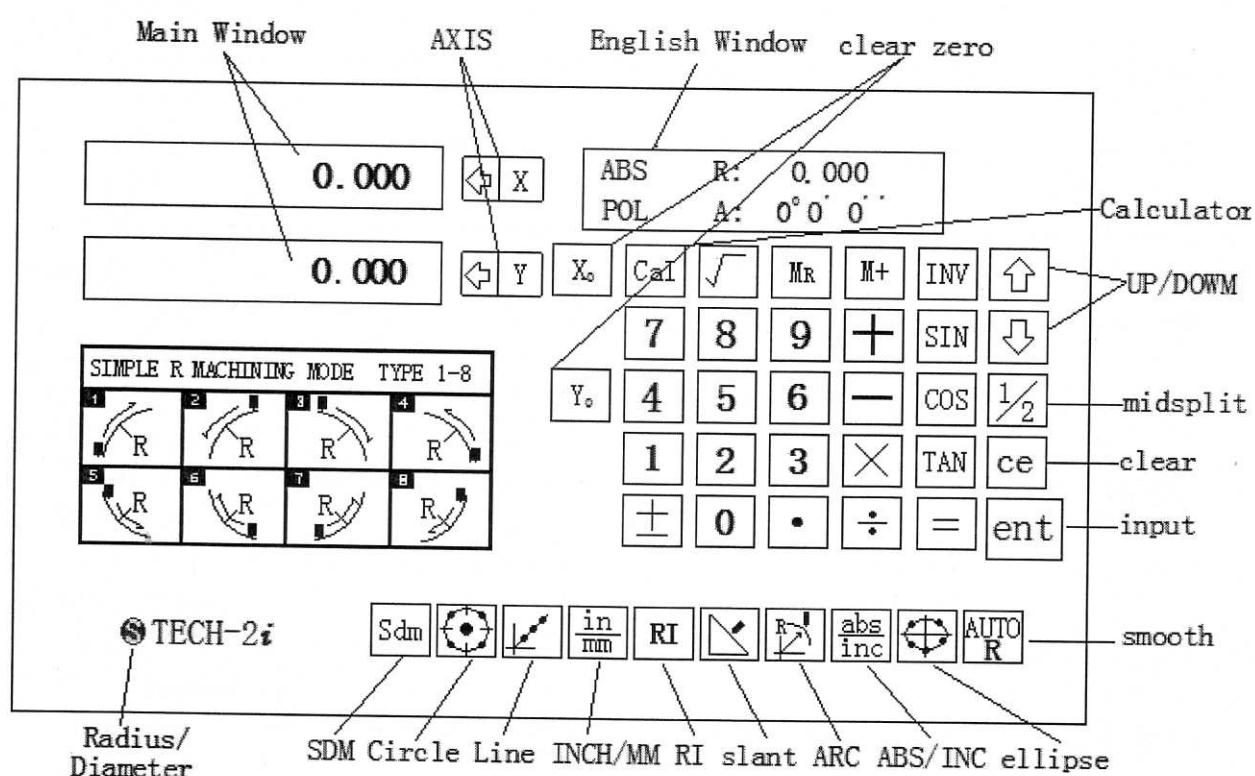


DIGITAL READOUT MANUAL

MODEL : TECH-2i

TECH-2i



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(Backside of front cover)

Dear User:

Welcome to the use of TECH-2i DRO System, which is developed by Measurite Pte Ltd, the TECH-2i DRO System is widely used in milling machine, grinding machine, wire-cut, EDM and lathe, the functions can help us to improve efficiency, ease of operation, precise measurement and repeatability. It is now an absolute need to install them on your machine.

The Use of the DRO System, is easily understood by any user. You can use it without needing to finish reading the manual. You can use it very easily and is suitable for both new operator and skilled operator alike.

Safety precautions:

Open the box and remove it from the packing. Plug it with the power cable and test if the DRO powers up and the digit display correctly. It accepts power of 80Vac ~ 240Vac.

- ① When you open the box, check the physical appearance if in good condition, if you find something at fault, please contact the seller, be sure not to take dismantle it.
- ② The DRO used the alternating current of 110V~220V or 50Hz~60Hz, the electrical connector plugs pin is three core pin which has earth pin.
- ③ The user be sure not to repair it, the DRO has high-powered piezoelectricity, this could do some damage to people.
- ④ The chassis is made by BS plastic, it can't be used in the high temperature.
- ⑤ When you do not use it, please turn off the electrical source. It can prolong the life-time of the product.
- ⑥ If the thunder storm comes, close the electrical source.

Routine Maintenance:

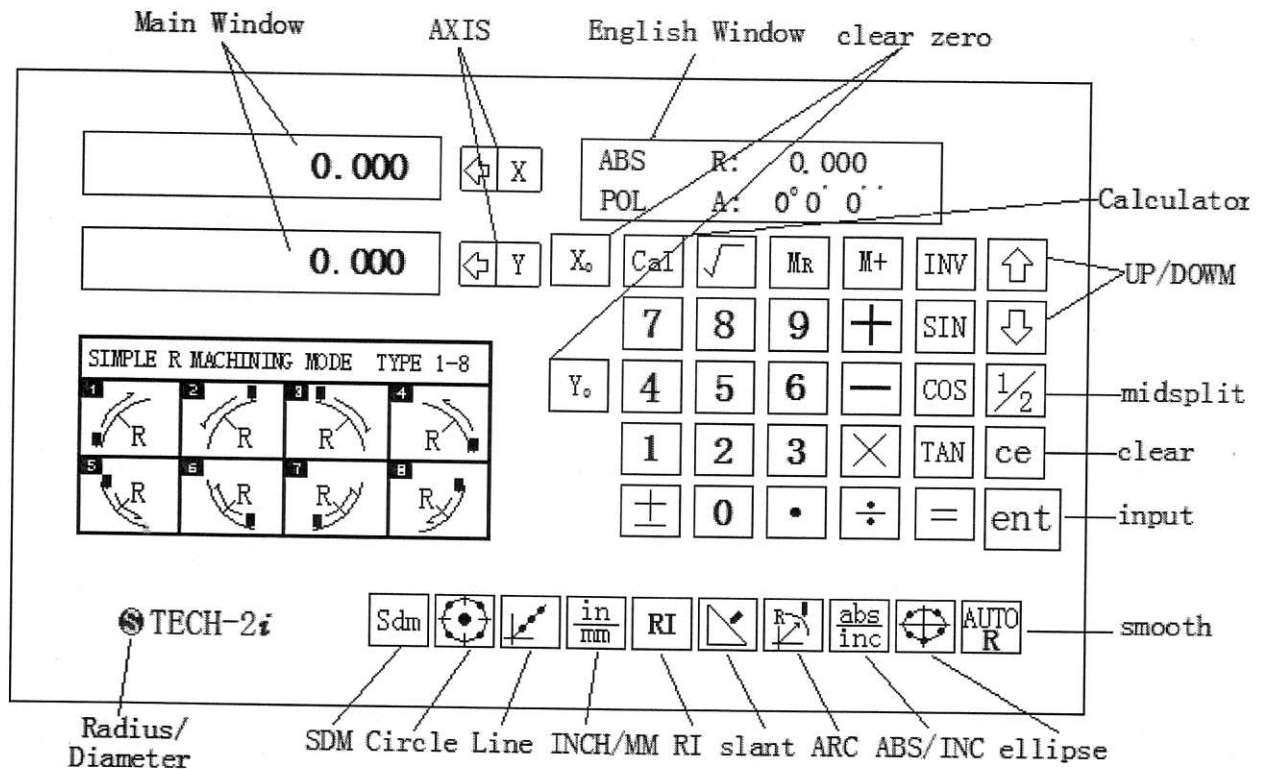
- ① When you are cleaning the DRO , please turn off the power.
- ② Use a dry cloth or brush clean the keyboard / rear panel of the DRO.
- ③ Do not clean the panel or keyboard by thinner or ethanol.
- ④ The rear of the casing can be cleaned by detergent.

Promises:

If there are some issue with the DRO operation or the malfunctions, you can contact Measurite Pte Ltd at www.measurite.com.sg / email : info@measurite.com.sg

The Note of the Pressed key

TECH-2i


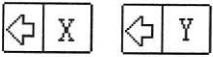















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TECH-2i DRO, used high-tech component and PCB assembly technique, more function, operate easily, credibility durable. Please read the manual before operation of the machines.

