

INSTRUCTION MANUAL

SG M-H

INJECTION MOLDING MACHINE

SG 50•75•100•125•180•260•350

TABLE OF CONTENTS

Chapter 1 SUMMARY

Main Specifications	1 - 1
Identification of Molding Machine Components	1 - 3
Operation Panel Identification	1 - 4
Arrangement of Encoders/Limit Switches/Proximity Switches	1 - 5

Chapter 2 PREPARATION FOR OPERATION

For Your Safety	2 - 1
Preparation and Checking before Operation	2 - 2
1. Charging the Accumulator with Nitrogen Gas	2 - 4
2. Checking the Hydraulic Tank and Lubricating Oil Tank for Proper Oil Level	2 - 7
3. Feeding the Hydraulic Oil Cooling Water	2 - 7
4. Feeding of Water to Water Jacket	2 - 8
5. Resetting the Emergency Stop Button	2 - 9
6. Main Power Supply and Control Power Supply	2 - 9
7, 8. Hydraulic Oil Pump Motor ON/OFF	2 - 10
9. Supplying the Heater Power/Heating up the Heating Cylinder	2 - 11
10. Air Bleeding from Hydraulic System	2 - 12
11. Mold Clamping Safety System (Safety door interlocking function)	2 - 13
12. Injection Unit Safety Device	2 - 15

Chapter 3 OPERATION

Effects of Mode Selection	3 - 1
Starting of Motor and Heater	3 - 2
Operations in Standby Mode	3 - 3
Operations in Manual Mode	3 - 5
Operation in OFF Mode	3 - 9
Operations in Semi-Automatic Mode	3 - 10
Operations in Automatic Mode	3 - 12

Chapter 4 MOLDING PROGRAM (SGM-H)

Operation/Programming Panel Identification	4 - 1
Various LEDs / Space Card Slot	4 - 2
Emergency Stop Button & Display	4 - 3
Identificatin of Screen Setting Keys	4 - 4
Programming Method	4 - 5
Examples of Displayed Screen	4 - 7
SET UP Screen	4 - 22
STANDBY Screen	4 - 25
CLAMP Screen	4 - 27
EJECTOR Screen	4 - 31
INJECTION Screen	4 - 34
✕ INJECTION Screen (2V- 2P)	4 - 37
INJECTION Screen (5V-4P)	4 - 39
INJ. DETAIL Screen	4 - 41
TEMP. Screen	4 - 43
✕ TEMP: MOLD Screen	4 - 47
CUTOUT Screen	4 - 48
✕ OUTLINE Screen (2V-2P)	4 - 51
✕ OUTLINE Screen (5V-4P)	4 - 52
✕ ANALYSIS Screen	4 - 53
SUPERVI. Screen	4 - 54
Q' LTY CONT Screen	4 - 58
Q' : DETAIL Screen (Detail of supervision)	4 - 60
PROD CONT Screen	4 - 62
STOKER Screen	4 - 64
STORAGE Screen	4 - 65
AUTO PROG. Screen	4 - 67
SET. LIST Screen	4 - 69
AUTO START Screen	4 - 71
MAINT. Screen	4 - 73
ABNORMAL Screen	4 - 75
SYSTEM Screen	4 - 84
I/O CHECK Screen	4 - 87

Chapter 5 MOLDING

Checking before Operation/Starting	5 - 1
Mounting the Mold	5 - 4
Symptoms and Causes of Main Molding Defects	5 - 20
Checking at the End of Molding Operation/Stopping the Machine	5 - 21

**Chapter 6
FUNCTION OF
INDIVIDUAL
UNITS**

Hydraulics	6 - 1
Mold-Clamping Unit	6 - 2
Hydraulic Ejector (b)	6 - 6
Mold-Clamping Force Adjuster	6 - 8
Central Lubricating System	6 - 9
Takeout Robot Connector	6 - 10
Injection and Plasticizing Unit (H Type)	6 - 14

**Chapter 7
MAINTENANCE**

Daily Inspection	7 - 1
Every Month Inspection	7 - 18
Every 3 Months Inspection	7 - 22
Every 6 Months Inspection	7 - 28
Every Year Inspection	7 - 35
Disassembling and Reassembling Screw Assembly	7 - 42
Nozzle Center Adjustment	7 - 53
Replacing the Fuses	7 - 55
Replacing the Battery	7 - 60

**Chapter 8
OPTIONAL
ACCESSORIES**

The following provides useful data well fitted to customer's specification

APPENDIX

Selection of an Injection Molding Machine	A - 1
Making a Choice of Screw Assembly	A - 3
Characteristics of Thermoplastic Resin & General Molding Conditions	A - 6
How to Calculate Plasticizing Stroke	A - 8
How to Calculate Mold Clamping Force	A - 9
Consideration to be Given to Purging	A - 10

**Guide to
Preparations
for Installation**

Read this Instruction Guide before operating your machine

**ATTACHED
MATERIALS**

General Assembly
Foundation Plan
Mold Platens
Nozzle • Needle • Heater List
Hopper Arrangement
Hydraulic Diagram
Operational Sequence
Locations of Hydraulic Components
Mold-clamping Cylinder

Hydraulic Ejector Cylinder
Injection Unit
Nozzle-closing Cylinder
Control Unit Parts Layout
MMC Unit Parts Layout
Elementary Diagram
Heater Bands
Spare Parts List
Parts Guide