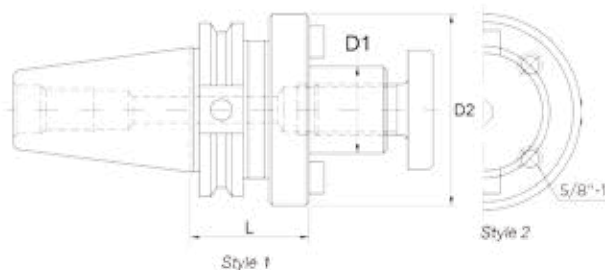
Shell Mill Adapters



- Taper to pilot runout: <math><0.0002''</math>
- Taper shank ground to AT3 accuracy or better
- H6 pilot tolerance
- AD+B coolant through spindle and lange
- Balanced by design
- Provided with a non-coolant arbor screw



CAT40 & CAT50



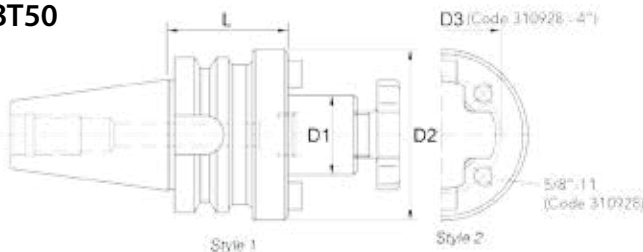
- CAT40 draw bar threads: 5/8"-11
- CAT50 draw bar threads: 1"-8

D1 (Inch)	D2 (Inch)	L (Inch)	Clamp Screw Reference	Wrench Size (Allen Key)	Drive Key Size (Inch)	CAT40		CAT50	
						Weight (lbs)	Code	Weight (lbs)	Code
1/2	1.75	1.38	301761	3/16	1/4	2.27	310989	-	-
1/2	2.75	1.38	301761	3/16	1/4	-	-	6.82	312074
1/2	1.44	3.50	301761	3/16	1/4	-	-	7.54	312075
3/4	2.75	1.38	301741	1/4	5/16	-	-	6.88	312076
3/4	1.75	1.38	301741	1/4	5/16	2.21	310990	-	-
3/4	1.75	3.50	301741	1/4	5/16	3.80	310991	8.34	312077
3/4	1.75	6.00	301741	1/4	5/16	-	-	9.70	312078
1	2.19	2.06	301742	5/16	3/8	3.10	310992	7.37	312079
1	2.19	4.00	301742	5/16	3/8	4.30	310993	-	-
1	2.40	4.00	301742	5/16	3/8	-	-	9.97	312080
1	2.40	6.00	301742	5/16	3/8	-	-	12.46	312081
1-1/4	2.75	2.12	301743	5/16	1/2	4.00	310994	7.18	312082
1-1/4	2.75	4.00	301743	5/16	1/2	5.00	310995	10.31	312083
1-1/4	2.75	6.00	301743	5/16	1/2	-	-	11.35	312084
1-1/2	3.38	2.41	301762	3/8	5/8	5.01	310996	9.71	312085
1-1/2	3.38	4.00	301762	3/8	5/8	5.01	310997	12.27	312086
1-1/2	3.38	6.00	301762	3/8	5/8	-	-	13.40	312087
2	4.37	2.40	301763	3/8	3/4	-	-	12.50	301770
2-1/2	4.88	2.40	-	-	1	-	-	19.00	* 301771

*Non-coolant through



BT40 & BT50



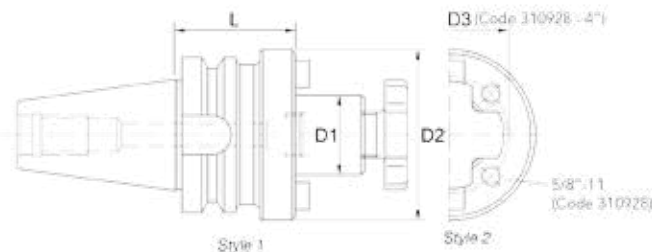
- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3

D1 (Inch)	D2 (Inch)	L (Inch)	Clamp Screw Reference	Wrench Size (Allen Key)	Drive Key Size (Inch)	BT40		BT50	
						Weight (lbs)	Code	Weight (lbs)	Code
1/2	1.44	1.77	301761	3/16	1/4	2.47	310894	-	-
3/4	1.75	1.77	301741	1/4	5/16	2.90	310895	8.08	310920
3/4	1.75	4.00	301741	1/4	5/16	-	-	9.56	310921
1	2.19	1.77	301742	5/16	3/8	3.04	310896	8.30	310922
1	2.40	4.00	301742	5/16	3/8	-	-	11.06	310923
1-1/4	2.88	2.36	301743	5/16	1/2	4.82	310897	-	-

