

## 9 List of Errors

### 9.1 Miscellaneous Errors and Machine Errors

Error N°	Meaning of the error
1	Unknown character / Axis not recognised by the system
	Too many digits after a function
	Presence of a sign after a function which does not allow signs
	Non ISO character
	Sequence number over 32767
	Slash character "/" for block skipping is not the first in the block
	Spindle speed programming over > 65535
	Operation number negative or over 127
	Programming a null EF value
	Dwell value negative
	Minimum radius in tangential feed is negative
	Syntax error with L900-L925
	E.xxx programmable error number is null
	Unknown memory area in the syntax VAR H.. :s
	Executable block in a part program called on RAZ procedure (%110000)
	Programming of a rotary modulo axis in incremental mode (G91) with more than 15 revs
	Programming of a linear axis whose axis name is forbidden (depending on the current interpolation plane)
	Programming of feed F with a null value
	Programming of a spindle speed S over 65535
	Programming of S several times
	Programming of K several times
	Programming of M3/M4 several times
	Programming of {M40 or M41or ....or M45} several times
	Spindle already in movement
	G76+ H... ou G76- H.... program number must be the last data on the line
	G76+ N.. .... (block to insert) unknown name field to add
	G76+ N.. .... (block to insert) EA...EZ name field : block to insert is full
	G76+ N.. .... (block to insert) dimension over 100000000
	G76+ N.. .... (block to insert) error on a list of polynomial coefficients
	G76+ N.. .... (block to insert) block to insert is full
	G76+ H<bin> = H<source> .... Character '+' is missing after G76
	G76+ H<bin> = H<source> .... Reservation size is null
	G76+ H<bin> = H<source> .... Reserved size must be the last data on the line
	G76+ H<bin> = H<source> .... Unknown name field to add
	G76+ H<bin> = H<source> .... Syntax error with G76+
	Structured programming in polynomial programming
	The character after the operator @ (equivalent address) is not alphabetical
	Error on axis address value @
	The second character in a sequence Ex is not alphabetical
	Programming several times the retract axis
	Retract axis not existing
	Mirror function enabled on axis direction tool
2	Unknown G function or a mandatory argument missing after the G
3	Attribute of a G code wrongly positioned
4	Option not enabled or option parameter conflict
	Structured programming, RTCP, synchronised axes, etc.
5	«Geometric» option programming not enabled

<b>6</b>	«Polynomial interpolation» option missing coefficient table full
<b>7</b>	Error in programming movements parallel to inclined axes (grinder): - Programming is not in plane G20 - Interpolation is not in G00 or G01 - X is not programmed after G05 - X and Z are not programmed after G07
<b>8</b>	Tool correction number too high
<b>9</b>	A sequence of too many non-working blocks - Endless Loop
<b>15</b>	Invalid line configuration
<b>16</b>	Error in RTCP activation
<b>17</b>	End of block in a comment - close bracket missing
<b>18</b> <sup>(1)</sup>	Servo error: P50 too small
<b>20</b>	No M02 at the end of the program Blocks not made executable in a cycle called by a G function
<b>21</b>	Blank definition incoherent in 3D mode
<b>24</b>	Error in inclined plane declaration Function reactivated when already active Function argument declaration incomplete Pivot point axis does not exist or is not servo-controlled Incoherent value in one of the matrix terms
<b>25</b>	Subroutine or sequence number does not exist
<b>26</b>	Too many subroutine nesting levels
<b>27</b>	Radius offset: In G52 machine origin programming / With taper threads
<b>28</b>	Syntax error in CCSPD or index table radius definition G96 must be followed by S / G97 must be followed by S / initial radius cannot be determined X or U not programmed in this block or a previous block
<b>29</b>	No range programmed for CCSPD / No range compatible with S in G97 No range search option: S not included between min. and max. values of the range programmed With range search option: S does not belong to any range
<b>30</b>	Line error detected
<b>32</b> <sup>(1)</sup>	Homing error / Axis already on limit switch
<b>33</b> <sup>(1)</sup>	All slides on wait for synchronisation
<b>34</b>	Minimum radius reached in G21 interpolation
<b>35</b> <sup>(1)</sup>	Sequence number not found in SEARCH
<b>36</b> <sup>(1)</sup>	Part program memory full
<b>37</b>	Max. feed rate exceeded for thread cutting (COMAND)
<b>38</b>	Spindle already controlled by another channel
<b>39</b> <sup>(1)</sup>	Axis synchronisation error (with axis synchronisation option)
<b>40-49</b> <sup>(1)</sup>	Excessive following error on axis 0 to 9
<b>50-59</b> <sup>(1)</sup>	Excessive following error on axis 10 to 19
<b>60-69</b> <sup>(1)</sup>	Excessive following error on axis 20 to 29
<b>70-71</b> <sup>(1)</sup>	Excessive following error on axis 30 and 31
<b>72</b>	Incremental programming after an incomplete block (PGP)
<b>75</b>	Switch from state G20 to G21 or G22: - last block in G20 incomplete as it is programmed in PGP or radius correction or with X ≤ 0 - first block in G21 without X and Y or G22 without Y and Z  Switch from state G21 or G22 to G20: - last block in G21 or - G22 incomplete or - first block in G20 in mode G41 or - G42: In G21 or G22, initial radius negative or zero

