B List of commands and programming parameters

The commands or system instructions to program BiesseWorks machining operations are found in the commands area of the Editor application software. The following is a list of the commands to create and modify the geometrical figures, to create milling, boring and cutting operations. Each command is associated with a list of parameters with relative description.

Contents

B.1 Commands “Piece variables”

COMMANDS	DESCRIPTION
PANEL	piece data

PARAMETERS	DESCRIPTION
CHKCOLL	see the Collision control field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
CKOP	see the Keyboard offset field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. • Bit 0 = Movement in X • Bit 1 = Movement in Y
COLLTOOL	see the Machining working dim. field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
CUSTSTR	see the User data field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Indicate the string with the personalised data separated by a comma.
ENABLELABEL	allows you to generate the ISO code for labelling operations. This parameter only appears in the dialogue box Piece variables when the machine is fitted with a label printer. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
FCN	allows you to define the multiplying factor for the units of measurement (e.g. set 1.0 for the millimetres; set 25.4 for the inches). See the Measure in inches field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226
JIGTH	see the Jig thickness field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
LOCKWASTE	see the Waste blocking field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
LPX	see the LPX field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
LPY	see the LPY field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
LPZ	see the LPZ field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
MATERIAL	see the Material field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. The values allowed are those which appear in the list of the piece images.

PARAMETERS	DESCRIPTION
OPPWKRS	(for the “Skipper” machine only) see the “Opposite machining” field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
ORLST	see the Origins list field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Indicate the list of whole numbers separated by a comma (e.g. 1,4).
RUNPAV	see the Optimises suction cups field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
SYMMETRY	see the Symmetry field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
TOOLING	see the “Tooling” field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
UNICLAMP	see the Uniclamp field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
UNIQUE	see the Sole origin field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
WTPIANI	see the Locking Zone field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
XCUT	see the X cut. position field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.
YCUT	see the “Y cut. position” field in paragraph 13.2.2 “The dialogue box Piece variables”, page 226.

B.2 Commands and geometric parameters

COMMANDS	DESCRIPTION
GEO	Define geometry (for the list of parameters, see page 506).
GEOTEXT	Text (for the list of parameters, see page 508).
OFFGEO	Geometry offset (for the list of parameters, see page 509).

■ *GEO*

PARAMETERS	DESCRIPTION
A	see the Starting angle field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
ARP	see the Angle [°] field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
COW	(for the “Skipper” machine only) see the (COW)Generate opp. mach. field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CRC	see the Correction field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285. Values allowed: • 0 = Central. • 1 = Right. • 2 = Left. • 5 = Internal. • 6 = External. • 7 = From the geometry.
CRN	see the CRN field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
DA	see the Angular step field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
DP	see the Depth field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
DX	see the X step field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
DY	see the Y step field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.

■ *GEO*

PARAMETERS	DESCRIPTION
ER	see the First Item field (option ) in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
ID	geometry identification string
LAY	string to identify the layer associated with the geometry. This string is not visualised between the programming lines, but in the dialogue box Layer management.
LRP	see the L. step field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
NRP	see the No.Repeats field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285
R	see the Radius field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
RDL	see the Radial field (option ) in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
RTY	enables the type of repetition. See the description of the repetition buttons in paragraph 14.2, page 285. Values allowed: • **-1 = “rpNO”** • 0 = **“rpX”**. • 1 = **“rpY”**. • 2 = **“rpXY”**. • 3 = **“rpCIR”**. • 5 = **“rpAL”**.
RV	see the Reverse field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
SIDE	piece side. See the SIDE field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
XRC	see the (XRC)X field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.
YRC	see the (YRC)Y field in paragraph 14.2 “Definition of parameters used to draw with EGA tools”, page 285.

■ *GEOTEXT*

PARAMETERS	DESCRIPTION
A	see parameter **A** of the "GEO" command (page 506).
ACC	see the Accuracy field in paragraph 14.5 "Creating a text", page 304.
ALN	see the Alignment field in paragraph 14.5 "Creating a text", page 304. Values allowed: • 0 = central alignment. • 1 = left-hand alignment. • 2 = right-hand alignment.
ANG	see the Angle field in paragraph 14.5 "Creating a text", page 304.
ARP	see parameter **ARP** of the "GEO" command (page 506).
BOL	see the Bold field in paragraph 14.5 "Creating a text", page 304. Values allowed: • 0 = normal. • 1 = bold.
CIR	see the Geometry field in paragraph 14.5 "Creating a text", page 304. Values allowed: • 1 = circular path (option Text on circle). • 0 = linear path (option Text on line).
CRN	see the CRN field in paragraph 14.5 "Creating a text", page 304.
DA	see parameter **DA** of the "GEO" command (page 506).
DX	see parameter **DX** of the "GEO" command (page 506).
DY	see parameter **DY** of the "GEO" command (page 506).
ER	see parameter **ER** of the "GEO" command (page 506).
FNT	see the Font name field in paragraph 14.5 "Creating a text", page 304.
ID	text identification string
ITL	see the Italics field in paragraph 14.5 "Creating a text", page 304. Values allowed: • 0 = normal. • 1 = italics.
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
LRP	see parameter **LRP** of the "GEO" command (page 506).
NRP	see parameter **NRP** of the "GEO" command (page 506).
PST	see the Position field in paragraph 14.5 "Creating a text", page 304. Values allowed: • 0 = **"txtExt"** • 1 = **"txtInt"**
R	see parameter **R** of the "GEO" command (page 506).
RDL	see parameter **RDL** of the "GEO" command (page 506).

■ *GEOTEXT*

PARAMETERS	DESCRIPTION
RDS	see the Radius field in paragraph 14.5 “Creating a text”, page 304. Only to be used if parameter CIR=1.
RTY	see parameter **RTY** of the “GEO” command (page 506).
SIDE	piece side. See the SIDE field in paragraph 14.5 “Creating a text”, page 304.
SZE	see the Height field in paragraph 14.5 “Creating a text”, page 304.
TXT	see the Text field in paragraph 14.5 “Creating a text”, page 304.
VRS	see the Direction field in paragraph 14.5 “Creating a text”, page 304. Values allowed: • 0 = option From right to left. • 1 = option From left to right. • 2 = option From top to bottom. • 3 = option From bottom to top.
WGH	see the Extension field in paragraph 14.5 “Creating a text”, page 304.
X	see the X field in paragraph 14.5 “Creating a text”, page 304.
XRC	see parameter **XRC** of the “GEO” command (page 506).
Y	see the Y field in paragraph 14.5 “Creating a text”, page 304.
YRC	see parameter **YRC** of the “GEO” command (page 506).

■ *OFFGEO*

PARAMETERS	DESCRIPTION
GID	see the Reference geometry field in chapter 14 “Creating profiles”.
ID	see the Generated geometry field in chapter 14 “Creating profiles”.
LAY	string to identify the layer associated with the geometry. This string is not visualised between the programming lines, but in the dialogue box Layer management.
OFS	see the Offset for compensation field in chapter 14 “Creating profiles”.
OSL	see the Selection type field in chapter 14 “Creating profiles”. Values allowed: • 0 = **“oslTan”**. • 1 = **“oslSel”.**
SIL	list of the IDs of the single geometric parts to be inserted between quotation marks. Each single geometric part is identified with a numerical ID. The SIL parameter allows you to define a list of IDs - separated by a comma - in order to identify the single geometric parts you need to work on (e.g. PARAM, NAME=SIL, VALUE=”59891, 59802, 59896”).
SHC	see the Sharp corners field in chapter 14 “Creating profiles”. Values allowed: 1 = YES, 0 = NO.

