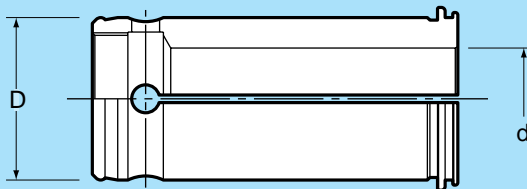


Milling Chuck Collets

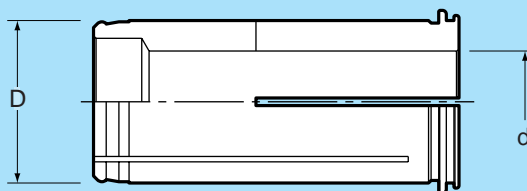
MC, MC-OH

Standard Collet MC



Collet capacity d	Collet outside diameter D								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250	MC1000-0250	MC1250-0250						
5/16	MC0750-0312	MC1000-0312	MC1250-0312						
3/8	MC0750-0375	MC1000-0375	MC1250-0375						
1/2	MC0750-0500	MC1000-0500	MC1250-0500						
5/8	MC0750-0625	MC1000-0625	MC1250-0625						
3/4		MC1000-0750	MC1250-0750						
7/8		MC1000-0875	MC1250-0875						
1			MC1250-1000	MC2000-1000					
1-1/4				MC2000-1250					
1-1/2				MC2000-1500					
6mm	MC0750-6	MC1000-6	MC1250-6		MC16-6	MC20-6	MC25-6	MC32-6	MC42-6
8mm	MC0750-8	MC1000-8	MC1250-8		MC16-8	MC20-8	MC25-8	MC32-8	MC42-8
10mm	MC0750-10	MC1000-10	MC1250-10		MC16-10	MC20-10	MC25-10	MC32-10	MC42-10
12mm	MC0750-12	MC1000-12	MC1250-12		MC16-12	MC20-12	MC25-12	MC32-12	MC42-12
16mm	MC0750-16	MC1000-16	MC1250-16			MC20-16	MC25-16	MC32-16	MC42-16
20mm		MC1000-20	MC1250-20				MC25-20	MC32-20	MC42-20
25mm			MC1250-25					MC32-25	MC42-25
32mm									MC42-32

Coolant Collet MC-OH (for cutters with coolant hole)

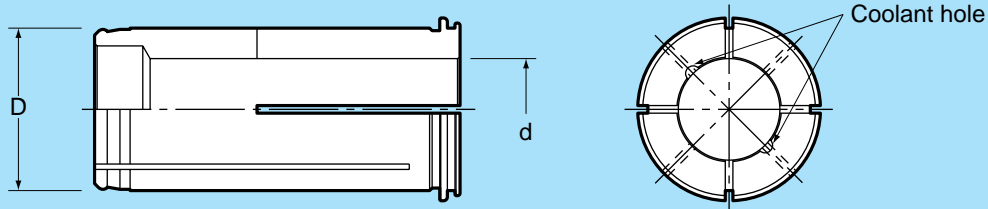


Collet capacity d	Collet outside diameter D								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250-OH	MC1000-0250-OH	MC1250-0250-OH						
5/16	MC0750-0312-OH	MC1000-0312-OH	MC1250-0312-OH						
3/8	MC0750-0375-OH	MC1000-0375-OH	MC1250-0375-OH						
1/2	MC0750-0500-OH	MC1000-0500-OH	MC1250-0500-OH						
5/8	MC0750-0625-OH	MC1000-0625-OH	MC1250-0625-OH						
3/4		MC1000-0750-OH	MC1250-0750-OH						
7/8		MC1000-0875-OH	MC1250-0875-OH						
1			MC1250-1000-OH	MC2000-1000-OH					
1-1/4				MC2000-1250-OH					
1-1/2				MC2000-1500-OH					
6mm	MC0750-6-OH	MC1000-6-OH	MC1250-6-OH		MC16-6-OH	MC20-6-OH	MC25-6-OH	MC32-6-OH	MC42-6-OH
8mm	MC0750-8-OH	MC1000-8-OH	MC1250-8-OH		MC16-8-OH	MC20-8-OH	MC25-8-OH	MC32-8-OH	MC42-8-OH
10mm	MC0750-10-OH	MC1000-10-OH	MC1250-10-OH		MC16-10-OH	MC20-10-OH	MC25-10-OH	MC32-10-OH	MC42-10-OH
12mm	MC0750-12-OH	MC1000-12-OH	MC1250-12-OH		MC16-12-OH	MC20-12-OH	MC25-12-OH	MC32-12-OH	MC42-12-OH
16mm	MC0750-16-OH	MC1000-16-OH	MC1250-16-OH			MC20-16-OH	MC25-16-OH	MC32-16-OH	MC42-16-OH
20mm		MC1000-20-OH	MC1250-20-OH				MC25-20-OH	MC32-20-OH	MC42-20-OH
25mm			MC1250-25-OH					MC32-25-OH	MC42-25-OH
32mm									MC42-32-OH

Milling Chuck Collets

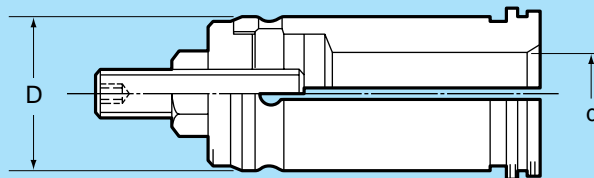
MC - C , M C A

Coolant Collet MC-C (for cutters without coolant hole)



Collet capacity d	Collet outside diameter D								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MC0750-0250-C	MC1000-0250-C	MC1250-0250-C						
5/16	MC0750-0312-C	MC1000-0312-C	MC1250-0312-C						
3/8	MC0750-0375-C	MC1000-0375-C	MC1250-0375-C						
1/2	MC0750-0500-C	MC1000-0500-C	MC1250-0500-C						
5/8	MC0750-0625-C	MC1000-0625-C	MC1250-0625-C						
3/4		MC1000-0750-C	MC1250-0750-C						
7/8		MC1000-0875-C	MC1250-0875-C						
1			MC1250-1000-C	MC2000-1000-C					
1-1/4				MC2000-1250-C					
1-1/2				MC2000-1500-C					
6mm	MC0750-6-C	MC1000-6-C	MC1250-6-C		MC16-6-C	MC20-6-C	MC25-6-C	MC32-6-C	MC42-6-C
8mm	MC0750-8-C	MC1000-8-C	MC1250-8-C		MC16-8-C	MC20-8-C	MC25-8-C	MC32-8-C	MC42-8-C
10mm	MC0750-10-C	MC1000-10-C	MC1250-10-C		MC16-10-C	MC20-10-C	MC25-10-C	MC32-10-C	MC42-10-C
12mm	MC0750-12-C	MC1000-12-C	MC1250-12-C		MC16-12-C	MC20-12-C	MC25-12-C	MC32-12-C	MC42-12-C
16mm	MC0750-16-C	MC1000-16-C	MC1250-16-C			MC20-16-C	MC25-16-C	MC32-16-C	MC42-16-C
20mm		MC1000-20-C	MC1250-20-C				MC25-20-C	MC32-20-C	MC42-20-C
25mm			MC1250-25-C					MC32-25-C	MC42-25-C
32mm									MC42-32-C

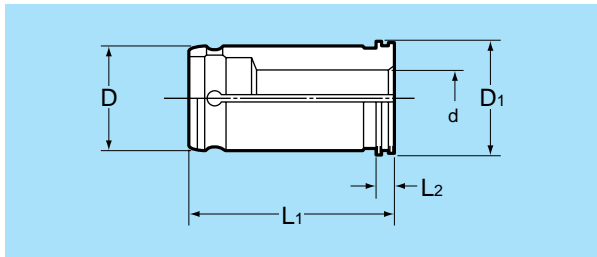
Standard Collet MCA (with depth adjustment stop screw)