一、Function item


- | | |
|---------------------|---|
| 1、Cleared |  |
| 2、Input coordinate |  |
| 3、INCH/MM |  |
| 4、BS/INC |  |
| 5、1/2 |  |
| 6、RI |  |
| 7、Radius/Diameter |  |
| 8、Calculator |  |
| 9、SDM |  |
| 10、Circle-Hole |  |
| 11、Ellipse-Hole |  |
| 12、Line-Hole |  |
| 13、RC-Hole |  |
| 14、Smooth |  |
| 15、Slant |  |
| 16、Power cut memory | |


二、nine core bnc connector jack and sense organ connect table





feet size	1	2	3	4	5	6	7	8	9
function	null	0v	null	null	null	signal	5v	signal	RI signal

Clear

Function: TECH-2i english prompt operator and clear the coordinate at any place

e.g: Press  → clear X







Press  → clear Y





0.000		X	ABS R: 0.000
0.000		Y	POL A: 0°00'00"
			
			

input Coordinate

Function: TECH-2i english prompt the operator and set the workpiece place to any data.

e.g: set the X to 45.8mm

Press in turn:   4  5  .  8  ent

45.800		X	ABS R: 45.800
0.000		Y	POL A: 0°00'00"
			
			

(pour: when you input, the X data will glint)

INCH/MM

Function: TECH-2i english prompt it can make the data switch between the mm and inch

Now the mm is 25.400, the inch is 1.0000.

operation steps

e.g 1: now the data is in inch ,we change it to mm.

1.0000	↩ X	ABS R: 1.00000
0.0000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

press in
mm

25.400	↩ X	ABS R: 25.400
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

e.g 2: now the data is in mm ,we change it to inch.

25.400	↩ X	ABS R: 25.400
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

press in
mm

1.0000	↩ X	ABS R: 1.00000
0.0000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

(attention: at BS/INC, SDM it can be switched also)

ABS
INC ABS/INC

function: TECH-2i english prompt the dataview table provide two coordinate, they are BS and INC.

- 1、The operator can memory the RI to BS, and switch to INC for operations.
- 2、Clear the INC coordinate at any place, the 1/2 can not affect the BS coordinate.
- 3、at BS coordinate the absolut value can autosave, and the operator can see it at any time.

operation steps

e.g1: Switch the BS to INC

0.000	↩ X	ABS R: 0.000
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

Press

ABS
INC

0.000	↩ X	INC R: 0.000
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

operation steps

e.g2: Switch the INC to BS

Press

X ₀

0.000	↩ X	ABS R: 0.000
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

make the X to another side → press

1/2

 → Press

↩ X

operate RI → press

ABS
INC

 → move the machine tool to RI.

1/2

 midsplit autoly

Function: TECH-2i english prompt at currently data press

1/2

 and move the machine tool to Zero.

e.g: set the X zero to the middle of the machine tool.

- 1、move the machine tool to one side ,press

X ₀

- 2、move the machine tool to another side,press

1/2

 , and press

↩ X

- 3、move the machine tool to "0.000"

RI

(Find RI)

Function: TECH-2i English prompt set the size of Zero and RI
 e.g: example for X

1、 Clear the X at BS, press **X₀**

2、 press **RI** → **← X**

3、 move the machine tool when it come by the RI.

When power off, if you move the operation table, you can find the RI by the RI function when you open it next time.

Press **RI** → **← X** move the machine table when it come by RI, the function, window view **OK.....** and beep for “du—du”. move the machine tool to “0.000” .

R/D

Radius/Diameter

Function: TECH-2i english prompt this function view the Radius size of the operation

workpiece. then set the Diameter follow the user' s need.

Cal

Calculator

t everyday process, the most tool is calculator besides workpiece.

The Calculator of the ME provide the function for add、 minus、 multiply、 divide and some function , contains Sin 、 Cos、 T N. etc.

The Calculator function can move the result to the axis which you need to operate it, the operator just need move the machine tool to zero. the place is you needed.

operation steps

e. g: $123+76=199$ $6 \times 35=210$

Press

1	2	3	+	7	6	=
---	---	---	---	---	---	---

6	×	3	5	=
---	---	---	---	---

attention: 1、 if you input error press

ce

 to cancel.

2、 when you finished press

←	X
---	---

, the result move to X.

3、 at calculator press

X _o

 move the data of X to calculator



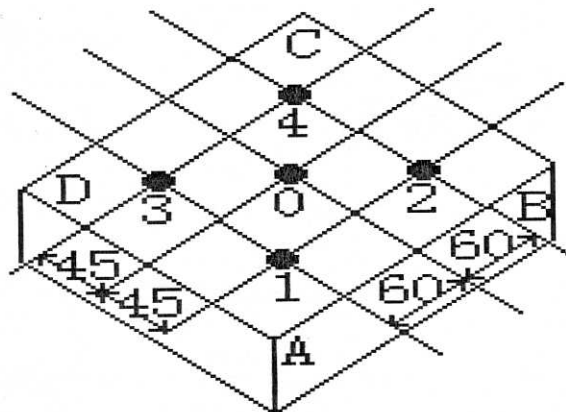
300 Group

TECH-2i english prompt the dataview table provide three coordinates: BS、INC、SDM (SDM0-SDM299). 300 Group user coordinate can use to assistant zero in operating. BS is absolutent coordinate.it' s established at the begin,it used to be the datum mark of processing workpiece.the SDM is defined relative to absolutent coordinate.

operation steps

Like chart, the origin of the BS is in the center of the workpiece, the others assistant zero is like pic 1、 2、 3、 4, there are two menthod to set assistant zero.

- ① To place clear zero
- ② Coordinate input



e. g 1: To place clear zero

set the workpiece zero to BS zero.move the machine tool to SDM begin place and clear zero,when operating without reference to BS or SDM,move the workpiece to "0.000" .

operation steps

Steps:

- (1) Follow the methods of the midsplit autoly, set the BS begin to the rectangle centre, B neat to the X.

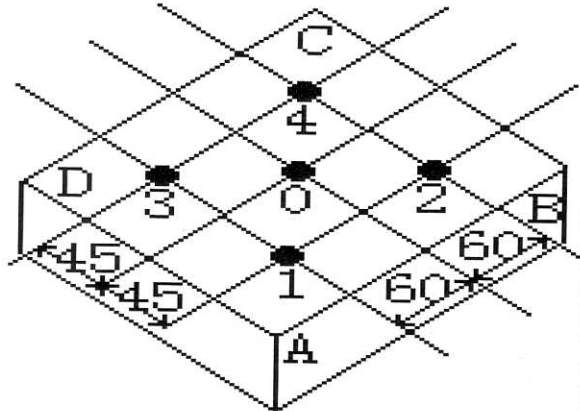
D neat to Y, aim at 0, BS、X、Y clear near.

Sdm0 X, Y Clear Zero

Sdm1 X, Y Clear Zero

Sdm2 X, Y Clear Zero

Sdm3 X, Y Clear Zero



0.000	← X	INC R: 0.000
0.000	← Y	POL A: 0°00'00"
		X ₀
		Y ₀

operation steps

- (1) Set the first point SDM ,enter the SDM coordinate, Clear X, Clear Y, move the machine tool to the first point. like pic.

press X₀ Y₀

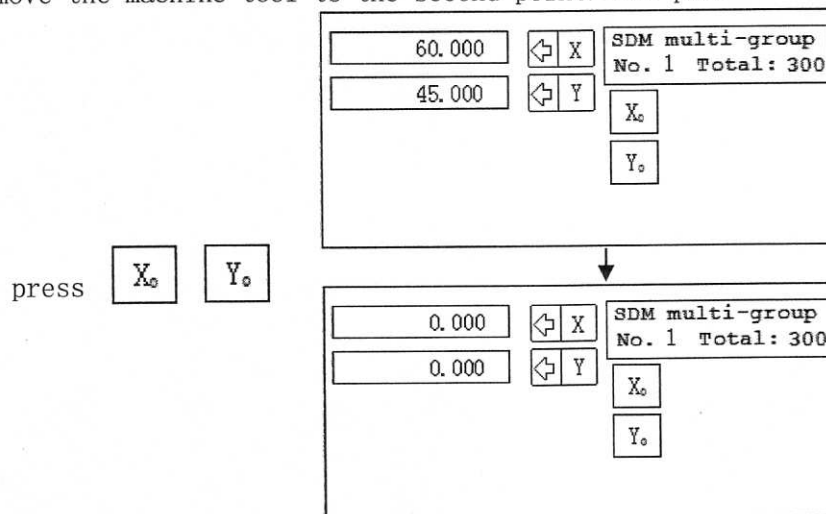
- 60.000	← X	SDM multi-group No. 0 Total: 300
45.000	← Y	
		X ₀
		Y ₀

