Troubleshooting

(Collet)

	Details of the trouble	Cause	Pulled out of holder. Unable to attach fast to spindle or holder in case of MT shank.
1	Unable to mount collet.	① Wrong size or type. ② Dust on mounting surface. ③ Inserting collects into cap, with tool already inserted into collects.	① Check size and type of cap and collets. ② Clean mounting surfaces of collets and cap. ③ Insert collects into cap first, then insert tool into collets.
2	Tool will not fit.	① Wrong collets with wrong I.D.. ② Dust on mounting portions. ③ Deformed collects.	① Check collets I.D. size; check tool shank diameter. ② Clean mounting surfaces of collets and cap. ③ ・Replacement of collets. ・See Problem: “Collets are deformed” and prevent collets deformation.
3	Poor runout accuracy during cutting.	① Poor chucking accuracy of collet. ② Cutting chips, dust on or stuck into mounting surfaces for collets (holder and cap). ③ Cutting chips, dust on or stuck into cap screws. ④ Malfunction of rotor ring of cap nut. (Rotor ring will not rotate smoothly.) ⑤ Scratch or dent in holder I.D. and shank. ⑥ Scratch or dent on collet I.D. and O.D.. ⑦ Insufficient chucking length. ⑧ Chucking on cutting edge of tool. ⑨ Wear on threaded portions of holder or cap. ⑩ Poor accuracy of tool.	① Replacement of collets. ② Clean mounting surface. ③ Cleaning of thread part, applying grease. ④ ・Cleaning of cap nut （so that rotor ring will rotate smoothly) ・Replacement of cap nuts ⑤ Replacement of holders. ⑥ Replacement of collets. ⑦ Keep minimum insertion length. (collet ID length must be filled.) ⑧ Do not chuck tool at cutting edge. ⑨ Replace holder or cap. ⑩ Replacement of tools.
4	Coolant leakage. Coolant is not supplied.	① Using standard collets. ② FDC-C type collets are used for tool with oil hole. ③ Insufficient chucking length. ④ Tool shank diameter is too small. （Smaller than collet I.D. by 0.2mm andmore.)	① Choose FDC-OH type or FDC-C type collets. ② For tool with oil hole, use FDC-OH type collets. ③ Keep minimum insertion length of tool (collet's I.D. length must be filled.). ④ Selection of right collet for tool shank diameter. (In the case of FDC-OH type and FDC-C type collets, the maximum tool diameter that can be accommodated is: collets I.D. minus 0.1mm.)

5	Tool will slip.	① Insufficient tightening of cap nut. ② Cutting resistance is too large. ③ Oil on mounting surfaces of tool shank and collets (holder, cap). ④ Insufficient tightening of cap nut because of increased friction in the thread part. ⑤ Insufficient chucking length.	① ・Keep recommended torque value for tightening cap nut. ・Use torque wrench. ② Cuting resistance should be lowered. a : Shorter tool protruding length b : Higher rotation or lower feed rate （Approx. 20%） c : Lower cutting depth ③ Wipe oil off with clean linen before chucking. ④ Apply oil (grease) on the thread part after cleaning it. ⑤ Keep minimum insertion length of tool (collet's I.D. length must be filled.).
6	Tool is pulled out during operation.	① Insufficient tightening of cap nut. ② Insufficient tightening of cup nut fromrotor ring's malfunction. ③ Insufficient tightening of cup nutbecause of increased friction. （Collapse of collet is not big enough.） ④ Cutting resistance is too large. (Pull out of tool because of pestle-like movement.) ⑤ Cutting resistance is too high in comparison with holder's rigidity.	① ・Keep recommended torque value for tightening cap nut. ・Use torque wrench. ② Replacement of cap nut. ③ Apply oil (grease) on the thread part. ④ Cuting resistance should be lowered. a : Shorter tool protruding length b : Higher rotation or lower feed rate （Approx. 20%） c : Lower cutting depth ⑤ Cuting resistance should be lowered. a : Shorter tool protruding length b : Higher rotation or lower feed rate （Approx. 20%） c : Lower cutting depth ・Use bigger tool holder. ・Recommendation of milling chuck or shrinker chuck instead.
7	Cannot remove collets from cap easily.	① Cutting chips, dust deposited on or stuck in, coolant residual adhered. ② Depending on type or size, there are some that are difficult to remove.	① Clean collets and cap. ② Move collets toward the cap end that has NT marking on it, push the collets' smaller end as if to fold it into two halves. If you find removal still difficult, turn collets while pushing as if to fold into two halves.
8	Collets get damaged.	① Cutting chips, dust on or stuck into mounting surfaces for collets (holder and cap). ② Tool shank is slipping	① Clean mounting surface. ②

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		③ Collets are not inserted into cap properly.	③ Insert collets into cap correctly, then mount into body.
		④ Insufficient chucking length.	④ Keep minimum insertion length of tool (collet's I.D. length must be filled.).
		⑤ Chucking tool at cutting edge.	⑤ Don’t chuck tool at cutting edge.
		⑥ Using tool with shank that has machined portions.	⑥ Use tool with shank that does not have machined portions.
9	Collets are deformed.	① Cap is tightened too much.	① ・Keep recommended torque value for tightening cap nut. ・Use torque wrench.
		② Collets are chucking tool with diameter that is smaller than the minimum diameter collets can accommodate.	② Use collets with smaller ID for accommodation of smaller diameter tool, or use tool with larger diameter within the accommodation range of collets.
		③ Dropped collets.	③ Replacement of collets.