Collet capacity d	Collet outside diameter D								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	MCA0750-0250	MCA1000-0250	MCA1250-0250						
5/16	MCA0750-0312	MCA1000-0312	MCA1250-0312						
3/8	MCA0750-0375	MCA1000-0375	MCA1250-0375						
1/2	MCA0750-0500	MCA1000-0500	MCA1250-0500						
5/8		MCA1000-0625	MCA1250-0625						
3/4		MCA1000-0750	MCA1250-0750						
7/8			MCA1250-0875						
1				MCA2000-1000					
1-1/4				MCA2000-1250					
1-1/2				MCA2000-1500					
6mm	MCA0750-6	MCA1000-6	MCA1250-6		MCA16-6	MCA20-6	MCA25-6	MCA32-6	MCA42-6
8mm	MCA0750-8	MCA1000-8	MCA1250-8		MCA16-8	MCA20-8	MCA25-8	MCA32-8	MCA42-8
10mm	MCA0750-10	MCA1000-10	MCA1250-10		MCA16-10	MCA20-10	MCA25-10	MCA32-10	MCA42-10
12mm	MCA0750-12	MCA1000-12	MCA1250-12		MCA16-12	MCA20-12	MCA25-12	MCA32-12	MCA42-12
16mm		MCA1000-16	MCA1250-16			MCA20-16	MCA25-16	MCA32-16	MCA42-16
20mm		MCA1000-20	MCA1250-20				MCA25-20	MCA32-20	MCA42-20
25mm			MCA1250-25					MCA32-25	MCA42-25
32mm									MCA42-32

Milling Chuck Collets Dimensional Data

MC, MC-OH, MC-C



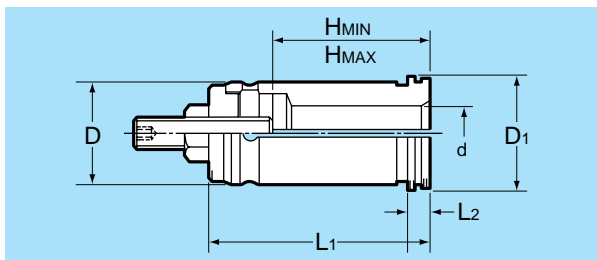
Metric

Type	D	D ₁	L ₁	L ₂	
MC	16	0.630	0.748	1.969	0.157
	20	0.787	0.945	2.362	0.157
	25	0.984	1.142	2.362	0.157
	32	1.260	1.417	2.835	0.157
	42	1.654	1.850	3.346	0.157

Inch

Type	D	D ₁	L ₁	L ₂	
MC	0750	0.750	0.945	2.362	0.157
	1000	1.000	1.142	2.362	0.157
	1250	1.250	1.417	2.835	0.157
	2000	2.000	2.244	3.346	0.157

MCA



Metric

Type	D	D ₁	L ₁	L ₂	H _{MAX}	
MCA	16	0.630	0.748	2.165	0.157	1.771
	20	0.787	0.945	2.559	0.157	2.165
	25	0.984	1.142	2.559	0.157	2.165
	32	1.260	1.417	3.110	0.157	2.598
	42	1.654	1.850	3.622	0.157	3.110

Inch

Type	D	D ₁	L ₁	L ₂	H _{MAX}	
MCA	0750	0.750	0.945	2.559	0.157	2.165
	1000	1.000	1.142	2.559	0.157	2.165
	1250	1.250	1.417	3.110	0.157	2.598
	2000	2.000	2.244	3.622	0.157	3.110

Collet capacity d	H _{MIN}								
	Collet outside diameter D								
	0.750	1.000	1.250	2.000	16mm	20mm	25mm	32mm	42mm
1/4	1.18	1.18	1.34						
5/16	1.34	1.34	1.34						
3/8	1.58	1.58	1.58						
1/2	1.58	1.58	1.58						
5/8		1.77	1.77						
3/4		1.77	1.77						
7/8			1.97						
1				1.97					
1-1/4				1.97					
1-1/2				1.97					
6mm	1.18	1.18	1.34		1.18	1.18	1.18	1.34	1.34
8mm	1.18	1.34	1.34		1.18	1.34	1.34	1.34	1.50
10mm	1.58	1.58	1.58		1.58	1.58	1.58	1.58	1.58
12mm	1.58	1.58	1.58		1.58	1.58	1.58	1.58	1.77
16mm		1.77	1.77			1.77	1.77	1.77	1.77
20mm		1.77	1.77				1.77	1.77	1.77
25mm			1.97				1.97	1.97	1.97
32mm								1.97	1.97

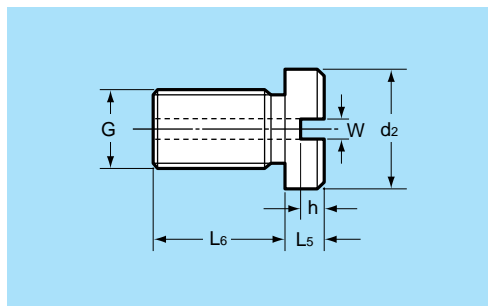
Milling Chuck Accessories H S , B L

Spanner Wrench HS

Type	Spanner Wrench
CT16	HS-1-16
CT20, CT0750	HS-2-20
CT25, CT1000	HS-2.5-25
CT32, CT1250	HS-3-32
CT42	HS-4-42
CT2000	HS-5-42



Back-up screw BL



Part Number	G(mm)	L ₅	L ₆	W	h	d ₂	Chucks
BL 16-	5	0.197	0.551	0.197	0.138	0.591	CT16
	15	0.591					
	25	0.984					
BL 20-	5	0.197	0.551	0.197	0.138	0.709	CT20, CT25 CT0750, CT1000
	15	0.591					
	25	0.984					
BL 32-	10	0.394	0.669	0.197	0.197	0.984	CT32, CT42 CT1250, CT2000
	20	0.787					
	35	1.378					

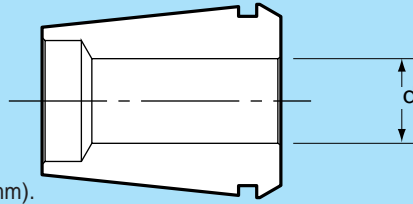
Hex-head screw

M4 × 5(S)

Note : In the case of BT or CAT , two M4 × 5(S) hex-head screws are necessary to plug the air holes to seal the chuck for coolant through operation.

High Precision Collets

F D C



FDC collets collapse by 0.020" (0.5mm).

