

- The parameter numbers and the setting numbers of these prohibited areas are as follows.

Table 2.23

		X	Y	Z	Division
1st prohibited area	A point	#6600	#6601	#6602	Parameter
	B point	#6606	#6607	#6608	
2nd prohibited area	C point	#6510	#6511	#6512	Setting
	D point	#6513	#6514	#6515	

- The parameters for specifying the inside and the outside of the 2nd prohibited area are as follows.

#6007D0	Meaning
"0"	Inside prohibition
"1"	Outside prohibition

- The 2nd prohibited area checking function can also be turned on and off with the following setting number.

#6001D1	Meaning
"0"	2nd prohibited area check; off
"1"	2nd prohibited area check; on

NOTES:

- The 1st and the 2nd prohibited area can be specified overlapping each other.
- Boundary lines are included in the prohibited areas.
- All the prohibited areas become effective after a manual return to reference point or a return to reference point by G28 after turning on of the power supply.
- If the tool is in the prohibited area at the time when the prohibited area becomes effective, this is immediately regarded as an error. In this case, turn off the 2nd prohibited area by the setting of the setting number, and either rewrite the data or move the tool out of the prohibited area manually.

- If an alarm state is created by the entry of the tool into the prohibited area, the tool can move only in the returning direction.
- No stored stroke limit can be set to the 4th axis.
- The stored stroke limit checking function may selectively be used or disused during a machine lock operation by the setting of the setting #6001D5.

2.9.13 REFERENCE POINT CHECK (G27)[†]

This function is for checking the correct return of the tool to the reference point after performing a cycle of operation in accordance with a program which starts at the reference point and ends at the reference point.

G27 X... Y... Z... (α^+ ...);

With this command, the tool moves towards the specified position along the three axes (4 axes[†]) simultaneously but independently, and after the arrival at the specified point, the point is checked for the conformity to the reference point. If any of the axes is omitted in the command, the tool does not move in that axis and no check is made in that axis.

If the point is in conformity with the reference point, the reference point return lamp lights. If the tool is correctly in the reference point in all the axes, automatic operation is performed further, but if the tool is not in the reference point even in one axis, this is regarded as an error (alarm 241 - 244 display), and the automatic operation is interrupted. (Cycle start lamp goes off.)

If G27 is commanded in the tool offset mode, the tool return point is also offset. Cancel the tool offset mode when commanding G27.