

FDC Replacing Guide

Step 1 : Find a collet series from....

Cap Pg.2



Holder Pg.3

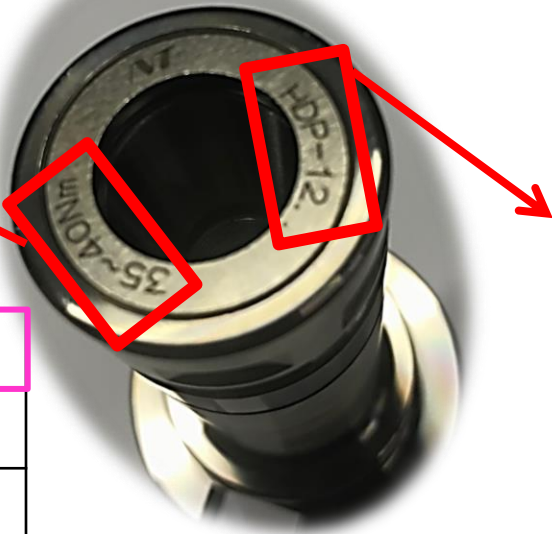


Collet Pg.4



Cap

Example 1:
Torque = 35 ~ 40 Nm



Example 2:

Cap Model
HDP12

Collet Series
FDC – 12 series

Cap Model	Torque
HDP- 07	10 ~ 15 Nm
HDP- 09	30 ~ 35 Nm
HDP- 12	35 ~ 40 Nm
HDP- 16	40 ~ 45 Nm
HDP- 22	55 ~ 60 Nm

Cap Model
HDP12

Collet Series
FDC – 12 series

Holder

Example



Holder Model

CAT40-HDC**12**A-120

Collet Series

FDC – **12 series**

Code	Model	d	L	L1	B	D	D1	kg	Preset Screw	Nut	Collet	Spanner
1990 10407075	CAT40 -HDC07A -75	0.020-0.276	2.953	0.866-1.654	0.0-0.157	0.906	1.750					
1990 10407090	-90	0.020-0.276	3.543	0.866-1.654	0.0-0.157	0.906	1.750		HDS-07	HDP-07A	FDC-07	S-0
1990 10407105	-105	0.020-0.276	4.134	0.866-1.654	0.0-0.157	0.906	1.750					
1990 10409090	CAT40 -HDC09A -90	0.098-0.354	3.543	1.063-2.126	0.0-0.157	1.024	1.750					
1990 10409105	-105	0.098-0.354	4.134	1.063-2.126	0.0-0.157	1.024	1.750		HDS-09	HDP-09	FDC-09	S-1L
1990 10409120	-120	0.098-0.354	4.724	1.063-2.126	0.0-0.157	1.024	1.750					
1990 10409135	-135	0.098-0.354	5.315	1.063-2.126	0.0-0.157	1.024	1.750					
1990 10409165	-165	0.098-0.354	6.496	1.063-2.126	0.0-0.157	1.024	1.750					
1990 10412090	<u>CAT40 -HDC12A -90</u>	0.098-0.472	3.543	1.339-2.598	0.0-0.236	1.260	1.750					
1990 10412105	-105	0.098-0.472	4.134	1.339-2.598	0.0-0.236	1.260	1.750					
1990 10412120	<u>-120</u>	0.098-0.472	4.724	1.339-2.598	0.0-0.236	1.260	1.750		HDS-12	HDP-12	<u>FDC-12</u>	S-3L
1990 10412135	-135	0.098-0.472	5.315	1.339-2.598	0.0-0.236	1.260	1.750					
1990 10412165	-165	0.098-0.472	6.496	1.339-2.598	0.0-0.236	1.260	1.750					
1990 10412195	-195	0.098-0.472	7.577	1.339-2.598	0.0-0.236	1.260	1.750					

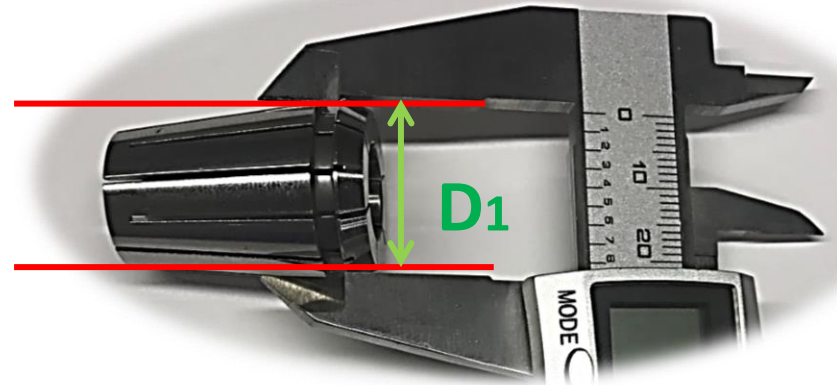
Collet

Example:

$D1 = 18 \text{ mm}$

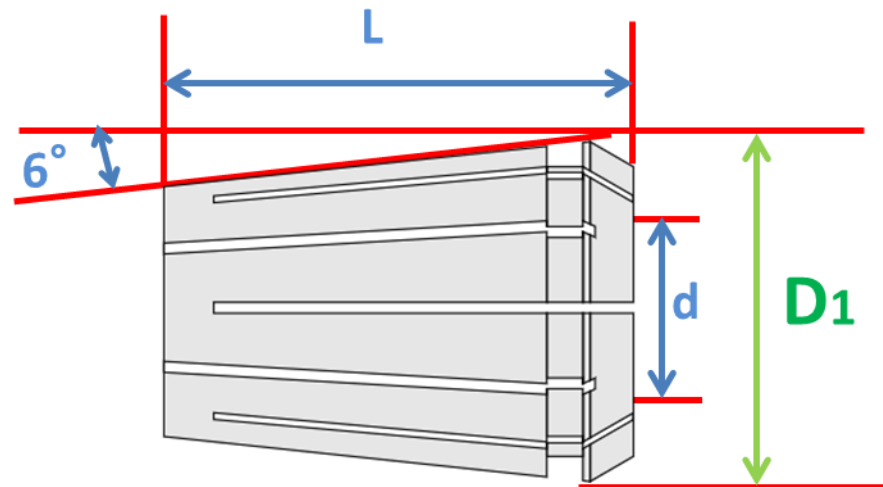
Collet Series

→ **FDC – 12 series**



Collet Series	d	D1	L
FDC- 07	0.5 ~ 7.0	11	18.0
FDC- 09	2.5 ~ 9.0	14	23.0
FDC- 12	2.5 ~ 12.0	18	27.5
FDC- 16	3.5 ~ 16.0	22	32.5
FDC- 22	3.5 ~ 22.0	31	39.5

(Unit: Metric)



Step 2 : Do you need a coolant?

No Coolant

Non-Coolant Collet



Collet Series

FDC -12 AA

Please go to Page 6 for next step.

With Coolant

Center-Thru Coolant Collet (Tools with coolant holes)



Collet Series

FDC -12 - OHAA

Collet-Thru Coolant Collet (Tools without coolant holes)



Collet Series

FDC -12 C AA

Please go to Page 8 for next step (Skip Page 6 & 7).

Non-Coolant Collet

Collet Series

FDC-12 AA

Step 3-AA : Choose Collet I.D. for Cutting Tool Shank Dia.

Tool shank dia.		Model			
mm (inch)	inch	FDC-07	FDC-09	FDC-12	FD
φ 1.0 ~ 0.5	φ 0.039 ~ 0.020	FDC-01007	—	—	
φ 1.5 ~ 1.0	φ 0.059 ~ 0.039	FDC-01507	—	—	
φ 2.0 ~ 1.5	φ 0.079 ~ 0.059	FDC-02007	—	—	
φ 3.0 ~ 1.5 (3/16")	φ 0.315 ~ 0.200	—	—	—	—
φ 8.5 ~ 8.0	φ 0.335 ~ 0.315	—	FDC-08509	FDC-08512	FDC-
φ 9.0 ~ 8.5	φ 0.354 ~ 0.335	—	FDC-09009	FDC-09012	FDC-
φ 9.5 ~ 9.0	φ 0.374 ~ 0.354	—	—	FDC-09512	FDC-
φ 10.0 ~ 9.5 (3/8")	φ 0.394 ~ 0.374	—	—	FDC-10012	FDC-

* If you would like to use Φ **10.0**mm shank, **FDC-100 12-AA** is a right collet for you.

* AA Collets collapse by 0.5mm, so FDC-10012 AA can hold Φ 9.5 ~ 10.0mm shank.

If you would like to use Φ 9.6mm shank, You can use FDC-10012 AA.

→ Refer next page for a inch size shank.

Non-Coolant Collet

* Standard Inch Size is indicated in a tool shank dia. column.

* If you would like to use $\Phi 3/8''$ shank, **FDC-10012 AA** is a right collet for you.

