

Fig. 2.20

Tool path

G12: ①→②→③→④→⑤→⑥

G13: ⑥→⑤→④→③→②→①

(D) represents a set value of tool radius compensation.

G12: Clockwise (CW)

G13: Counterclockwise (CCW)

I: Radius of finished circle
(incremental value with sign)

R: Rapid traverse section
(incremental value with sign)

D: Tool radius compensation No.

F: Cutting feed rate

- Automatic calculation of rapid traverse section

G12(G13) I... J... D... F... ;

With this command, when depth of cut (incremental) is designated by numerals following an address character J in place of R, the tool rapid traverse section within which the tool can move at rapid traverse rate without making contact with the stock is calculated automatically. J is programmed without a plus or minus sign.

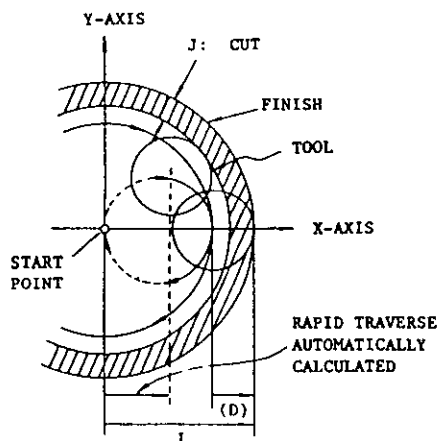


Fig. 2.21

- Commanding repeated circle designation

G12(G13) I... D... L... F... ;

With this command, the circular bore surface can be executed L times.

- Commanding spiral circle Q, K

G12(G13) I... D... K... Q... F... ;

With this command, the tool is moved along a spiral before finally finishing a circular hole, as shown below. For the sake of simplification, the diagram shows as if the tool has a zero radius ($D = 0$). Q (radius increment) must be programmed without sign.

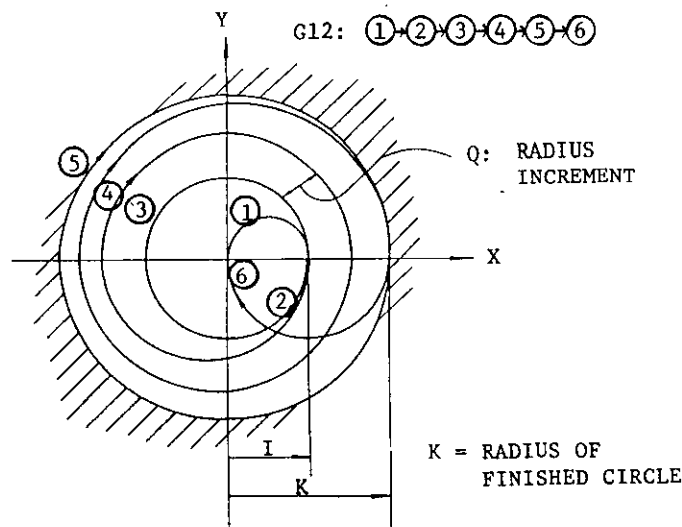


Fig. 2.22

NOTES:

Tool rapid traverse section can be set at $\frac{n}{10} \cdot i$ ($n = 0, 1, 2 \dots 10$) pitch for a returning semi-circle of circle bore.