Shell Mill Adapters



BT40 & BT50 (continued)



- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3

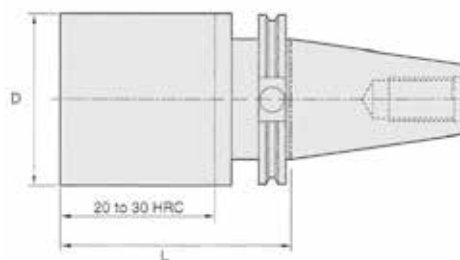
D1 (Inch)	D2 (Inch)	L (Inch)	Clamp Screw Reference	Wrench Size (Allen Key)	Drive Key Size (Inch)	BT40		BT50	
						Weight (lbs)	Code	Weight (lbs)	Code
1-1/4	2.88	4.00	301743	5/16	1/2	–	–	12.80	310924
1-1/2	3.81	1.77	301762	3/8	5/8	–	–	9.40	310925
1-1/2	3.82	2.36	301762	3/8	5/8	4.69	310898	–	–
1-1/2	3.81	4.00	301762	3/8	5/8	–	–	16.60	310926
2	4.13	2.36	301745	9/16	3/4	–	–	14.07	310927
2	4.88	4.00	301745	9/16	3/4	–	–	19.32	310928

Boring Bar Blanks



CAT V-Flange Shanks

- Constructed of high quality alloy steel - SAE8620/20MnCR5
- 58+/-2 HRC shank
- 20-30 HRC blank part
- Taper shank ground to AT3 accuracy or better



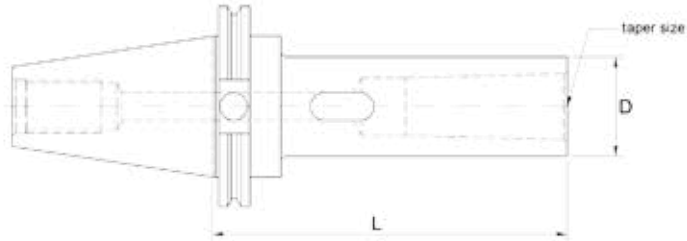
CAT40				CAT50			
D (Inch)	L (Inch)	Weight (lbs)	Code	D (Inch)	L (Inch)	Weight (lbs)	Code
4.00	12.00	39.89	310933	4.00	12.00	44.56	312023
4.00	6.00	18.55	310934	4.00	6.00	23.23	312024
–	–	–	–	6.00	6.00	43.50	312025

Morse Taper Adapters



- Coolant through spindle
- Taper shank ground to AT3 accuracy or better

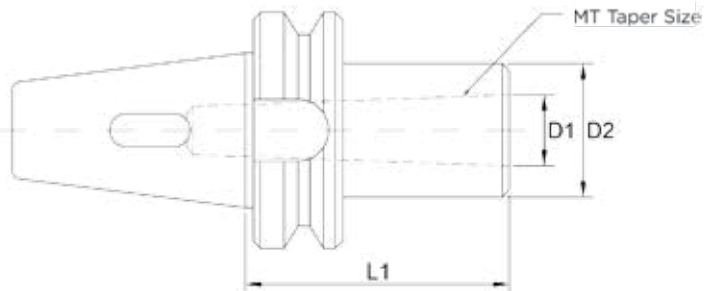
CAT40 & CAT50



- MT - CAT Form A
- CAT40 draw bar threads: 5/8"-11
- CAT50 draw bar threads: 1"-8

Taper Size	CAT40				CAT50			
	D (Inch)	L (Inch)	Weight (lbs)	Code	D (Inch)	L (Inch)	Weight (lbs)	Code
MT1	0.98	1.75	2.21	310984	2.75	1.75	6.90	312068
MT2	1.26	2.44	2.30	310985	2.75	2.00	7.43	312069
MT3	1.57	3.00	2.49	310986	1.57	2.50	6.73	312070
MT4	1.89	3.88	2.86	310987	1.89	3.38	6.90	312071
MT5	-	-	-	-	2.75	3.75	7.55	312072

BT40 & BT50



- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3

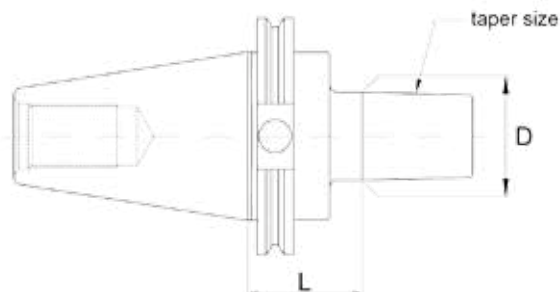
Taper Size	BT40					BT50				
	D1 (Inch)	D2 (Inch)	L1 (Inch)	Weight (lbs)	Code	D1 (Inch)	D2 (Inch)	L1 (Inch)	Weight (lbs)	Code
MT1	0.476	0.984	1.772	2.23	310889	0.476	0.984	1.772	3.97	310916
MT2	0.701	1.260	1.772	2.34	310890	-	-	-	-	-
MT3	0.937	1.575	2.953	2.49	310891	0.937	1.575	2.559	7.05	310917
MT4	1.232	1.890	3.740	2.93	310892	1.232	1.890	3.740	7.72	310918
MT5	-	-	-	-	-	1.748	2.756	4.134	9.92	310919