B.3 Commands and parameters for boring

COMMANDS	DESCRIPTION
B_GEO	Bore from geometry
BCA	Bore with C axis on circular side
BCL	Bore with C axis on straight side
BG	Generic bore
BH	Horizontal bore
BV	Vertical bore
S32	System bore

PARAMETERS	DESCRIPTION
A	see parameter **A** of the "GEO" command (page 506).
A21	see the Aggr21 angle field in "Description of the fields present in the boring windows", page 336.
AGG	aggregate identification.
AP	see the description of the buttons  in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = NO; linear (). • 1 = YES; circular ().
AR	see the (AR) field in "Description of the fields present in the boring windows", page 336.
ARP	see parameter **ARP** of the "GEO" command (page 506).
AZ	see the (AZ) field in "Description of the fields present in the boring windows", page 336.
AZS	see the Add. Z saf. field in "Description of the fields present in the boring windows", page 336.
BFC	see the Chip cleaning by blowing field in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
CEN	see the Centre field in "Description of the fields present in the boring windows", page 336.

PARAMETERS	DESCRIPTION
CKA	enables the type of inclination AR/AZ. See the (AZ) field and the (AR) field in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"azrNO"**. • 1 = **"azrABS".** • 2 = **"azrINC".**
CRN	Number of corners. See the CRN field in "Description of the fields present in the boring windows", page 336.
COW	(for the "Skipper" machine only) see the "(COW)Generate opp. mach." field in paragraph 15.1.3 "Description of the fields present in the milling windows". Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
DA	see parameter **DA** of the "GEO" command (page 506).
DDS	see the Lower. dist. field in paragraph "Description of the fields present in the boring windows", page 336.
DIA	see the Diameter field in "Description of the fields present in the boring windows", page 336.
DIR	Direction of the repetitions; option  or option  (in the case of System bore type boring). This parameter is linked with parameter STP. Values allowed: • 0 = **"drX"**. • 1 = **"drY".**
DP	see the Depth field in "Description of the fields present in the boring windows", page 336.
DSP	see the Piercing speed field in "Description of the fields present in the boring windows", page 336.
DST	see the Distance field in "Description of the fields present in the boring windows", page 336.
DX	see parameter **DX** of the "GEO" command (page 506).
DY	see parameter **DY** of the "GEO" command (page 506).
EA21	enables the use of parameters **A21** and **S21**. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
ER	see parameter **ER** of the "GEO" command (page 506).
GID	see the Geom. identif. field in "Description of the fields present in the boring windows", page 336.
ID	machining operation identification string.
IOS	see the Appr./output speed field in "Description of the fields present in the boring windows", page 336.
ISO	ISO instruction.

PARAMETERS	DESCRIPTION
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
LRP	see parameter **LRP** of the "GEO" command (page 506).
MAC	see the "Machine" field in "Description of the fields present in the boring windows", page 336.
MD	enables the creation of a bore midway through the piece thickness. See also the Y field in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
NRP	see parameter **NRP** of the "GEO" command (page 506).
OPT	see the OPT field in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
R	see parameter **R** of the "GEO" command (page 506).
RDL	see parameter **RDL** of the "GEO" command (page 506).
RSP	see the Rot. speed [rpm] field in paragraph "Description of the fields present in the boring windows", page 336.
RTY	see parameter **RTY** of the "GEO" command (page 506).
S21	see the Aggr21 face field in "Description of the fields present in the boring windows", page 336. Values allowed: 1, 2, 3, 4 (i.e. the indicators identifying the standard side faces) or an indicator of the customised face.
SHP	see the Hood position field in paragraph "Description of the fields present in the boring windows", page 336. Values allowed from 0 to 6: • 0 = automatic. • 1 = all up. • 6 = all down.
SIDE	piece side. See the SIDE field in "Description of the fields present in the boring windows", page 336.
SIL	parameter only valid for the **B_GEO** command. For the description, see the **SIL** parameter of the "OFFGEO" command (page 509).
SPI	see the Spindle field in "Description of the fields present in the boring windows", page 336.
STP	see the "Step" field in "Description of the fields present in the boring windows", page 336.
TCL	see the Tool class field in "Description of the fields present in the boring windows", page 336. Values allowed: • 1 = C_ROUTING • 0 = C_DRILLING

PARAMETERS	DESCRIPTION
THR	enables the through bore. See also the Depth field in "Description of the fields present in the boring windows", page 336. Values allowed: • 1 = through bore operation enabled. • 0 = through bore operation disabled.
TNM	see the Tool code field in "Description of the fields present in the boring windows", page 336. Indicate the string with the name of the tool.
TOS	see the Channel field in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TTP	see the Tool type field in "Description of the fields present in the boring windows", page 336. Values allowed with C_ROUTING tool class: • 100 = CANDELA • 101 = SAGOMATA • 102 = ROUT0 • 103 = ROUT1 Values allowed with C_DRILLING tool class: • 0 = NORMALE • 1 = LANCIA • 2 = SVASATA • 3 = NORMALEG
TYP	type of repeat bores. See the description of the buttons  in "Description of the fields present in the boring windows", page 336. Values allowed: • 0 = **"sysCorr"**. • 1 = **"sysHole"**. • 2 = **"sysSpace"**. • 3 = **"sysOffset"**.
VTR	see the Vertical runs field in "Description of the fields present in the boring windows", page 336.
WSP	see the Work.Speed [mm/min] field in "Description of the fields present in the boring windows", page 336.
X	X co-ordinate of the first bore. See the X field in "Description of the fields present in the boring windows", page 336.
XMI	see the Minimum X field in "Description of the fields present in the boring windows", page 336.
XRC	see parameter **XRC** of the "GEO" command (page 506).
Y	Y co-ordinate of the first bore. See the Y field in "Description of the fields present in the boring windows", page 336.
YRC	see parameter **YRC** of the "GEO" command (page 506).

PARAMETERS	DESCRIPTION
Z	see the Channel field in “Description of the fields present in the boring windows”, page 336.

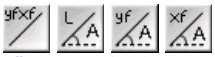
B.4 Commands and parameters for cutting

COMMANDS	DESCRIPTION
CUT_F	Format piece
CUT_FR	Rectangular cut
CUT_G	Generic cut
CUT_GEO	Cut from geometry
CUT_X	X cut
CUT_Y	Y cut

PARAMETERS	DESCRIPTION
A	see parameter **A** of the "GEO" command (page 506).
AGG	aggregate identification.
ANG	see the Angle [°] field in "Description of the fields present in the cutting windows", page 344.
ARP	see parameter **ARP** of the "GEO" command (page 506).
AR	see the (AZ) field in "Description of the fields present in the cutting windows", page 344.
BDR	see the Two-way run field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
BFC	see the Chip cleaning by blowing field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
BRC	see the Blade radius correction field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
CEN	see the Centre field in "Description of the fields present in the cutting windows", page 344.
CKA	enables the type of inclination AR/AZ. See the (AZ) field and the (AR) field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"azrNO"**. • 1 = **"azrABS"**. • 2 = **"azrINC"**.

PARAMETERS	DESCRIPTION
CRC	see the Correction field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = Central. • 1 = Right. • 2 = Left. • 7 = From the geometry.
CRN	see the CRN field in "Description of the fields present in the cutting windows", page 344.
COW	(for the "Skipper" machine only) see the "(COW)Generate opp. mach." field in paragraph 15.1.3 "Description of the fields present in the milling windows". Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
D	see the Distance field in "Description of the fields present in the cutting windows", page 344.
DA	see parameter **DA** of the "GEO" command (page 506).
DIN	see the Initial ext. field in "Description of the fields present in the cutting windows", page 344.
DOU	see the Final ext. field in "Description of the fields present in the cutting windows", page 344.
DP	see the Depth field in "Description of the fields present in the cutting windows", page 344.
DSP	see the Lowering speed field in "Description of the fields present in the cutting windows", page 344.
DX	see parameter **DX** of the "GEO" command (page 506).
DY	see parameter **DY** of the "GEO" command (page 506).
ER	see parameter **ER** of the "GEO" command (page 506).
GID	see the Geom. identif. field in "Description of the fields present in the cutting windows", page 344.
GIP	see the GIP field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
ID	machining operation identification string.
IOS	see the Appr./output speed field in "Description of the fields present in the cutting windows", page 344.
ISO	ISO instruction.
L	see the Length field in "Description of the fields present in the cutting windows", page 344.
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.

