Guide for Cut-Off

Tool Selection

		For Small Dia. Cut-Off	KGD	CERACUT / Plunge & Turn	CERACUT Cut-Off
Insert	1. Insert 1-edge Insert … For Larger Dia. Workpiece (Max.ø120)	-	-	-	○
	2-edge Insert … For Smaller Dia. Workpiece Cost per corner is reduced	○	○	○	-
	2. Use a neutral angle insert if there is no limit to the finished shape.	TKF...S TKF...NB TKFS...S	GDM GDMS	GMM	TKN
	3. Use angled insert to reduce the size of the remaining boss.	TKF...DR	GDM-R-6D GDMS-R-6D (➡Fig.2)	GMM-R/L (➡Fig.2)	TKR/L (➡Fig.1)
	4. Use sharp-cornered lead-angled Insert to make the remaining boss much smaller when machining small parts and thin parts.	TKF...DR	-	GMM-R/L (➡Fig.2)	-
	5. Use the minimum width insert suitable for the machining operation.			○	○
Toolholder	1. Use a suitable toolholder (blade) for the workpiece dia.	○	○	○	○
	2. Use a more rigid toolholder (blade).	○	○	○	○
	3. Use a back clamp toolholder if there is no space for clamping tools from top side (Automatic Lathe).	○	-	-	-

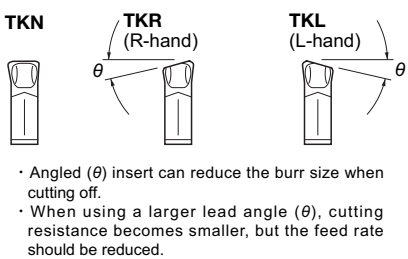
How to Set Up (TKN / TKR/L)

1. Tap the insert lightly with a plastic hammer to push it in to the extent that it can not be removed by hand.	-	-	-	○ (➡Fig.3)
2. Remove the insert by using the supplied wrench.	-			○ (➡Fig.4)

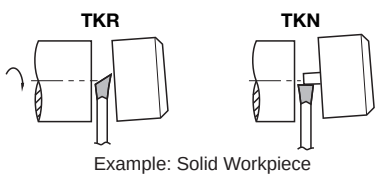
Caution

1. Set the cutting edge height 0.1-0.2mm above the center height.	○ (➡Fig.5)	○ (➡Fig.5)	○ (➡Fig.5)	○ (➡Fig.5)
2. Always apply sufficient coolant to the cutting edge.	○	○	○	○
3. Constant spindle revolution is recommended to obtain stable tool life.	○	○	○	○
4. Cut-off as close to the chuck as possible	○	○	○	○
5. Decrease the feed rate from 1/2 to 1/3 at the near center to prevent chipping.	○	○	○	○
●Overuse of insert and toolholder (blade) may cause insert breakage and toolholder (blade) damage. ●Do not rework the insert and toolholder (blade) to prevent damage. ●Clean the insert pocket well with compressed air when replacing insert.	○	○	○	○

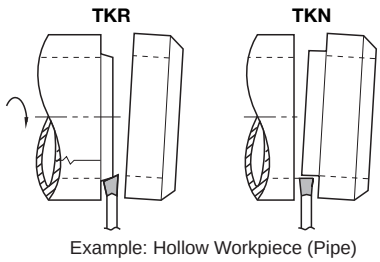
○: Applicable —: Not Applicable



・Angled (θ) insert can reduce the burr size when cutting off.
・When using a larger lead angle (θ), cutting resistance becomes smaller, but the feed rate should be reduced.



Example: Solid Workpiece



Example: Hollow Workpiece (Pipe)

Fig.1

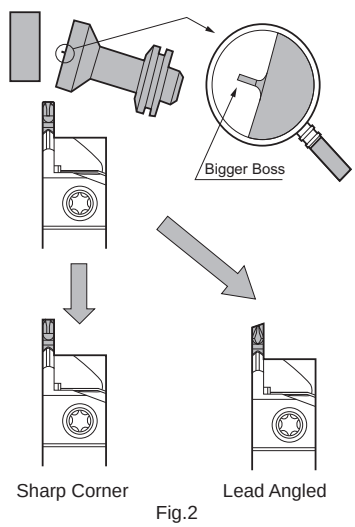


Fig.2

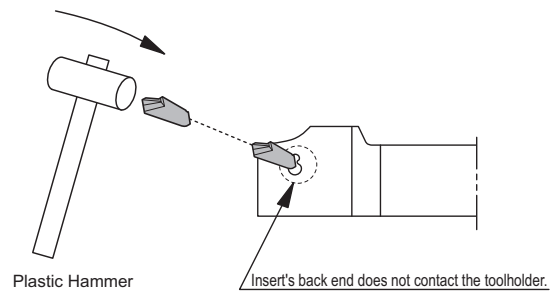


Fig.3

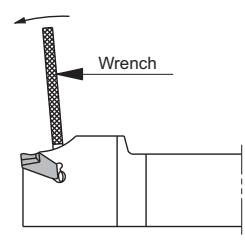


Fig.4

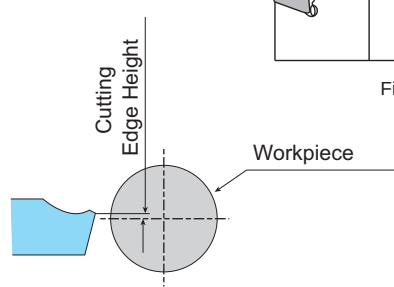


Fig.5

H

Cut-off