Jacobs Taper Adapters

- Designed to use with keyless Jacobs chucks
- Non-coolant through
- Taper shank ground to AT3 accuracy or better

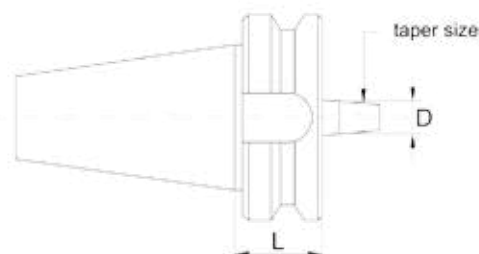
CAT40 & CAT50



- CAT40 draw bar threads: 5/8"-11
- CAT50 draw bar threads: 1"-8

Taper Size	D (Inch)	L (Inch)	CAT40		CAT50	
			Weight (lbs)	Code	Weight (lbs)	Code
JT2	0.560	1.57	2.10	300719	2.65	300724
JT2	0.560	2.44	2.33	310979	2.93	312064
JT3	0.812	1.57	2.30	300720	2.90	300725
JT3	0.812	2.78	2.45	310980	3.06	312065
JT33	0.625	1.57	2.20	300721	2.81	300726
JT33	0.625	2.56	2.32	310981	2.96	312066
JT4	1.124	1.57	2.18	300722	6.45	300727
JT4	1.124	2.44	2.45	310982	-	-
JT4	1.124	3.25	-	-	6.97	312067
JT5	1.413	1.57	-	-	6.92	300728
JT5	1.413	3.25	-	-	7.25	300729
JT6	0.676	1.57	2.50	300723	6.95	300730
JT6	0.676	2.44	2.78	310983	-	-

BT40



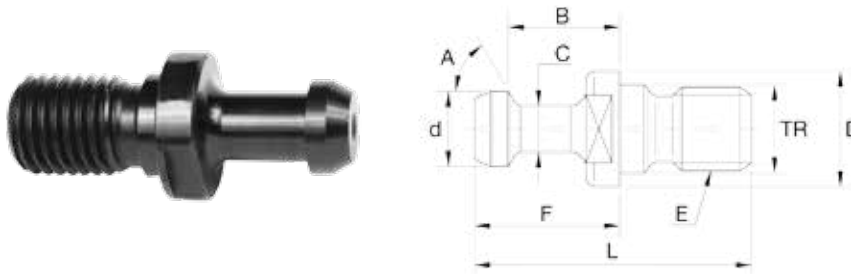
- BT40 draw bar threads: M16 x 2
- BT50 draw bar threads: M24 x 3

Taper Size	D (Inch)	L (Inch)	Weight (lbs)	Code	Taper Size	D (Inch)	L (Inch)	Weight (lbs)	Code
JT33	0.624	1.77	2.47	310885	JT3	0.811	3.18	5.51	310886
JT2	0.559	2.44	5.14	310884	JT4	1.124	1.18	5.62	310887
					JT6	0.676	1.18	6.13	310888

Pull Studs



Retention Knobs – RK Style

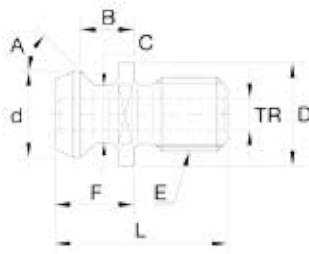


RK BT – MAS – 403

Taper Size	TR (Inch)	A	B (Inch)	C (Inch)	D (Inch)	d (Inch)	E	F (Inch)	L (Inch)	Code
40	0.669	45°	1.100	0.392	0.902	0.589	M16-2	1.376	2.362	312119
40	0.669	60°	1.100	0.392	0.902	0.589	M16-2	1.376	2.362	312120
40	0.669	90°	1.100	0.392	0.902	0.589	M16-2	1.376	2.362	312121
50	0.984	45°	1.376	0.667	1.492	0.904	M24-3	1.769	3.346	312123
50	0.984	60°	1.376	0.667	1.492	0.904	M24-3	1.769	3.346	312124
50	0.984	90°	1.376	0.667	1.492	0.904	M24-3	1.769	3.346	312125