PARAMETERS	DESCRIPTION
LRP	see parameter **LRP** of the "GEO" command (page 506).
LX	see the X length field in "Description of the fields present in the cutting windows", page 344.
LY	see the Y length field in "Description of the fields present in the cutting windows", page 344.
NRP	see parameter **NRP** of the "GEO" command (page 506).
NRV	see the Reverse the cutting direction field in paragraph "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
OPT	see the OPT field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
OVM	see the Over-material field in "Description of the fields present in the cutting windows", page 344.
PRV	see the Possible reversing of the cut field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
R	see parameter **R** of the "GEO" command (page 506).
RDL	see parameter **RDL** of the "GEO" command (page 506).
RSP	see the Rot. speed [rpm] field in "Description of the fields present in the cutting windows", page 344.
RTY	see parameter **RTY** of the "GEO" command (page 506).
RV	see the Reverse field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
SHP	see the Hood position field in paragraph "Description of the fields present in the cutting windows", page 344. Values allowed from 0 to 6: • 0 = automatic. • 1 = all up. • 6 = all down.
SIDE	piece side. See the SIDE field in "Description of the fields present in the cutting windows", page 344.
SIL	parameter only valid for the **CUT_GEO** command. For the description, see the **SIL** parameter of the "OFFGEO" command (page 509).
SPI	see the Spindle field in "Description of the fields present in the cutting windows", page 344.

PARAMETERS	DESCRIPTION
TCL	see the Tool class field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 1 = C_ROUTING • 2 = C_CUTTING
TH	see the Thickness field in "Description of the fields present in the cutting windows", page 344.
THR	enables the through bore. See also the Depth field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 1 = through bore operation enabled. • 0 = through bore operation disabled.
TNM	see the Tool code field in "Description of the fields present in the cutting windows", page 344. Indicate the string with the name of the tool.
TOS	see the Channel field in "Description of the fields present in the cutting windows", page 344. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TTK	see the Total Thickness field in "Description of the fields present in the cutting windows", page 344.
TTP	see the Tool type field in "Description of the fields present in the cutting windows", page 344. Values allowed with C_ROUTING tool class: • 100 = CANDELA • 101 = SAGOMATA • 102 = ROUT0 • 103 = ROUT1 Values allowed with C_CUTTING tool class: • 200 = CUTT0 • 201 = CUTT1 • 250 = HEAD0 • 251 = HEAD1
TYP	type of repeat cuts. See the description of the buttons  in "Description of the fields present in the cutting windows", page 344. Values allowed: • 2 = "cutXY". • 3 = "cutXA". • 4 = "cutYA". • 5 = "cutLA".
VTR	see the Vertical runs field in "Description of the fields present in the cutting windows", page 344.
WSP	see the Work.Speed [mm/min] field in "Description of the fields present in the cutting windows", page 344.
X	see the **X** field in "Description of the fields present in the cutting windows", page 344.

PARAMETERS	DESCRIPTION
XE	see the End X field in “Description of the fields present in the cutting windows”, page 344.
XRC	see parameter **XRC** of the “GEO” command (page 506).
Y	see the **Y** field in “Description of the fields present in the cutting windows”, page 344.
YE	see the End Y field in “Description of the fields present in the cutting windows”, page 344.
YRC	see parameter **YRC** of the “GEO” command (page 506).
Z	see the Channel field in “Description of the fields present in the cutting windows”, page 344.

B.5 Commands and parameters for milling and insertions

COMMANDS	DESCRIPTION
INSERT	Insertion (for the list of parameters, see INSERTG on page 520).
INSERTG	Insertion from geometry (for the list of parameters, see page 520).
POCK	Pocketing (for the list of parameters, see page 522).
ROUT	Milling (for the list of parameters, see ROUTG on page 526).
ROUTG	Milling from geometry (for the list of parameters, see page 526).
TT	Tracer (for the list of parameters, see page 533).

■ *INSERTG*

PARAMETERS	DESCRIPTION
A	see parameter **A** of the “GEO” command (page 506).
AGG	see the Aggregate field in “Description of the fields present in the insertion windows”, page 352.
ARP	see parameter **ARP** of the “GEO” command (page 506).
CEN	see the Centre field in “Description of the fields present in the insertion windows”, page 352.
CRN	see the **CRN** field in “Description of the fields present in the insertion windows”, page 352.
DA	see parameter **DA** of the “GEO” command (page 506).
DP	see the Depth field in “Description of the fields present in the insertion windows”, page 352.
DP	see the Depth field in “Description of the fields present in the insertion windows”, page 352.
DX	see parameter **DX** of the “GEO” command (page 506).
DY	see parameter **DY** of the “GEO” command (page 506).
ER	see parameter **ER** of the “GEO” command (page 506).
GID	see the Geom. identif. field in “Description of the fields present in the insertion windows”, page 352.
ID	machining operation identification string.
ISO	ISO instruction.
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
LRP	see parameter **LRP** of the “GEO” command (page 506).
MAC	see the “Machine” field in “Description of the fields present in the insertion windows”, page 352.

■ *INSERTG*

PARAMETERS	DESCRIPTION
NRP	see parameter **NRP** of the "GEO" command (page 506).
OPT	see the OPT field in "Description of the fields present in the insertion windows", page 352. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
R	see parameter **R** of the "GEO" command (page 506).
RTY	see parameter **RTY** of the "GEO" command (page 506).
SIDE	piece side. See the SIDE field in "Description of the fields present in the insertion windows", page 352.
SIL	see parameter **SIL** of the "OFFGEO" command (page 509).
SPI	see the Spindle field in "Description of the fields present in the insertion windows", page 352.
TCL	see the Tool class field in "Description of the fields present in the insertion windows", page 352. Values allowed: • 3 = C_INSERTING
TNM	see the Tool code field in "Description of the fields present in the insertion windows", page 352. Indicate the string with the name of the tool.
TTP	see the Tool type field in "Description of the fields present in the insertion windows", page 352. Values allowed: • 300 = BASETTA • 301 = ATTACCAGLIA • 302 = REGGIPIANI • 303 = CERNIERA • 304 = GUIDA • 305 = BUSSOLA • 306 = SPINA • 307 = PARACOLPI • 308 = COLLA
WSP	see the Work.Speed [mm/min] field in "Description of the fields present in the insertion windows", page 352.
X	see the X field "Description of the fields present in the insertion windows", page 352.
XRC	see parameter **XRC** of the "GEO" command (page 506).
Y	see the Y field in "Description of the fields present in the insertion windows", page 352.
YRC	see parameter **YRC** of the "GEO" command (page 506).
Z	see the Channel field in "Description of the fields present in the insertion windows", page 352.

■ *POCK*

PARAMETERS	DESCRIPTION
A	see the Angle [°] field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
A21	see the Aggr21 angle field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
AGG	aggregate identification.
AIN	see the “Lead-in Angle” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
AOU	see the “Lead-out Angle” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
CEN	see the Centre field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
CIN	see the “(CIN)Correction in air” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CKI	see the Activ. islands field in paragraph 15.1.4 “Geometric profile pocketing”, page 329. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
COU	see the “(COU) Correction in air” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
COW	(for the “Skipper” machine only) see the “(COW)Generate opp. mach.” field in paragraph 15.1.3 “Description of the fields present in the milling windows”. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
DIA	see the “Diameter” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
DIN	see the “Initial ext.” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
DLT	see the Overlapping field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
DOU	see the “Final ext.” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
DP	see the Depth field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.