0.000	← X	SDM multi-group No. 0 Total: 300
0.000	← Y	
		X ₀
		Y ₀

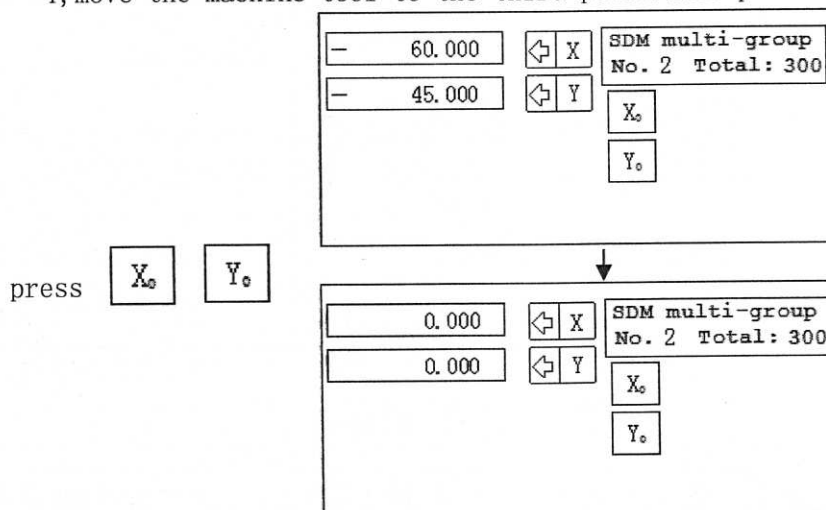
- (2) Set the first point SDM1 ,enter the SDM1 coordinate, Clear X, Clear

Operation Steps

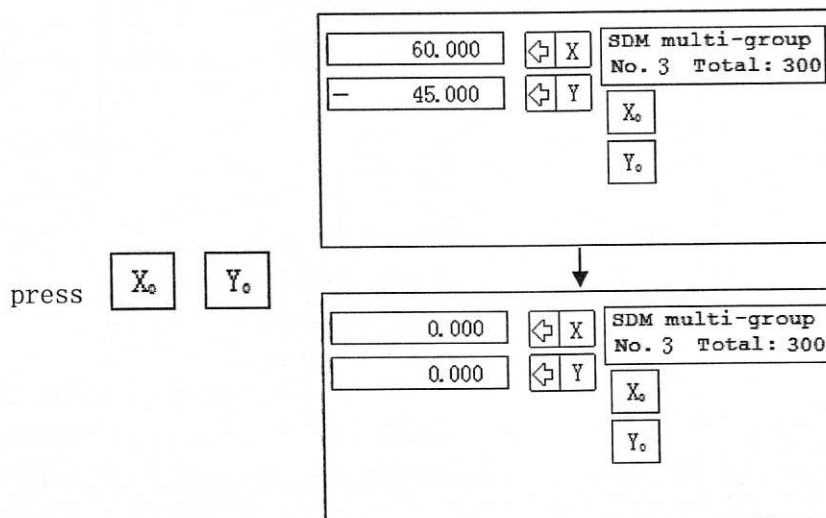
Y, move the machine tool to the second point. like pic.



(3) Set the first point SDM2 , enter the SDM2 coordinate, Clear X, Clear Y, move the machine tool to the third point. like pic.





(4) Set the first point SDM3 , enter the SDM3 coordinate, Clear X, Clear Y, move the machine tool to the fourth point. like pic.



Operation Steps

(5) Process workpiece according to the coordinate.

(6) Process workpiece which is the same to the previous workpiece, just set the BS zero at "0.000", the SDM Zero have set autoly, press   and move the machine tool to zero.

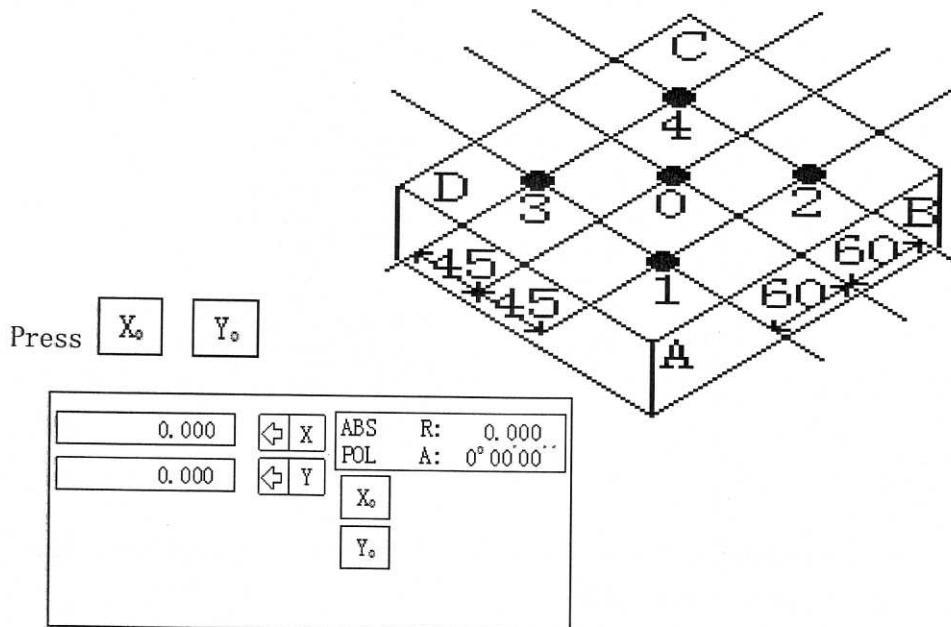
2. Preset the SDM coordinate.

Use the method of preset zero, you needn't to move the machine tool, it can set the user's zero exactness and shortcut.

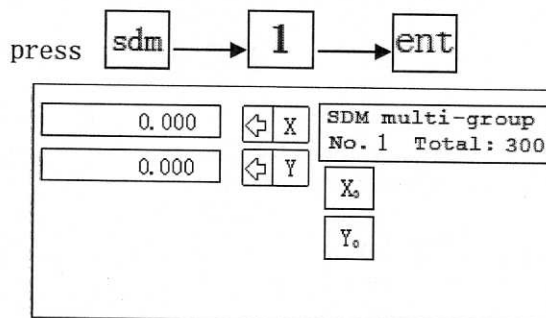
e.g: use the "0" mode input, like pic when the absoluteness coordinate is in zero, the 1 (60, -45), 2 (-60, -45), 3 (60, 45), 4 (-60, 45)

Operation steps

(1) In the BS set the RI



(2) Set the 1st zero, turn to the 1st zero SDM1.



(3) Input the 1st assistant zero coordinate straight.

Operation Steps

Press \leftarrow X \rightarrow 6 0 \rightarrow ent

Press \leftarrow Y \rightarrow 4 5 \rightarrow \pm \rightarrow ent

60.000	\leftarrow X	SDM multi-group
- 45.000	\leftarrow Y	No. 1 Total: 300
		X ₀
		Y ₀

Set the 2nd zero,
turn to the 2nd zero SDM2.

0.000	\leftarrow X	SDM multi-group
0.000	\leftarrow Y	No. 2 Total: 300
		X ₀
		Y ₀

press \downarrow

Input the 2nd assistant zero coordinate straight.

Press \leftarrow X \rightarrow 6 0 \rightarrow \pm \rightarrow ent

Press \leftarrow Y \rightarrow 4 5 \rightarrow \pm \rightarrow ent

- 60.000	\leftarrow X	SDM multi-group
- 45.000	\leftarrow Y	No. 2 Total: 300
		X ₀
		Y ₀

Set the 3rd zero,
turn to the 3rd zero SDM3.

Press \downarrow

0.000	\leftarrow X	SDM multi-group
0.000	\leftarrow Y	No. 3 Total: 300
		X ₀
		Y ₀

Input the 3rd assistant zero coordinate straight.

press \leftarrow X \rightarrow 6 0 \rightarrow ent

press \leftarrow Y \rightarrow 4 5 \rightarrow ent

Operation Steps



60.000	← X	SDM multi-group No. 3 Total: 300
45.000	← Y	
		X ₀
		Y ₀


Set the 4th zero

Press 

0.000	← X	SDM multi-group No. 4 Total: 300
0.000	← Y	
		X ₀
		Y ₀

Input the 4th assistant zero coordinate straight.


Press  X → **6** **0**  → **ent**

Press  Y → **4** **5** → **ent**

- 60.000	← X	SDM multi-group No. 4 Total: 300
45.000	← Y	
		X ₀
		Y ₀

When the four assistant zero have been set, operator can press,



to the assistant zero, and move the machine tool to zero, it's the assistant zero, quit the SDM function, you can press .

Switch SDM input mode:

When the SDM mode is "0", the data input is fact data.

When the SDM mode is "1", the data input is reverse data.

e.g: 1 Press  → press 

0.000	← X	SDM input Mode mode 0 switching?
0.000	← Y	
		X ₀
		Y ₀



2 Press **ent** to select "0" mode or "1" mode, Press **ce** quit.

Operation step Suddenly





SDM 11 clear away


The function is introduced : Eliminate consumer coordinate systemSDM300 Group The plain is interposed, Eliminate the queen, SDMCoordinate system has to demonstrate value and BS coordinate system has to demonstrate value equality.





