

SPARE PARTS

SHIMS

NEW CODE	OLD CODE
AATN-2-0001	05141601
AATN-2-0002	01041601
	03041601
AATN-3-0025	07041601
AATN-3-0015	01042201
	03042201
	07042201
AATN-2-0020	05111601
AATN-2-0004	05112201
AACN-2-0001	05070901
	03010901
AACN-2-0003	05071201
AACN-3-0001	01011201
	03011201
	07011201
AACN-3-0002	01011601
	07011601
	03011601
AACN-3-0003	07011901
AACN-3-0008	07012501
AAWN-3-0001	01050801
	03050801
	07050801
AKS-16L	06211601/L
AKS-16R	06211601/R
AASP-6-0001	05121201
AASN-3-0004	01031201
	07031201
AASN-3-0023	07031520
AASN-3-0005	07031901
AASN-3-0020	07032501
AASN-20020	05031220
AADN-2-0001	05081101
	01021101
AADN-SD317	07021101
AADN-3-0001	01021501
	03021501
	07021501
AAVN-2-0002	05091601
	05101601
	01061601
AAWN-SW317	01050601
	03050601
	07050601

EXCENTRIC SCREW

NEW CODE	OLD CODE
AEV-01-M6x16	40-2.5-M6

CLAMPS

NEW CODE	OLD CODE
ATK-01	01021102
	01041602
	01050602
ATK-02	01011202
	01021502
	01031202
	01042202
	01050802
ATK-03	01061602
ATK-04	01011602
AMK-01	03050602
AMK-02	03041621
AMK-03	03021102
	03011202
AMK-04	03041602
	03042202
	03021502
AMK-05	03050802
ACK-01	06211602 - R
ACK-02	06211602 - L
ACK-03	06220302
	06220502
ACK-06	06220302
ACK-10	60-M8x8
ACK-11	60-M8x10

SHIM SCREWS

NEW CODE	OLD CODE
AAV-01-M3X10	01050605
	06211605
AAV-02-M5X12	01021505
	01031205
	01011205
	01042205
	01050805
AAV-03-M5X12	01041605
AAV-04-M5X12	01061605
	01021105
AAV-05-M6X15	01011605
AAV-06-M3.5X11	05070907
	05081107
	05091607
	05101607
	05141607
	05111607
AAV-07-M4.5X11	05112207
	05071207
	05121207

CLAMP SCREWS

NEW CODE	OLD CODE
AKV-01-M5X20	01021103
	01041603
	01050603
AKV-02-M6X20	01011203
	01021503
	01031203
	01042203
	01050803
	01061603
	03041603
	03042203
	03021503
AKV-03-M6X20	03050803
AKV-04-M5X20	03050603
	03041622
	03021103
	03011203
AKV-05-M6X25	01011603
AKV-06-M6X20	06211603
AKV-07-M6X20	06220503
AKV-10-M6X15	06220303
AKV-13-M8X1X16	5004-M8x1x16
AKV-14-M8X1X18	5004-M8x1x18
AKV-15-M8X1X20	5004-M8x1x20

STAMP

NEW CODE	OLD CODE
	01021104
	01041604
	01050604
	01011204
	01021504
	01031204
	01042204
ABPL-01	01050804
	01061604
	03041604
	03042204
	03050804
	03021504
	06211604

SPARE PARTS

CLAMP SPRING

NEW CODE	OLD CODE
AKY-01	01011200
	01021500
	01031200
	01042200
	01050800
	01050600
	01061600
AKY-02	06211600

LEVER SCREWS

NEW CODE	OLD CODE
ALV-01-M6X15	07041623
	07021123
ALV-02-M6X17	07041610
	07021110
	07050610
ALV-03-M8X19	07011210
	07021510
	07031210
	07042210
	07050810
ALV-04-M8X22	07011610
	07031510
ALV-05-M10X27	07011910
	07031910

SHIM SPRING

NEW CODE	OLD CODE
AAV-01	07021111
	07041611
	07050611
AAV-02	07011211
	07021511
	07031211
	07042211
AAV-03	07050811
	07011611
AAV-04	07031511
	07011911
	07031911

LEVERS

NEW CODE	OLD CODE
APL-01	07021109
	07041609
	07050609
APL-02	07011209
	07031209
	07042209
	07050809
APL-03	07021509
APL-04	07011609
	07031509
APL-05	07011909
	07031909

PIN

NEW CODE	OLD CODE
APM-01	03041606
APM-02	03050806
	03042206
	03050606
APM-03	03021106
	03041624
APM-04	03011206
	03021506