■ *POCK*

PARAMETERS	DESCRIPTION
DSP	see the Lowering speed field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
EA21	enables the use of parameters **A21** and **S21**. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
GID	see the Geom. identif. field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
ID	machining operation identification string.
IOS	see the Appr./output speed field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
ISL	see the Islands list field in paragraph 15.1.4 “Geometric profile pocketing”, page 329. Indicate the string with the list of islands. The names of the islands must be inside quotation marks, and separated by commas, e.g. “is1”, “is2”.
ISO	ISO instruction.
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
OPT	see the OPT field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
OTR	see the Horizontal runs field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PRP	see the “Percent Radius” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
RRV	see the Finish. Inver. field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
RSP	see the Rot. speed [rpm] field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
RV	see the Reverse field in paragraph 15.1.4 “Geometric profile pocketing”, page 329. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
S21	see the Aggr21 face field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: 1, 2, 3, 4 (i.e. the indicators identifying the standard side faces) or an indicator of the customised face.
SDS	see the “Decel. Dist.” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.

■ *POCK*

PARAMETERS	DESCRIPTION
SHP	see the "Hood position" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed from 0 to 6: • 0 = automatic. • 1 = all up. • 6 = all down.
SPI	see the Spindle field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
TBI	see the "(TBI)Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TBO	see the "(TBO) Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TC	see the Compensation field in paragraph 15.1.4 "Geometric profile pocketing", page 329. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TCL	see the Tool class field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 1 = C_ROUTING • 2 = C_CUTTING
TIN	see the "Lead-in Type" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = None • 1 = Curve • 2 = Line • 3 = Tg LineCurve • 5 = Helix • 6 = 3DLineCurve • 7 = Corrected 3DLine • 8 = Corrected 3DCurve • 9 = Corrected Line • 14 = 3D profile
TNM	see the "Tool code" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Indicate the string with the name of the tool.

■ *POCK*

PARAMETERS	DESCRIPTION
TOS	see the **TOS** field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
TOU	see the “Lead-out type” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = None • 1 = Curve • 2 = Line • 3 = Tg LineCurve • 5 = Helix • 6 = 3DLineCurve • 7 = Corrected 3DLine • 8 = Corrected 3DCurve • 9 = Corrected Line • 14 = 3D profile
TTP	see the “Tool type” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed with C_ROUTING tool class: • 100 = CANDELA • 101 = SAGOMATA • 102 = ROUT0 • 103 = ROUT1 Values allowed with C_CUTTING tool class: • 200 = CUTT0 • 201 = CUTT1 • 250 = HEAD0 • 251 = HEAD1
TYP	see the description of the buttons to define the types of machining operation in paragraph 15.1.4 “Geometric profile pocketing”, page 329. Values allowed: • 0 = **“ptZIG”.** • 1 = **“ptZZ”.** • 2 = **“ptIN”.** • 3 = **“ptOUT”.** • 4 = **“ptFSH”**.
WSP	see the “Work.Speed [mm/min]” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
Z	see the Z step field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.
ZST	see the Overlapping field in paragraph 15.1.4 “Geometric profile pocketing”, page 329.

■ *ROUTG*

PARAMETERS	DESCRIPTION
A	see parameter **A** of the "GEO" command (page 506).
A21	see the Aggr21 angle field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
AGG	aggregate identification.
AIN	see the "Lead-in Angle" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
AOU	see the "Lead-out Angle" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
AR	see the "(AR)" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
ARP	see parameter **ARP** of the "GEO" command (page 506).
AUX	(for the "Skipper" machine only) see the "(AUX)AUX tables" field in paragraph 15.1.3 "Description of the fields present in the milling windows".
AZ	see the "(AZ)" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
AZS	see the Add. Z saf. field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
BDR	see the Two-way run field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
BFC	see the Chip cleaning by blowing field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
BLW	see the Blower field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
CEN	see the Centre field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
CIN	see the "(CIN)Correction in air" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.

■ *ROUTG*

PARAMETERS	DESCRIPTION
CKA	enables the type of inclination AR/AZ. See the (AZ) field and the (AR) field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“azrNO”**. • 1 = **“azrABS”.** • 2 = **“azrINC”.**
CKT	see the Enable TCP field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
COF	see the Enable finishing field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
COU	see the “(COU) Correction in air” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CRC	see the “Correction” field in paragraph 15.1.3 “Description of the fields present in the milling windows”. Values allowed: • 0 = Central. • 1 = Right. • 2 = Left. • 7 = From the geometry.
COW	(for the “Skipper” machine only) see the “(COW)Generate opp. mach.” field in paragraph 15.1.3 “Description of the fields present in the milling windows”. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CRN	see the CRN field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
CRR	see the Corner slow down field in paragraph 16.1 “Notes for programming using the chip deflector”, page 363. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CSP	see the Corner speed field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
DA	see parameter **DA** of the “GEO” command (page 506).
DDT	see the Distance field in paragraph 16.1 “Notes for programming using the chip deflector”, page 363.

■ *ROUTG*

PARAMETERS	DESCRIPTION
DIA	see the "Diameter" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DIN	see the "Initial ext." field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DOF	see the Finishing step field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DOU	see the "Final ext." field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DP	see the "Depth" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DSP	see the Lowering speed field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DVR	see the Final run field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
DX	see parameter **DX** of the "GEO" command (page 506).
DY	see parameter **DY** of the "GEO" command (page 506).
EA21	enables the use of parameters **A21** and **S21**. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
EECS	see the "Activates the electronic copying" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
ER	see parameter **ER** of the "GEO" command (page 506).
FDT	see the Final distance field in paragraph 16.1 "Notes for programming using the chip deflector", page 363.
GID	see the Geom. identif. field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
GIN	see the "(GIN)Offset" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
GIP	see the GIP field in 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
GOU	see the "(GOU) Offset" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
ID	machining operation identification string.
IDT	see the Starting distance field in paragraph 16.1 "Notes for programming using the chip deflector", page 363.
IOS	see the Appr./output speed field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
ISO	ISO instruction.

■ *ROUTG*

PARAMETERS	DESCRIPTION
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
LNG	see the Length [mm|%] field in paragraph 15.1.3 “Description of the fields present in the milling windows”.
LPR	see the Length as % field in paragraph 15.1.3 “Description of the fields present in the milling windows”.
LRP	see parameter **LRP** of the “GEO” command (page 506).
NRP	see parameter **NRP** of the “GEO” command (page 506).
OPT	see the OPT field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
OTR	see the Horizontal runs field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
OVM	see the Over-material field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PCIN	see the “Correction of initial depth” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PCU	see the “Correction of end depth” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PDIN	see the “Length of the initial section” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PDU	see the “Length of the end section” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PMOL	see the “ZE axis speed variation” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PRP	see the “Percent Radius” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
PRS	see the Presser field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
R	see parameter **R** of the “GEO” command (page 506).
RDL	see parameter **RDL** of the “GEO” command (page 506).
RDT	see the Rotation [%] field in paragraph 16.1 “Notes for programming using the chip deflector”, page 363.
RSP	see the Rot. speed [rpm] field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
RTY	see parameter **RTY** of the “GEO” command (page 506).

■ *ROUTG*

PARAMETERS	DESCRIPTION
RV	see the "Reverse" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
S21	see the Aggr21 face field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: 1, 2, 3, 4 (i.e. the indicators identifying the standard side faces) or an indicator of the customised face.
SC	see the Sharp corners field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
SDS	see the "Decel. Dist." field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
SDT	see the Thickness [inc] field in paragraph 16.1 "Notes for programming using the chip deflector", page 363.
SHP	see the "Hood position" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed from 0 to 6: • 0 = automatic. • 1 = all up. • 6 = all down.
SIL	see parameter **SIL** of the "OFFGEO" command (page 509).
SIDE	piece side. See the SIDE field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
SPI	see the Spindle field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
SVR	see the Horizontal step field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
SWI	see the Floating field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TBI	see the "(TBI)Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
TBO	see the "(TBO) Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.

