

### 2.9.31 PROGRAMMING OF ABSOLUTE ZERO POINT (G92) (CONT'D)

- The programmed absolute zero point is not affected by reset operation. Perform any of the following operations for resetting the absolute zero point.
  1. Use ORG key (see 4.1.9).
  2. Write G92 X0 Y0 Z0 α<sup>†</sup> 0 ; in MD1 mode, and then execute.
  3. Turn the power off and on again.

### 2.9.32 FEED FUNCTION DESIGNATION (G94, G95)<sup>†</sup>

These G codes are for selecting whether to designate the feed in mm/min. or in mm/rev. prior to programming the F code for feed, in the case where the control is equipped with feed per revolution<sup>†</sup> function.

- When G94 ; is programmed, the F code programmed thereafter is executed in mm/min. (or inch/min.<sup>†</sup>, deg/min.<sup>†</sup>).
- When G95 ; is programmed, the F code programmed thereafter is executed in mm/rev. or inch/rev. (deg/rev.<sup>†</sup>).
- G94, G95 are modal G codes of F group, and G94 is selected when the power is turned on.
- When switching between G94 and G95 is made, the previously programmed F code is cancelled. Therefore, a new F code must be programmed.

### 2.9.33 HIGH-SPEED CUTTING FEATURE (G100 THROUGH G102)<sup>†</sup>

In this feature, a division in a part program is designated by a G code and the data processing of the designated division is performed before entering the automatic operation mode. This feature, therefore, eliminates the interblock stoppage time due to compensation calculation, providing an uninterrupted machining operation if short-distance blocks are consecutively specified. This feature is of two types: "sequential processing mode" and "memory processing mode," which may be selected by specifying one of the G codes shown below:

High Speed Cutting G codes	
G code	Meaning
G100	High-speed cutting cancel
G101	High-speed cutting in sequential processing mode ON
G102	High-speed cutting in memory processing mode ON

### 2.9.33.1 High Speed Cutting in Sequential Processing Mode (G101)

```
G101 ;
:
:
G100 ;
```

Every time the above is specified, the data processing and data registration of this division are performed. The automatic operation is followed by the registered data. The above command may be used repeatedly in one part program. However, the number of blocks in a program between G101; and G100 ; is limited as shown in the table below. The part program memory capacity is also limited to 1/2 as shown in the same table.

No.	Part Program Capacity in Usual Operation	High-Speed Cutting Function ON	
		Part Program Memory Capacity	No. of Allowable Blocks for High-Speed Cutting
1	40 m	20 m	480 blocks
2	80 m	40 m	672 blocks
3	150 m	90 m	1504 blocks
4	320 m	150 m	4064 blocks

### 2.9.33.1 High-Speed Cutting in Memory Processing Mode (G102)

```
G102 P... ;
:
:
:
G100 ;
```

REGISTRATION NO. OF  
HIGH SPEED CUTTING  
PROGRAM

By the above command, data processing and data registration are first performed then the automatic operation is performed using the registered data. Thereafter, when the same command given, the automatic operation is immediately performed using the registered data. In address P, designate the registration number of the program to be registered in memory processing mode. The registration number is of a maximum of 4 digits (P0 through P9999). When P designation is omitted, P0000 is assumed. This P designation allows the registration of a maximum of 20 high-speed cutting programs.

Note: The "registration number" by P designation has no relationship with the "program number" by O designation. Hence, the registration number is not subjected to the address search operation. The contents of the program which was data-processed and registered cannot be displayed on the CRT screen. The number of blocks in one part program between G102 ; and G100 and the limits to the part program memory capacity are as shown in Table 2.9.32.2. The total number of blocks in the maximum of 20 registered high-speed cutting programs should not exceed the value allowed in Table 2.9.33.2.