

Surface Grinding of Knives, Holeplates, and Pre-Cutters

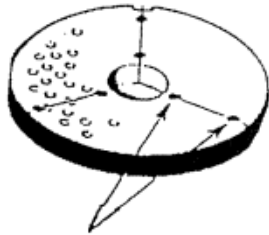
To achieve a proper result, the surface grinder should be in perfect working condition and the chuck needs to be completely clean.

Do not use a too high feeding, as this will cause unnecessary heat generation, causing oblique parts.

Grinding of Knives and Holeplates

1. Grind one side until it is clean.
2. Turn the part and grind the other side, until it is clean.
3. Turn the part once more and grind the first side once more.
4. The part is now finished.
5. Check the dimensions according to figure I or II.

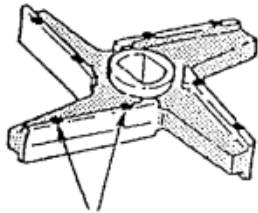
Fig. I



Measuring points.

Check the dimensions six places, as shown. Max. difference in dimensions: 0.02 mm and thinnest at the centre.

Fig. II

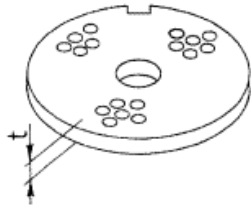


Measuring points

NPK Needles Plates Knives

Contact NPK at 614-738-8208

Grinding of Holeplates



TYPE	T-NOMINAL	T-MIN HARD PRODUCTS	T-MIN SOFT PRODUCTS
UNIGRIND 200	14.5	10-11	9-10
UNIGRIND 250	17	11-12	10-11
MAXIGRIND 400	25	15-20	15

T-Minimum is only to be seen as guideline and will vary from product to product.

The thinner the holeplate, the more it will tend to bend out because of the pressure, which will give a bad cutting and an increased wear of both holeplate and knife.

The smaller the holes are in the holeplate, the higher the pressure will be.

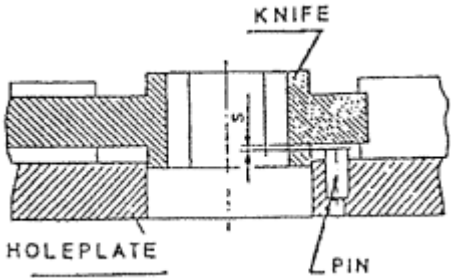
When using a double knife set, you have to check that the knife hubs do not touch each other, as this will make it impossible to tighten the knife set.

Cleaning Pin

When using BES (Bone Elimination System), the holeplate is equipped with a cleaning pin which has to keep the knife hub clean

The cleaning pin is hit out before grinding of the holeplate. When the grinding of the holeplate is finished, the cleaning pin is hit in again.

Check that there is space between the top of the cleaning pin and the bottom of the track in the knife hub. If the distance "S" is smaller than 1mm, some of the pin should be grinded off (see fig. below)



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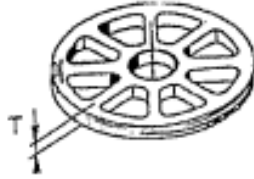
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Grinding of Pre-cutters

Grind only the side turning towards the knife



TYPE	NUMBER	T-NOMINAL	T-MIN HARD PRODUCTS	T-MIN SOFT PRODUCTS
UNIGRIND 200				
200/3-L	30133	15	10	7
200/4-F	37986	22	16.5	11
200/5-F	31233	22	16.5	11
200/5-F	36833	22	16.5	11
UNIGRIND 250				
250/5-L	30136	18	14	9
250/7-L	30135	18	14	9
250/7-F	30888	18	14	9
250/3-F	34621	18	14	9
250/5-L	31913	32	24	16
250/3-L	31915	32	24	16
250/5-F	303506	18	14	9
MAXIGRIND 400				
400/5-L	30138	26	20	13
400/5-F	35534	38	28.5	19
400/9-F	30139	38	28.5	19
400/10-L	30140	38	28.5	19

*L = Loose, F = Fixed, T-Minimum is only to be seen as guideline and may vary from product to product.