Tool shank dia.		Model			
mm (inch)	inch	FDC-07	FDC-09	FDC-12	FD
ϕ 1.0 ~ 0.5	ϕ 0.039 ~ 0.020	FDC-01007	—	—	
ϕ 1.5 ~ 1.0	ϕ 0.059 ~ 0.039	FDC-01507	—	—	
ϕ 2.0 ~ 1.5	ϕ 0.079 ~ 0.059	FDC-02007	—	—	
ϕ 2.5 ~ 2.0	ϕ 0.098 ~ 0.079	FDC-02507	—	—	
ϕ 3.0 ~ 2.5	ϕ 0.118 ~ 0.098	FDC-03007	FDC-03009	FDC-03012	
ϕ 3.5 ~ 3.0 (1/8")	ϕ 0.138 ~ 0.118	FDC-03507	FDC-03509	FDC-03512	
ϕ 4.0 ~ 3.5	ϕ 0.157 ~ 0.138	FDC-04007	FDC-04009	FDC-04012	FDC-
ϕ 4.5 ~ 4.0	ϕ 0.177 ~ 0.157	FDC-04507	FDC-04509	FDC-04512	FDC-
ϕ 5.0 ~ 4.5 (3/16")	ϕ 0.197 ~ 0.177	FDC-05007	FDC-05009	FDC-05012	FDC-
ϕ 5.5 ~ 5.0	ϕ 0.217 ~ 0.197	FDC-05507	FDC-05509	FDC-05512	FDC-
ϕ 6.0 ~ 5.5	ϕ 0.236 ~ 0.217	FDC-06007	FDC-06009	FDC-06012	FDC-
ϕ 6.5 ~ 6.0 (1/4")	ϕ 0.256 ~ 0.236	FDC-06507	FDC-06509	FDC-06512	FDC-
ϕ 7.0 ~ 6.5	ϕ 0.276 ~ 0.256	FDC-07007	FDC-07009	FDC-07012	FDC-
ϕ 7.5 ~ 7.0	ϕ 0.295 ~ 0.276	—	FDC-07509	FDC-07512	FDC-
ϕ 8.0 ~ 7.5 (5/16")	ϕ 0.315 ~ 0.295	—	FDC-08009	FDC-08012	FDC-
ϕ 8.5 ~ 8.0	ϕ 0.335 ~ 0.315	—	FDC-08509	FDC-08512	FDC-
ϕ 9.0 ~ 8.5	ϕ 0.354 ~ 0.335	—	FDC-09009	FDC-09012	FDC-
ϕ 9.5 ~ 9.0	ϕ 0.374 ~ 0.354	—	—	FDC-09512	FDC-
ϕ 10.0 ~ 9.5 (3/8")	ϕ 0.394 ~ 0.374	—	—	FDC-10012	FDC-
ϕ 10.5 ~ 10.0	ϕ 0.413 ~ 0.394	—	—	FDC-10512	FDC-
ϕ 11.0 ~ 10.5	ϕ 0.433 ~ 0.413	—	—	FDC-11012	FDC-
ϕ 11.5 ~ 11.0 (7/16")	ϕ 0.453 ~ 0.433	—	—	FDC-11512	FDC-
ϕ 12.0 ~ 11.5	ϕ 0.472 ~ 0.453	—	—	FDC-12012	FDC-
ϕ 12.5 ~ 12.0	ϕ 0.492 ~ 0.472	—	—	—	FDC-
ϕ 13.0 ~ 12.5 (1/2")	ϕ 0.512 ~ 0.492	—	—	—	FDC-

Coolant Collet

Collet Series

FDC-12-OHAA

FDC-12-C AA

Step 3-OHAA or C AA:

Choose Collet I.D. for Cutting Tool Shank Dia.

Tool shank dia.		Model			
mm (inch)	inch	FDC-07-OHAA	FDC-09-OHAA	FDC-12-OHAA	
φ 3.0	φ 0.118	FDC-03007-OHAA	FDC-03009-OHAA	FDC-03012-OHAA	
φ 3.2 (1/8")	φ 0.125	FDC-03207-OHAA	FDC-03209-OHAA	FDC-03212-OHAA	
φ 3.5	φ 0.138	FDC-03507-OHAA	FDC-03509-OHAA	FDC-03512-OHAA	
φ 4.0	φ 0.157	FDC-04007-OHAA	FDC-04009-OHAA	FDC-04012-OHAA	
φ 9.0	φ 0.354	-	FDC-09009-OHAA	FDC-09012-OHAA	FDC
φ 9.5	φ 0.374	-	-	FDC-09512-OHAA	FDC
φ 9.6 (3/8")	φ 0.375	-	-	FDC-09612-OHAA	FDC
φ 10.0	φ 0.394	-	-	FDC-10012-OHAA	FDC
φ 10.2	φ 0.402	-	-	FDC-10212-OHAA	FDC
φ 10.5	φ 0.413	-	-	FDC-10512-OHAA	FDC

* If you would like to use φ10.0mm shank,

FDC-100 12-OHAA(or C AA)

is a right collet for you.