<b>76</b>	In G21, programming of a fixed turning and milling cycle
<b>77</b>	Tool type incompatible with the machining phase (milling or turning)
<b>78</b>	Syntax error in programming channels synchronisation
	G78 P: Maximum 4 digits, must be less than the number of P must have a maximum of 4 digits and the index less than the number of channels
	G78 Q: Q must have a maximum of 4 digits and declared in ascending order
	No M00, M01 or M02 should be encountered when a G78 P... is active
<sup>(1)</sup> Machine error	

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## 9.2 Parametric Programming Errors

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Error N°	Meaning of the error
91	Parameter No. not recognised
92	Negative parameter assigned to a function which does not take a sign Parameter value higher than the maximum value of the function to which it is assigned
93	Error in parameter declaration or test expression L function not followed by symbols =, <, >, &, ! Association with a prohibited function by a linking character -, +, *, /.
94	Operation prohibited in a parametric expression: Square root of a negative number / Division by 0
95	Attempt to write in an external input parameter or a read-only parameter
96	The block preceding the external parameter declaration is incomplete Programming of L100 ... in a contour definition in G64
97	Parameter update impossible in G76: - No symbol = after the parameter number - Less than 10 characters allocated for entry of the value
98	Write by a channel of a dynamic operation already used by another channel
99	Error related to the N/M AUTO function: - More than 5 N/M AUTO axes defined - Non-servo-controlled axis defined as N/M AUTO - Definition of an N/M AUTO axis of another channel

## 9.3 Profile Geometry Programming (PGP) Errors

### 9.3.1 The end point cannot be calculated from the elements in the blocks

Error N°	Meaning of the error
101	PGP: Insufficient data for programming a circle
	Circle programmed on two parallel axes (with R / see Error 107)
102	Line programmed by an angle and one coordinate with no way of calculating the other coordinate
106	In G02, G03, programming of the third axis without «helical» option
107	PGP: Circle programmed by its radius and end point, with the end point separated from the start point by more than 2 * radius
	Circle programmed by X, Z, I K with a start radius different from the end point (20 microns) / Helical: dimension of 3rd axis missing
	Circle programmed on two parallel axes (with I, J, K / see Error 101)

### 9.3.2 An intermediate point cannot be calculated from the data in two blocks

Error N°	Meaning of the error
110	PGP: Syntax error in the first of two blocks of a PGP entity
	Circle programmed on two parallel axes (with R / see Error 107)
111	PGP: Line/line intersection in which: - First block starting point = second block end point, or - First line angle = second line angle
113	PGP: The values programmed in the two blocks do not allow determination of an intersection or tangency point
114	PGP: Intersection or tangency point not determined by ET+, ET-, ES+ or ES-

