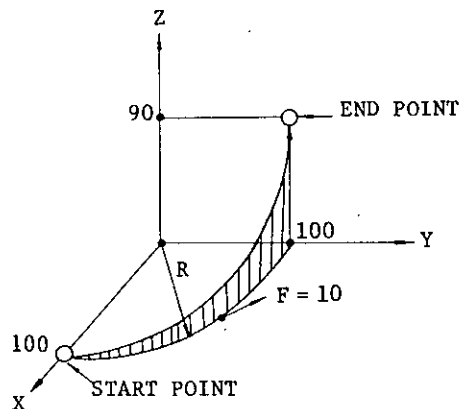


Command format

- (a) For XY plane G17 {G02
G03} X... Y... {R...
I... J...} Z(α)... F... ;
- (b) For ZX plane G18 {G02
G03} Z... X... {R...
K... I...} Y(α)... F... ;
- (c) For YZ plane G19 {G02
G03} Y... Z... {R...
J... K...} X(α)... F... ;
- (d) For Xα plane G17 {G02
G03} X... α... {R...
I... J...} Z... F... ;
- (e) For Zα plane G18 {G02
G03} Z... α... {R...
K... I...} Y... F... ;
- (f) For Yα plane G19 {G02
G03} Y... α... {R...
J... K...} X... F... ;

Where α is one of the linear 4th axes U, V, or W. If no 4th axis is programmed in (d), (e), and (f), they are regarded as equal to (a), (b) and (c).

EXAMPLE



G17 G03 X0 Y100. R100. Z90. F10. ;

Fig. 2.18

NOTES:

- The circular arc should be within 360°.
- As long as above note (a) is satisfied, the start and end points can be taken at any time.
- The feedrate F means the tangential speed on the plane of circular interpolation. Therefore, the speed (F') in the direction of linear interpolation is as follows.

$$F' = F \times \frac{(\text{Length covered by linear interpolation})}{(\text{Length of circular path})}$$

- Tool radius compensation C⁺ can be applied only to the circular path on the plane of circular interpolation.

2.9.6 DWELL (G04)

G04 P... ;

This command interrupts feed for the length of time designated by the address P.

Dwell is programmed as an independent block.

The maximum length of time which can be designated with address P is as follows.

Format	Dwell time (P programmable range)
P53	0 - 99999.999 sec

The value does not depend on metric/inch input or metric/inch output.

EXAMPLE

G04 P2500 ;

Dwell time: 2.5 sec.

Two types of dwell can be selected by parameter:

Dwell when the specified value in the command block before the dwell block is identified by lag pulses of servo, or dwell on completion of pulse distribution.

2.9.7 EXACT STOP (G09, G61, G64)

- Exact stop (G09)

When a block containing G09 is executed, the program advances to the next block after completing a block in the Error Detect On mode (Note a). This function is used when sharp corners are desired. G09 is non-modal, and is effective only in the block in which it is contained.