Handle a step:

1. Press  KeyEnter the fundamental parameter → Press 
Choice arrives at "Clear SDM multiunit coordinate" →

Press 

0.000	 X	clear SDM axis Press UP or DOWN
0.000	 Y	
	 	

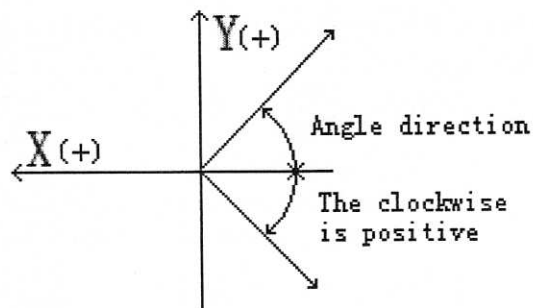
2. When right window display "OVER", Press  for exit.

0.000	 X	OVER.
0.000	 Y	 



Circumference be allotted a hole

Function : TECH-2i The obvious form of number provides the convenient circumference halving hole function , Person requires operation to import



The circumference radius



The circumference initiation angle

The circumference termination angle

The halving hole number

TECH-2i English is pointed out

On the circumference the obvious form of number is calculated out just voluntarily, every divides the hole location from the middle , Every hole

location is set up for zero, Person needs operation press  or  , Which

and then the upper hole choosing to the circumference, the machine tool working table is swayed to zero , is the location being a hole's turn.

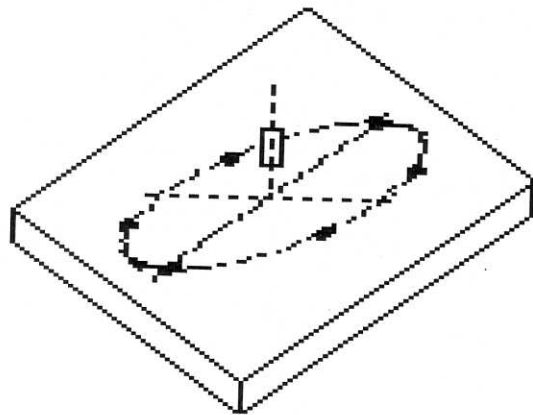
Handle a step

Example: Radius: — 30mm

Initiation angle: — 30°


End an angle: — 318°

Divide the hole number
from the middle: — 6

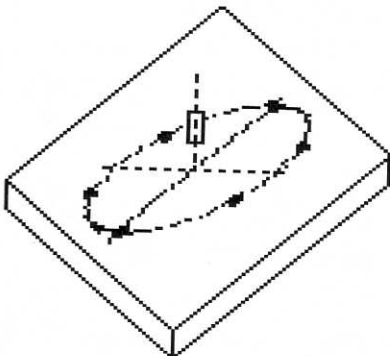


- Remarks:1 The central point location $X=0, Y=0$
- 2 The halving hole number is that the angle divides till destination angle from starting point along the clockwise sense
- 3 Think that the initiation angle is 0 , that the termination angle is 360 points , the input hole number ought to is $(N+1)$

Handle a step:

- 1、First workpiece centre location is fixed for zero, then press 

Enter the circumference mark of hole function



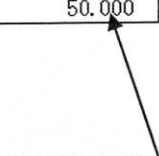
Handle a step

	\leftarrow X	circle dispart Input Radius....
50.000	\leftarrow Y	
		X ₀
		Y ₀

2、Import a radius (R: 30)

Press **3** **0** **ent**

	\leftarrow X	circle dispart Input Radius....
50.000	\leftarrow Y	
		X ₀
		Y ₀



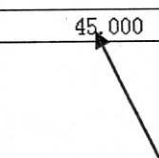
In the first place radius interposing

	\leftarrow X	circle dispart Input Radius....
30.000	\leftarrow Y	
		X ₀
		Y ₀

3、Import the initiation angle

Press **3** **0** **ent**

	\leftarrow X	circle dispart Input Incept Angle...
45.000	\leftarrow Y	
		X ₀
		Y ₀



In the first place initiation angle interposing

	\leftarrow X	circle dispart Input The End Angle
30.000	\leftarrow Y	
		X ₀
		Y ₀

4、Import the termination angle

Press **3** **1** **8** **ent**

"the circumference mark of hole " function, When returning to regular

BS state, X, Y, coordinate show, Press Withdraw from temporarily,

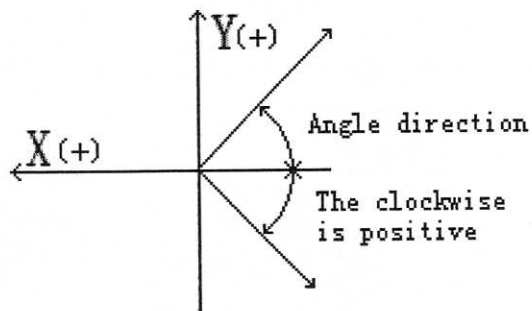
Press Return to circumference mark of hole state.



Ellipse be allotted a hole

Function: TECH-2i The god of the earth who points out that the obvious form of number provides the convenient ellipse halving hole function , handles person requires English to import an ellipse

X , Y axis radius



Elliptic initiation angle

Elliptic termination angle

Elliptic maximal hole number

TECH-2i English mounts every halving hole location , every hole location is set up for zero to point out that the obvious form of number calculates out an ellipse just voluntarily,

Person needs operation Press or Which and then the upper hole choosing to the ellipse, the machine tool working table is swayed to zero , is the location being a hole's turn.

Handle a step

Example: X axis radius:

20mm

Y axis radius:

30mm

Initiation angle:

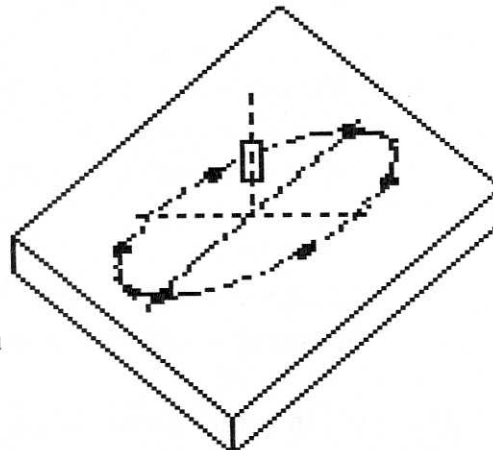
0°

End an angle:

360°

Divide the hole number from the middle:

6



"the circumference mark of hole " function, When returning to regular

BS state, X, Y, coordinate show, Press Withdraw from temporarily,

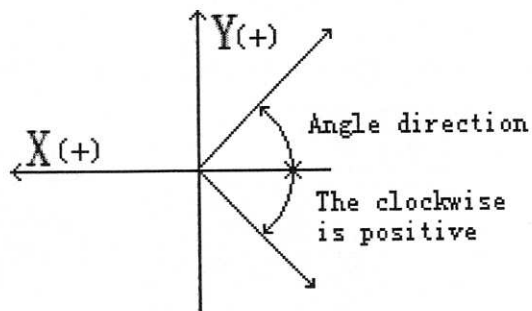
Press Return to circumference mark of hole state.



Ellipse be allotted a hole

Function: TECH-2i The god of the earth who points out that the obvious form of number provides the convenient ellipse halving hole function , handles person requires English to import an ellipse

X , Y axis radius



Elliptic initiation angle

Elliptic termination angle

Elliptic maximal hole number

TECH-2i English mounts every halving hole location , every hole location is set up for zero to point out that the obvious form of number calculates out an ellipse just voluntarily,

Person needs operation Press or Which and then the upper hole choosing to the ellipse, the machine tool working table is swayed to zero , is the location being a hole's turn.

Handle a step

Example: X axis radius:

20mm

Y axis radius:

30mm

Initiation angle:

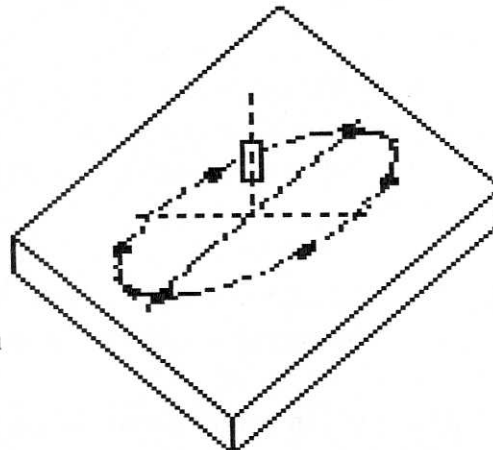
0°

End an angle:

360°

Divide the hole number from
the middle:

6



Remarks: 1、 The central point location is $X=0$, $Y=0$

2、 The halving hole hole number is that the angle divides till destination angle from starting point along the clockwise sense.

