9.   Messages

9.1   Groups of messages

M1000 . .. M1999	Messages of the CNC, block interpreter, I/O
M1150... M1199	Error off tool radius correction
M1950... M1999	SYSTEM error with the call by DLL Functions
M2000 . .. M2999	Messages of the interpolator
M3000 . .. M3999	Messages of the PLC
M3000 . .. M3499	Global messages of the plant (i.e. channel overlapping)
M3000 . .. M3249	Messages are indicated with gray writing on red ground
M3250 . .. M3499	Messages are indicated with black writing on turquois ground
M3500 . .. M3999	Channel specific messages
M3500 . .. M3749	Messages are indicated with gray writing on red ground
M3750 . .. M3999	Messages are indicated with black writing on turquois ground
M4000 ... M4999	Messages of the operating panel
M4000 ... M4499	BWO messages
M4000 ... M4299	DOS messages
M4300 ... M4399	Messages of the system
M4400 ... M4499	Messages of the MMI
M4500 ... M4999	free for the user
M5000 . .. M7999	Reserved
M8000 . .. M8999	Messages of cycles
M8000 . .. M8499	Standard cycles
M8500 . .. M8999	Free for users
M9000... M9999	Error message off CNC DLL
M9000... M9099	Reserves for BWO
M9100... M9999	Freely for users

9.2   General CNC messages

Message	Meaning

1000   Error when writing in Flash-memory
          P8505   Error code
          P8506   Channel number

1001   FLASH Function not executed

1002   No NC program in the Flash-memory

1008   Approach reference points

1009   Switching AUTO <—> POS not allowed
          Switching has to be done in MANUAL!

1050   Tool group not found in the tool data memory

1098   Error message when renumbering a NC program
          -> skip target is not available.
          The renumbering is not executed.
          Number of the NC block which has caused this message is written in P8505.

1099   Error message when renumbering a NC program
          -> indirect skip in NC memory available.
          Renumbering is not stopped, but this NC block is marked with the text 'warning'.

9.3 Messages at input/output

Message	Meaning

1100   Error in the test character or in the character number with the datentransfer between operating panel and CNC, i.e. the operating panel obtain on divergent Test character / file size as the CNC.

1102   No abort confirmation from the operating panel
Each I/O-abort-confirmation-telegram (CNC —> OP) has to be confirmed by the operating panel.
If this is not the case, the message 1102 is

1105   Error when opening a program in the NC memory

1106   NC program becomes overwritten

1107   NC program is already existing and will not be overwritten

1110   Wrong file identification
i.e.: the identification at the file start is not correct
'P' for NC programs
'D' for parameters
'B' for zero points
Line number in P8505

1111   Line read can not be interpreted
Line number in P8505

Reasons e.g.:
- NC block does not start with block number
- parameter line is damaged
- preceeding file has no end identification (#)
- I/O parameter is not correct (Baudrate, parity ...)

1112   Invalid channel
Reason: Read or write operations with channel parameters of which the channel does not exist.

9.3   Messages at input/output (continued)

Message	Meaning

1113   Reception string overflow with I/O traffic (input)
(max. character length of a line: 400)
Read in string actual longer than reception s string.
A cause: - It tried on false file format to read in (EXE, being file...)
                    - Errors in the input file

1114   Reception string does not contain a test character

1115   Reception string contains false test character

1120   Memory space problem with the system down load
(too little temporary memory (HEAP) available)

1121   Download software does not fit the hardware version of the CNC Card,
e.g.. to charge it tried on BS902.xxx into a CNC Hardware 084564.

1122   Check total the loaded system software actual not correctly.
- > file possibly damages
- > problems while the loading.

