



HM 63

HORIZONTAL MACHINING CENTER

OPERATION MANUAL

CE

Table of Contents

A-1 Safety

(1) Specifications

1.1	Machine specifications	1-1
1.2	Dimensions	1-12
1.3	Installation drawing	1-13
1.4	Major components	1-14
1.5	Standard parts	1-15

(2) Operation

2.1	Main operation panel	2-1
2.2	Manual pulse generator	2-2
2.3	Operation	2-3
2.4	Auxiliary operation panel of APC	2-16
2.5	Alarm list	2-19
2.6	Automatic operation	2-26
2.7	Auxiliary functions	2-29
2.8	Manual operation preparation	2-30
2.9	Working range (Pallet table)	2-35
2.10	Maximum range of work and fixture	2-36
2.11	Coolant system	2-38
2.12	Chip conveyor	2-41
2.13	NC rotary table	2-42
2.14	Special specifications	2-43

(3) ATC Manual

3.1	Tool arrangement	3-1
3.2	Tool shank, pull stud dimensions	3-3
3.3	ATC tool dimensions	3-4
3.4	ATC operating sequence	3-8

(4) APC Manual

4.1	APC manual outline	4-1
4.2	Initial operation of continuous APC operation	4-2
4.3	Precautions	4-3
4.4	APC operating sequence	4-4
4.5	Pallet dimensions	4-5

(5) Appendix

5.1	Hydraulic circuit diagram	5-1
5.2	Pneumatic circuit diagram	5-2
5.3	Hydraulic/pneumatic solenoid valve layout and functions	5-3
5.4	Drive system skeleton	5-5
5.5	Spindle drive system	5-6
5.6	Table index	5-7
5.7	Magazine	5-10
5.8	Maximum size of work	5-13
5.9	Auxiliary functions	5-14

** Machine undergoes constant improvement without prior notice and there may be slight difference between actual machines and the contents of this manual.