I.D.	Type		FDC-07	FDC-09	FDC-12	FDC-16	FDC-22
	mm	inch					
1.0 ~ 0.5	0.039 ~ 0.020		FDC-01007	—	—	—	—
1.5 ~ 1.0	0.059 ~ 0.039		FDC-01507	—	—	—	—
2.0 ~ 1.5	0.079 ~ 0.059		FDC-02007	—	—	—	—
2.5 ~ 2.0	0.098 ~ 0.079		FDC-02507	—	—	—	—
3.0 ~ 2.5	0.118 ~ 0.098		FDC-03007	FDC-03009	FDC-03012	—	—
3.5 ~ 3.0	0.138 ~ 0.118		FDC-03507	FDC-03509	FDC-03512	—	—
4.0 ~ 3.5	0.157 ~ 0.138		FDC-04007	FDC-04009	FDC-04012	FDC-04016	FDC-04022
4.5 ~ 4.0	0.177 ~ 0.157		FDC-04507	FDC-04509	FDC-04512	FDC-04516	FDC-04522
5.0 ~ 4.5	0.197 ~ 0.177		FDC-05007	FDC-05009	FDC-05012	FDC-05016	FDC-05022
5.5 ~ 5.0	0.217 ~ 0.197		FDC-05507	FDC-05509	FDC-05512	FDC-05516	FDC-05522
6.0 ~ 5.5	0.236 ~ 0.217		FDC-06007	FDC-06009	FDC-06012	FDC-06016	FDC-06022
6.5 ~ 6.0	0.256 ~ 0.236		FDC-06507	FDC-06509	FDC-06512	FDC-06516	FDC-06522
7.0 ~ 6.5	0.276 ~ 0.256		FDC-07007	FDC-07009	FDC-07012	FDC-07016	FDC-07022
7.5 ~ 7.0	0.295 ~ 0.276		—	FDC-07509	FDC-07512	FDC-07516	FDC-07522
8.0 ~ 7.5	0.315 ~ 0.295		—	FDC-08009	FDC-08012	FDC-08016	FDC-08022
8.5 ~ 8.0	0.335 ~ 0.315		—	FDC-08509	FDC-08512	FDC-08516	FDC-08522
9.0 ~ 8.5	0.354 ~ 0.335		—	FDC-09009	FDC-09012	FDC-09016	FDC-09022
9.5 ~ 9.0	0.374 ~ 0.354		—	—	FDC-09512	FDC-09516	FDC-09522
10.0 ~ 9.5	0.394 ~ 0.374		—	—	FDC-10012	FDC-10016	FDC-10022
10.5 ~ 10.0	0.413 ~ 0.394		—	—	FDC-10512	FDC-10516	FDC-10522
11.0 ~ 10.5	0.433 ~ 0.413		—	—	FDC-11012	FDC-11016	FDC-11022
11.5 ~ 11.0	0.453 ~ 0.433		—	—	FDC-11512	FDC-11516	FDC-11522
12.0 ~ 11.5	0.472 ~ 0.453		—	—	FDC-12012	FDC-12016	FDC-12022
12.5 ~ 12.0	0.492 ~ 0.472		—	—	—	FDC-12516	FDC-12522
13.0 ~ 12.5	0.512 ~ 0.492		—	—	—	FDC-13016	FDC-13022
13.5 ~ 13.0	0.531 ~ 0.512		—	—	—	FDC-13516	FDC-13522
14.0 ~ 13.5	0.551 ~ 0.531		—	—	—	FDC-14016	FDC-14022
14.5 ~ 14.0	0.571 ~ 0.551		—	—	—	FDC-14516	FDC-14522
15.0 ~ 14.5	0.591 ~ 0.571		—	—	—	FDC-15016	FDC-15022
15.5 ~ 15.0	0.610 ~ 0.591		—	—	—	FDC-15516	FDC-15522
16.0 ~ 15.5	0.630 ~ 0.610		—	—	—	FDC-16016	FDC-16022
16.5 ~ 16.0	0.650 ~ 0.630		—	—	—	—	FDC-16522
17.0 ~ 16.5	0.669 ~ 0.650		—	—	—	—	FDC-17022
17.5 ~ 17.0	0.689 ~ 0.669		—	—	—	—	FDC-17522
18.0 ~ 17.5	0.709 ~ 0.689		—	—	—	—	FDC-18022
18.5 ~ 18.0	0.728 ~ 0.709		—	—	—	—	FDC-18522
19.0 ~ 18.5	0.748 ~ 0.728		—	—	—	—	FDC-19022
19.5 ~ 19.0	0.768 ~ 0.748		—	—	—	—	FDC-19522
20.0 ~ 19.5	0.787 ~ 0.768		—	—	—	—	FDC-20022
20.5 ~ 20.0	0.807 ~ 0.787		—	—	—	—	FDC-20522
21.0 ~ 20.5	0.827 ~ 0.807		—	—	—	—	FDC-21022
21.5 ~ 21.0	0.846 ~ 0.827		—	—	—	—	FDC-21522
22.0 ~ 21.5	0.866 ~ 0.846		—	—	—	—	FDC-22022

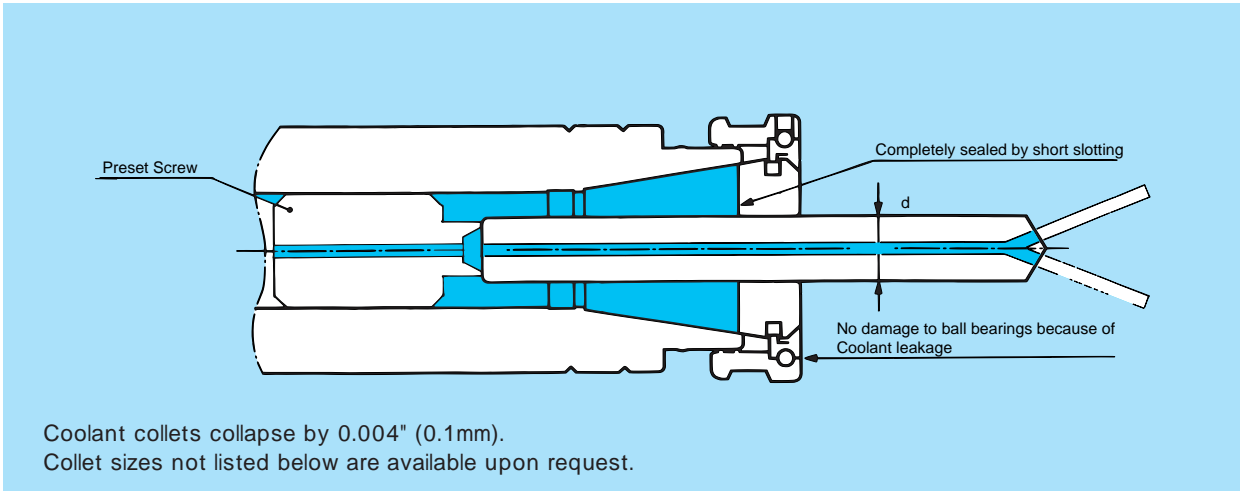
When ordering Collet, please specify class (AA or A) of TIR accuracy at end of Model No.
Collet class runout specifications shown on page 48.

High Precision Coolant Collets PAT.

F D C / O H (For tool with coolant hole)

Feature

FDC-OH collets are short slotted for high pressure coolant applications.
 All steel construction eliminates loss of accuracy due to rubber or silicone seals.
 Eliminates down time due to damaged seals.



Coolant collets collapse by 0.004" (0.1mm).
 Collet sizes not listed below are available upon request.

I.D.		Type		FDC-07-OH	FDC-09-OH	FDC-12-OH	FDC-16-OH	FDC-22-OH
		mm	inch					
3.0	0.118	FDC-03007-OH	FDC-03009-OH	FDC-03012-OH	—	—		
3.5	0.138	FDC-03507-OH	FDC-03509-OH	FDC-03512-OH	—	—		
4.0	0.157	FDC-04007-OH	FDC-04009-OH	FDC-04012-OH	—	—		
4.2	0.165	FDC-04207-OH	FDC-04209-OH	FDC-04212-OH	—	—		
4.5	0.177	FDC-04507-OH	FDC-04509-OH	FDC-04512-OH	—	—		
5.0	0.197	FDC-05007-OH	FDC-05009-OH	FDC-05012-OH	—	—		
5.5	0.217	FDC-05507-OH	FDC-05509-OH	FDC-05512-OH	—	—		
6.0	0.236	FDC-06007-OH	FDC-06009-OH	FDC-06012-OH	FDC-06016-OH	FDC-06022-OH		
6.5	0.256	FDC-06507-OH	FDC-06509-OH	FDC-06512-OH	FDC-06516-OH	FDC-06522-OH		
6.8	0.268	FDC-06807-OH	FDC-06809-OH	FDC-06812-OH	FDC-06816-OH	FDC-06822-OH		
7.0	0.276	FDC-07007-OH	FDC-07009-OH	FDC-07012-OH	FDC-07016-OH	FDC-07022-OH		
7.5	0.295	—	FDC-07509-OH	FDC-07512-OH	FDC-07516-OH	FDC-07522-OH		
8.0	0.315	—	FDC-08009-OH	FDC-08012-OH	FDC-08016-OH	FDC-08022-OH		
8.5	0.335	—	FDC-08509-OH	FDC-08512-OH	FDC-08516-OH	FDC-08522-OH		
9.0	0.354	—	FDC-09009-OH	FDC-09012-OH	FDC-09016-OH	FDC-09022-OH		
9.5	0.374	—	—	FDC-09512-OH	FDC-09516-OH	FDC-09522-OH		
10.0	0.394	—	—	FDC-10012-OH	FDC-10016-OH	FDC-10022-OH		
10.2	0.402	—	—	FDC-10212-OH	FDC-10216-OH	FDC-10222-OH		
10.5	0.413	—	—	FDC-10512-OH	FDC-10516-OH	FDC-10522-OH		
11.0	0.433	—	—	FDC-11012-OH	FDC-11016-OH	FDC-11022-OH		
11.5	0.453	—	—	FDC-11512-OH	FDC-11516-OH	FDC-11522-OH		
12.0	0.472	—	—	FDC-12012-OH	FDC-12016-OH	FDC-12022-OH		
13.0	0.512	—	—	—	FDC-13016-OH	FDC-13022-OH		
16.0	0.630	—	—	—	FDC-16016-OH	FDC-16022-OH		
18.0	0.709	—	—	—	—	FDC-18022-OH		
20.0	0.787	—	—	—	—	FDC-20022-OH		
22.0	0.866	—	—	—	—	FDC-22022-OH		