■ *ROUTG*

PARAMETERS	DESCRIPTION
TCL	see the Tool class field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 1 = C_ROUTING • 2 = C_CUTTING
TDT	see the Deflector field in paragraph 16.1 “Notes for programming using the chip deflector”, page 363. Indicate the string with the name of the chip deflector.
THR	enables the through machining operation. See the “Depth” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 1 = through bore operation enabled. • 0 = through bore operation disabled.
TIN	see the “Lead-in Type” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = None • 1 = Curve • 2 = Line • 3 = Tg LineCurve • 5 = Helix • 6 = 3DLineCurve • 7 = Corrected 3DLine • 8 = Corrected 3DCurve • 9 = Corrected Line • 14 = 3D profile
TLI	see the Tabbing length option of the “(TBI)Insert tabbing” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
TLO	see the Tabbing length option of the “(TBO) Insert tabbing” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
TNM	see the “Tool code” field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Indicate the string with the name of the tool.
TOS	see the **TOS** field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.

■ *ROUTG*

PARAMETERS	DESCRIPTION
TOU	see the "Lead-out type" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed: • 0 = None • 1 = Curve • 2 = Line • 3 = Tg LineCurve • 5 = Helix • 6 = 3DLineCurve • 7 = Corrected 3DLine • 8 = Corrected 3DCurve • 9 = Corrected Line • 14 = 3D profile
TQI	see the Tabbing position option of the "(TBI)Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
TQO	see the Tabbing position option of the "(TBO) Insert tabbing" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
TTP	see the "Tool type" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312. Values allowed with C_ROUTING tool class: • 100 = CANDELA • 101 = SAGOMATA • 102 = ROUT0 • 103 = ROUT1 Values allowed with C_CUTTING tool class: • 200 = CUTT0 • 201 = CUTT1 • 250 = HEAD0 • 251 = HEAD1
UDT	see the Use deflector field in paragraph 16.1 "Notes for programming using the chip deflector", page 363. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
VTR	see the Vertical runs field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
WSP	see the "Work.Speed [mm/min]" field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.
XRC	see parameter **XRC** of the "GEO" command (page 506).
YRC	see parameter **YRC** of the "GEO" command (page 506).
Z	see the Channel field in paragraph 15.1.3 "Description of the fields present in the milling windows", page 312.

■ *ROUTG*

PARAMETERS	DESCRIPTION
ZE	see the End Z field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.
ZS	see the Starting Z field in paragraph 15.1.3 “Description of the fields present in the milling windows”, page 312.

■ *TT*

PARAMETERS	DESCRIPTION
AGG	aggregate identification.
CEN	see the Centre field in paragraph 15.5 “Programming piece tracing”, page 353.
COR	see the Dis. correction field in paragraph 15.5 “Programming piece tracing”, page 353. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
CRN	see the CRN field in paragraph 15.5 “Programming piece tracing”, page 353.
ISO	see the ISO parameter field in paragraph 15.5 “Programming piece tracing”, page 353.
LAY	string to identify the layer associated with the machining operation. This string is not visualised between the programming lines, but in the dialogue box Layer management.
MD	enables the creation of a bore midway through the piece thickness. See also the Y field in 15.5 “Programming piece tracing”, page 353. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
SIDE	piece side. See the SIDE field in paragraph 15.5 “Programming piece tracing”, page 353.
SPD	see the TSpd field in paragraph 15.5 “Programming piece tracing”, page 353.
SPI	see the Spindle field in paragraph 15.5 “Programming piece tracing”, page 353.
TNM	see the Tool code field in paragraph 15.5 “Programming piece tracing”, page 353. Indicate the string with the name of the tool.
TYP	see the Tracer type field in paragraph 15.5 “Programming piece tracing”, page 353.
X	see the X field in paragraph 15.5 “Programming piece tracing”, page 353.
Y	see the Y field in paragraph 15.5 “Programming piece tracing”, page 353.

- ***TT***

PARAMETERS	DESCRIPTION
Z	see the Channel field in paragraph 15.5 “Programming piece tracing”, page 353.

B.6 Commands and parameters to create the drawing

- List of commands and parameters to design the arches (page 535).
- List of commands and parameters to design the lines (page 536).
- List of commands and parameters to design the figures (page 537).

B.6.1 List of commands and parameters to design the arches

COMMANDS	DESCRIPTION
AINC_ANCE	Incremental curve given angle and centre point.
AINC_EPRA	Incremental curve given radius and end point.
ARC_ANCE	Curve given angle and centre.
ARC_ANCERATP	Curve given angle centre radius and tangency to previous item.
ARC_CETS	Curve given centre and tangency to next element (with previous point determined).
ARC_CETSPK	Curve given centre and tangency to next element (with previous point not determined).
ARC_EPCE	Curve given end point and centre.
ARC_EPRA	Curve given end point and radius.
ARC_EPRATP	Curve given end point radius and tangency to previous item.
ARC_EPTP	Curve given end point and tangency to previous item.
ARC_IPEP	Curve using three points.
ARC_RATS	Curve given radius and tangency to next element (with previous point determined).
ARC_RATSPK	Curve given radius and tangency to next element (with previous point not determined).
CONNECTOR	Connector A.
CONNECTOR2	Connector B.
START_POINT	Starting point (for the list of parameters, see page 544).

PARAMETERS	DESCRIPTION
A	see the Alpha field in ""Arc" type tools", page 293.
DIR	see the Direction field in ""Arc" type tools", page 293. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.
FD	see the Work. Speed field in ""Arc" type tools", page 293.
R	see the Radius field in ""Arc" type tools", page 293.

PARAMETERS	DESCRIPTION
SC	see the Sharp corner field in ""Arc" type tools", page 293. Values allowed: • 0 = **"scOFF"**. • 1 = **"sc1"**. • 2 = **"sc2"**.
SOL	see the Solution field in ""Arc" type tools", page 293. Values allowed: 0, 1. For the **ARC_EPRATP** command only, the values allowed are: AUTO, 0, 1, 2, 3.
SP	see the Rot. Speed field in ""Arc" type tools", page 293.
X2	see the X2 field in ""Arc" type tools", page 293.
XC	see the Centre X field in ""Arc" type tools", page 293.
XE	see the End X field in ""Arc" type tools", page 293.
XI	• For the **AINC_ANCE** command, see the Centre X incr. field in ""Arc" type tools", page 293. • For the **AINC_EPRA** command, see the End X incr. field in ""Arc" type tools", page 293.
Y2	see the Y2 field in ""Arc" type tools", page 293.
YC	see the Centre Y field in ""Arc" type tools", page 293.
YE	see the End Y field in ""Arc" type tools", page 293.
YI	• For the **AINC_ANCE** command, see the Centre Y incr. field in ""Arc" type tools", page 293. • For the **AINC_EPRA** command, see the End Y incr. field in ""Arc" type tools", page 293.
ZE	see the End Z field in ""Arc" type tools", page 293.
ZS	see the Start Z field in ""Arc" type tools", page 293.

B.6.2 List of commands and parameters to design the lines

COMMANDS	DESCRIPTION
CHAMFER	Chamfer.
LINC_EP	Incremental line given end point.
LINE_ANXE	Line given angle and final X.
LINE_ANYE	Line given angle and final Y.
LINE_EP	Line given end point.
LINE_EPANTP	Line given end point angle and tangency to previous item.
LINE_EPTP	Line given end point and tangency to previous item.
LINE_LNAN	Line given length and angle.
LINE_LNTP	Line given length and tangency to previous item.
LINE_LNXE	Line given length and final X.