1123   Check total the system software actual burned in the FLASH not correctly.
- > file possibly damages
- > hardware problem

9.4   Messages with the tools radius correction

Message	Meaning
1151	Tool radius too largely
1152	Circle radius too small (message with stop)
1153	Tool radius correction error with ON/OFF drive
1154	G0 / G1 with tool radius correction not possibly
1155	G2 / G3 with tool radius correction not possibly
1156	With tool radius correction no intersection of the sets
1157	Too many blocks without path
1158	G12 not possible
1159	No path difference

9.5   Messages of the NC interpreter

Message	Meaning
1200	Coprocessor is missing
1201	Channel descriptor not valid
1202	Parameter number too large
1203	Division through zero
1207	Too many axes programs. Message only in the export version A cause: It is tried, in a block more axes to interpolate as certified. Error correction: Program fewer axes in the incorrect block.
1208	Too many parameters programmed in the block (max. 32)
1209	Too many bracket levels (maximum 10)
1210	Bracket is missing
1211	Syntax error
1212	Negative root
1213	Function can not be executed e.g. at - logarithm-calculation - tan (90) ...
1214	No parameter operation
1215	Syntax error
1216	Unknown axis name
1217	Error at M25 The NC program contains on loop end (M25) without loop start (M24).
1218	Error at M24
1219	Errors at sub-routine call up
1220	Too many sub-routine call up

9.5   Messages of the NC interpreter (continued)

Message	Meaning

1221   Parameters not loaded

1222   too many M - or G - or P - functions in a block programs

1223   Error in the outline path
In the case of NC program abort:
A possible cause   tool radius actual too largely, in order to process outline.
Error correction   Tool with smaller tool tools use.

With NC program stop:
Programmed outline radius actual smaller than the half chord. Radius is corrected.
NC program can be started again.

1224   Spindle not available

1225   No tool group defined

1226   Geometry error
possible reason: - at G12, G123 next block with travel is missing
                          - function G123 is programmed with M01

1227   M - function number too large

1228   M - function definition not correct
- a M-function with skip target is in the NC program.
  M-Function is not defined as skip-M-function.
- a M-function without skip target is in the NC program.
  M-Function is defined as skip-M-function.

1229   M1 is not allowed in this block
e.g. it may not be synchronized if tool radius correction is switched on.

1230   No feed was programmed for G01/02/03

1231   G02/G03 without path difference

1232   Not allowed combination of G or M function programmed in the NC block.

1233   Circular interpolation (G02/G03) programmed without R or I / J / K

9.5   Messages of the NC interpreter (continued)

Message	Meaning
1234	Programmed outline radius actual smaller than the half chord, i.e. with this programmed radius can the programmed terminator point not to be achieved. NC program is stopped. Radius is corrected. NC program can be started again.
1235	Spline not possible
1237	Circle dynamics, Error when calculating feed Reason: Acceptable path deviation (P8852) is larger than the programmed radius. Erasing the error: Reduce path deviation (P8852)
1238	Programmed centre point is not correct with programmed start and terminator point (see also P8843)
1240	No valid operation range defined (P8555) Message appears e.g. at zero point call up
1249	Invalid NC interpreter default Error correction: The following parameters check: Parameter P8830 Preset zero point Parameter P8853 Preset type of coordinate
1252	Program not found
1255	Block not found
1256	NC memory full
1257	Memory error in drip-feed-buffer Over - or underflow
1258	Memory error in drip-feed-buffer Faulty block synchronization when reading the buffer
1259	NC block with defective check sum

9.5   Messages of the NC interpreter (continued)

Message	Meaning
1260	Error when reading NC memory
1261	Error when writing in NC memory
1262	File not defined
1263	Program not found
1264	Program not opened for reading
1265	Program write-locked Interlocking through key-operated switch etc..
1266	NC program is locked Program is already opened for writing by an other user.
1267	Too many programs opened
1268	Circle buffer - overflow e.g. Drip-feed-buffer overflow
1269	Applied function is not supported at ring - buffer (Drip-feed-operation)
1270	Format error (The opened file is not a NC program)
1271	Faulty NC block e.g. 'N' is missing before the block number
1272	Error at access on the NC memory
1280	Directory chain of NC memory defective
1281	File chain of NC program defective
1283	System data for NC memory organization defective
1285	Blocks in the NC memory are double-chained
1290	NC blocks are not sorted (beginning with the small number and ending with the big one) P8505 old block number P8506 new block number