3、 Think that the initiation angle is 00 , ending an angle is 3600 points , ought to be when importing the hole number (N+1)

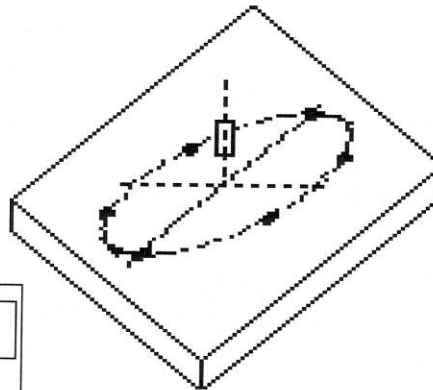
Handle a step:

1、 Fix position for zero first with workpiece centre location, then press



enter the ellipse mark of hole function

Example: X、 Y axis radius: 20、 30mm
Initiation angle: 30°
End an angle: 360°
Divide the hole number from
the middle: 6



	\leftarrow X	Ellipse dispart Input X Radius..
10.000	\leftarrow Y	
	X ₀	
		Y ₀

2、 Import the X axis radius (R: 20)

Press

2 **0** **ent**

	\leftarrow X	Ellipse dispart Input X Radius..
10.000	\leftarrow Y	
	X ₀	
		Y ₀

In the first place radius interposing

	\leftarrow X	Ellipse dispart Input Y Radius..
20.000	\leftarrow Y	
	X ₀	
		Y ₀

Import the Y axis radius, Press

3 **0** **ent**


Handle a step

	\leftarrow X	Ellipse dispart Input Incept Angle..
30.000	\leftarrow Y	
	X_0	
		Y_0

3、 Import the initiation angle

Press **0** **ent**

	\leftarrow X	Ellipse dispart Input Incept Angle..
30.000	\leftarrow Y	
	X_0	
		Y_0




In the first place initiation angle interposing

	\leftarrow X	Ellipse dispart Input Incept Angle..
0.000	\leftarrow Y	
	X_0	
		Y_0

4、 Import the termination angle

Press **3** **6** **0** **ent**

	\leftarrow X	Ellipse dispart Input The End Angle
50.000	\leftarrow Y	
	X_0	
		Y_0



In the first place end an angle interposing

	\leftarrow X	Ellipse dispart Input The End Angle
360.000	\leftarrow Y	
	X_0	
		Y_0

5、 Import the maximal hole number (Hole number)

Press **6** **ent**

Handle a step

		X	Ellipse dispart Input The Most NO..
5.000		Y	
		X ₀	
		Y ₀	

In the first place Maximal hole number interposing

-	17.320		X	Ellipse bore Hole NO: 1
-	15.000		Y	
			X ₀	
			Y ₀	

Enter treating directly, If treating is finished, Press exit.

Remarks:

1、Process the queen in entrance, Handle person press The which number holes queen to choose , the machine tool working table is swayed being the location owing an ellipse a hole to the coordinate for 0.000.

2、Import process middle , Y axis scintillation that can not stay, Press

That the number displays a form is able to enter next step voluntarily.

3、Require that the halfway is temporary if handling person withdraw from X , Y , Z , coordinate show when "the ellipse mark of hole " function, returns to

regular BS state, Press Withdraw from temporarily, Press again

Return to ellipse mark of hole state.



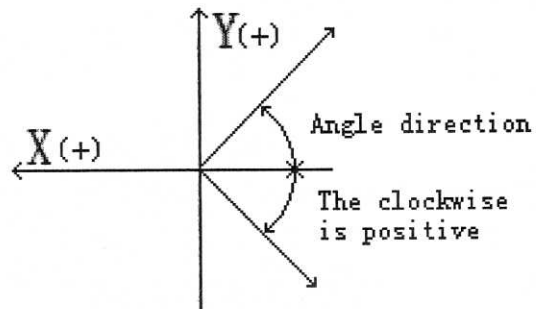
Oblique line be allotted a hole

Function: TECH-2iThe English hint provides the oblique line halving hole , is used for the centre of a circle processing the YX flat surface on the same straight line, uniform distribution hole place , operation person need importing the following parameter

Oblique line length

(The first centres of a circle arrive at final hole centre of a circle distance)

Oblique line angle
 (Refer to the oblique line and zeta-axis direction intersection angle)
 Hole number



Every hole location the obvious form of entering parameter queen number meeting automation is calculated out an oblique line, Handle person press



, Choose the hole number

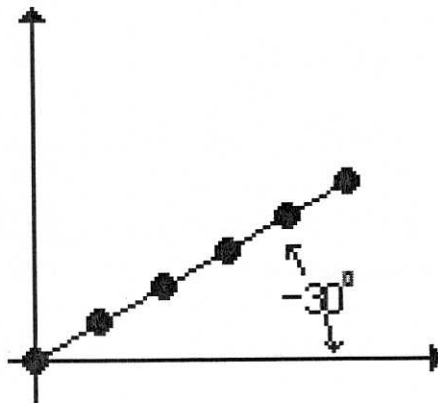
nd then rock workpiece being 0.000 to zeta-axis, Y axis location for 0.000 , location being that hole

Example: The workpiece , parameter showing with regard to if pursuing an institute are set up as follows

Oblique line length: 150mm


Oblique line angle: -30°

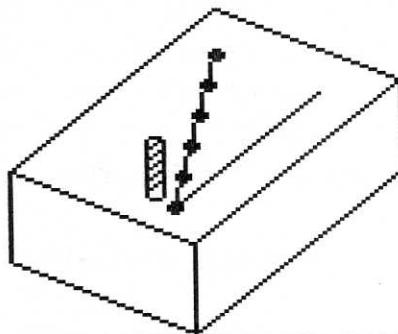
Hole number: 6



Handle a step:

1、First with lathe tool alignment oblique line hole first o'clock, nd

press  Enter the oblique line mark of hole function



Handle a step

	\leftarrow X	Line Dispart Input Line length.
60.000	\leftarrow Y	
	X_0	
		Y_0

2. Import the oblique line length

The host Windows Y axis demonstrates the oblique line length interposing in the first place

Press **1** **5** **0** **ent**

	\leftarrow X	Line Dispart Input Line length.
20.000	\leftarrow Y	
	X_0	
		Y_0

Oblique line length that the plain sets up

	\leftarrow X	Line Dispart Input Line length.
150.000	\leftarrow Y	
	X_0	
		Y_0

3. Import the oblique line angle

Windows subsidiary Windows is demonstrated "importing oblique line angle Y, please" demonstrates the oblique line interposing last time and

press **3** **0** **\pm** **ent**

	\leftarrow X	Line Dispart Input Line Angle
20.000	\leftarrow Y	
	X_0	
		Y_0

Oblique line angle that the plain interposes



Handle a step


	← X	Line Dispart
5.000	← Y	Input The Most NO.
		X ₀
		Y ₀

4、 Import the maximal oblique line mark of hole number "NO. HOLE " Y Windows subsidiary Windows is demonstrated demonstrates mark of hole number

interposing last time, Press **6** **ent** Start treating

0.000	← X	Line bore
0.000	← Y	HOLE NO: 1
		X ₀
		Y ₀

5、 Press  or  , and then the number choosing the hole processing, has rocked the machine tool working table being able to punch a hole in that right away to zeta-axis, Y axis, the location demonstrating "0.000" s

Remarks: Treating is finished press  Return to regular display state, Be allotted hole process middle in the oblique line, Handle person

press **TAN** forLeave time of function temporarily returning to regular

X, Y, Z-coordinate display, Press **TAN** again to return to the oblique line mark of hole function.



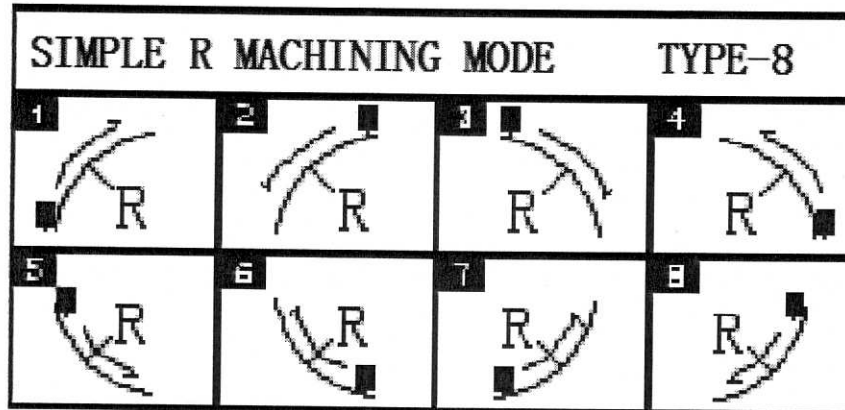
The arc is processed

Function: TECH-2i English is pointed out: Obvious system of number provides simple

arc treating , makes stick treating can be equal in the amounts processing out ,controlling every time conveniently rapidly on the milling machine being applied or used universally to cut an arc; The arc controlling the arc level and smooth degree , cutting amounts stop processing increasingly, is getting shorter as level and smooth , cutting amounts to feel rougher , as big , processing an arc more processing time more.