Ordering Example FDC-12012-OH AA

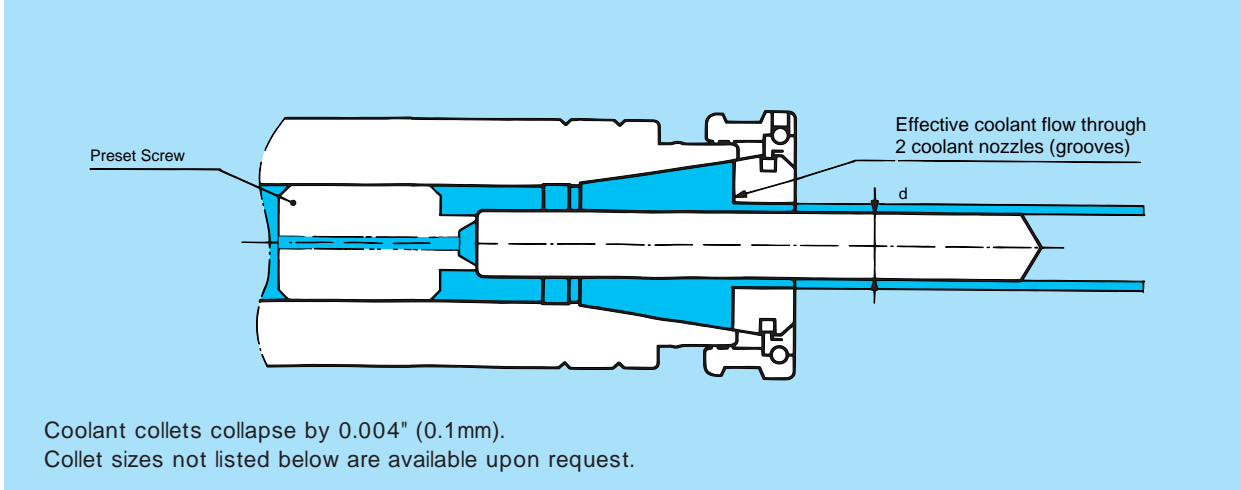
When ordering Collet, please specify class (AA or A) of TIR accuracy at end of Model No.
 Collet class runout specifications shown on page 48.

High Precision Coolant Collets PAT.

F D C / C (For tool without coolant hole)

Feature

FDC-C collets are short slotted for high pressure coolant applications.
 All steel construction eliminates loss of accuracy due to rubber or silicone seals.
 Eliminates down time due to damaged seals.



Coolant collets collapse by 0.004" (0.1mm).
 Collet sizes not listed below are available upon request.

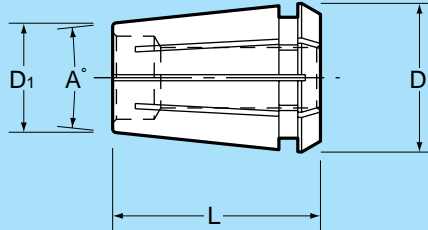
I.D.		Type		FDC-07-C	FDC-09-C	FDC-12-C	FDC-16-C	FDC-22-C
		mm	inch					
3.0	0.118	FDC-03007-C	FDC-03009-C	FDC-03012-C	—	—		
3.5	0.138	FDC-03507-C	FDC-03509-C	FDC-03512-C	—	—		
4.0	0.157	FDC-04007-C	FDC-04009-C	FDC-04012-C	—	—		
4.2	0.165	FDC-04207-C	FDC-04209-C	FDC-04212-C	—	—		
4.5	0.177	FDC-04507-C	FDC-04509-C	FDC-04512-C	—	—		
5.0	0.197	FDC-05007-C	FDC-05009-C	FDC-05012-C	—	—		
5.5	0.217	FDC-05507-C	FDC-05509-C	FDC-05512-C	—	—		
6.0	0.236	FDC-06007-C	FDC-06009-C	FDC-06012-C	FDC-06016-C	FDC-06022-C		
6.5	0.256	FDC-06507-C	FDC-06509-C	FDC-06512-C	FDC-06516-C	FDC-06522-C		
6.8	0.268	FDC-06807-C	FDC-06809-C	FDC-06812-C	FDC-06816-C	FDC-06822-C		
7.0	0.276	FDC-07007-C	FDC-07009-C	FDC-07012-C	FDC-07016-C	FDC-07022-C		
7.5	0.295	—	FDC-07509-C	FDC-07512-C	FDC-07516-C	FDC-07522-C		
8.0	0.315	—	FDC-08009-C	FDC-08012-C	FDC-08016-C	FDC-08022-C		
8.5	0.335	—	FDC-08509-C	FDC-08512-C	FDC-08516-C	FDC-08522-C		
9.0	0.354	—	FDC-09009-C	FDC-09012-C	FDC-09016-C	FDC-09022-C		
9.5	0.374	—	—	FDC-09512-C	FDC-09516-C	FDC-09522-C		
10.0	0.394	—	—	FDC-10012-C	FDC-10016-C	FDC-10022-C		
10.2	0.402	—	—	FDC-10212-C	FDC-10216-C	FDC-10222-C		
10.5	0.413	—	—	FDC-10512-C	FDC-10516-C	FDC-10522-C		
11.0	0.433	—	—	FDC-11012-C	FDC-11016-C	FDC-11022-C		
11.5	0.453	—	—	FDC-11512-C	FDC-11516-C	FDC-11522-C		
12.0	0.472	—	—	FDC-12012-C	FDC-12016-C	FDC-12022-C		
13.0	0.512	—	—	—	FDC-13016-C	FDC-13022-C		
16.0	0.630	—	—	—	FDC-16016-C	FDC-16022-C		
18.0	0.709	—	—	—	—	FDC-18022-C		
20.0	0.787	—	—	—	—	FDC-20022-C		
22.0	0.866	—	—	—	—	FDC-22022-C		

Ordering Example FDC-12012-C AA

When ordering Collet, please specify class (AA or A) of TIR accuracy at end of Model No.
 Collet class runout specifications shown on page 48.

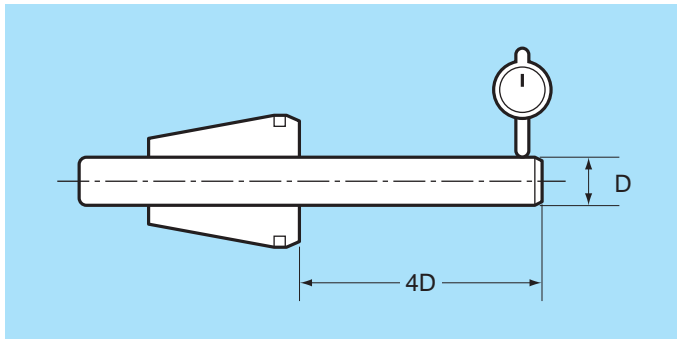
FDC Collet Dimensional Data

FDC Collet Dimensional Data



Type	D	D ₁	L	I.D. FDC		I.D. FDC-OH,C		A °
				inch	mm	inch	mm	
FDC-07	0.445	0.295	0.709	0.020 ~ 0.276	0.5 ~ 7.0	0.118 ~ 0.276	3.0 ~ 7.0	16
FDC-09	0.579	0.394	0.906	0.098 ~ 0.354	2.5 ~ 9.0	0.118 ~ 0.354	3.0 ~ 9.0	12
FDC-12	0.776	0.571	1.083	0.098 ~ 0.472	2.5 ~ 12.0	0.118 ~ 0.472	3.0 ~ 12.0	12
FDC-16	0.925	0.681	1.280	0.138 ~ 0.630	3.5 ~ 16.0	0.236 ~ 0.630	6.0 ~ 16.0	12
FDC-22	1.260	0.961	1.555	0.138 ~ 0.866	3.5 ~ 22.0	0.236 ~ 0.866	6.0 ~ 22.0	12

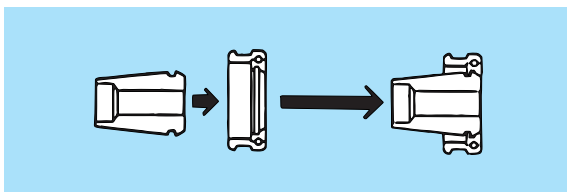
Runout Accuracy



Accuracy class	AA	A
Chucking Accuracy at 4D	.0002" (5µm)	.0004" (10µm)

Collet insertion and removal

To insert:



Place the FDC collet into the threaded end of the HDC nut. Press down on the rear of the collet to "clip" the collet into the nut.