9.5 Messages of the NC interpreter (continued)

Message	Meaning
1300	Parameter not installed - cleared
1301	Parameter-check sum defective
1302	Parameter - number larger than maximum Parameter - Number
1304	Parameter is write-locked Parameter number in P8505 Channel in P8506
1305	Channel parameter not available. It was tried, to write a channel parameter, whose channel does not exist.
1306	AUTO file frame erre OVERFLOWS A cause: With einges chalteter increasing AUTOMATIC file locks is enough storage space not off (see also P8806).
1310	Program number not loaded at emergency program call (P8820 etc.)
1320	Mode of operation change locked e.g. during emergency program call it can not be switched to AUTO mode of operation
1321	Control not in MANUAL operation mode
1322	Control not in AUTO operation mode

9.6   Messages of the system

Message	Meaning

1800   Fatal error; System start again
After sequence error   - M1820
                                         - M1830
                                         - M1840

1810   Interface CNC —> PLC: Data overflow
During a parameter transfer to the PLC there was a data overflow.
(floating decimal point format does not fit into the fixed point format,
mantissa too largely)
Information: Parameter number in P8505 (info. 1), channel in P8506 (info. 2)

1811   Parameter test character defectively
If the channel 1 in the operating mode HAND is, becomes from the operating system
in background constantly the total parameter area checks.
Info.: Q-parameter number in P8505 (info. 1)

1815   Real time buffer overflow
- faulty real time buffer administration or
- faulty feedback of the interpolator

1816   Feed back buffer overflow
- Feedbacks of the interpolator can not be processed any more.

1820   Floatingpoint exception
Exception reason in P8505: Bit 0 : Inexact
                                         Bit 1 : Underflow
                                         Bit 2 : Overflow
                                         Bit 3 : Divide by Zero
                                         Bit 4 : Invalid operation
                                         Bit 5 : Unimplemented operation
System address in   P8506
Task-Id in   P8507

9.6   Messages of the system (continued)

Message   Meaning

1830   NA signal became intermittently active   (NA: Power failure signal)
         After the message M1830 position adjustment may not be eingeschatet any longer!
         (interlock in the PLC)
         No more NC programs may be started!
         Axis positions cannot be correct possibly.
         To start after the occurance of of this error message actual the system again.
         (power OFF / on)

A cause:	Cure-early mains voltage failure
Errors eliminate:	Mains voltage check
	Power supply unit check

1840   (F0)   General hardware error.
                  Module or network failed.
                  (see also at the operating panel under DIAGNOSIS system configuration)

1841   (F1)   Battery voltage is missing
                  Causes: - Battery defectively
                                 - contact problems of the battery plug

1842   (F2)   ±15V-Spannung is missing

1843   (F3)   Battery and ±15V-Spannung are missing

1844   (F4)   Processor fan defectively
                  Caution: With defective fan overheating danger consists, there that
                  processor on the CNC Module is no longer sufficiently cooled.
                  an overheating of the CNC Processor leads to malfunctions or to
                  complete failure of the system.

9.6 Messages of the system (continued)

Message | Meaning

1950 DLL Function or subfunction missing
Off the CNC DLL a function in the CNC CORE is called, which does not exist.
Information: Info1 / P8505: Function code
Info2 / P8506: Subfunction paragraph

1951 Invalid channel with function call
Off the CNC DLL a function in the CNC CORE is called, also
invalidly / illegal channel number
Information: Info1 / P8505: Function code
Info2 / P8506: Subfunction paragraph

1952 Invalid axis paragraph with function call
Off the CNC DLL a function in the CNC CORE is called, also
invalidly / illegal axis paragraph
Information: Info1 / P8505: Function code
Info2 / P8506: Subfunction paragraph