RK CT – ANSI – With Pilot – Inch

Taper Size	TR (Inch)	Coolant Through Hole Dia. (Inch)	A	B (Inch)	C (Inch)	D (Inch)	d (Inch)	E	F (Inch)	L (Inch)	Code
40	0.636	–	45°	0.988	0.392	0.938	0.589	5/8"-11	1.264	2.250	301765
40	0.636	–	60°	0.988	0.392	0.938	0.589	5/8"-11	1.264	2.250	300891
40	0.636	–	90°	0.988	0.392	0.938	0.589	5/8"-11	1.264	2.250	312116
40	0.636	0.158	45°	0.988	0.392	0.938	0.589	5/8"-11	1.264	2.250	300892
50	1.026	–	45°	1.384	0.668	1.438	0.903	1"-8	1.778	3.355	301766
50	1.026	–	90°	1.384	0.668	1.438	0.903	1"-8	1.778	3.355	312118
50	1.026	0.315	45°	1.384	0.668	1.438	0.903	1"-8	1.778	3.355	300893



RK CT – ANSI – Inch

Taper Size	TR (Inch)	A	B (Inch)	C (Inch)	D (Inch)	d (Inch)	E	F (Inch)	L (Inch)	Code
40	0.281	45°	0.440	0.490	0.938	0.740	5/8"-11	0.640	1.500	312122
50	0.500	45°	0.700	0.820	1.400	1.140	1"-8	1.000	2.300	312126



Tightening Fixtures

Universal H/V CNC Tool Tightening Fixtures



Mount in vertical and horizontal positions

- Multiple usage on tool holder shank CAT, BT, NMTB and ISO
- Enables strong gripping power of tool holder
- Access both ends of tool holders simultaneously
- Provides maximum protection of tool holder
- Tools may be mounted in vertical and horizontal positions
- High quality compact and rigid design for mounting on work table or tool cart
- Body is constructed of strong, high quality aluminum alloy

MILLING

Taper Size	Overall Height (Inch)	Overall Length (Inch)	Width (Inch)	Weight (lbs)	Code
30	4.84	7.09	3.23	3.8	310841
40	5.12	7.09	3.23	4.2	310842
50	7.24	9.84	4.72	8.4	310843

Shell Mill Arbors

ISA (NMTB) Shanks



- Made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- Shell end mill pilot total indicator runout <0.0004"

Draw Bar Threads:

- ISA30 1/2"-13 UNC
- ISA40 5/8"-11 UNC
- ISA50 1"-8 UNC

Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Weight (lbs)	Code	Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Weight (lbs)	Code
ISA30	1/2	1-1/4 – 1-1/2	0.82	827119	ISA40	1-1/2	4 – 5	2.76	827127
ISA30	3/4	1-3/4 – 2	0.95	827120	ISA40	2	5-1/2 – 6	3.44	827128
ISA30	1	2-1/4 – 2-3/4	1.26	827121	ISA50	1/2	1-1/4 – 1-1/2	6.00	827129
ISA30	1-1/4	3 – 3-1/2	1.32	827122	ISA50	3/4	1-3/4 – 2	6.10	827130
ISA40	1/2	1-1/4 – 1-1/2	1.85	827123	ISA50	1	2-1/4 – 2-3/4	6.40	827131
ISA40	3/4	1-3/4 – 2	1.96	827124	ISA50	1-1/4	3 – 3-1/2	6.50	827132
ISA40	1	2-1/4 – 2-3/4	2.25	827125	ISA50	1-1/2	4 – 5	6.90	827133
ISA40	1-1/4	3 – 3-1/2	2.45	827126	ISA50	2	5-1/2 – 6	7.40	827134

ISA (NMTB) Shanks – 4" Extension Type



Draw Bar Threads:

- ISA40 5/8"-11 UNC
- ISA50 1"-8 UNC

Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Weight (lbs)	Code
ISA40	3/4	1-3/4 – 2	3.50	827135
ISA40	1	2-1/2 – 2-3/4	3.90	827136
ISA50	1	2-1/4 – 2-3/4	8.60	827137
ISA50	1-1/4	3 – 3-1/2	10.6	827138