COMMANDS	DESCRIPTION
LINE_LNYE	Line given length and final Y.
START_POINT	Starting point (for the list of parameters, see page 544).

PARAMETERS	DESCRIPTION
A	see the Alpha field in ""Line" type tools", page 290.
D	see the Distance field in ""Line" type tools", page 290.
FD	see the Work. Speed field in ""Line" type tools", page 290.
L	see the Length field in ""Line" type tools", page 290.
MVT	see the Repositioning field in ""Line" type tools", page 290. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
SC	see the Sharp corner field in ""Line" type tools", page 290. Values allowed: • 0 = **"scOFF"**. • 1 = **"sc1"**. • 2 = **"sc2"**.
SOL	see the Solution field in ""Line" type tools", page 290. Values allowed: 0, 1.
SP	see the Rot. Speed field in ""Line" type tools", page 290.
XE	see the End X field in ""Line" type tools", page 290.
XI	see the Increase in X field in ""Line" type tools", page 290.
XS	see the Start X field in ""Line" type tools", page 290.
YE	see the End Y field in ""Line" type tools", page 290.
YI	see the Increase in Y field in ""Line" type tools", page 290.
YS	see the Start Y field in ""Line" type tools", page 290.
ZE	see the End Z field in ""Line" type tools", page 290.
ZS	see the Start Z field in ""Line" type tools", page 290.

B.6.3 List of commands and parameters to design the figures

COMMANDS	DESCRIPTION
CIRCLE_3P	Circle given three points (for the list of parameters, see page 538).
CIRCLE_CR	Circle given centre and radius (for the list of parameters, see page 538).
ELLIPSE	Ellipse (for the list of parameters, see page 539).
OVAL	Oval (for the list of parameters, see page 540).
POLYGON	Polygon (for the list of parameters, see page 541).

COMMANDS	DESCRIPTION
RECTANGLE	Rectangle (for the list of parameters, see page 542).
STAR	Star (for the list of parameters, see page 543).
START_POINT	Starting point (for the list of parameters, see page 544).

■ *CIRCLE_3P*

PARAMETERS	DESCRIPTION
AS	see the Start alpha field in "Description of fields in the Circle given three points dialogue box:", page 297.
DIR	see the Direction field in "Description of fields in the Circle given three points dialogue box:", page 297. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.
FD	see the Work. Speed field in "Description of fields in the Circle given three points dialogue box:", page 297.
SP	see the Rot. Speed field in "Description of fields in the Circle given three points dialogue box:", page 297.
X1	see the **X1 field in "Description of fields in the Circle given three points dialogue box:"**, page 297.
X2	see the X2 field in "Description of fields in the Circle given three points dialogue box:", page 297.
X3	see the X3 field in "Description of fields in the Circle given three points dialogue box:", page 297.
Y1	see the Y1 field in "Description of fields in the Circle given three points dialogue box:", page 297.
Y2	see the Y2 field in "Description of fields in the Circle given three points dialogue box:", page 297.
Y3	see the Y3 field in "Description of fields in the Circle given three points dialogue box:", page 297.

■ *CIRCLE_CR*

PARAMETERS	DESCRIPTION
AS	see the Start alpha field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.
DIR	see the Direction field in "Description of fields in the Circle given centre and radius dialogue box:", page 297. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.

■ *CIRCLE_CR*

PARAMETERS	DESCRIPTION
FD	see the Work. Speed field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.
R	see the Radius field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.
SP	see the Rot. Speed field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.
XC	see the Centre X field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.
YC	see the Centre Y field in "Description of fields in the Circle given centre and radius dialogue box:", page 297.

■ *ELLIPSE*

PARAMETERS	DESCRIPTION
A	see the Alpha field in "Description of fields in the Ellipse dialogue box:", page 295.
A1	see the Axis 1 field in "Description of fields in the Ellipse dialogue box:", page 295.
A2	see the Axis 2 field in "Description of fields in the Ellipse dialogue box:", page 295.
AE	see the End alpha field in "Description of fields in the Ellipse dialogue box:", page 295.
AS	see the Start alpha field in "Description of fields in the Ellipse dialogue box:", page 295.
DIR	see the Direction field in "Description of fields in the Ellipse dialogue box:", page 295. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.
ELM	see the No. Items field in "Description of fields in the Ellipse dialogue box:", page 295.
FD	see the Work. Speed field in "Description of fields in the Ellipse dialogue box:", page 295.
SP	see the Rot. Speed field in "Description of fields in the Ellipse dialogue box:", page 295.
UA	see the Use field in "Description of fields in the Ellipse dialogue box:", page 295. Values allowed: • 0 = NO (Lines). • 1 = YES (Arcs).

■ *ELLIPSE*

PARAMETERS	DESCRIPTION
UNE	see the No. Items used field in "Description of fields in the Ellipse dialogue box:", page 295. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
XC	see the Centre X field in "Description of fields in the Ellipse dialogue box:", page 295.
YC	see the Centre Y field in "Description of fields in the Ellipse dialogue box:", page 295.

■ *OVAL*

PARAMETERS	DESCRIPTION
AS	see the Start alpha field in "Description of fields in the Oval dialogue box:", page 296.
DIR	see the Direction field in "Description of fields in the Oval dialogue box:", page 296. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.
FD	see the Work. Speed field in "Description of fields in the Oval dialogue box:", page 296.
LKR	see the Conn. radius field in "Description of fields in the Oval dialogue box:", page 296.
R1	see the Radius 1 field in "Description of fields in the Oval dialogue box:", page 296.
R2	see the Radius 2 field in "Description of fields in the Oval dialogue box:", page 296.
SP	see the Rot. Speed field in "Description of fields in the Oval dialogue box:", page 296.
X1	see the X1 field in "Description of fields in the Oval dialogue box:", page 296.
X2	see the X2 field in "Description of fields in the Oval dialogue box:", page 296.
Y1	see the Y1 field in "Description of fields in the Oval dialogue box:", page 296.
Y2	see the Y2 field in "Description of fields in the Oval dialogue box:", page 296.

■ *POLYGON*

PARAMETERS	DESCRIPTION
A	see the Alpha field in “Description of fields in the Polygon dialogue box:”, page 299.
CD	see the Chamfer distance field in “Description of fields in the Polygon dialogue box:”, page 299.
CT	see the Chamfer type field in “Description of fields in the Polygon dialogue box:”, page 299. Values allowed: • 0 = **“cmfNO”**. • 1 = **“cmfLIN”**. • 2 = **“cmfCIR”**.
DIR	see the Direction field in “Description of fields in the Polygon dialogue box:”, page 299. Values allowed: • 1 = **“dirCW”**. • 2 = **“dirCCW”**.
FD	see the Work. Speed field in “Description of fields in the Polygon dialogue box:”, page 299.
R	see the Radius field in “Description of fields in the Polygon dialogue box:”, page 299.
S	see the No. sides field in “Description of fields in the Polygon dialogue box:”, page 299.
SC	see the Sharp corner field in “Description of fields in the Polygon dialogue box:”, page 299. Values allowed: • 0 = **“scOFF”**. • 1 = **“sc1”**. • 2 = **“sc2”**.
SD	see the Starting distance field in “Description of fields in the Polygon dialogue box:”, page 299.
SP	see the Rot. Speed field in “Description of fields in the Polygon dialogue box:”, page 299.
SS	see the Starting side field in “Description of fields in the Polygon dialogue box:”, page 299. Values allowed: 1, 2, 3, 4.
XC	see the Centre X field in “Description of fields in the Polygon dialogue box:”, page 299.
YC	see the Centre Y field in “Description of fields in the Polygon dialogue box:”, page 299.