ALLEN KEYS

NEW CODE	OLD CODE
AAL-01-2 mm	90-A2x65
AAL-02-2.5 mm	90-A2.5x65
AAL-03-3 mm	90-A3x65
AAL-05-4 mm	90-A4x75
AAL-07-5 mm	90-A5x80



TECHNICAL INFORMATION

USER'S GUIDE FOR AKKO U-DRILLS

Before connecting your U-Drill to CNC lathe, you have to check if the turret is eccentric from the center or not. If there is any eccentricity in your turret, never use your U-Drill. Processes that should be done to fix the turret :

1. A cylindrical part whose surface is precision and whose length and diameter is the same with the U-Drill that you will use, should be mounted to the holder of turret and X value of the lathe should be brought to zero (0).
2. Comparator should be mounted to chuck. The end of the comparator should be contacted (touched) to the surface of the part that we mounted on the turret.
3. The comparator that we mounted on the chuck should be turned 360-degree with the chuck and turret should be zeroed by that turning according to changing rate of comparator.

CUTTING SPEED AND REVOLUTION THAT ARE NEEDED FOR USING (RUNNING) YOUR U-DRILLS MORE PRODUCTIVELY

Grup No.	Material	Material Type	Cutting Speed Vc (mm/m)
1	Non-alloy steel and free cutting steel	C1010, Automat etc.	220
2	Low alloy steel and cast steel	C1030 - 106 etc.	200
3	Alloy steel and tool steel	CK-45, 4140, 7131 etc.	170
4	Hot Work Steel and Stainless Steel	Impax etc.	150

P.S. : The cutting speed may be concerned with the type of the insert that you use.

Fistly, choose the material to make calculation of revolution. You should multiply the cutting speed (Vc) of the material that you chose by 1000 and divide by 3.14. You should divide the value that you found by the diameter of U-Drill. **For Example :** If our material is alloy steel and tool steel (3rd group), diameter of the U-Drill is 25 mm, cutting speed is 170, we should calculate as following; $170 \times 1000 / 3.14 = 54140$, $54140 / 25 = 2166$ rpm is the result that we found (Spindle Speed) Feed rate of the lathe is concerned with the U-Drill that you will use and changes between 0.05 and 0.10. The user sets it according to cut of cutting insert.

FEED CALCULATION FOR CENTRAL MACHINE :

2166 spindle speed, that we found as a result of above mentioned calculation, should be multiplied by cutting insert feed (mm/r) between 0.05 and 0.10 feed choises. **Example 1 :** $2166 \times 0.05 = 108$ **Example 2 :** $2116 \times 0.10 = 217$
The results 108 and 217 are the feed mm/m calculation for central machine.

CALCULATING SPINDLE SPEED and FEED RATE FOR MILLING PROCESS

Vc.	S	D	F	Z	fz	FORMULAS
Cutting Speed (Please read from the back side of cutting insert box)	Spindle Revolution rpm	Milling Tool Diameter	Feed Rate	Number of Effective Tooth	Feed Per Tooth (Please read from the back side of cutting insert box)	Calculation of Revolution : $S = (Vc \times 1000) / (3.14 \times D)$ Feed Rate Calculation : $F = S \times Z \times fz$

For Example : We will make milling with milling tool whose diamention is D 50 mm, whose theeth number is Z=5.

The spindle revolution was written as $Vc=200m/mn$ at the back side of cutting insert box. Let's calculate the revolution that should be entered to the milling machine : $Vc=200 m/m D=50 mm$

S = Firstly Cutting Speed is multiplied with 1000, the result should be divided by 3.14 , the last result should be divided by diameter of milling tool.

$$S = 200 \times 1000 = 200000 \rightarrow 200000 / 3.14 = 63663 \rightarrow 63663 / 50 = 1273 \text{ rev } \quad \mathbf{S=1273 \text{ rev / mn}}$$

After finding spindle revolution, let's find feed rate : milling tool with $Z=5$ teeth and we read $fz=0,12$ from the back side of cutting insert box.

F = Tooth number should be multiplied with revolution, the result should be multiplied with feed per tooth.

$$F = 1273 \times 5 = 6365 \rightarrow 6365 \times 0,12 = 763 \quad \mathbf{F = 763 \text{ mm / mn}}$$

Revolution that should be entered to the milling machine = S 1273 Feed Rate that should be entered to the milling machine = F 763 average value.

P.S : The values Vc and fz have to be written at the back side of the cutting insert. If these values were not written on the cutting insert box, please find them from cutting insert catalogue. If the material that you will work is steel, please read Vc and fz values that were written on the part P, if it is stainless steel please read from the part M, if it is cast iron please read from the part K.