R8 Shanks

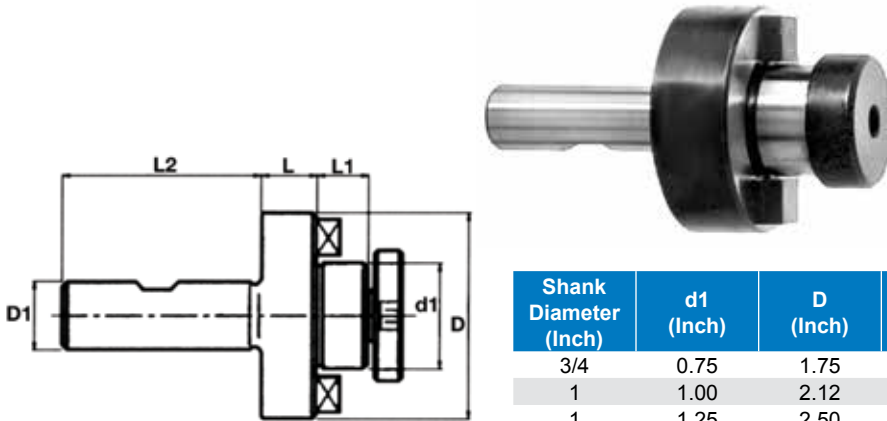


- Made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- Shell end mill pilot total indicator runout <0.0004"

Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Code
R8	1/2	1-1/4 – 1-1/2	827140
R8	3/4	1-3/4 – 2	827141
R8	1	2-1/4 – 2-3/4	827142
R8	1-1/4	3 – 3-1/2	827143
R8	1-1/2	4 – 5	827144

Shell Mill Arbors

Straight Shanks



Shank Diameter (Inch)	d1 (Inch)	D (Inch)	L (Inch)	L1 (Inch)	L2 (Inch)	Code
3/4	0.75	1.75	0.703	0.67	1.75	827145
1	1.00	2.12	0.714	0.67	2.25	827146
1	1.25	2.50	0.845	0.67	2.25	827147

Morse Taper Shanks – Tanged



- Made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- Shell end mill pilot total indicator runout <0.0004"

Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Code	Shank	Arbor Diameter (Inch)	For Shell End Mills (Inch)	Code
MT4	3/4	1-3/4 – 2	827149	MT5	1	2-1/4 – 2-3/4	827153
MT4	1	2-1/4 – 2-3/4	827150	MT5	1-1/4	3 – 3-1/2	827154
MT4	1-1/4	3 – 3-1/2	827151	MT5	1-1/2	4 – 5	827155
MT4	1-1/2	4 – 5	827152				

Screws

For Shell Mill Arbors

- Socket head arbor screws are designed for all shell end mill arbors
- Made of alloy forged steel for long, durable service life



Thread	Arbor Diameter (Inch)	Code	Thread	Arbor Diameter (Inch)	Code	Thread	Arbor Diameter (Inch)	Code
1/4-28	1/2	827156	1/2-20	1	827158	3/4-16	1-1/2	827160
3/8-24	3/4	827157	5/8-18	1-1/4	827159	1-14	2	827161

Face Mill Holders

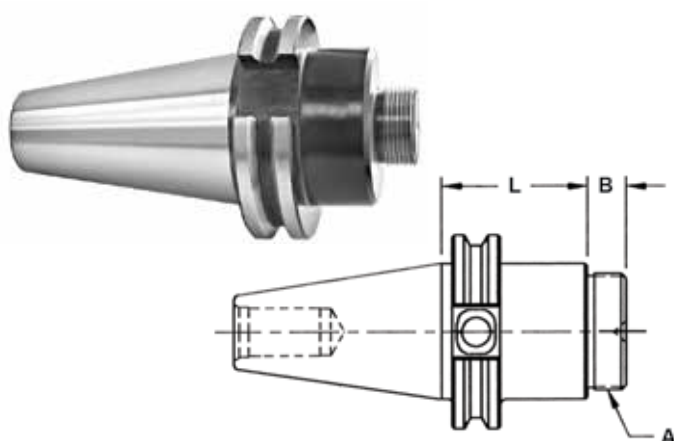


- Holders have four mounting holes with 5/8-11 thread on a 4" bolt circle to hold 8" or larger face milling cutters
- Holders have 1" drive keys

Taper	Arbor Diameter (Inch)	Arbor Length (Inch)	Weight (lbs)	Code
ISA40	2	6.20	7.5	827162
ISA40	2-1/2	6.20	8.0	827163
ISA50	2	7.56	11.5	827164
ISA50	2-1/2	7.56	11.8	827165

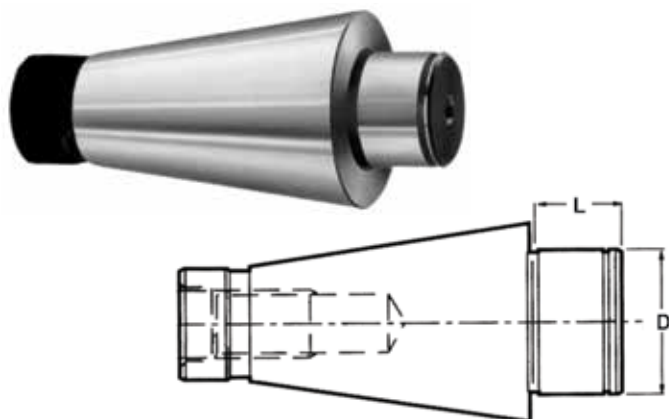
Boring Head Adapters

For Boring Heads with Threaded Bores – CAT V-Flange Shanks



Taper	A Thread	B (Inch)	L (Inch)	Code
CAT40	7/8-20	0.44	1.50	827170
CAT40	1-1/2-18	0.50	2.00	302431
CAT50	1-1/2-18	0.44	1.75	302432