To remove:



While holding the HDC nut firmly in one hand grasp the FDC collet in the other while pushing sideways.

HDC, HDZ, GDC Collet Chuck Accessories

HDC, HDZ Collet Chuck Accessories

Holder	Collet	Nut	Preset screw	Spanner Wrench
HDC07A	FDC-07	HDP-07	HDS07A-ES11	S-0
HDZ07			HDS-07	
HDC09A	FDC-09	HDP-09	HDS-09	S-1L
HDZ09				
HDC12A	FDC-12	HDP-12	HDS12A-ES20	S-3L
HDZ12			HDS-12	
HDC16A	FDC-16	HDP-16	HDS16A-ES25	S-4L
HDZ16			HDS-16	
HDC22A	FDC-22	HDP-22	HDS22A-ES32	S-5L
HDZ22			HDS-22	

HDC & HDZ collet chucks include Preset screws. Spanner Wrenches and collets are sold separately.

Holder	Hexagon Wrench	Size
HDZ07, 09	L-3T	3mm
HDZ12, 16	L-4T	4mm
HDZ22	L-5T	5mm

GDC Collet Chuck Accessories

Holder	Collet	Nut	Preset screw	Spanner Wrench
GDC07A	FDC-07	HDP-07	HDS-07	S-0
GDC09A	FDC-09	GDP-09	HDS-09	FK0025
GDC12A	FDC-12	GDP-12	HDS-12	FK0030
GDC16A	FDC-16	GDP-16	HDS-16	FK0034
GDC22A	FDC-22	GDP-22	HDS-22	FK0045

Spanner Wrenches, Collets and Preset Screws are sold separately.

Special Spanner Wrench

NT spanner wrenches are manufactured to factory specifications and dimensions to achieve optimal clamping force.

Use of NT spanner wrenches on NT products prevents over-tightening and breakage.

NT spanner wrench flats are made to NT specifications, conventional spanner wrenches may not fit properly on NT products.

Special Spanner Wrench

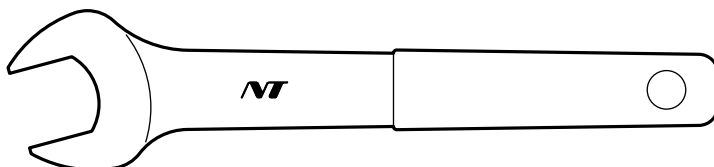


S-0, FK

Preset screw



HDS

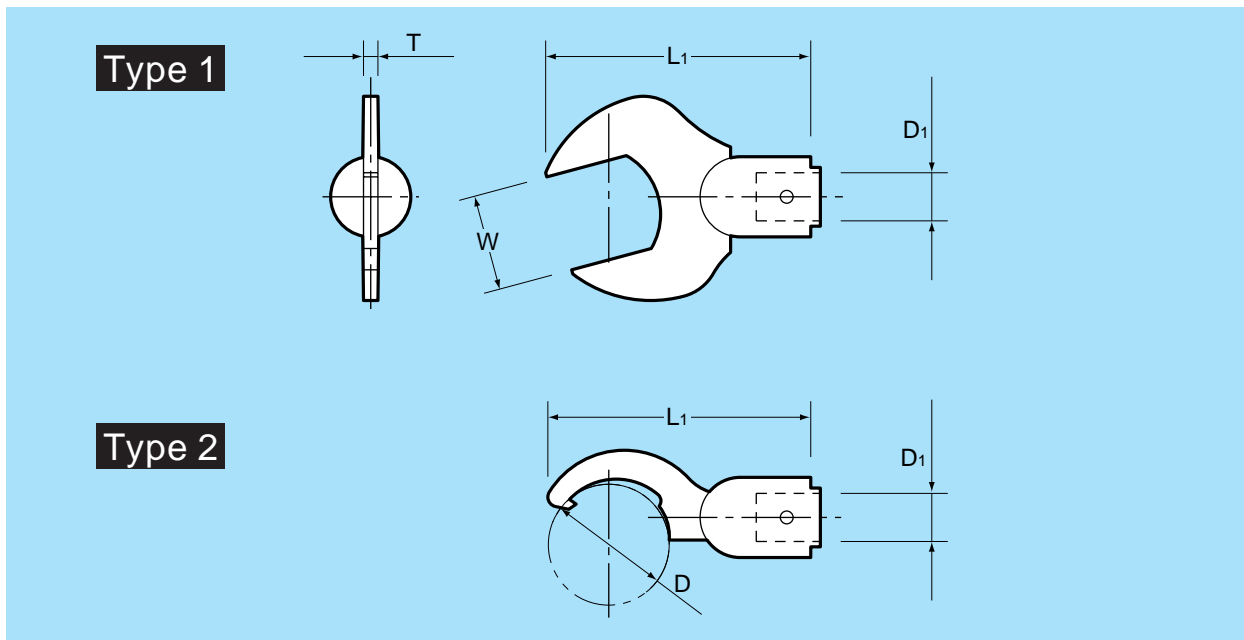


S-L

HDC, HDZ, GDC Collet Chuck Accessories Torque Wrench

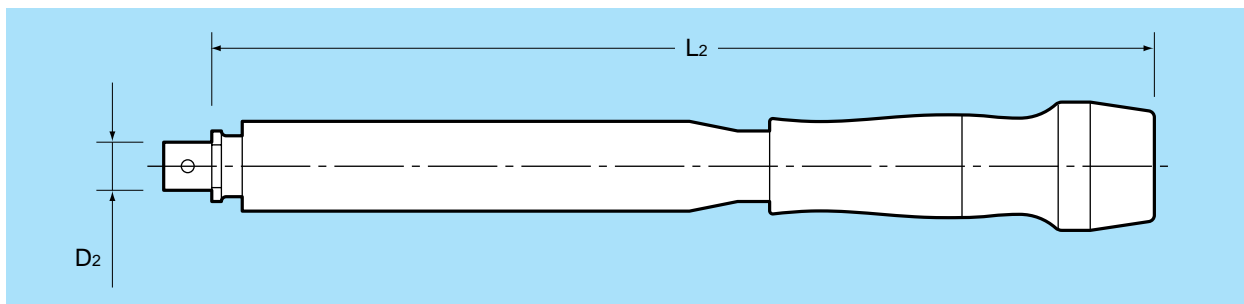
Using of torque wrenches while tightening collet chucks assures maximum gripping force without over-tightening. Over-tightening of the collet nut can cause excessive run-out, loss of tool life and diminished finish quality, as well as collet and nut damage.