* OHAA(or C AA) Collets **collapse by 0.1mm**, so FDC-10012-OHAA(or C AA) can hold only φ9.9~10.0mm shank.

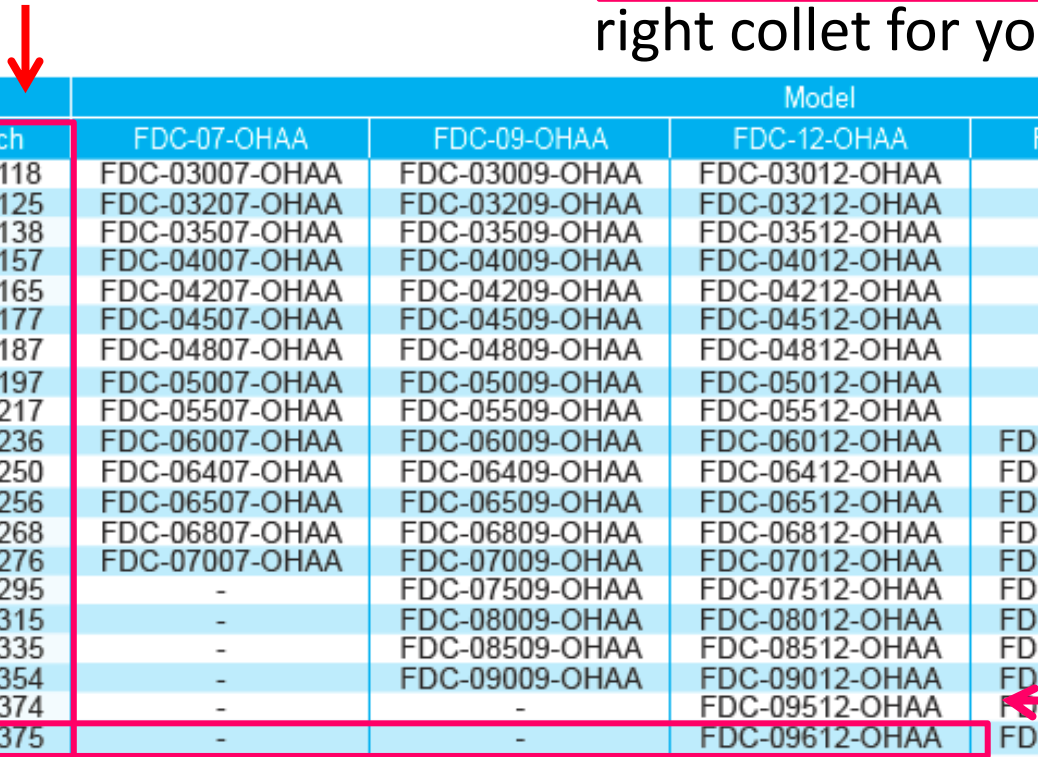
If you would like to use φ9.6mm shank, You need **FDC-09612-OHAA (or C AA)**.

→ Refer next page for a inch size shank

Coolant Collet

* Standard Inch Size is indicated in a tool shank dia. column.

*If you would like to use $\Phi 3/8$ " shank, **FDC-09612- OHAA (or C AA)** is a right collet for you.



