

[INSTRUCTION MANUAL]

Sodick CNC - WIRE CUT EDM

AQ327/537L

MACHINE TOOL

Sodick

Version 1.9E

TABLE OF CONTENTS

	PAGE
PRECAUTIONS	
SECTION 1 GENERAL DESCRIPTION	1-1
1. MACHINE INSTALLATION PLACE.....	1-1
2. SAFETY GUIDELINES.....	1-2
3. GENERAL INSTRUCTIONS.....	1-8
4. ELECTRICAL CONNECTION.....	1-10
SECTION 2 SPECIFICATIONS AND MACHINE INSTALLATION LAYOUT	2-1
1. AQ327L.....	2-1
1-1. MACHINE SPECIFICATIONS (STANDARD TYPE).....	2-1
1-2. VIEW OF MACHINE (STANDARD TYPE).....	2-2
1-3. FLOOR LAYOUT (STANDARD TYPE).....	2-4
1-4. MACHINE SPECIFICATIONS (CE TYPE).....	2-5
1-5. VIEW OF MACHINE (CE TYPE).....	2-6
1-6. FLOOR LAYOUT (CE TYPE).....	2-8
1-7. WORK TABLE DIMENSIONS.....	2-9
2. AQ537L.....	2-10
2-1. MACHINE SPECIFICATIONS (STANDARD TYPE).....	2-10
2-2. VIEW OF MACHINE (STANDARD TYPE).....	2-11
2-3. FLOOR LAYOUT (STANDARD TYPE).....	2-13
2-4. MACHINE SPECIFICATIONS (CE TYPE).....	2-14
2-5. VIEW OF MACHINE (CE TYPE).....	2-15
2-6. FLOOR LAYOUT (CE TYPE).....	2-17
2-7. WORK TABLE DIMENSIONS.....	2-18
SECTION 3 MACHINE INSTALLATION, PIPING AND WIRING	3-1
1. MACHINE INSTALLATION.....	3-1
2. PIPING FOR SUPPLY TANK.....	3-10
3. CABLE CONNECTION.....	3-15
4. TRANSPORTATION OF MACHINE.....	3-16

	PAGE
SECTION 4 NC & MACHINE OPERATION PANEL AND DESCRIPTION OF MACHINE UNIT.....	4-1
1. NC & MACHINE OPERATION PANEL.....	4-1
2. WIRE FEED UNIT.....	4-6
2-1. WIRE FEED UNIT (AWT).....	4-6
2-2. SUB PANEL FOR WIRE FEED UNIT CONTROL.....	4-8
3. WIRE EJECTION UNIT.....	4-10
4. WIRE GUIDE SECTION (CONDUCTIVITY UNIT).....	4-11
5. DISCHARGE CABLE CONNECTION DIAGRAM.....	4-13
6. WORK TANK UNIT.....	4-15
6-1. WORK TANK UNIT.....	4-15
6-2. MIDDLE SWITCH.....	4-16
7. WATER SUPPLY TANK.....	4-17
7-1. CONSTRUCTION OF WATER SUPPLY TANK.....	4-17
7-2. PIPING DIAGRAM.....	4-19
7-3. PIPING DIAGRAM (High-Speed).....	4-21
7-4. AIR DIAGRAM.....	4-23
7-5. AIR DIAGRAM (High-Speed).....	4-25
SECTION 5 MACHINE OPERATIONS.....	5-1
1. SAFETY GUIDELINE.....	5-1
2. CONTROLLED AXIS AND ACTIVE LIMITS.....	5-2
2-1. CONTROLLED AXES AND DIRECTIONS.....	5-2
2-2. ACTIVE LIMIT CONTROL.....	5-3
3. PREPARATION FOR OPERATION.....	5-4
4. THREADING THE WIRE ELECTRODE.....	5-6
4-1. THREADING THE WIRE ELECTRODE IN THE WIRE FEED UNIT (AWT).....	5-6
4-2. DANCER-PULLEY STOPPER.....	5-9
5. SETTING THE WIRE FEED SPEED.....	5-10
6. SETTING THE WIRE TENSION.....	5-12
7. ALIGNING THE WIRE VERTICALLY.....	5-13
8. MOUNTING WORK PIECE.....	5-15

Table of Contents

	PAGE
9. WORK PIECE CLAMP FIXTURES.....	5-17
10. USING CLAMP FIXTURES.....	5-18
11. ADJUSTING THE HEIGHT OF GUIDE SECTION.....	5-19
12. ADJUSTING FLUSHING PRESSURE.....	5-20
13. WATER GUARD OF WIRE GUIDE.....	5-21
14. WATER RESISTANCE SENSOR AND DEIONIZER.....	5-21
14-1. WATER-RESISTANCE CHECKED.....	5-22
14-2. OPERATION EXAMPLE.....	5-22
15. INVERTER RESET.....	5-23
16. ADJUSTING THE WIRE EJECT ROLLER (WIRE EJECTION UNIT).....	5-24
SECTION 6 INSPECTIONS AND MAINTENANCE.....	6-1
1. CHECK LIST.....	6-1
1-1. DAILY INSPECTIONS.....	6-1
1-2. WEEKLY INSPECTIONS.....	6-2
1-3. MONTHLY, EVERY 3-MONTHS AND EVERY 6-MONTHS INSPECTIONS.....	6-3
1-4. ABOUT GREASE-UP TO AXIS.....	6-4
2. MAINTENANCE PROCEDURE.....	6-5
2-1. AWT PIPE.....	6-5
2-2. WATER RESISTANCE.....	6-5
2-3. FILTER.....	6-6
2-4. CHANGING THE POSITION OF CONDUCTIVITY PIECE.....	6-8
2-5. INSIDE THE WIRE GUIDE.....	6-9
2-6. ASPIRATOR.....	6-13
2-7. UPPER FLOAT LIMIT SWITCH.....	6-14
2-8. FLOW METER.....	6-14
2-9. ANNEALING & THERMAL MELTING MECHANISM.....	6-16
2-10. GUIDE SHAFT (UPPER GUIDE OF THE MACHINE EQUIPPED WITH AWT).....	6-17
2-11. AIR-HYDRO UNIT.....	6-19
2-12. WATER RESISTANCE SENSORS.....	6-20
2-13. GUIDE C1 and Guide C.....	6-21

Table of Contents

2-14 AWT GUIDES	6-22
	PAGE
2-15. FILLING WATER INTO SUPPLY TANK	6-23
2-16. SEALING SECTIONS	6-25
2-17. TAKING FRONT COVER OFF	6-27
2-18. PUMP MAINTENANCE	6-28
3. CONSUMABLE PARTS LIST	6-29