

3.1 Customer Service — Service Programme



Information:

The unit's electronic control board offers the possibility of calling-up various internal programme parameters and operating states in order to detect possible faults.








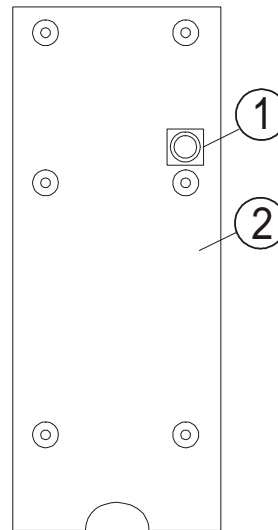
Attention:

Any changes on the parameters in the Service Programme, other than the normal work adjustments (default values), could cause operation malfunctions.



Instructions: Calling-up Customer Service Programme

1. Switch unit on with the  key.
2. Press Service Programme key 1 on the back side of the control module 2 or
3. Press ,  and  at the same time and hold for 3 seconds.
4. The display now shows the service number and the affiliated service value and on ODP a short explanation. The service number is selected on the display, this means that it is shown inverse.
5. By turning the adjustable knob, various service numbers can be called-up.
6. With the Scroll key, the service number and the service value can be alternately shown (only with control and diagnose values.).
7. If the service value is selected (inverse), it can be adjusted with the adjustable knob. The changed service value is first taken over by the controls when the service number springs back via the Scroll left key.
8. The included service list gives comprehensive information about the meanings of the service numbers, the maximum and minimum adjustable values, the default values as well as the corresponding specifics.
9. Press the Service Programme key 1 or the  key in order to leave the Customer Service – Service Programme.



Notice:

The first letter of the service numbers indicate the following:

- r-- = read value → only for reading
- c-- = control value → for reading and writing (function parameter)
- d-- = diagnose value → for detecting errors and checking functions



Cross reference:

- Service Handbook 5. Trouble shooting and Error Codes Electronic

3.1 Customer Service — Service Programme

Service-No.:	Description	Connector	Pin	OSC	OSP	OSG	Minimum adjust. value	Maximum adjust. value	Default value	Specifics	Comments
r 01	Actual value CTC check point 1 (B10)	X6	2+6	✓	✓	✓					
r 02	Actual value CTC check point 2 (B10)	X6	3+6	✓	✓	✓					
r 03	Actual value CTC check point 3 (B10)	X6	4+6	✓	✓	✓					
r 04	Actual value CTC check point 4 (B10)	X6	5+6	✓	✓	✓					
r 05	Actual value oven temperature (N6)	X6	7+8	✓	✓	✓					
r 06	Actual value bypass (B5)	X6	9+10	✓	✓	✓					
r 07	Actual value condenser (B3)	X6	11+12	✓	✓	✓					
r 08	Actual value steam generator (B4)	X6	13+14	✓	✓						
r 09	Actual value safety thermostat in steam generator (N8)	X6	15+16	✓	✓						
r 10	free	X6	17+18								free temperature input
r 11	free	X6	19+20								free temperature input
r 12	free	X6	21+22								
r 13	Actual value connection area temp.	SM		✓	✓	✓					Probe is on the circuit panel (PT500)
r 14	Identification for gas unit (1)	X3	7+2			✓					Connection with ground = Gas unit
r 15	Identification for electric unit (1)	X3	6+2	✓	✓						Connection with ground = Electric unit
r 16	free			✓	✓	✓					free (ascertained speed in U/min)
r 17	free	X7	11	✓	✓	✓					free
r 18	Nozzle rinsing	X7	9								Manometric switch automatic cleaning
r 19	free	X7	7			✓					free digital input
r 20	Level low (pressure switch on gas- P1)	X7	2	✓	✓	✓					
r 21	Level high	X7	1	✓	✓						
r 22	Motor PTC	X7	4	✓	✓	✓					
r 23	Door (Door contact switch)	X7	6	✓	✓	✓					
r 24	Free input *	X8	11	✓	✓	✓					
r 25	Free input *	X8	12	✓	✓	✓					
r 26	Free input *	X8	13	✓	✓	✓					
r 27	Free input *	X8	14	✓	✓	✓					
r 28	Free input *	X8	15	✓	✓	✓					
r 29	Software version number Operation- module (BM)			✓	✓	✓					
r 30	Software version number Control- module (SM)			✓	✓	✓					
r 31	Software version number Communication-module (KM)			✓	✓	✓					
r 32	Time controls on net [h]			✓	✓	✓					Time of controls in Standby mode + Stop etc.
r 33	Time controls in operation [h]			✓	✓	✓					Controls in Stop/Start operation etc.
r 34	In time - motor [h] * ⁵			✓	✓	✓					
r 35	In time - steam generator heating [h] * ² * ⁵			✓	✓	✓					

