

3000 Series Operation

(Rev. 1.00)

Trainee (受講者)		Period (期間)	
Company (会社名)		Trainer (トレーナー)	

Module (モジュール)	Page (ページ)	Machine Manual (装置マニュアル)			Sign-off (サインオフ欄)		
		Type (種別)	Chapter (章)	Section (セクション)	Date (日付)	Trainee (受講者)	Trainer (トレーナー)
Day 1							
1. Machine Components							
1.1. Interpret the Operation Panel Screen Constituents	1	OPE	A	1. Screen Constituents			
	3	OPE	A	1-1. Top Bar			
	5	OPE	A	1-2. Main Area			
	9	OPE	A	1-3. Sensor Status Area			
1.2. Interpret the Software Keyboard	11	OPE	A	1-4. Software Keyboard Area			
2. Start-up and Termination of the Machine							
2.1. Start up the Machine	22	OPE	B	1. Starting up the Machine			
	23	OPE	B	1-1. Opening Stopcocks of Air, Water and Duct and Turning ON the Power of the Plant Facility			
	25	OPE	B	1-2. Turning the Power ON			
	30	OPE	B	1-3. Checking Supply Pressure of Air			
	31	OPE	B	1-4. Check the Flow Rate of the Spindle Coolant Water			
2.2. Execute the System Initialization	32	OPE	B	1-5. Executing Initialization			
2.3. Execute the Warming Up	33	OPE	B	1-6. Executing Warming Up (Idling)			
2.4. Execute the Setup	36	OPE	D	2. Setup			
2.5. Terminate the Machine	60	OPE	B	2. Terminating the Machine			
3. Full Automation Operation							
3.1. Operate the Device Data Operation Screens	67	DAT	B	1-5-1. DEVICE DATA LIST screen [3.0]			
	69	DAT	B	1-5-2. Entering the DATA PASSWORD			
3.2. Execute Full Automation	70	OPE	C	1. Full Automation Operation			
	71	OPE	C	1-1. Preparation of Operation			
	72	OPE	C	1-2. Verification of Device Data			
	75	OPE	C	1-3. Setting a Workpiece			
	77	OPE	C	1-4. Calling Up the FULL AUTOMATION Screen [1.0]			
	79	OPE	C	1-5. Executing Full Automation			
3.3. Complete Full Automation	80	OPE	C	1-6. Verifying Full Automation			
	81	OPE	C	1-7. Completion of Full Automation			
	82	OPE	C	1-8. Verifying Full Automation			
	83	OPE	C	1-9. Verifying Full Automation			
4. Making Corrections during Full Automation Operation							
4.1. Interpret the Correctable Items during Full Automation	83	OTH	---	---			
4.2. Adjust the Light Intensity and Microscope Focus	86	OPE	C	1-6-1-2. Adjusting light intensity and microscope focus			
4.3. Correct the Hairline Alignment	88	OPE	C	1-6-1. Correcting hairline alignment			
	89	OPE	C	1-6-1-1. Suspending cutting operation			
	90	OPE	C	1-6-1-3. Executing hairline alignment			
	91	OPE	C	1-6-1-4. What to do after correcting hairline alignment			

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4.4. Correct the Cutting Position	93	OPE	C	1-6-2. Correcting cutting position			
	94	OPE	C	1-6-2-1. Suspending cutting operation			
	95	OPE	C	1-6-2-3. Executing correction of cutting position			
	97	OPE	C	1-6-2-4. What to do after correcting cutting position			
4.5. Change the Feed Speed	99	OPE	C	1-6-3. Changing feed speed			
4.6. Correct the Blade Height	101	OPE	C	1-6-4. Correcting blade height			
5. Manual Operation							
5.1. Execute the Manual Alignment	103	OPE	C	3-2. Manual Alignment			
5.2. Execute the Auto Alignment	118	OPE	C	3-1. Automatic Alignment			
5.3. Execute the Auto Cut	123	OPE	C	2-3-2. Executing automatic cutting			
5.4. Execute the Semi-auto Cut	127	OPE	C	2-3-3. Executing semi-automatic cutting			
Day 2							
6. Device Data							
6.1. Copy the Device Data	132	DAT	B	1-5-3. DEVICE DATA COPY screen [3.2]			
6.2. Move the Device Data	136	DAT	B	1-5-4. DEVICE DATA MOVE screen [3.3]			
6.3. Rename the Device Data	138	DAT	B	1-5-5. DEVICE DATA RENAME Screen [3.4]			
6.4. Delete the Device Data	140	DAT	B	1-5-6. DEVICE DATA DELETE screen [3.5]			
6.5. Create the Device Data	142	DAT	B	2-2. Device Data Setup			
6.6. Interpret the Detail of Cutting Function	144	DAT	B	1-6-1. DEVICE DATA screen [3.1.2]			
	153	DAT	B	1-6-2. DEVICE DATA screen [3.1.2.2]			
	154	DAT	B	2-1-2. Cutting mode			
6.7. Set the Process Control Table	160	DAT	B	1-6-6. PROCESS CONTROL TABLE screen [3.1.6]			
6.8. Interpret the Alignment Data	167	DAT	B	1-6-3. ALIGNMENT DATA screen [3.1.3]			
	172	DAT	B	1-6-4. ALIGNMENT SPECIAL DATA screen [3.1.3.3]			
6.9. Interpret the Water Program Maintenance Function Setting	175	DAT	B	5-4-5. WATER PROGRAM DATA MAINTENANCE screen [5.3.5]			
6.10. Interpret the Z-axis Auto-down (Blade Wear Compensation)	177	DAT	B	2-1-3. Blade wear correction function			
6.11. Set the Auto-setup Data	181	DAT	B	4-7. Setting the Auto-Setup Data [Optional Accessory]			
6.12. Interpret the Purpose and the Data Setting for Precut Function	183	DAT	B	5-2. Precut Data Maintenance			
	197	DAT	B	1-6-7. PRECUT PROCESS screen			
6.13. Set the Data of Kerf Check Function	203	DAT	B	1-3-3. KERF CHECK PARAMETER 1 screen (during stop correction)			
	205	DAT	B	1-3-4. KERF CHECK PARAMETER 2 screen (during stop correction)			
	210	DAT	B	1-3-5. KERF CHECK SPECIAL DATA screen (during stop correction)			
	213	DAT	B	1-6-8. KERF CHECK DATA screen [3.1.8]			
	220	DAT	B	1-6-9. KERF CHECK SPECIAL DATA screen [3.1.8.8]			
6.14. Edit the Device Data for Multiple Index Workpiece	223	DAT	B	2-3-2. Device data setting <example 2>			
7. Blade Maintenance							
7.1. Interpret the Operation Flow of Blade Maintenance	226	OPE	D	1. Blade Replacement			
7.2. Replace the Blade	228	OPE	D	1-1. Preparation for Blade Replacement			
	232	OPE	D	1-3. Replacement of Blades			
7.3. Set the Data for a New Blade	256	OPE	D	1-4-1. Data setting for a new blade			