Head



Part Number	Type	W	T	D	D ₁	L ₁	Suitable Nut	Recommended Torque	
SH-1A-15	1	0.945	0.177		0.591	3.071	HDP-09	30 ~ 35N·m	22 ~ 26lbf-ft(266 ~ 310lbf-in)
SH-3A-15	1	1.181	0.177		0.591	3.268	HDP-12	35 ~ 40N·m	26 ~ 30lbf-ft(310 ~ 354lbf-in)
SH-4A-15	1	1.299	0.177		0.591	3.307	HDP-16	40 ~ 45N·m	30 ~ 33lbf-ft(354 ~ 398lbf-in)
SH-5A-15	1	1.654	0.217		0.591	3.504	HDP-22	55 ~ 60N·m	41 ~ 44lbf-ft(487 ~ 531lbf-in)
SH-23-10	2			0.906	0.394	2.362	HDP-07	10 ~ 15N·m	266 ~ 310lbf-in
SH-25-15	2			1.142	0.591	3.031	GDP-09	30 ~ 35N·m	22 ~ 26lbf-ft(266 ~ 310lbf-in)
SH-30-15	2			1.339	0.591	3.110	GDP-12	35 ~ 40N·m	26 ~ 30lbf-ft(310 ~ 354lbf-in)
SH-34-15	2			1.496	0.591	3.228	GDP-16	40 ~ 45N·m	30 ~ 33lbf-ft(354 ~ 398lbf-in)
SH-45-15	2			1.929	0.591	3.386	GDP-22	55 ~ 60N·m	41 ~ 44lbf-ft(487 ~ 531lbf-in)

Adjustable torque handle



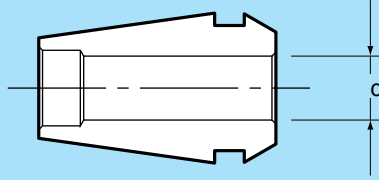
Part Number	D ₂	L ₂	Suitable Head
25N-10D	0.394	7.441	SH-***-10
50N-15D	0.591	8.622	SH-***-15
100N-15D	0.591	11.575	SH-***-15
200N-19D	0.748	17.126	SH-***-19

Ordering Example

SH-1A-15 + 50N-15D

ER Collets

Standard 16-degree taper collet



I.D.		Type	ER8	ER11	ER16	ER20	ER25	ER32	ER40	ER50
mm	inch									
1.0 ~ 0.5	0.039 ~ 0.020	ER8-1.0	ER11-1.0	ER16-1.0	ER20-1.0	ER25-1.0				
1.5 ~ 1.0	0.059 ~ 0.039	ER8-1.5	ER11-1.5	ER16-1.5	ER20-1.5	ER25-1.5				
2.0 ~ 1.5	0.079 ~ 0.059	ER8-2.0	ER11-2.0	ER16-2.0	ER20-2.0	ER25-2.0				
2.5 ~ 2.0	0.098 ~ 0.079	ER8-2.5	ER11-2.5	ER16-2.5	ER20-2.5	ER25-2.5				
3.0 ~ 2.5	0.118 ~ 0.098	ER8-3.0	ER11-3.0	ER16-3.0	ER20-3.0	ER25-3.0	ER32-3.0			
3.5 ~ 3.0	0.138 ~ 0.118	ER8-3.5	ER11-3.5	ER16-3.5	ER20-3.5	ER25-3.5	ER32-3.5			
4.0 ~ 3.5	0.157 ~ 0.138	ER8-4.0	ER11-4.0	ER16-4.0						
4.5 ~ 4.0	0.177 ~ 0.157	ER8-4.5	ER11-4.5	ER16-4.5						
5.0 ~ 4.5	0.197 ~ 0.177	ER8-5.0	ER11-5.0	ER16-5.0						
5.5 ~ 5.0	0.217 ~ 0.197		ER11-5.5	ER16-5.5						
6.0 ~ 5.5	0.236 ~ 0.217		ER11-6.0	ER16-6.0						
6.5 ~ 6.0	0.256 ~ 0.236		ER11-6.5	ER16-6.5						
7.0 ~ 6.5	0.276 ~ 0.256		ER11-7.0	ER16-7.0						
7.5 ~ 7.0	0.295 ~ 0.276			ER16-7.5						
8.0 ~ 7.5	0.315 ~ 0.295			ER16-8.0						
8.5 ~ 8.0	0.335 ~ 0.315			ER16-8.5						
9.0 ~ 8.5	0.354 ~ 0.335			ER16-9.0						
9.5 ~ 9.0	0.374 ~ 0.354			ER16-9.5						
10.0 ~ 9.5	0.394 ~ 0.374			ER16-10.0						
4.0 ~ 3.0	0.157 ~ 0.118				ER20-4.0	ER25-4.0	ER32-4.0	ER40-4.0		
5.0 ~ 4.5	0.197 ~ 0.157				ER20-5.0	ER25-5.0	ER32-5.0	ER40-5.0		
6.0 ~ 5.0	0.236 ~ 0.197				ER20-6.0	ER25-6.0	ER32-6.0	ER40-6.0		
7.0 ~ 6.0	0.276 ~ 0.236				ER20-7.0	ER25-7.0	ER32-7.0	ER40-7.0		
8.0 ~ 7.0	0.315 ~ 0.276				ER20-8.0	ER25-8.0	ER32-8.0	ER40-8.0		
9.0 ~ 8.0	0.354 ~ 0.315				ER20-9.0	ER25-9.0	ER32-9.0	ER40-9.0		
10.0 ~ 9.0	0.394 ~ 0.354				ER20-10.0	ER25-10.0	ER32-10.0	ER40-10.0		
11.0 ~ 10.0	0.433 ~ 0.394				ER20-11.0	ER25-11.0	ER32-11.0	ER40-11.0	ER50-12.0	
12.0 ~ 11.0	0.472 ~ 0.433				ER20-12.0	ER25-12.0	ER32-12.0	ER40-12.0		
13.0 ~ 14.0	0.512 ~ 0.472				ER20-13.0	ER25-13.0	ER32-13.0	ER40-13.0		
14.0 ~ 13.0	0.551 ~ 0.512					ER25-14.0	ER32-14.0	ER40-14.0	ER50-14.0	
15.0 ~ 14.0	0.591 ~ 0.551					ER25-15.0	ER32-15.0	ER40-15.0		ER50-16.0
16.0 ~ 15.0	0.630 ~ 0.591					ER25-16.0	ER32-16.0	ER40-16.0		
17.0 ~ 16.0	0.669 ~ 0.630						ER32-17.0	ER40-17.0		ER50-18.0
18.0 ~ 17.0	0.709 ~ 0.669						ER32-18.0	ER40-18.0		
19.0 ~ 18.0	0.748 ~ 0.709						ER32-19.0	ER40-19.0		ER50-20.0
20.0 ~ 19.0	0.787 ~ 0.748						ER32-20.0	ER40-20.0		

ER Collets

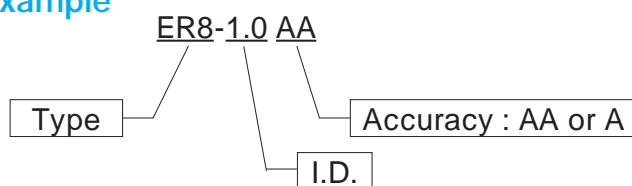
Standard 16-degree taper collet

I.D.		Type	ER8	ER11	ER16	ER20	ER25	ER32	ER40	ER50
mm	inch									
21.0 ~ 20.0	0.827 ~ 0.787								ER40-21.0	ER50-22.0
22.0 ~ 21.0	0.866 ~ 0.827							ER40-22.0		
23.0 ~ 22.0	0.906 ~ 0.866								ER40-23.0	ER50-24.0
24.0 ~ 23.0	0.945 ~ 0.906							ER40-24.0		
25.0 ~ 24.0	0.984 ~ 0.945								ER40-25.0	ER50-26.0
26.0 ~ 25.0	1.024 ~ 0.984							ER40-26.0		
27.0 ~ 26.0	1.063 ~ 1.024									ER50-28.0
28.0 ~ 27.0	1.102 ~ 1.063									
29.0 ~ 28.0	1.142 ~ 1.102									ER50-30.0
30.0 ~ 29.0	1.181 ~ 1.142									
31.0 ~ 30.0	1.220 ~ 1.181									ER50-32.0
32.0 ~ 31.0	1.260 ~ 1.220									
33.0 ~ 32.0	1.299 ~ 1.260									ER50-34.0
34.0 ~ 33.0	1.339 ~ 1.299									

Coolant collet (ER-OH, ER-C) is produced upon request.

When ordering Collet, please specify class of TIR accuracy at end of Part Number.