■ *RECTANGLE*

PARAMETERS	DESCRIPTION
A	see the Alpha field in "Description of fields in the Rectangle dialogue box:", page 298.
CD	see the Chamfer distance field in "Description of fields in the Rectangle dialogue box:", page 298.
CRN	see the Corner field in "Description of fields in the Rectangle dialogue box:", page 298. Values allowed: 1, 2, 3, 4.
CT	see the Chamfer type field in "Description of fields in the Rectangle dialogue box:", page 298. Values allowed: • 0 = **"cmfNO"**. • 1 = **"cmfLIN"**. • 2 = **"cmfCIR"**.
DIR	see the Direction field in "Description of fields in the Rectangle dialogue box:", page 298. Values allowed: • 1 = **"dirCW"**. • 2 = **"dirCCW"**.
FD	see the Work. Speed field in "Description of fields in the Rectangle dialogue box:", page 298.
H	see the Height field in "Description of fields in the Rectangle dialogue box:", page 298.
L	see the Length field in "Description of fields in the Rectangle dialogue box:", page 298.
SC	see the Sharp corner field in "Description of fields in the Rectangle dialogue box:", page 298. Values allowed: • 0 = **"scOFF"**. • 1 = **"sc1"**. • 2 = **"sc2"**.
SD	see the Starting distance field in "Description of fields in the Rectangle dialogue box:", page 298.
SP	see the Rot. Speed field in "Description of fields in the Rectangle dialogue box:", page 298.
SS	see the Starting side field in "Description of fields in the Rectangle dialogue box:", page 298.Values allowed: 1, 2, 3, 4.
USC	see the Use field in "Description of fields in the Rectangle dialogue box:", page 298.Values allowed: • 1 = Center (centre). • 0 = Corner (corner).
XC	see the Centre X field in "Description of fields in the Rectangle dialogue box:", page 298.

■ *RECTANGLE*

PARAMETERS	DESCRIPTION
YC	see the Centre Y field in “Description of fields in the Rectangle dialogue box:”, page 298.

■ *STAR*

PARAMETERS	DESCRIPTION
A	see the Alpha field in “Description of fields in the Star dialogue box:”, page 300.
CD	see the Chamfer distance field in “Description of fields in the Star dialogue box:”, page 300.
CT	see the Chamfer type field in “Description of fields in the Star dialogue box:”, page 300. Values allowed: • 0 = **“cmfNO”**. • 1 = **“cmfLIN”**. • 2 = **“cmfCIR”**.
DIR	see the Direction field in “Description of fields in the Star dialogue box:”, page 300. Values allowed: • 1 = **“dirCW”**. • 2 = **“dirCCW”**.
ER	see the Ext. radius field in “Description of fields in the Star dialogue box:”, page 300.
FD	see the Work. Speed field in “Description of fields in the Star dialogue box:”, page 300.
IR	see the Int. radius field in “Description of fields in the Star dialogue box:”, page 300.
PS	see the No. points field in “Description of fields in the Star dialogue box:”, page 300.
SC	see the Sharp corner field in “Description of fields in the Star dialogue box:”, page 300. Values allowed: • 0 = **“scOFF”**. • 1 = **“sc1”**. • 2 = **“sc2”**.
SD	see the Starting distance field in “Description of fields in the Star dialogue box:”, page 300.
SP	see the Rot. Speed field in “Description of fields in the Star dialogue box:”, page 300.
SS	see the Starting side field in “Description of fields in the Star dialogue box:”, page 300. Values allowed: 1, 2, 3, 4.

■ *STAR*

PARAMETERS	DESCRIPTION
XC	see the Centre X field in “Description of fields in the Star dialogue box:”, page 300.
YC	see the Centre Y field in “Description of fields in the Star dialogue box:”, page 300.
ZE	see the End Z field in “Description of fields in the Star dialogue box:”, page 300.
ZS	see the Start Z field in “Description of fields in the Star dialogue box:”, page 300.

■ *START_POINT*

PARAMETERS	DESCRIPTION
X	Start X; X-axis co-ordinate of the drawing start point.
Y	Start Y; Y-axis co-ordinate of the drawing start point.

B.7 Commands and parameters for the functions

COMMANDS	DESCRIPTION
GRIP	(for the “Skipper” machine only) Clamping (for the list of parameters, see page 545).
ISO	ISO code (for the description, see paragraph 13.3.1 “ISO instructions”, page 246).
OFFSET	Move piece (for the list of parameters, see page 545).
PUTPROG	(for the “Skipper” machine only) Entering a subprogram (for the list of parameters, see page 546).
ROTATE	Rotate geometry (for the list of parameters, see page 547).
SCALE	Geometry scale (for the list of parameters, see page 547).
SHIFT	Move geometry (for the list of parameters, see page 547).
WAIT	Wait for piece positioning (for the list of parameters, see page 548).
WFC	Circular side (for the list of parameters, see page 548).
WFG	Sides from geometry (for the list of parameters, see page 549).
WFGL	Side from geometry on side faces (for the list of parameters, see page 550).
WFGPS	Side from geometry using section plan (for the list of parameters, see page 551).
WFL	Straight side (for the list of parameters, see page 551).

■ *GRIP*

PARAMETERS	DESCRIPTION
CRN	see the “CRN” field in paragraph 13.3.13 “Moving the vices of the “Skipper” machine”, page 272. Values allowed: • **“crnN1”** • **“crnN4”**
X	see the “X POSITION” field in paragraph 13.3.13 “Moving the vices of the “Skipper” machine”, page 272.
GNM	see the “GNM” field in paragraph 13.3.13 “Moving the vices of the “Skipper” machine”, page 272. Values allowed: • **“gcGrip1”** • **“gcGrip2”**

■ *OFFSET*

PARAMETERS	DESCRIPTION
X	see the X field in paragraph 13.3.2 “Translation of the origin”, page 246.

■ *OFFSET*

PARAMETERS	DESCRIPTION
Y	see the Y field in paragraph 13.3.2 “Translation of the origin”, page 246.
Z	see the Z field in paragraph 13.3.2 “Translation of the origin”, page 246.

■ *PUTPROG*

PARAMETERS	DESCRIPTION
BCK	see the “(BCK)Rear loading” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
PAV	see the “(PAV)Consider as piece” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
REF	see the “(REF)Machine origin” and “(REF)Machine origin” fields in paragraph 13.3.6 “Inserting sub-programs”, page 249.
RFT	see the “(RFT)(RFT) Position reference” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. Values allowed: • 1 = “(1) Positioning on the origin” • 2 = “(2) Positioning on piece corner”
ROT	see the “(ROT)Rotation” field in paragraph 13.3.6 “Inserting sub-programs”, page 249.
SPCRN	see the “(SPCRN)Sub-piece corner” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. Values allowed: 1, 2, 3, 4.
SPLPX	see the “(SPLPX)Sub-piece width” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. -1= default value
SPLPY	see the “(SPLPY)Sub-piece height” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. -1= default value
SPLPZ	see the “(SPLPZ)Sub-piece thickness” field in paragraph 13.3.6 “Inserting sub-programs”, page 249. -1= default value
SPNAME	see the “(SPNAME)Sub-piece name” field in paragraph 13.3.6 “Inserting sub-programs”, page 249.

■ *PUTPROG*

PARAMETERS	DESCRIPTION
SYMY	see the "(SYMY)Tilting" field in paragraph 13.3.6 "Inserting sub-programs", page 249. Values allowed: • 0 = **"NO"**. • 1 = **"YES"**.
VARS	see the "(VARS)Sub-piece variables" field in paragraph 13.3.6 "Inserting sub-programs", page 249.
X	see the "(X)X offset" field in paragraph 13.3.6 "Inserting sub-programs", page 249.
Y	see the "(Y)Y offset" field in paragraph 13.3.6 "Inserting sub-programs", page 249.