Service-No.:	Description	Connector	Pin	OSC	OSP	OSG	Minimum adjust. value	Maximum adjust. value	Default value	Specifics	Comments
r 36	In time - convection heating [h]*3 *5			✓	✓	✓					
r 37	In time - additional fan [h] *5			✓	✓	✓					
r 38	Last error			✓	✓	✓					Call up last 10 errors with scroll key
r 39	Unit number			✓	✓	✓					
r 40	Article number of unit			✓	✓	✓					
c01	Selected value for steam gen. Standby mode			✓	✓		78	95	88	°C	
c02	Selected value condenser cooling			✓	✓	✓	50	95	68	°C	Optimizing value
c03	In time - fan pulse			✓	✓		01	20	02	sec	
c04	Out time – fan pulse			✓	✓		0	90	60	sec	
c05	Continuous heating steam gen.			✓	✓		00	01	00		00=regulated; 01=continuous steam
c06	New initialization of controls (as of Software Version 2.00)			✓	✓	✓					All modules (BM; SM; KM) are initialized.
c07	Moisture Steam			✓	✓	✓	50	95	87	°C	Optimizing value
c08	Moisture Superheat			✓	✓	✓	81	96	90	°C	
c09	Moisture Quick				✓	✓	81	96	90	°C	
c10	Moisture Regeneration OSP/OSG				✓	✓	01	12	04	--	
c11	Moisture Regeneration OSG					✓	01	10	04	--	
c12	Bit field 1										Only Convotherm intern
c13	Bit field 2										Only Convotherm intern
c14	Option 1										Only Convotherm intern
c15	Option 2										Only Convotherm intern
c16	start again			✓	✓	✓	0	59	15	min	
c17	start again			✓	✓	✓	0	48	0	h	
c18	Number of ignition attempts when rinsing the gas pipes					✓	1	10	5		
c19	PIN – Clearing the key block				✓	✓	0	999	500		
c20	Sterilizing				✓		0	1	0		0 = without sterilizing 1 = with sterilizing
c21	Shining from step				✓		1	4	4		Cleaning step with which shining rinse is activated
c22	Detergent dosage				✓		3	15	5		Cleaning pump working time in sec.
c23	free			✓	✓	✓					
d01	Error saver - delete			✓	✓	✓					*4
d02	Key block - delete			✓	✓	✓					*4
d03	Programme - delete			✓	✓	✓					*4

* = Prepared for further development

*2 = In gas units switching on time for water injection Y1

*3 = In gas units switching on time for burner

*4 = Activate with right scroll key (shown inverse), than turn adjustable knob to "off" and save by pressing and releasing the left scroll key.

*5 = The timers are not active in all software

Testing the outputs



Information:

The OSC and OSP electronic controls offer the possibility to activate via the service numbers r19 – r23 various inputs and via d04 – d28 the outputs, as well as to activate various functions. Thereby checking the inputs and outputs and detecting any defects.

Testing the outputs

Service-No.:	Description	Contactor	Pin	OSC	OSP	OSG	Comments
d04	Test all display elements and keys			✓	✓	✓	
d05	Test programme protection	X1	8	✓	✓	✓	On OSG: Alarm
d06	Test the reduced fan speed	X1	5	✓	✓	-	
d07	Test fan motor	X1	4	✓	✓	✓	
d08	Test steam gen.1 heating	X1	2	✓	✓	✓	On OSG: Valve water injection Y1
d09	Test convection 1 heating	X1	1	✓	✓	✓	On OSG: burner on
d10	Test steam gen. 2 heating	X1	6	✓	✓	-	
d11	Test convection 2 heating	X1	7	✓	✓	✓	On OSG: ignition unit supply
d12	Test oven lamp	X2	3	✓	✓	✓	
d13	Test condenser cooling	X2	4	✓	✓	✓	On OSG: only 20.20
d14	Test steam gen. injection	X2	5	✓	✓	✓	simultaneously Phase connect through On OSG: Valve Bypass cooling Y2
d15	Test motor breaks	X2	7	✓	✓	-	Attention: right run
d16	Test steam gen. draining	X2	6		✓	-	
d17	Test "System open"	X2	8	✓	✓	-	
d18	Test outputs X2.1+2 (PFK)	X2	1+2	✓	✓	✓	Potential clear contact On OSG: Reset 1+2 (automatic ignite)
d19	free	X2	9	✓	✓	-	
d20	free	X2	10	✓	✓	-	
d21	Additional fan	X8	8+9	✓	✓	✓	Activating additional fan
d22	Nozzle flushing	X8	1	✓	✓	✓	Nozzle flushing fluid - pump
d23	Water nozzles	X8	2	✓	✓	✓	Activating of the water valve
d24	Cleaning pumps	X8	3	✓	✓	✓	Activating of the cleaning pumps
d25	free	X8	4	✓	✓	✓	
d26	free	X8	5	✓	✓	✓	
d27	free	X8	6	✓	✓	✓	
d28	free	X8	7	✓	✓	✓	




Safety:

When specific actuators are often tripped, one after the other, they can be destroyed!!!



Instructions:

1. The desired service point is called-up on selective service numbers with adjustable knob.
2. Use this key  to change to service value.
3. Switch output on and off with adjustable knob.



Notice:

- When selecting d04 various functions and status displays light up in sequence; the displays, the 'Closed System' –symbol and the loop segment of the keys. When a key is pressed, the position number is shown in the display.
- With d05 – d28 using the adjustable knob, the affiliated actuators can be activated for 10 seconds. There are also the points d18 to d28 for actuators that are not being used at the moment.