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7.4. Set the Data for a Used Blade	259	OPE	D	1-2. Saving Data of Used Blades			
	262	OPE	D	1-4-2. Data setting for a used blade			
7.5. Adjust the Blade Breakage Detector	265	OPE	D	1-5. Adjusting the Blade Breakage Detector [Optional Accessory]			
7.6. Interpret the Setup Function	268	OPE	D	2. Setup			
	269	OPE	D	2-1. Preparation for Setup			
7.7. Set the Setup Data	273	DAT	B	4. Setup Data			
	274	DAT	B	4-1. Setting the Setup Data			
	280	DAT	B	4-2. Setting the Setup Area Data			
	286	DAT	B	4-3. Outline of Contact Setup			
	289	DAT	B	4-4. Outline of Specified Position Setup			
	292	DAT	B	4-5. Outline of Non-Contact Setup [Optional Accessory]			
295	DAT	B	4-6. Outline of Sensor Calibration Setup [Optional Accessory]				
7.8. Execute the Contact Setup	300	OPE	D	2-2. Executing Chuck Table Setup			
7.9. Execute the Specified-Position Setup	305	OPE	D	2-3. Executing Specified-Position Setup			
7.10. Execute the Non-contact Setup	310	OPE	D	2-4. Executing Non-Contact Setup [Optional Accessory]			
7.11. Execute the Sensor Calibration Setup	313	OPE	D	2-5. Executing Sensor Calibration Setup [Optional Accessory]			
7.12. Execute the Dress Cutting	319	OPE	D	3. Blade Dressing Operation			
7.13. Correct the Hairline Alignment	338	OPE	D	4. Hairline Alignment			
8. Alignment Teach							
8.1. Use the Measure Function	351	DAT	B	5-3. Measure Function			
8.2. Execute the Alignment Teach	355	DAT	B	3. Teach			
8.3. Interpret a Summary of the Alignment Target Selection	397	OTH	---	---			
8.4. Execute the Process Control Table Running (Except for Cutting)	433	OPE	C	2-3-4. Executing process control table running (except for cutting)			
9. Appendix							
9.1. (Appendix) Interpret the Errors during Cutting	436	OPE	E	1. Errors during Cutting			
9.2. (Appendix) Interpret the Interlock Errors of the Covers	441	OPE	E	2. Interlock Errors of the Covers			
9.3. (Appendix) Interpret the Errors during Setup	444	OPE	E	3. Errors during Setup			
9.4. (Appendix) Interpret the Errors during Alignment	461	OPE	E	4. Errors during Alignment			
9.5. (Appendix) Interpret the Errors during Kerf Check	472	OPE	E	5. Errors during Kerf Check			
9.6. (Appendix) Interpret the Blade Breakage Detector Errors [Optional Accessory]	480	OPE	E	6. Blade Breakage Detector Errors [Optional Accessory]			
9.7. (Appendix) Interpret the Errors Related to Supply Utility	491	OPE	E	7. Errors Related to Supply Utility			
9.8. (Appendix) Interpret the Other Errors	497	OPE	E	9. Other Errors			

Course composition, intended trainees and course objective

Course Name	Intended Trainees	Course Objective
Operation	- who has no experience of operating the machine - who conducts data and function settings of the machine	→ - To enable trainees to understand the terms necessary for operating the machine and to process products by calling up the data set in the machine - To enable trainees to create the data and set the data and functions for operating the machine
Maintenance 1	- who has already completed the "Operation" course (or has equivalent operation skills) - who conducts periodic maintenance of the machine	→ To enable trainees to safely and precisely perform the periodic maintenance and consumable parts replacement described in the Maintenance Manual of the machine
Maintenance 2	- who has already completed the "Maintenance 1" course (or has equivalent maintenance skills) - who conducts maintenance works which are not described in the Maintenance Manual of the machine	→ To enable trainees to conduct maintenance works which are not described in the machine Maintenance Manual (only the items that can be executed without any special tools or access to the internal Maker Data)