Ordering Example

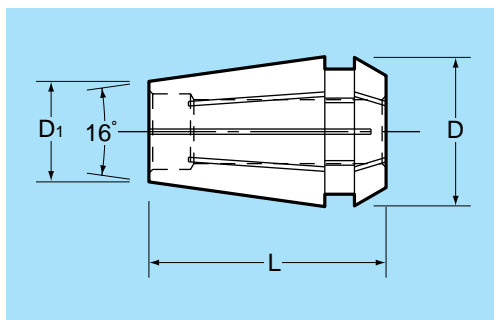


ER Collet Collapse Range

Type	I.D.	Collapse Range	
ER 8	1.0 ~ 5.0mm	0.020"	0.5mm
ER11	1.0 ~ 7.0mm	0.020"	0.5mm
ER16	1.0 ~ 10.0mm	0.020"	0.5mm
ER20	1.0 ~ 3.5mm	0.020"	0.5mm
	4.0 ~ 13.0mm	0.039"	1.0mm

Type	I.D.	Collapse Range	
ER25	1.0 ~ 3.5mm	0.020"	0.5mm
	4.0 ~ 16.0mm	0.039"	1.0mm
ER32	3.0 ~ 3.5mm	0.020"	0.5mm
	4.0 ~ 20.0mm	0.039"	1.0mm
ER40	4.0 ~ 26.0mm	0.039"	1.0mm
ER50	12.0 ~ 34.0mm	0.079"	2.0mm

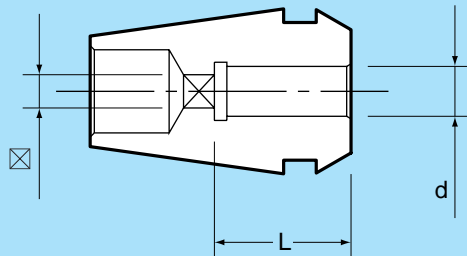
ER Collet Dimensional Data



Type	D	D ₁	L	I.D.	
				inch	mm
ER 8	0.331	0.217	0.535	0.020 ~ 0.197	0.5 ~ 5.0
ER11	0.406	0.307	0.709	0.020 ~ 0.276	0.5 ~ 7.0
ER16	0.677	0.445	1.063	0.020 ~ 0.394	0.5 ~ 10.0
ER20	0.835	0.571	1.22	0.020 ~ 0.512	0.5 ~ 13.0
ER25	1.031	0.728	1.378	0.020 ~ 0.63	0.5 ~ 16.0
ER32	1.307	0.961	1.575	0.098 ~ 0.787	2.5 ~ 20.0
ER40	1.622	1.228	1.811	0.118 ~ 1.024	3.0 ~ 26.0
ER50	2.067	1.539	2.362	0.394 ~ 1.339	10.0 ~ 34.0

ER Tap Collets

E R - G B



Suitable Tap Size		d	☒	L	ER16GB	ER20GB	ER25GB	ER32GB	ER40GB
Metric	Inch								
M4	#8, 5/32	0.168	0.131	0.709	ER16GB-0168	ER20GB-0168	ER25GB-0168	ER32GB-0168	
M4.5, M5	#10, 3/16	0.194	0.152	0.709	ER16GB-0194	ER20GB-0194	ER25GB-0194	ER32GB-0194	
—	#12, 7/32	0.220	0.165	0.709	ER16GB-0220	ER20GB-0220	ER25GB-0220	ER32GB-0220	
M6, M6.5	#14, 1/4	0.255	0.191	0.709	ER16GB-0255	ER20GB-0255	ER25GB-0255	ER32GB-0255	ER40GB-0255
M7	5/16	0.318	0.238	0.709		ER20GB-0318	ER25GB-0318	ER32GB-0318	ER40GB-0318
—	7/16	0.323	0.242	0.709		ER20GB-0323	ER25GB-0323	ER32GB-0323	ER40GB-0323
M12	1/2	0.367	0.275	0.709		ER20GB-0367	ER25GB-0367	ER32GB-0367	ER40GB-0367
M10	3/8	0.381	0.286	0.709		ER20GB-0381	ER25GB-0381	ER32GB-0381	ER40GB-0381
M14	9/16	0.429	0.322	0.866			ER25GB-0429	ER32GB-0429	ER40GB-0429
—	1/8PT	0.437	0.328	0.866			ER25GB-0437	ER32GB-0437	ER40GB-0437
M16	5/8	0.480	0.360	0.984			ER25GB-0480	ER32GB-0480	ER40GB-0480
M18	11/16	0.542	0.406	0.984				ER32GB-0542	ER40GB-0542
—	1/4PT	0.562	0.421	0.984				ER32GB-0562	ER40GB-0562
—	3/4	0.590	0.422	0.984				ER32GB-0590	ER40GB-0590
M20	13/16	0.652	0.489	0.984				ER32GB-0652	ER40GB-0652
—	1/2PT	0.687	0.515	0.984					ER40GB-0687
M22	7/8	0.697	0.523	0.984					ER40GB-0697
—	3/8PT	0.700	0.531	0.984					ER40GB-0700
M24	15/16	0.760	0.570	0.984					ER40GB-0760
M25	1	0.800	0.600	1.102					ER40GB-0800

Ordering Example

ER16GB-0220

Type

Tap shank size

ER Collet Chuck Accessories

ER Collet Chuck Accessories

Holder Series	Collet	Nut	Preset screw	Spanner Wrench
ERC8	ER8	ERP-8	—	S-8E
ERC11S	ER11	ERP-11S	HDS07A-ES11	S-11E
ERC11		HDP-07		S-0
ERC16	ER16	ERP-16	ES16	FK0030
ERC20	ER20	ERP-20	HDS12A-ES20	FK0034
ERC25	ER25	ERP-25	HDS16A-ES25	HS-1-16
ERC32	ER32	ERP-32	HDS22A-ES32	HS-2-20
ERC40	ER40	ERP-40	ES40	HS-2.5-25
ERC50	ER50	ERP-50	ES50	HS-4-42

ER collet chucks are supplied with preset screw and nut. (except for ER8)

Special spanner wrench and collet are sold separately.

Special Spanner Wrench

NT spanner wrenches are manufactured to factory specifications and dimensions to achieve optimal clamping force.

Use of NT spanner wrenches on NT products prevents over-tightening and breakage.

NT spanner wrench flats are made to NT specifications, conventional spanner wrenches may not fit properly on other NT products.

Special Spanner Wrench

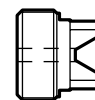


S-0, FK, HS



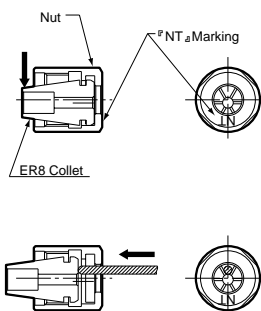
S-8E, S-11E

Preset screw



HDS, ES

ER8 Collet removal:



Step 1

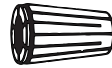
Push the collet towards the NT marking.

Step 2

Remove the collet by pushing against the collet face until the collet is released.

