

- Block commands G51 I... J... K... P... ; and G50 ; should be programmed independently. If X, Y and Z commands coincide in the same block, an alarm will occur.
- When the scale ratio of one or more is programmed, the resultant command value should not exceed the maximum.
- Scale ratio 0 cannot be commanded. If commanded, an alarm will occur.
- Scaling is not effective on compensation value.
- Canned cycles cannot be executed with scaling commanded on Z-axis. If scaling is commanded on Z-axis during canned cycle execution, an alarm will occur.
- When operation is reset (reset pushbutton, M02, M30 command), scaling is turned off.
- Display of command and position will show the values of command and position after scaling is finished.
- The following Gcodes cannot be commanded during scaling. If commanded, an alarm will occur.  
G28, G29, G30, G31, G36, G37, G38, G53, G92
- Scaling (G51) command cannot be given during tool radius compensation C.
- Alarm codes for scaling are listed below.

#### EXAMPLE

Reduction by half in respect with the point (40, 30) specified as the center.

- |   |                          |   |
|---|--------------------------|---|
| ① | N100 G92 X0 Y0 Z0 ;      |   |
| ② | N101 G51 I40. J30. P 0.5 | ... Center of 1/2 scaled contour (40, 30) |
| ③ | N102 G90 G00 X10. Y20. ; | } Scaling range                           |
| ④ | N103 G01 Y50. F1000 ;    |   |
| ⑤ | N104 G02 X50. I20. ;     |   |
| ⑥ | N105 G01 X90. ;          |   |
| ⑦ | N106 Y10. ;              |   |
| ⑧ | N107 X50. ;              |   |
| ⑨ | N108 X0 Y35. ;           |   |
| ⑩ | N109 G50 ;               | ... Scaling cancel                        |
| ⑪ | N110 G00 X0 Y0 ;         |   |

Fig. 2.72

