

Maintenance manual

CHARMILLES TECHNOLOGIES

CHARMILLES TECHNOLOGIES

- 1. Periodic maintenance procedures
- 2. Error messages
- 3. Troubleshooting
- 4. Installation
- 5. Putting into service
- 6. Diagrams
- 7. Extract of catalogue

Maintenance manual

290F 300/310F 500/510F

IMPRESSUM

This document was conceived and written by Messrs. Zaslawski and Fujisé, CTSA-

Typesetting and production by Mrs. Lechat, CTSA-Geneva.

Technical data originate from our Standard Wire product line, managed by Mr. Paccaud, CTSA-Geneva.

Our thanks for his collaboration go to ; Mr. Schaller, CTSA-Geneva.

Printed by the Publishing Department, CTSA-Geneva.

General table of contents

	Periodic maintenance procedures	1.1
	List of periodic maintenance operations Log book	1.3
	Error messages	2.1
	P/S alarms	2.3
)	Overtravel alarms	2.15
	Absolute pulse coder/serial pulse coder alarms	2.18
	Servo alarms	2.19
	Overheat alarm	2.21
	System alarms	2.21
	Analyzing causes of servo alarm	2.23
	Generator alarms Alarms and warning classification Alarm origin Class of error Generator alarms	2.27 2.27 2.27 2.27 2.29
	Troubleshooting: Location of machine components	3.1.1
	Introduction	3.1.3
)	Alphabetical index of components	3.1.11

Troubleshooting: Location of units of common cabinet 3.2.1						
and the second of the second o	1					
Introduction	3.2.3					
Overall view of cabinet	3.2.4					
Overall view (side part of the cabinet)	3.2.5					
Overall view (rear part of the cabinet)	3.2.6					
Alphabetical index of units	3.2.31					
Numerical index of units						
Troubleshooting: Procedures	3.3.1					
Internal demineralization test procedure High pressure injection problem The clean tank water is polluted A pump is defectiv Functions and dynamic simulation of dielectric function components The wire breaks but not during machining The wire breaks during machining Wire cut doesn't work Automatic threading doesn't work Automatic rethreading doesn't work The wire drive is irregular General machining problem Measurement accuracy problem Power board LIPA-16	3.3.4 3.3.5 3.3.5 3.3.7 3.3.8 3.3.9 3.3.10 3.3.11 3.3.12					
Checking and adjustment How to check the power supplies Configuration of the printed circuit boards in the control unit (Main CPU, PMC-RC) Pneumatic panel test/adjustment Threading jet test/adjustment procedure Suction nozzle injection rate test procedure Adjustment of evacuation roller pressure on wire Swinging arm pulley position test/adjustment Adjustment of torque limiter on 16kg spools	3.3.24 3.3.26 3.3.27 3.3.28 3.3.30 3.3.32 3.3.33 3.3.34					

	Replacement, dismantling and the work to replace the fuses in the powers. How to replace printed circuit boards of the work to replace printed circuit boards of control unit. How to replace the batteries on the control with the work to replace the fan motor. Replacement of the X, Y, U and V belts. Draining the tanks. Removal, replacement and installation of Replacement of crimping pinions. Dismantling/re-assembly of the bottom. Bottom head height adjustment. Greasing of the gearwheels behind the Replacement of wire drive motor notches.	on spark master driving other units on the other evacuation head better the other units of the other units o	ver ne rollers	3.3.36 3.3.36 3.3.34 3.3.40 3.3.41 3.3.42 3.3.44 3.3.46 3.3.46 3.3.50 3.3.52 3.3.53	
		2010 10020	· ·	27 -	
	Installation			4.1	
	Transport and handling Storage prior to placing in service Transporting and unpacking Choice of working premises	tsessit 1971 2014 -		4.3 4.4 4.5	
	Site dimensions - Bulk Atmosphere Location Equipping the premises (outside conne	1.9		4.8 4.8 4.8	
	Machine installation check list Choice and equipment of premises Packing + Transport		5 9 4 4	4.11 4.11 4.11	
)	Data sheet			4.12	
		W.	2.37 T		2). H
	Putting into service			5.1	
		9 - 2	Freds (k.t.		1.
	Positioning the equipment Levelling Releasing the axes Releasing the X1, X2, Y1, Y2 axes Releasing the Z axis (290/300/3 Releasing the X1, X2, Y1, Y2 axes Releasing the Z axis (500/510F) Releasing the pumps	s (290/300/310 310F) s (500/510F)	2 - 1 -	5.3 5.4 5.4 5.4 5.5 5.5 5.5	

Connecting the equipment Adaptation to the customer's supply voltage Electrical connections Connecting the deionization and compressed air Connecting the cooling system Cooling with mains water or by network of chilled water Cooling with a chiller unit specific to the machine	5.7 5.8 5.9 5.11 5.11 5.13
Putting into service of the equipment Check of delivered equipment Fitting of boards in the cabinet Switching on the electrical cabinet Check the direction of rotation of the air conditioner fan Preparing the reservoir Checking the electrical equipment Checking the pump indicator plates Filling Checking the heat exchanger Checking the operation of deionization	5.15 5.15 5.16 5.17 5.18 5.19 5.19 5.19 5.19 5.20 5.20
Check list of putting into service operations	5.22
Diagrams	6
CONTROL Functional diagram	6.1.3
POSITION Functional diagram	6.1.5
DIELECTRIC Functional diagram ROBOFIL 290F/300F/500F	6.1.7
DIELECTRIC Functional diagram ROBOFIL 310F/510F	6.1.9
WIRE CHANGE Functional diagram	6.1.11
ERODE Functional diagram	6.1.13
List of electrical diagrams	6.2.1
List of mechanical diagrams	6.2.2
Diagrams	
Extract of catalogues	7.1