: Process XZ , YZ , flat surface

YZ , have what the arc processes XZ , shows to process way 8 kinds face to face , pursue as follows



May use the flat base milling cutter or the arc milling cutter when processing;
When using the flat base treating arc, the knife sets up from the diameter
for 0.000

B: Process XY Floor

When processing Floor, also be just like eight kinds treating way, one's
duty arc processes and processes for the arc the cutter and
perpendicularity , every one kind of way processing face; Need to choose
a knife when compensating way , treating Floor , therefore when processing
Floor, disregarding round-headed knife be still closely cropped hair knife,
according to that actual value interposes the cutter diameter.

rc treating needs to import the following parameter
Choose treating face
Choose the treating pattern
The inner/ outside arc processes choice (XY face is proper)
Wait for the radius processing an arc
Cutter diameter
Strong point processing an arc every time

Example 1: Need to process if pursuing 900 arc B of what be shown, start
treating , B is over , the parameter interposes from as follows:

Process face: XY

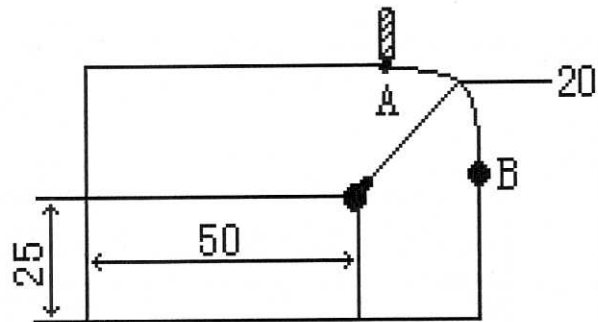
R processes a pattern: 3

The arc processes the outside

Radius: 20mm

Cutter diameter: 6mm

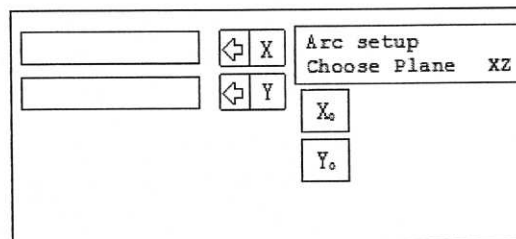
Depth of cut: 0.5mm



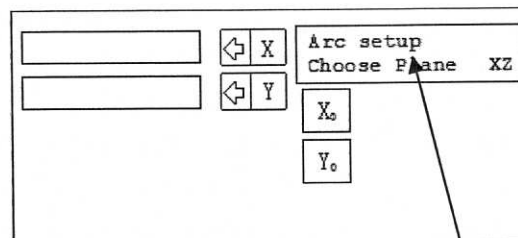
Handle a step:

- 1、Wave the machine tool working table , lathe tool alignment burn , zeta-axis clears

- 2、Enter arc treating





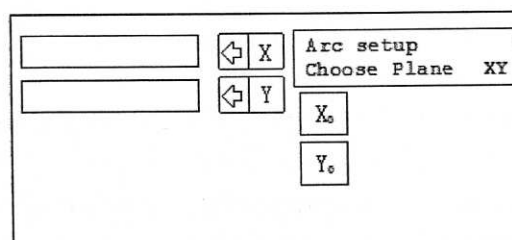
Press  Enter arc treating





Treating flat surface that the plain interposes



- 3、Choose treating face



- 4、 Press   Choose XY face , enter the pattern choosing treating









Handle a step

Remarks: Press   Choose XY face



Press   Choose YZ face







Press   Choose XZ face (Press X axis choose XZ face)

5. Choose the treating form

<input type="text"/>	 	Arc setup process mode 1-8
<input type="text" value="2"/>	 	
		
		


Subsidiary Windows demonstrates "the treating pattern"


1-8" Press   The arc processes or the outside arc

<input type="text"/>	 	Arc setup process mode 1-8
<input type="text" value="3"/>	 	
		
		


processes the inner choosing the choice processing form entrance







6. The arc processes the outside choosing an inner

Press  The arc choosing the outside is processed

Press  The arc choosing an inner is processed




Remarks: Choose the pattern interposing in the first place press 

If not press 

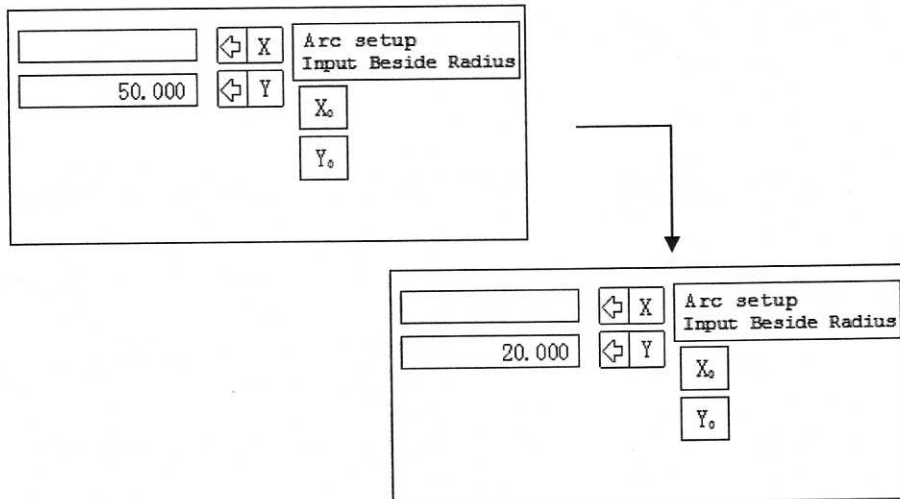
<input type="text"/>	 	Arc setup out doing
<input type="text" value="3"/>	 	
		
		

7. Import the arc radius

The window subsidiary Windows is demonstrated "importing the arc radius Y axis, please" demonstrates the arc radius interposing in the first place;

Press    Be completed importing a radius

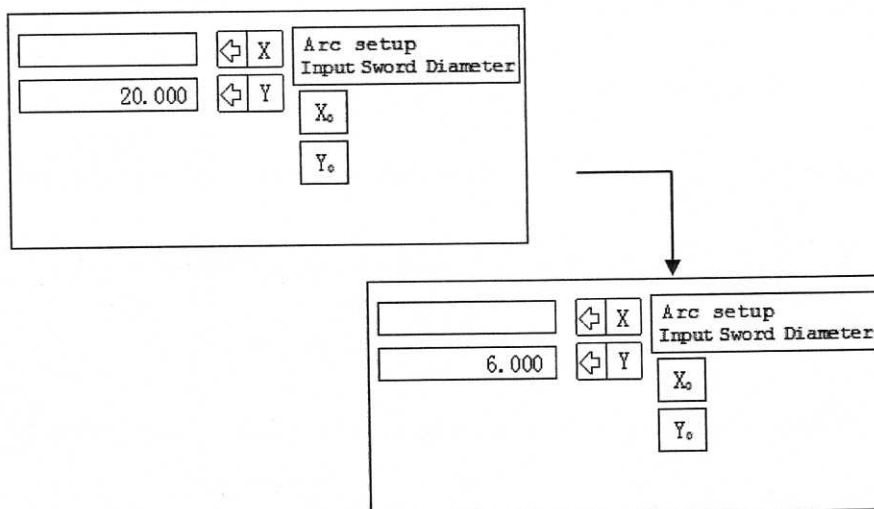
Handle a step



8. Import the cutter diameter

The window subsidiary Windows is demonstrated "importing the cutter diameter Y axis, please" demonstrates the cutter diameter interposing in the first place;

Press **6** **ent** Be completed importing the cutter diameter



9. Import the strong point processing an arc every time Windows subsidiary

Windows is demonstrated "importing long step-by-step arc amounts Y, please"

demonstrates it turns out that the treating arc at every time interposing

is long; Press **0** **.** **5** **ent** Import the strong point

processing an arc every time , enter the treating arc


Handle a step

	↩ X	Arc setup Input ARC Stepping
6.000	↩ Y	
		X ₀
		Y ₀

	↩ X	Arc setup Input ARC Stepping
0.500	↩ Y	
		X ₀
		Y ₀


10. Process an arc


Subsidiary Windows demonstrates "1 treating processing a serial number" looking at a window till X, Y Windows shows when value is "0.000", the first treating


are completed, and press  The display beginning to process the operation second repeating last time, processing till auxiliary looks at window "processes a serial number 54 "