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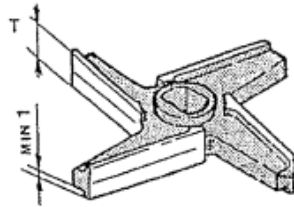
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Grinding of Knives

Grind only the side turning towards the knife



TYPE	SIZE	NUMBER	T-NOMINAL	T-MINIMUM
UNIGRIND 200				
PROPELLER	200/3	30176	28	22
PROPELLER	200/6	31093	18	15
CUT	200/8	31092	21	15
KNIFE	200/4	30373	23	17
UNIGRIND 250				
PROPELLER	250/3	30008	37	33
PROPELLER	250/6	30010	30	26
CUT	250/8	30011	28	22
KNIFE	250/4	30013	30	22
STAR	250/4	30014	18	15
MAXIGRIND 400				
PROPELLER A	400/4	30170	38	34
PROPELLER B	400/4	30172	38	34
PROPELLER A	400/6	30160	42	36
PROPELLER B	400/6	30161	42	36
CUT	400/8	30171	42	36
KNIFE	400/4	30346	32	24
STAR	400/4	30375	36	31

Knives with Loose Inserts: Can be ground with NPK grinding tool Number 305030.

T-Minimum is only to be seen as a guideline and may vary from product to product. In general, you may say that the ground surface of the insert has to lay min. 1 mm above the knife body. The propeller knives can be sent to NPK for renovating; the inserts will be welded up with hard metal and the knife is ground so that it will keep T-Nominal.

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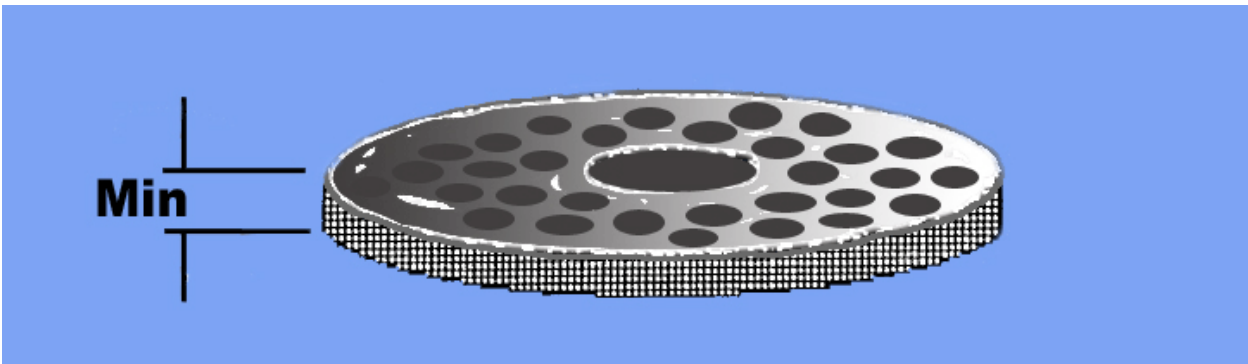
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Holeplates and Pre-cutters Minimum Thickness

NPKLLC can provides Surface Grinding service for all grinder knives and plates down to the minimum recommended thicknesses shown below.

TYPE	SIZE	MIN THICKNESS
HOLEPLATES	160	0.317" (8mm)
	200	0.343" (8.7mm)
	250	0.433" (11mm)
	400	0.787" (20mm)
PRECUTTERS	160	0.329" (8.5mm)
	200	0.433" (11mm)
FIXED PRECUTTERS	250	0.458" (11.5mm)
	400	1.200" (30mm)
LOOSE PRECUTTERS	250	0.458" (11.5mm)
	400	0.787" (20mm)
CFD PRECUTTERS	250	0.937" (23.7mm)



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