9.7   Mssages of the interpolator

Message	Maning
2001	Lag distance too large
2004	Measuring system signal is missing
2005	Measuring system UAS is missing
2006	Measuring system frequency too large
2007	Measuring system correction too large
2020	Axis can not be moved
2022	Axis not in position
2023	Coupling difference too large
2024	Reference distance too large
2050	Block buffer overflow in the interpolator

2052   Coordinate mode not defined
Possible causes: - Type of coordinate does not specify, i.e. e.g. with the Robot system is missing to Robot definition in P11800
- When switching on of a type of coordinate (G48 on, G49...) are yet all axes involved does not report.
Errors eliminate: - Type of coordinate specify
- Axes report

2101	Hardware end position +
2102	Hardware end position -
2103	Software end position +
2104	Software end position -

9.7   Mssages of the interpolator (continued)

Message   Maning

2110   Approach reference position

2112   Approach measuring position

2114   Approach emergency position

2116   Approach basic position

9.8   Messages of the PLC

Message	Meaning
3000	Connection operating panel <-> CNC was interrupted - Security stop of all axes is set
3501	Mode of operation change -> Automatic locked
3502	Mode of operation change -> Manual locked

9.9 Messages of the operating panel

Message	Meaning

Range 4000 .. 4299 are DOS error messages

4002	File not found
4003	Path not found
4004	Maximum number of files already opened (FILES=xx)
4005	File access refused
4006	Invalid file handle not defined or
4012	Invalid file mode
4015	Drive number not allowed
4016	Actual directory can not be cleared
4100	Error when reading the disc
4101	Error when storing on the disc
4102	File variable is not allocated to a file
4103	File is not opened
4104	File was not opened for reading operations
4105	File was not opened for storing operations
4106	Invalid numerical format

9.9   Messages of the operating panel (continued)

Message	Meaning
4150	Disc is not write-locked
4151	Peripheral device unknown / not connected
4152	Drive not ready
4153	Invalid DOS function
4154	Check sum error when reading from the floppy / hard disc
4155	Invalid disc parameter block
4156	Head-positioning error on the floppy / hard disk
4157	Sector format unknown
4158	Disc sector can not be localised
4160	Write error when accessing a peripheral device
4161	Read error when accessing a peripheral device
4200	Division with zero
4201	Range test: error
4202	Stack test: overflow
4203	No more space in the Heap-range
4204	Invalid pointer operation
4205	Floating point overflow
4206	Floating point underflow
4207	Floating point error
4211	Program too deep

9.9 Messages of the operating panel (continued)

Message	Meaning

Area 4300... 4399 messages of the operating system operating panel

4300   More than 400 programs in the directory (CNC: NCDATA \...). it cannot do all
to be displayed.

4301   Operating panel Input SIO parity error

4302   Operating panel Input SIO Overrun error

4303   Operating panel Input SIO Framing error

4310   More than 1600 programs in the directory (CNC: NCDATA \...). it cannot do all
to be displayed. (only on PC operating panel with driver CNC900X.EXE starting from
09.06.97.)

4390   Connection operating panel <-> CNC actual interrupted.
No response of the CNC within Timeout.

Area 4400... 4499 messages of the control surface

4400   Control not in MANUAL

4401   Changeover to AUTO not made

4402   Graphics simulation not active

9.10 Cycle messages

Message	Meaning

8001   Geometry errors in the cycle   (G71, 72, 73, 74, 75)
        This message appears when the control finds out that the pocket-contour
        can not be processed with the programmed tool data.
        E.g. P14 smaller than tool radius or tool radius = 0,
        or tool radius is not programmed.