0.000	↩ X	Circle process Sequence NO: 1
0.000	↩ Y	
		X ₀
		Y ₀

- 23.000	↩ X	Circle process Sequence NO: 73
- 23.000	↩ Y	
		X ₀
		Y ₀

11. Treating is finished press  exit

Remarks: In the process of arc treating, Handle person can press  Leave temporarily, The R function returns to regular X, Y, zeta-axis show,

Press  Return to an arc process a function

Example 2: The arc processes from E burns, the parameter interposes treating if pursuing what be shown FE Duan as follows

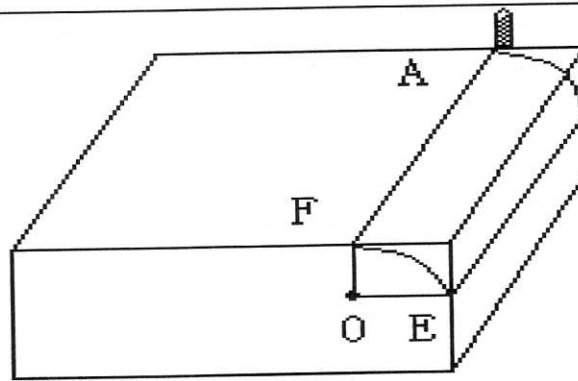
Process a flat surface: XZ

Process a pattern: 3

rc radius: 20mm


Cutter diameter: 0



Strong point processing
an arc every time: 0.5mm






Handle a step:

1. Wave the machine tool working table, selects knife alignment , zeta-axis
clears

2. Enter arc treating, Press  Enter arc treating



0.000		X	ABS R: 0.000
0.000		Y	POL A: 0°00'00"
			X ₀
			Y ₀

3. Choose treating face, Press  X XZ choosing enters the treating
pattern face to face



		X	Arc setup
		Y	Choose Plane XZ
			X ₀
			Y ₀

4. Choose the treating pattern

Subsidiary Windows demonstrates "the treating pattern 1-8 ", Y axis

display window display before process a pattern press   Choose

the entrance processing a pattern

		X	Arc setup
1		Y	process mode 1-8
			X ₀
			Y ₀

Turn out to be the treating pattern interposing

Handle a step

	← X	Arc setup process mode 1-8
3	← Y	
	X ₀	
		Y ₀

5. Import the arc radius

Windows subsidiary Windows is demonstrated "importing arc radius Y, please" demonstrates the radius interposing in the first place, and press

2 **0** **ent**

Be completed importing the arc radius

	← X	Arc setup Input Beside Radius
30.000	← Y	
	X ₀	
		Y ₀

Turn out to be the radius interposing

	← X	Arc setup Input Sword Diameter
20.000	← Y	
	X ₀	
		Y ₀

6. Import the cutter diameter

Subsidiary Windows display "imports the cutter diameter, please", Y Windows demonstrates the cutter diameter interposing in the first place, and press

0 **ent**

Be completed importing the cutter diameter

	← X	Arc setup Input Sword Diameter
5.000	← Y	
	X ₀	
		Y ₀

Cutter diameter that the plain interposes

	← X	Arc setup Input Sword Diameter
0.000	← Y	
	X ₀	
		Y ₀

7. Import step-by-step amounts of Z-axis

Handle a step

Subsidiary Windows demonstrates it turns out that the treating arc at every time interposing is long, and press **0** **.** **5** **ent** Import

the strong point processing an arc every time , enter arc treating

	← X	Arc setup Input Z Stepping
0.600	← Y	
		X ₀
		Y ₀

The arc that the plain interposes is long

	← X	Arc setup Input Z Stepping
0.500	← Y	
		X ₀
		Y ₀

Process an arc:

Z-axis that the data expression that subsidiary Windows demonstrates processes

currently when stopping processing simulates if altitude, pursuing what be shown.

The flat surface processing XZ, X Windows demonstrate zeta-axis location, think that X display is that "0.000" o'clock is finished in X direction treating, Y Windows first two demonstrate the crescent-shaped knife with long handle ring number of turns, last four demonstrates the crescent-shaped knife with long handle ring graduation number, indicate that as for processing point currently, process till being circle graduation's turn to be OK.

If the flat surface processing YZ, Y Windows demonstrate Y axis location, think that the Y axis shows "0.000" o'clock, is in Y

Direction processes the crescent-shaped knife with long handle ring number of turns being finished, showing X Windows the first two, last four demonstrates the crescent-shaped knife with long handle ring graduation number.

The institute shows as follows:

- 9.680	← X	Sim Z: 2.500 Sequence NO: 6
01 0.000	← Y	
		X ₀
		Y ₀



Smooth arc processing to enter the following parameters

Processing of choice

Select processing mode

Inner / outer smooth arc processing options (X, Y-specific)

X, Y-axis coordinates of the location of origin

Smooth radius to be processed

Tool diameter

Length of each step of processing

Starting point of view

End perspective

Example 1:

Processing side: XY

Processing of rc

X, Y-axis origin coordinates: (20, 30)

Radius: 25 mm

Tool diameter: 20 mm

Stepping in: 0.5 mm

Starting point of view: 00

The termination point of view: 3600

Smooth arc processing steps:

1, rocking machine table, tool aimed at the smooth processing takes place starting point arc, each axis cleared.

Handle a step

0.000	↩ X	ABS R: 0.000
0.000	↩ Y	POL A: 0°00'00"
		X ₀
		Y ₀

2, press **AUTO R** keys to enter smooth arc processing functions.

	↩ X	SmoothR setup
	↩ Y	choosed plane: XY
		X ₀
		Y ₀

3, planar processing options, according to **↩ X** button or **↩ Y** key options. according to two axes of the three **↩ X** keys to select XY, XZ two planar processing.

4, by **↓**, and then choose from within the arc arc processing or processing.

	↩ X	SmoothR setup
	↩ Y	out doing
		X ₀
		Y ₀

5, by **+** key for the selection of rc processing, according to the circular **-** key for processing. If you choose to face ZX, YZ plane, the direct input of the coordinates of the origin location of the origin of the XY coordinates position refers to the processing smooth arc relative to the center position by-0.1 **ent** key.

6, input X axis coordinates, by **ent** key; input Y-axis coordinate value by **ent** key.

	↩ X	SmoothR setup
20.000	↩ Y	Input X-axis
		X ₀
		Y ₀

Handle a step

	X	SmoothR setup Input Y-axis
30.000	Y	
		X ₀
		Y ₀

7, the importation of smooth radius **2** **5** **ent**

	X	SmoothR setup Input Arc Radius
5.000	Y	
		X ₀
		Y ₀

radius of the original settings

	X	SmoothR setup Input Arc Radius
25.000	Y	
		X ₀
		Y ₀

8, input tool diameter **2** **0** **ent**

	X	SmoothR setup Input Sword diam
10.000	Y	
		X ₀
		Y ₀

Tool diameter of the original settings

	X	SmoothR setup Input Sword diam
20.000	Y	
		X ₀
		Y ₀

9, Step length of input **0** **.** **5** **ent**

	X	SmoothR setup Input Z Stepping
4.000	Y	
		X ₀
		Y ₀

Handle a step

Stepping of the original settings

	X	SmoothR setup Input Z Stepping
0.500	Y	
		X ₀
		Y ₀

10, starting point of importation

0 ent

	X	SmoothR setup Input Incept Angle
5.000	Y	
		X ₀
		Y ₀

The starting point of the original settings

	X	SmoothR setup Input Incept Angle
0.000	Y	
		X ₀
		Y ₀

11, the end point of importation

3 0 0 ent

	X	SmoothR setup Input The End Angle
320.000	Y	
		X ₀
		Y ₀

The termination point of the original settings

	X	SmoothR setup Input The End Angle
300.000	Y	
		X ₀
		Y ₀

12, the word of the show such as m

-	55.000		X	Circle process Sequence NO: 1
-	30.000		Y	
<div>X₀</div> <div>Y₀</div>				

13, will show zero-axis machine tools. R which is the starting point for processing. according to a processing show. Machine Tool Show then moved to zero axis. Repeat operations to complete all processing is completed processing.