### 9.3.3 An intermediate point cannot be calculated from the data in three blocks

Error N°	Meaning of the error
121	PGP: Syntax error in the last of the three blocks of a PGP entity
122	PGP: The first two blocks are non-intersecting lines
123	PGP: The data programmed in the three blocks do not allow determination of the tangent point
124	PGP: Tangent point of the second and third blocks not specified by ET+ or ET-

### 9.3.4 Fillet or chamfer definition errors

Error N°	Meaning of the error
130	Zero displacement in one of the two blocks connected by a fillet or a chamfer
131	Fillet or chamfer programmed in a block including M0, M1 or M2
	Programming insufficient in a sequence of blocks, not allowing determination of the end point
135	A chamfer can only connect two straight lines

### 9.3.5 Miscellaneous errors in PGP

Error N°	Meaning of the error
136	More than two blocks without movement between two geometric elements whose intersection or tangency point is to be calculated
137	Change of interpolation plane with an invalid block

## 9.4 Miscellaneous Errors

Error N°	Meaning of the error
138	Change of interpolation plane when not in G40 (FCU)
139	Two carried parallel axes programmed in the same block outside G52 and outside G00
140	Radius correction programming error: - Too many extraneous blocks between two consecutive paths The following functions cannot be programmed when radius offset is active: - M00, M01, M02, access to external parameters, writing of parameters E8xxxx or L > 100
141	Carried parallel axes: - Programming of a circle whose start point was programmed with one axis and whose end point was programmed with the associated parallel axis
143	Scale factor cancelled or enabled with radius offset
144	Movement of a quantified axis different from the increment
145	G29: ABS VAL (P * P + Q * Q + R * R - 1000 mm) > 1 mm (normal vector not a unit vector)
146	Offset in space / G29: - At least one of dimensions P, Q or R missing - At least one of dimensions X/U, Y/V or Z/W missing
148	Number of axes programmed exceeds the maximum authorised number
149	Tool radius too large with respect to programmed path

## 9.5 Request for Movements Outside the Machine Travel Limits

Error N°	Meaning of the error
150	Travel overrun on the X axis
151	Travel overrun on the Y axis
152	Travel overrun on the Z axis
153	Travel overrun on the U axis
154	Travel overrun on the V axis
155	Travel overrun on the W axis
156	Travel overrun on the A axis
157	Travel overrun on the B axis
158	Travel overrun on the C axis
159	Request for programmed movement on an UN-HOMED axis

## 9.6 Structured Programming Errors

Error N°	Meaning of the error
190	Too many branch or loop nesting levels (maximum 15)
191	Non-compliance with the syntax in structured programming structured programming prohibited in MDI mode the index of a FOR loop must be: - an L variable, a symbolic variable or a parameter E80000 - E81000 or E82000 non-compliance with the syntax of PUSH and PULL instructions - DO missing after WHILE programming of IF, THEN, ELSE in MDI mode
192	Keyword not recognised or prohibited in the context
193	Structure error
195	Program stack saturated / Too many constants defined for the space allocated
196	Error in array index declaration
197	Use of a symbol not declared as VAR
198	Syntax error in variable symbol declaration
199	Incorrect variable declaration syntax

## 9.7 Axis Errors

Error N°	Meaning of the error
<b>200 ÷ 203</b>	Hardware error on handwheel 1 to 4
<b>210 ÷ 219</b> <sup>(1)</sup>	Poor signal or sensor complementarity error on axis 0 to 9
<b>220 ÷ 229</b> <sup>(1)</sup>	Poor signal or sensor complementarity error on axis 10 to 19
<b>230 ÷ 239</b> <sup>(1)</sup>	Poor signal or sensor complementarity error on axis 20 to 29
<b>240, 241</b> <sup>(1)</sup>	Poor signal or sensor complementarity error on axis 30 and 31
<b>245</b> <sup>(1)</sup>	Fault on digital servo-control
<b>248</b>	DISC NT Drive in fault
<sup>(1)</sup> Machine error.	