Centering Plug Arbors



Taper	D (Inch)	L (Inch)	Code
ISA50	2	1-1/4	213530
ISA50	2-1/2	1-1/4	213532

Milling Machine Adapters

- Shanks are produced according to AT3 specifications
- Made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- Taper seat T.I.R. <0.0004"

For Changing from ISA (NMTB) Shank to a Smaller ISA (NMTB)



ISA/ISA

For Changing from ISA (NMTB) Shank to MT Socket



ISA/MT

Shank	ISA Hole	Weight (lbs)	Code
ISA50	ISA30	4.52	827172
ISA50	ISA40	3.86	827173

Shank	Morse Taper Hole	Weight (lbs)	Draw Bar Thread	Code
ISA40	MT2	1.98	5/8 – 11	827176
ISA40	MT3	2.20	5/8 – 11	827177
ISA40	MT4	3.09	5/8 – 11	827178
ISA40	MT5	7.06	5/8 – 11	827179
ISA50	MT2	9.26	1 – 8	827180
ISA50	MT3	9.26	1 – 8	827181
ISA50	MT4	8.16	1 – 8	827182
ISA50	MT5	6.61	1 – 8	827183

For Changing from ISA (NMTB) Shank to MT Socket



ISA/MT

- Open end type for threaded shank tools

Shank	Morse Taper Hole	Weight (lbs)	Code
ISA40	MT2	1.30	827186
ISA40	MT3	1.15	827187
ISA40	MT4	1.26	827188
ISA50	MT3	5.29	827189
ISA50	MT4	4.74	827190
ISA50	MT5	5.84	827191

For Changing from ISA (NMTB) Shank to R8 Socket



ISA/R8

- Adapters are provided with the screw (Inside) to hold tools with 7/16–20 R8 shank
- To hold adapter in the spindle use draw bar with standard thread

Shank	Hole	Weight (lbs)	Draw Bar Thread	Code
ISA40	R8	3.26	5/8–11	827184

For Changing from R8 Shank to MT Socket



R8/MT

Shank	Morse Taper Hole	Weight (lbs)	Draw Bar Thread	Code
R8	MT2	0.71	7/16 – 20	827174
R8	MT3	0.86	7/16 – 20	827175

Quick Change Tooling Systems

Collet Chuck Quick Change Adapters No. 30 & 40 Tapers



Capacity (Inch)	No. 30 Taper	No. 40 Taper
	Code	Code
1/8 – 1	302195	302196

End Mill Quick Change Adapters No. 30 & 40 Tapers



Bore Diameter (Inch)	No. 30 Taper	No. 40 Taper
	Code	Code
3/8	302110	302120
1/2	302111	302121
5/8	302112	302122
3/4	302113	302123
7/8	302114	302124
1	302115	302125
1-1/4	302116	302126

Morse Taper Quick Change Adapters No. 30 & 40 Tapers



Morse Taper	No. 30 Taper	No. 40 Taper
	Code	Code
MT1	302136	–
MT2	302137	302147
MT3	302138	302148
MT4	302139	302149

NOTE: ISA30 ad ISA40 Quick-Change Adapters can be used on regular machine spindles. Standard ISA30 and ISA40 adapters cannot be used on these master shanks

Jacobs Taper Quick Change Adapters No. 30 & 40 Tapers



Jacobs Taper	No. 30 Taper	No. 40 Taper
	Code	Code
J2	302161	302171
J3	302162	302172
J33	302163	302173
J4	302164	302174
J6	302165	302175

Shell Mill Quick Change Adapters No. 30 & 40 Tapers



Spigot Diameter (Inch)	No. 30 Taper	No. 40 Taper
	Code	Code
1/2	302180	302190
3/4	302181	302191
1	302182	302192
1-1/4	302183	302193
1-1/2	302184	302194

Quick Change Adapter Set 21 Pieces



Set includes:

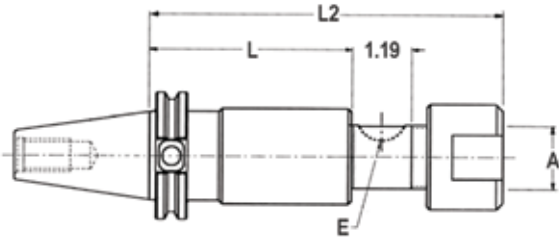
- Master holder
- Collet holder
- 1" Shell
- J6 Jacobs
- MT3 Morse
- 15 Collets 1/8-1"
- Wrench

Master Shank	Code
40/40	302106

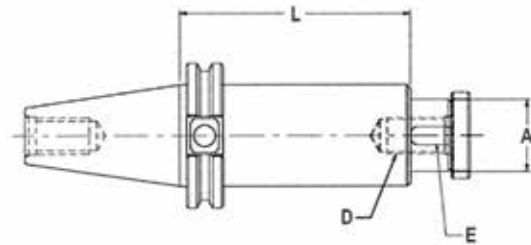
Stub Arbor Adapters

For Side Milling Cutters

Nut Type



Screw Type



Taper	A Diameter (Inch)	L (Inch)	L2 (Inch)	E Key (Inch)	Code
CAT40	1.00	4.00	6.19	0.250	827685
CAT40	1.25	4.00	6.44	0.312	827686
CAT50	1.25	4.00	6.44	0.312	827688
CAT50	1.50	4.00	6.69	0.375	827689

Includes three spacers (1/8, 3/8, 3/4), key and nut.
Additional spacers available.

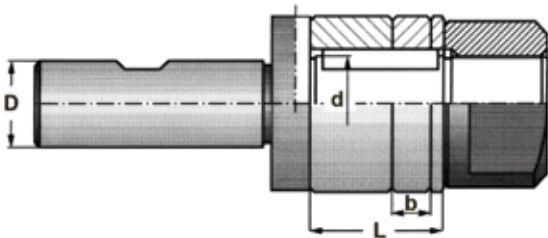
Taper	A Diameter (Inch)	L (Inch)	D Thread	E Key (Inch)	Code
CAT40	1.00	4.00	1/2-20	0.250	827690
CAT40	1.25	4.00	5/8-18	0.312	827691
CAT40	1.50	4.00	3/4-16	0.375	827692
CAT50	1.25	4.00	5/8-18	0.312	827693
CAT50	1.50	4.00	3/4-16	0.375	827694

Includes two spacers (1/4, 1/2), key and standard shell screw.

Weldon Shank



- Made of alloy forged steel for long, durable service life
- Hardened to 56-60 HRC and ground to ensure maximum accuracy
- Face is held perpendicular to center line within 0.0004"
- Pilot diameter is sized for precision fit with cutter and is keyed for positive drive
- Heavy duty locking LH nut and three arbor spacers are included



D Shank Diameter (Inch)	d Arbor Diameter (Inch)	L (Inch)	Code
3/4	3/4	1	827192
3/4	7/8	1	827193
3/4	1	1	827194
3/4	1-1/4	1	827195

Milling Machine Arbors

R8, ISA (NMTB) Styles A & B



Complete with assorted spacers and running bushings as indicated

R8 Style

Taper	Diameter of Arbor (Inch)	Style	L Length (Inch)	D x L1 Running Bushings (Inch)	Running Bushing Quantity	Code
R8	1	B	2	-	-	203101
R8	1-1/4	B	2	-	-	203103

ISA (NMTB) - Style A (End Pilot 23/32" Dia. x 1-3/4" Long)

Taper	Diameter of Arbor (Inch)	Style	L Length (Inch)	D x L1 Running Bushings (Inch)	Running Bushing Quantity	Code
ISA30	7/8	A	10	1-5/8 x 2-5/8	1	203105
ISA30	1	A	10	1-5/8 x 2-5/8	1	203107
ISA40	7/8	A	10	-	-	203109
ISA40	7/8	A	16	1-7/8 x 3-1/8	1	203111
ISA40	1	A	12	-	-	203113
ISA40	1	A	16	1-7/8 x 3-1/8	1	203115
ISA40	1-1/4	A	12	-	-	203117
ISA40	1-1/4	A	16	1-7/8 x 3-1/8	1	203119
ISA50	1	A	12	-	-	203121
ISA50	1	A	18	2-1/8 x 3-3/4	1	203123
ISA50	1-1/4	A	12	-	-	203125
ISA50	1-1/4	A	18	2-1/8 x 3-3/4	1	203127

Milling Machine Arbors R8, ISA (NMTB) Styles A & B (continued)