Tool shank dia.			Model			
mm	(inch)	inch	FDC-07-OHAA	FDC-09-OHAA	FDC-12-OHAA	
φ 3.0		φ 0.118	FDC-03007-OHAA	FDC-03009-OHAA	FDC-03012-OHAA	
φ 3.2	(1/8")	φ 0.125	FDC-03207-OHAA	FDC-03209-OHAA	FDC-03212-OHAA	
φ 3.5		φ 0.138	FDC-03507-OHAA	FDC-03509-OHAA	FDC-03512-OHAA	
φ 4.0		φ 0.157	FDC-04007-OHAA	FDC-04009-OHAA	FDC-04012-OHAA	
φ 4.2		φ 0.165	FDC-04207-OHAA	FDC-04209-OHAA	FDC-04212-OHAA	
φ 4.5		φ 0.177	FDC-04507-OHAA	FDC-04509-OHAA	FDC-04512-OHAA	
φ 4.8	(3/16")	φ 0.187	FDC-04807-OHAA	FDC-04809-OHAA	FDC-04812-OHAA	
φ 5.0		φ 0.197	FDC-05007-OHAA	FDC-05009-OHAA	FDC-05012-OHAA	
φ 5.5		φ 0.217	FDC-05507-OHAA	FDC-05509-OHAA	FDC-05512-OHAA	
φ 6.0		φ 0.236	FDC-06007-OHAA	FDC-06009-OHAA	FDC-06012-OHAA	FD
φ 6.4	(1/4")	φ 0.250	FDC-06407-OHAA	FDC-06409-OHAA	FDC-06412-OHAA	FD
φ 6.5		φ 0.256	FDC-06507-OHAA	FDC-06509-OHAA	FDC-06512-OHAA	FD
φ 6.8		φ 0.268	FDC-06807-OHAA	FDC-06809-OHAA	FDC-06812-OHAA	FD
φ 7.0		φ 0.276	FDC-07007-OHAA	FDC-07009-OHAA	FDC-07012-OHAA	FD
φ 7.5		φ 0.295	-	FDC-07509-OHAA	FDC-07512-OHAA	FD
φ 8.0	(5/16")	φ 0.315	-	FDC-08009-OHAA	FDC-08012-OHAA	FD
φ 8.5		φ 0.335	-	FDC-08509-OHAA	FDC-08512-OHAA	FD
φ 9.0		φ 0.354	-	FDC-09009-OHAA	FDC-09012-OHAA	FD
φ 9.5		φ 0.374	-	-	FDC-09512-OHAA	FD
φ 9.6	(3/8")	φ 0.375	-	-	FDC-09612-OHAA	FD
φ 10.0		φ 0.394	-	-	FDC-10012-OHAA	FD
φ 10.2		φ 0.402	-	-	FDC-10212-OHAA	FD
φ 10.5		φ 0.413	-	-	FDC-10512-OHAA	FD
φ 11.0		φ 0.433	-	-	FDC-11012-OHAA	FD
φ 11.2	(7/16")	φ 0.437	-	-	FDC-11212-OHAA	FD
φ 11.5		φ 0.453	-	-	FDC-11512-OHAA	FD
φ 12.0		φ 0.472	-	-	FDC-12012-OHAA	FD
φ 12.5		-	-	-	-	FD
φ 12.7	(1/2")	φ 0.500	-	-	-	FD
φ 13.0		φ 0.512	-	-	-	FD

If you don't see your tool shank dia. in the chart, please contact NT USA.



FDC AA COLLETS (collapses by 0.5mm)						
Inch (fraction)	Inch (decimal)	Inch Range	Metric	Metric Range	Collet	Series
1/16	0.063	0.079 - 0.059	1.588	2.0 - 1.5	FDC - 020**	07
1/8	0.125	0.138 - 0.118	3.175	3.5 - 3.0	FDC - 035**	07, 09, 12
3/16	0.188	0.197 - 0.177	4.763	5.0 - 4.5	FDC - 050**	07, 09, 12, 16, 22
1/4	0.250	0.256 - 0.236	6.350	6.5 - 6.0	FDC - 065**	07, 09, 12, 16, 23
5/16	0.313	0.315 - 0.295	7.938	8.0 - 7.5	FDC - 080**	09, 12, 16, 22
3/8	0.375	0.394 - 0.374	9.525	10.0 - 9.5	FDC - 100**	12, 16, 22
7/16	0.438	0.453 - 0.433	11.113	11.5 - 11.0	FDC - 115**	12, 16, 22
1/2	0.500	0.512 - 0.492	12.700	13.0 - 12.5	FDC - 130**	16, 22
5/8	0.625	0.630 - 0.610	15.875	16.0 - 15.5	FDC - 160**	16, 22
3/4	0.750	0.768 - 0.748	19.050	19.5 - 19.0	FDC - 195**	22

FDC-OHAA/C AA COLLETS (collapses by 0.1mm)				
Inch (fraction)	Inch (decimal)	Metric	Collet	Series
1/8	0.125	3.175	FDC - 032**	07, 09, 12
3/16	0.187	4.763	FDC - 048**	07, 09, 12
1/4	0.250	6.350	FDC - 064**	07, 09, 12, 16, 22
5/16	0.315	7.938	FDC - 080**	09, 12, 16, 22
3/8	0.375	9.525	FDC - 096**	12, 16, 22
7/16	0.437	11.113	FDC - 112**	12, 16, 22
1/2	0.500	12.700	FDC - 127**	16, 22
5/8	0.630	15.875	FDC - 160**	16, 22
3/4	0.750	19.050	FDC - 191**	22