8003   Corner radius too small

8004   Corner radius too big

8005   Invalid tool radius

8006   Sequence error

8007   Pocket radius < tool radius

8008   Pre-bore tool radius > pocket radius

8009   In-feed > pocket depth   (P13) - allowance on pocket depth   (P18)

8010   Invalid inner radius   (P11)

8011   Invalid 1st. pocket dimension   (P11)

8012   Invalid 2nd. pocket dimension   (P12)

8013   Invalid pocket depth   (P13)

8014   Invalid radius   (P14)

8015   Invalid allowance   (P15)

8016   Invalid in-feed   (P16)

8017   Invalid in-feed   (P17)

8018   Invalid allowance on pocket depth   (P18)

8019   Invalid safety allowance   (P19)

8020   Invalid fine-infeed   (P20)

9.10   Cycle messages (continued)

Message	Meaning	
8021	Invalid plange in feed	(P21)
8032	Invalid feed	(P32)
8033	Invalid drilling depth	(P33)
8034	Invalid preliminary stop plane	(P34)
8035	Invalid retraction plane on pocket depth	(P35)
8036	Invalid stroking rate	(P36)
8037	Invalid parameter for 1st. stroke	(P37)
8038	Invalid safety allowance	(P38)

9.10   Cycle messages (continued)

Message	Meaning	
8100	Invalid X-coordinate X(AB)	(P100)
8101	Invalid Y-coordinate Y(AB)	(P101)
8103	Invalid angle (E1)	(P103)
8104	Invalid vector length (L1)	(P104)
8105	Invalid vector division (T1)	(P105)
8106	Invalid number of positionings (N1)	(P106)
8107	Vector division (T1)	(P105)
	or number of positionings (N1) is missing	(P106)
8110	Invalid X-coordinate X(AC)	(P110)
8111	Invalid Y-coordinate Y(AC)	(P111)
8113	Invalid angle (E2)	(P113)
8114	Invalid vector length (L2)	(P114)
8115	Invalid vector division (T2)	(P115)
8116	Invalid number of bores (N2)	(P116)
8117	Vector division (T2) (P115)	
	or number of positionings (N2) is missing	(P116)
8120	Invalid X-coordinate pitch circle centre point	(P120)
8121	Invalid Y-coordinate pitch circle centre point	(P121)
8122	Invalid pitch circle diameter (D)	(P122)
8123	Invalid starting angle (E)	(P123)
8124	Invalid travelling angle (L)	(P124)
8125	Invalid pitch angle (T)	(P125)
8126	Invalid number of bores (N)	(P126)

9.10   Cycle messages (continued)

Message	Meaning		
8300	No spindle speed programmed	(G81, G83, G84, G85)	
8301	No spindle direction of rotation	(G81, G83, G84, G85)	
8302	Spindle speed = 0	(G81, G83, G84, G85)	
8303	Spindle speed not reached	(G81, G83, G84, G85)	
8309	Oversized pitch dimension (T1)		(P105)
	and number of positionings (N1)		(P106)
8310	Oversized vector division (T1)		(P105)
	and final point B		
	(Final point B is defined by X and Y coordinate (P101 and P102))		
8311	Oversized vector length (L1)		(P104)
	and final point B		
	(Final point B is defined by X and Y coordinate (P101 and P102))		
8313	Oversized vector length (L1)		(P104)
	and vector part (T1)		(P105)
8315	Oversized vector division (T1)		(P105)
	and number of positionings (N1)		(P106)
8316	Input number of positionings with 0		(P106)
8320	Oversized vector division (T2)		(P115)
	and final point C		
	(Final point C is defined by X and Y coordinate (P111 and P112))		
8321	Oversized vector length (L2)		(P114)
	and final point C		
	(Final point C is defined by X and Y coordinate (P111 and P112))		
8323	Oversized vector length (L2)		(P114)
	and vector division (T2)		(P115)
8325	Oversized vector division (T2)		(P115)
	and number of positionings (N2)		(P116)
8326	Input number of positionings with 0		(P116)

9.10 **Cycle messages (continued)**

Message	Meaning	
8332	Wrong proportioned travelling angle L (P124) and pitch angle T (P125)	
8333	Oversized pitch angle T and number of positionings N	(P125) (P126)
8334	Indicate pitch angle with 0	(P125)
8335	Indicate pitch angle with 1	(P125)
8336	Indicate number of bores N with 0	(P126)
8337	Indicate number of bores N with 1	(P126)