## 9.8 CNC - PLC Communication

Error N°	Meaning of the error
<b>249</b>	Cyclic CNC - PLC communication fails

## 9.9 System options errors

Error N°	Meaning of the error
<b>250</b>	Invalid PERSOChip
<b>251</b>	Inconsistent PERSOChip Data
<b>252</b>	Invalid Licence File
<b>253</b>	Nesting of subroutine called by M functions is forbidden

## 9.10 Axes Not Identified on the Bus

Error N°	Meaning of the error
<b>300 ÷ 309</b> <sup>(1)</sup>	Axis 0 to 9 declared in P2 but not detected on the bus
<b>310 ÷ 319</b> <sup>(1)</sup>	Axis 10 to 19 declared in P2 but not detected on the bus
<b>320 ÷ 329</b> <sup>(1)</sup>	Axis 20 to 29 declared in P2 but not detected on the bus
<b>330, 331</b> <sup>(1)</sup>	Axis 30 and 31 declared in P2 but not detected on the bus
<sup>(1)</sup> Machine error. Caution: For this type of error a CNC reset causes a general reset (CNC reset + PLC reset).	

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## 9.11 Dynamic Operators in C

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Error N°	Meaning of the error
400	Loading dynamic operators in C: The size of user code is too big
401	Loading dynamic operators in C: Format error
402	Loading dynamic operators in C: Checksum error
403	The system has insufficient memory for dynamic operators in C
404	Loading dynamic operators in C: Open error
405	Loading dynamic operators in C: Read error
406	Loading dynamic operators in C: Close error
407	Loading dynamic operators in C: The directory is empty
410	Dynamic operators in C: Number of parameters passed doesn't tally
411	Dynamic operators in C: USER ERROR from INIT: negative return
413	Unrecognised dynamic operators in C
414	Dynamic operators in C without MAIN
420	Dynamic operators in C: USER ERROR from the QUIT function
421	Dynamic operators in C: USER ERROR from the QUIT function: negative return
423	Dynamic operators in C: Range of function in C not from [0..100]

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## 9.12 Spline Curve Interpolation Errors

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Error N°	Meaning of the error
600	Curve number zero
601	N.. N.. must be programmed
602	No axes programmed in the first block of the contour
603	Curve slope undefined
604	Less than three blocks in the profile
605	Curve number unknown



## 9.13 Cycle Programming Errors

Error N°	Meaning of the error
830	Positioning not completed
831	Spindle stopped
832	End point, P and K must be programmed
833	Retraction clearance too small
834	EB value: $-90 < EB < +90$
835	The values of P, Q, R and K are absolute values
836	The interpolation plane must be G81 or G20
837	Bad value of F or S
838	Threading resume : incoherent data
862	P or R and end point to be programmed
863	End point incoherent with EA
864	Milling tool prohibited in G66
871	Finished profile limits not defined
872	No dimensions in blank definition
873	P or R not programmed
874	Blank inconsistent with finished profile
875	No intersection of EA with the profile
876	Relief angle EB incorrectly defined
880	Cycle axis unknown
881	Parameter value not compatible
882	Hole bottom dimension not programmed
883	Pitch (I J K) or clearance (P) not programmed
884	More than 9 thread starts
885	Pocket incompatible with the plane selected
886	Tool incompatible with the radius programmed
887	Cut > tool diameter
888	Dwell prohibited in this cycle
889	Syntax error
890	Tool orientation incompatible
891	Return plane = bottom of hole
892	Axial feed missing
893	Lateral feed missing
894	ER prohibited in G20
895	G21, G22 prohibited in cycle
896	Dimension incompatible with tool radius
897	Length of oblong pocket < diameter
898	Tool corrector missing
899	Spindle not assigned to this channel or spindle or channel incompatible