For instructions on removal of all other collets see

Collet EDC, FDC



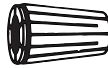
Collet Cutter's Shank Dia.	FDC-07A
1.0 ~ 0.5	FDC-01007A
1.5 ~ 1.0	FDC-01507A
2.0 ~ 1.5	FDC-02007A
2.5 ~ 2.0	FDC-02507A
3.0 ~ 2.5	FDC-03007A
3.5 ~ 3.0	FDC-03507A
4.0 ~ 3.5	FDC-04007A
4.5 ~ 4.0	FDC-04507A
5.0 ~ 4.5	FDC-05007A
5.5 ~ 5.0	FDC-05507A
6.0 ~ 5.5	FDC-06007A
6.5 ~ 6.0	FDC-06507A
7.0 ~ 6.5	FDC-07007A

Collet Cutter's Shank Dia.	FDC-32B
20.5 ~ 20.0	FDC-20532B
21.0 ~ 20.5	FDC-21032B
21.5 ~ 21.0	FDC-21532B
22.0 ~ 21.5	FDC-22032B
22.5 ~ 22.0	FDC-22532B
23.0 ~ 22.5	FDC-23032B
23.5 ~ 23.0	FDC-23532B
24.0 ~ 23.5	FDC-24032B
24.5 ~ 24.0	FDC-24532B
25.0 ~ 24.5	FDC-25032B
25.5 ~ 25.0	FDC-25532B
26.0 ~ 25.5	FDC-26032B
26.5 ~ 26.0	FDC-26532B
27.0 ~ 26.5	FDC-27032B
27.5 ~ 27.0	FDC-27532B
28.0 ~ 27.5	FDC-28032B
28.5 ~ 28.0	FDC-28532B
29.0 ~ 28.5	FDC-29032B
29.5 ~ 29.0	FDC-29532B
30.0 ~ 29.5	FDC-30032B
30.5 ~ 30.0	FDC-30532B
31.0 ~ 30.5	FDC-31032B
31.5 ~ 31.0	FDC-31532B
32.0 ~ 31.5	FDC-32032B

Collet Cutter's Shank Dia.	EDC-19	EDC-24	EDC-28	EDC-36
3.0 ~ 2.8	EDC-0319	EDC-0324	—	—
3.3 ~ 3.0	EDC-03319	EDC-03324	—	—
3.6 ~ 3.3	EDC-03619	EDC-03624	—	—
3.9 ~ 3.6	EDC-03919	EDC-03924	—	—
4.2 ~ 3.9	EDC-04219	EDC-04224	EDC-04228	EDC-04236
4.5 ~ 4.2	EDC-04519	EDC-04524	EDC-04528	EDC-04536
5.0 ~ 4.5	EDC-0519	EDC-0524	EDC-0528	EDC-0536
5.5 ~ 5.0	EDC-05519	EDC-05524	EDC-05528	EDC-05536
6.0 ~ 5.5	EDC-0619	EDC-0624	EDC-0628	EDC-0636
6.5 ~ 6.0	EDC-06519	EDC-06524	EDC-06528	EDC-06536
7.0 ~ 6.5	EDC-0719	EDC-0724	EDC-0728	EDC-0736
7.5 ~ 7.0	EDC-07519	EDC-07524	EDC-07528	EDC-07536
8.0 ~ 7.5	EDC-0819	EDC-0824	EDC-0828	EDC-0836
8.5 ~ 8.0	EDC-08519	EDC-08524	EDC-08528	EDC-08536
9.0 ~ 8.5	EDC-0919	EDC-0924	EDC-0928	EDC-0936
9.5 ~ 9.0	—	EDC-09524	EDC-09528	EDC-09536
10.0 ~ 9.5	—	EDC-1024	EDC-1028	EDC-1036
10.5 ~ 10.0	—	EDC-10524	EDC-10528	EDC-10536
11.0 ~ 10.5	—	EDC-1124	EDC-1128	EDC-1136
11.5 ~ 11.0	—	EDC-11524	EDC-11528	EDC-11536
12.0 ~ 11.5	—	EDC-1224	EDC-1228	EDC-1236
12.5 ~ 12.0	—	—	EDC-12528	EDC-12536
13.0 ~ 12.5	—	—	EDC-1328	EDC-1336
13.5 ~ 13.0	—	—	EDC-13528	EDC-13536
14.0 ~ 13.5	—	—	EDC-1428	EDC-1436
14.5 ~ 14.0	—	—	EDC-14528	EDC-14536
15.0 ~ 14.5	—	—	EDC-1528	EDC-1536
15.5 ~ 15.0	—	—	EDC-15528	EDC-15536
16.0 ~ 15.5	—	—	EDC-1628	EDC-1636
16.5 ~ 16.0	—	—	—	EDC-16536
17.0 ~ 16.5	—	—	—	EDC-1736
17.5 ~ 17.0	—	—	—	EDC-17536
18.0 ~ 17.5	—	—	—	EDC-1836
18.5 ~ 18.0	—	—	—	EDC-18536
19.0 ~ 18.5	—	—	—	EDC-1936
19.5 ~ 19.0	—	—	—	EDC-19536
20.0 ~ 19.5	—	—	—	EDC-2036
20.5 ~ 20.0	—	—	—	EDC-20536
21.0 ~ 20.5	—	—	—	EDC-2136
21.5 ~ 21.0	—	—	—	EDC-21536
22.0 ~ 21.5	—	—	—	EDC-2236

Note To clamp 6.0 tool shank, there are 2 collets, 6.0 and 6.5.
We suggest you select 6.0 collet for higher accuracy.

Collet EDC, FDC



Combination of accessories

Collet	Nut	Spanner Wrench
FDC-07A	KDP-1414	Flat 17mm width
EDC-19	KDP-1916	S-1L
EDC-24	KDP-2422	S-3L
EDC-28	KDP-2825	S-4L
EDC-36	KDP-3632	S-5L
FDC-32B	HDP-32	S-6L

Special Spanner Wrench

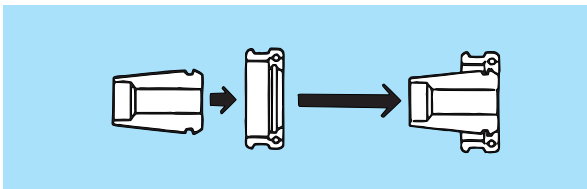
NT spanner wrenches are manufactured to factory specifications and dimensions to achieve optimal clamping force. Use of NT spanner wrenches on NT products prevents over-tightening and breakage. NT spanner wrench flats are made to NT specifications, conventional



Model	T ₂	L
S-1L	24	180
S-3L	30	200
S-4L	33	220
S-5L	42	220
S-6L	—	250

Collet insertion and removal

To insert:



Place the FDC collet into the threaded end of the HDC nut. Press down on the rear of the collet to "clip" the collet into

To remove:

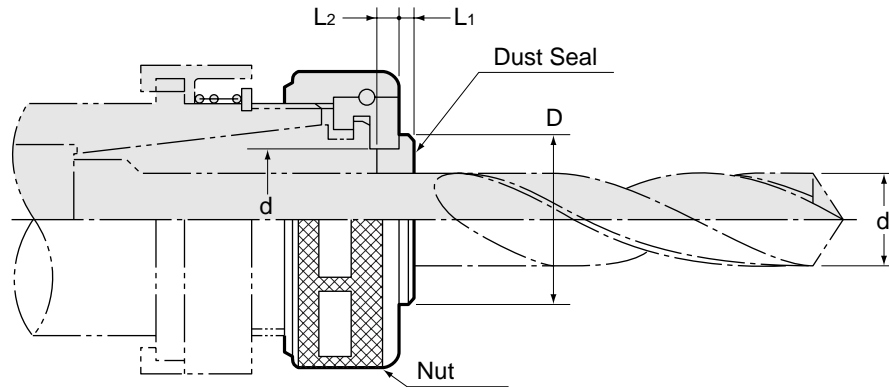


While holding the HDC nut firmly in one hand grasp the FDC collet in the other while pushing sideways.

Dust Seal

Application

Prevents chip build-up.
 By installing a dust seal into the nut, chips are prevented from entering.
 When placing an order for the dust seal, please supply tool shank diameter.

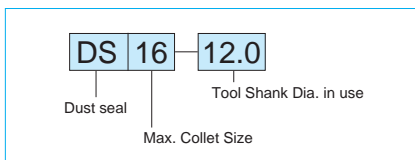


Collet	Nut	Collet	d	D	d	L ₁	L ₂
DS 9- \square d	KDP-1916	EDC-19	2.8~9	15	10	1.5	2.3
DS 12- \square d	KDP-2422	EDC-24	2.8~11.5	18	12.5	1.5	2.7
DS 16- \square d	KDP-2825	EDC-28	3.9~15.5	22	16.5	2	2.7
DS 22- \square d	KDP-3632	EDC-36	3.9~22	30	23	2	4
DS 32- \square d	HDP-32	FDC-32B	20.0~32	40	33	2	4

All dimensions shown in

Ordering Example

1. When ordering a dust seal only :



To insert the dust seal apply some application to the nut and press down on the dust seal to

2. Ordering Example of your holder with dust seal :