Slant processing

Features: TECH-2i English tips to provide a significant number of processing automatically calculate slope processing function, the operator can type the following parameters

Plane processing options (XY, YZ, for the slant processing XZ plane)

Slant angle (in the XY plane and the X-axis slant that positive angle in the YZ plane with the Y-axis slant that positive angle)

		X	Bevel Setup Input ARC Angle.....
0.000		Y	
<div>X₀</div> <div>Y₀</div>			

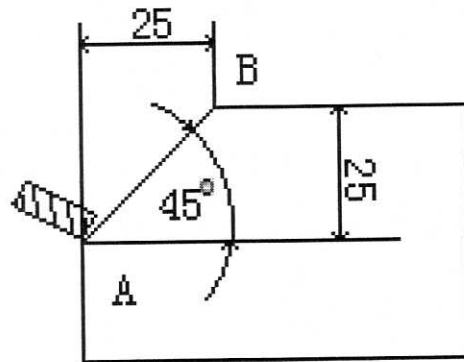
fter several significant input parameters Table hypotenuse will be automatically calculate the location of each point, the operator by or option processing serial number, and then turning tool processing to the two axes of the plane showed that the value of 0.000 for all locations

Example: processing as shown slant B, parameter settings are as follows

Plane Processing: XZ

Slant angle: 450

Each processing slant length: 1.2 mm



Handle a step

1, machine tool spindle tilt table 450, rocking machine processing workstations at the slant- start, the X-axis cleared, the Z-axis cleared. In the normal show,

press

<input type="text" value="0.000"/>	<input type="button" value="← X"/>	ABS R: 0.000
<input type="text" value="0.000"/>	<input type="button" value="← Y"/>	POL A: 0°00'00"
	<input type="button" value="X₀"/>	
	<input type="button" value="Y₀"/>	

2, by the processing function will be inclined to enter parameter input,

by direct access to the state processing

<input type="text"/>	<input type="button" value="← X"/>	Bevel Setup
<input type="text"/>	<input type="button" value="← Y"/>	Choose Plane XY
	<input type="button" value="X₀"/>	
	<input type="button" value="Y₀"/>	

3, the processing of choice

by and then choose XZ plane into the next step "input bevel angle"

Note: XY plane by options

YZ plane by choice

Select XZ plane by

Handle a step

4, slope angle input

Deputy window display "Please enter slant angle of the" Y-axis settings of the original slant angle. Followed button. **4** **5** **ent**

The slant angle of the original settings

5, each input processing slant length

Deputy window display the "Z-axis stepper type of" Y-axis stepper set by the original volume. Followed by **1** **.** **2** **ent**

Stepping of the original settings



6, processing slant


Handle a step



Deputy window display the "3.600" to the X-axis lathe tool processing, and Z-axis showed that 1.100 finished processing the first point, followed by the processing



of some

7, by  or  points in the inter-switch

8, processing has been completed, according to the state show that  to return to normal

Note: For two-axis digital form, no Z-axis installation, use  or  to the Z-axis position in the simulation

step


1, set in the internal functions of the Z-axis settings of Central Boring

2, before the first workpiece machining at the slant of the Z-axis position of the starting point, then Z-axis location is set to "0.000"

3, in the process, the Z-axis of window display a high degree of simulation, that the current cease processing laboratories, Z-axis height, if processing XZ plane, the X-axis shows that X-axis position, when X shown as "0.000", X direction processing finished processing, and Y-axis shows that the two previous ring a few boring, boring after four Central show that the scale of the current processing, processing of the circle to the calibration can be

4, if the processing YZ plane, the Y-axis shows that Y-axis position, when Y shown as "0.000", in the Y-axis direction of processing completed, the two previous X-axis shows that ring a few boring, boring show after four Central calibration few, said that for the current processing, processing can scale to the ring

In slant process, the operator can temporarily left by  slope processing function to return to normal

XYZ-axis, to check a few boxes marked the calculation of the position,  and then returned to slant processing functions



The basic parameter settings

plus or minus direction switch

Features: You can fine-tuning the direction of the axis of plus or minus




cases by entering key parameter settings



According to the  "X DIR +", and then switch the direction of 




can choose according to X-axis or Y axis, switching direction

According to exit 

Second, SDM coordinates input mode switch

After entering the basic parameters, according to choose to go to  

"SDM. MODE. 0" click  switch.




When SDM model "0", input data for the actual value


When SDM model for the "1", contrary to input data for a few


Third, set up in Central Boring



Boring ring of the main function in the R and slant processing, the principal of the two-axis digital simulation settings Z-axis Z-axis height of boring ring

Z-axis milling machine with boring ring of a circle of 5 mm according to

 →  → 

1、 according to Deputy window  until a "Z DI L"

2、 the main window by  Y-axis settings of the original Z-axis of Central Boring, vice window display the "Z DI L"

3、 by  

Note: If the input error may withdraw from the  enter it again

5.000

← X

Z DIAL

← Y

4. When setup completed, press CE to quit

Advanced users

senior user settings

1, according to S entered the parameter settings, according to choose

↑ "SET P R "

2, and then the right of the ent metres character display window will show "P SWORD"

3, press 3 2 1 1

Second, the resolution settings

After entering advanced users based on user configuration requirements from the production home settings, users must not lose chaos on chaos, otherwise prevented normal use. Functional disorder caused by the software must be sent back to the manufacturers to set up, otherwise no warranty.

1, in the senior user settings, the characters of the display window metres tips

on X. Y. RES - ent all resolution settings, and our digital form can

be carried out separately for each axis resolution settings.

2, when entering resolution settings, the X, Y-axis show such as "0.00500." t

by ← X, the X-axis display window flashes on ↑ or ↓ bond cycle

choose a different resolution, and then selected the current Resolution ent.

Showing no window immediately, it means that the action has been completed.

Note: If you want to set the two-axis resolution, select a shaft after not

directly by ent, but that on-demand changes in the resolution of several key axis of the home such as ← Y.

Advanced users

Three, linear compensation

Features: TECH-2i English tips provide linear compensation, in accordance with the actual value of the processing and observation of the error between the value of compensation amendments.

Example: access to advanced users, according to choose to go to

"X. LIN. COMP" and then click compensation after the axial under standard value, observation error correction value compensation, in accordance with the right features tips window English "ST ND RD", then the right input

window displays "OBSERVED", enter the observations you want and then click

TECH-2i English tips digital system will automatically compensation, the final withdrawal by

Fourth, the total system

Showing access to the system - the total by bond, English Show: STR RT... W IT... M waiting for a few seconds after the show revert to the word "CLR SDM," said that at this time the total-system has been completed.

Fault Analysis and Processing

Fault	analyze the causes	pproach
Do not show	<p>1, missed good power</p> <p>2, a tributary of 110 V power supply voltage is not within the scope of $\sim 220V$</p>	<p>1, power line inspection plug and socket Interpolation is strong, whether good contact.</p> <p>2, inspection of a significant form of insurance is good.</p> <p>3, tests whether the input voltage 110 V $\sim 220V$ range.</p>
Shell Charged	<p>1, grounding bad</p> <p>2, 220 V power leakage</p>	<p>1, machine tool bed with a few significant leader - Connectivity, and power requirements of the earth The same.</p> <p>2, machine Chuangjiao such as plastic mats, the ground power supply must be linked to good ground, or else they affect low-pressure sensors operating power inconvenient.</p> <p>3, 220 V power leakage, speed electrician requested formal inspection, there are still problems such as Please contact with the manufacturers of the service.</p> <p>4, please do not access FireWire 380 V Power Zone, to avoid burn a few significant power or form factors of insecurity, affecting the operator's personal safety.</p>

Fault	analyze the causes	approach
X, Y window display confusion, numerical No laws, no	Table may be in power a few bad contact, affected by the power disruption	<p>1, a few tables in the power-down and then re-opened, a few significant forms can be automatically scans of their own-one.</p> <p>2, if the first step is not operating the trip, please refer to the specification of-way.</p> <p>3, if the next step is still unable to rule out the possibility of the service, please contact manufacturers.</p>
Table axis of a significant number do not count	<p>1, grating-foot table with several significant contact is good.</p> <p>2, no grating signal output device.</p> <p>3, check optical grating-foot body, feet first is the normal installation, whether users limit themselves demolished, rendering the first reading by ultra-foot trip Penghuai body.</p> <p>4, a few tables in the axis counting problems.</p>	<p>another axis grating and see whether they can change their normal count, if transplanted to normal after a device is the root counting device malfunction. Customers are requested to speed the above issues and service companies associated with the Department.</p>

<p>Table count several significant errors that distance and the actual distance inconsistent</p>	<p>1, machine tool accuracy Guide bad.</p> <p>2, machine tool running too fast.</p> <p>3, sub-grating device installation requirements of the parallel device did not adjust well, whether on Connecting Plate ministries firmly installed.</p> <p>4, the grating set foot resolution inconsistent with the actual resolution.</p> <p>5, linear error compensation value is not set up correctly.</p> <p>6, grating bad feet, and missed a few.</p>	<p>1, maintenance or transfer Machine Tool Guide is space.</p> <p>2, reducing the speed.</p> <p>3, reload grating feet firmly ministries to install on Connecting Plate.</p> <p>4, set the correct resolution.</p> <p>5, set the correct value of the linear error compensation.</p> <p>6, repair or replacement of optical grating.</p>
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(Back cover)