ISA (NMTB) - Style B

Taper	Diameter of Arbor (Inch)	Style	L Length (Inch)	D x L1 Running Bushings (Inch)	Running Bushing Quantity	Code
ISA40	1	B	3	-	-	203129
ISA40	1	B	14	1-7/8 x 3-1/8	1	203131
ISA40	1	B	20	1-7/8 x 3-1/8	1	203133
ISA40	1-1/4	B	3	-	-	203135
ISA40	1-1/4	B	14	1-7/8 x 3-1/8	1	203137
ISA40	1-1/4	B	20	1-7/8 x 3-1/8	1	203141
ISA40	1-1/2	B	20	2-1/8 x 3-3/4	1	203145
ISA50	1	B	3-1/2	-	-	203147
ISA50	1	B	15	2-1/8 x 3-3/4	1	203149
ISA50	1	B	18	2-1/8 x 3-3/4	2	203151
ISA50	1	B	24	2-1/8 x 3-3/4	2	203153
ISA50	1-1/4	B	3-1/2	-	-	203155
ISA50	1-1/4	B	15	2-1/8 x 3-3/4	1	203157
ISA50	1-1/4	B	18	2-1/8 x 3-3/4	2	203159
ISA50	1-1/4	B	24	2-1/8 x 3-3/4	2	203161
ISA50	1-1/4	B	30	2-1/8 x 3-3/4	2	203163
ISA50	1-1/2	B	3-1/2	-	-	203165
ISA50	1-1/2	B	18	2-1/8 x 3-3/4	2	203167
ISA50	1-1/2	B	24	2-3/4 x 4-1/4	2	203169
ISA50	1-1/2	B	30	2-3/4 x 4-1/4	2	203171
ISA50	1-1/2	B	36	2-3/4 x 4-1/4	2	203173
ISA50	2	B	24	-	-	203175
ISA50	2	B	30	2-3/4 x 4-1/4	2	203177
ISA50	2	B	36	-	-	203179
ISA50	2-1/2	B	36	3-3/8 x 4-1/2	2	203181

Nuts

- Hardened
- Ground left-hand thread and shoulder



For Arbor Diameter (Inch)	Thread Size	Code
7/8	7/8 – 14RH	203211
1	1 – 14RH	203213
1-1/4	1-1/4 – 12RH	203215
1-1/2	1-1/2 – 12RH	203217
2	2 – 12RH	203219
2-1/2	2-1/2 – 12RH	203220

Arbor Spacers With Keyway



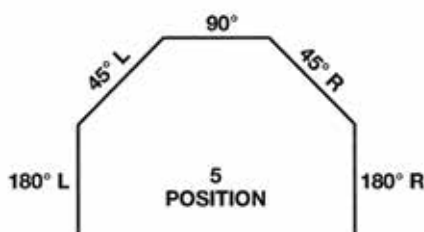
0.001" to 0.125" Thickness – 10 Piece Sets

Thickness (Inch)	Inside Diameter 7/8"	Inside Diameter 1"	Inside Diameter 1-1/4"	Inside Diameter 1-1/2"	Inside Diameter 2"
	Code	Code	Code	Code	Code
0.001	206400	206420	206440	206460	206480
0.0015	206401	206421	206441	206461	206481
0.002	206402	206422	206442	206462	206482
0.003	206403	206423	206443	206463	206483
0.004	206404	206424	206444	206464	206484
0.005	206405	206425	206445	206465	206485
0.006	206406	206426	206446	206466	206486
0.007	206407	206427	206447	206467	206487
0.008	206408	206428	206448	206468	206488
0.010	206409	206429	206449	206469	206489
0.012	206410	206430	206450	206470	206490
0.015	206411	206431	206451	206471	206491
0.020	206412	206432	206452	206472	206492
0.025	206413	206433	206453	206473	206493
0.031	206414	206434	206454	206474	206494
0.047	206415	206435	206455	206475	206495
0.062	206416	206436	206456	206476	206496
0.093	206417	206437	206457	206477	206497
0.125	206418	206438	206458	206478	206498
Assorted 19 pcs.	206419	206439	206459	206479	206499

Tool Clamping Fixtures

Multiple Use for Tool Shank ISO – DIN 69871 – CAT & BT-MAS

- Easy access for combined assembly of cutting tool and pull stud
- Head fixture can be set in five positions: vertical, horizontal and 45° (left and right)
- Efficiently designed for maximum protection of tool holder
- Enables strong gripping power of cutting tools
- Compact design - can be mounted on work table or tool cart



Taper	Code
Tool clamp #40 rotary	827695
Tool clamp #50 rotary	827696
Tool clamp #40 fixed	827697
Tool clamp #50 fixed	827698

Tool Trolleys & Accessories Heavy Duty

Tool Trolley



Tool Tray with #40 Inserts



Code
214200

Inserts



#40 Inserts



#50 Inserts

Description	Code
With #40 inserts (28 pcs.)	214140
With #50 inserts (20 pcs.)	214150

Insert	Code
#40	214240
#50	214250
HSK50	214260
HSK63	214261