■ *ROTATE*

PARAMETERS	DESCRIPTION
AR	see the (AR) field in paragraph 13.3.3 "Rotating the geometry", page 247.
X	see the X field in paragraph 13.3.3 "Rotating the geometry", page 247.
Y	see the Y field in paragraph 13.3.3 "Rotating the geometry", page 247.

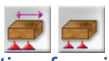
■ *SCALE*

PARAMETERS	DESCRIPTION
FCT	see the Scale factor field in paragraph 13.3.4 "Reducing/increasing the geometry dimensions", page 248.

■ *SHIFT*

PARAMETERS	DESCRIPTION
X	see the X field in paragraph 13.3.5 "Translation of the geometry", page 248.
Y	see the Y field in paragraph 13.3.5 "Translation of the geometry", page 248.

■ *WAIT*

PARAMETERS	DESCRIPTION
MR	see the Tilting field in paragraph 13.3.7 “Suspension of the machining operation for piece positioning”, page 253.
OG	see the Origin Identif. field in paragraph 13.3.7 “Suspension of the machining operation for piece positioning”, page 253.
RT	see the Rotation field in paragraph 13.3.7 “Suspension of the machining operation for piece positioning”, page 253.
TYP	type of suspension. See the description of the buttons  in paragraph 13.3.7 “Suspension of the machining operation for piece positioning”, page 253. Values allowed: • **0 = “stNT”.** • **1 = “stTR”.**
UK	see the Unlock field in paragraph 13.3.7 “Suspension of the machining operation for piece positioning”, page 253.

■ *WFC*

PARAMETERS	DESCRIPTION
A	see the Starting angle field in paragraph 13.3.11 “Curved surface sides”, page 266.
AFH	see the Aut.Height field in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
AZ	see the Inclination field in paragraph 13.3.11 “Curved surface sides”, page 266.
DA	see the Ang. size field.
DIR	rotation direction. See the description of the buttons  in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 1 = **“dirCW”**. • 2 = **“dirCCW”**.
GID	see the Geom. identif. field in paragraph 13.3.11 “Curved surface sides”, page 266.
H	see the Height field in paragraph 13.3.11 “Curved surface sides”, page 266.
ID	see the Side Identif. field in paragraph 13.3.11 “Curved surface sides”, page 266.

■ *WFC*

PARAMETERS	DESCRIPTION
LAY	string to identify the layer associated with the side created. This string is not visualised between the programming lines, but in the dialogue box Layer management.
R	see the Radius field in paragraph 13.3.11 “Curved surface sides”, page 266.
RV	see the Reverse field in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
UCS	see the System field in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VF	see the Virtual Face field in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VRT	see the Vertical field in paragraph 13.3.11 “Curved surface sides”, page 266. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
X	see the “X pos.” field in paragraph 13.3.11 “Curved surface sides”, page 266.
Y	see the “Y pos.” field in paragraph 13.3.11 “Curved surface sides”, page 266.
Z	see the “Z pos.” field in paragraph 13.3.11 “Curved surface sides”, page 266.

■ *WFG*

PARAMETERS	DESCRIPTION
AZ	see the Inclination field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.
GID	see the Geom. identif. field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.
HGT	see the “Height” field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.

■ *WFG*

PARAMETERS	DESCRIPTION
ID	see the Side Identif. field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.
LAY	string to identify the layer associated with the side created. This string is not visualised between the programming lines, but in the dialogue box Layer management.
PDF	see the Panel Def. field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.
RV	see the Reverse field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VF	see the Virtual Face field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VRT	see the Vertical field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
Z	see the “Z pos.” field in paragraph 13.3.8 “Sides obtained from a geometric profile”, page 254.

■ *WFGL*

PARAMETERS	DESCRIPTION
GIZ	see the Z geometry field in paragraph 13.3.9 “Sides obtained from drawings on side faces”, page 260.
ID	see the Side Identif. field in paragraph 13.3.9 “Sides obtained from drawings on side faces”, page 260.
LAY	string to identify the layer associated with the side created. This string is not visualised between the programming lines, but in the dialogue box Layer management.
RV	see the Reverse field in paragraph 13.3.9 “Sides obtained from drawings on side faces”, page 260. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.

■ *WFGL*

PARAMETERS	DESCRIPTION
VF	see the Virtual Face field in paragraph 13.3.9 “Sides obtained from drawings on side faces”, page 260. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.

■ *WFGPS*

PARAMETERS	DESCRIPTION
GID	see the Geom. identif. field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262.
GIZ	see the Z geometry field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262.
ID	see the Side Identif. field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262.
LAY	string to identify the layer associated with the side created. This string is not visualised between the programming lines, but in the dialogue box Layer management.
PS	see the “Section plan” field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
RV	see the Reverse field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VF	see the Virtual Face field in paragraph 13.3.10 “Sides obtained from drawings on zero face and on the side faces”, page 262. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.

■ *WFL*

PARAMETERS	DESCRIPTION
AFH	see the Aut.Height field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.

■ *WFL*

PARAMETERS	DESCRIPTION
AFL	see the Aut.Length field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
AR	see the (AR) field in paragraph 13.3.12 “Flat surface sides”, page 269.
AZ	see the Inclination field in paragraph 13.3.12 “Flat surface sides”, page 269. Only to be used if the VRT = NO parameter has been set.
FRC	see the Corner field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: 1, 2, 3, 4.
H	see the Height field in paragraph 13.3.12 “Flat surface sides”, page 269.
ID	see the Side Identif. field in paragraph 13.3.12 “Flat surface sides”, page 269.
L	see the Length field in paragraph 13.3.12 “Flat surface sides”, page 269.
LAY	string to identify the layer associated with the side created. This string is not visualised between the programming lines, but in the dialogue box Layer management.
RV	see the Reverse field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
UCS	see the System field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VF	see the Virtual Face field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
VRT	see the Vertical field in paragraph 13.3.12 “Flat surface sides”, page 269. Values allowed: • 0 = **“NO”**. • 1 = **“YES”**.
X	see the “X pos.” field in paragraph 13.3.12 “Flat surface sides”, page 269.
Y	see the “Y pos.” field in paragraph 13.3.12 “Flat surface sides”, page 269.
Z	see the “Z pos.” field in paragraph 13.3.12 “Flat surface sides”, page 269.

B.8 Positioning instructions and parameters

INSTRUCTIONS	DESCRIPTION
WTCARRIAGE	Carriage transfer
WTEND	End of parallel unit
WTGROUP	Start parallel unit
WTLIFT	Bar support
WTMOVING	Repositioning work table
WTPLANE	Mobile support transfer
WTUNICLAMP	Open/Close clamp
WTVACUM	Enable/Disable vacuum

PARAMETERS	DESCRIPTION
■ *WTCARRIAGE*	
NAME	see the Name field in "Entering the instruction Carriage transfer", page 358.
INCPOS	see the Increment Position field in "Entering the instruction Carriage transfer", page 358.
POS	see the Position field in "Entering the instruction Carriage transfer", page 358.
REF	see the Carriage reference field in "Entering the instruction Carriage transfer", page 358.
■ *WTLIFT*	
NAME	see the Name field in "Entering the instruction Bar support", page 361.
VALUE	see the Value field in "Entering the instruction Bar support", page 361.
■ *WTMOVING*	
TYPE	see the References field in paragraph 15.6 "Entering the positioning instructions for the work table objects", page 354. Values allowed: • 0 = **"movRel"**. • 1 = **"movAbs"**
■ *WTPLANE*	
NAME	see the Name field in "Entering the instruction Mobile support transfer", page 355.
INCPOS	see the Increment Position field in "Entering the instruction Mobile support transfer", page 355.
POS	see the Position field in "Entering the instruction Mobile support transfer", page 355.

PARAMETERS	DESCRIPTION
REF	see the Carriage reference field in "Entering the instruction Mobile support transfer", page 355.

■ ***WTUNICLAMP***

NAME	see the Name field in "Entering the instruction Open/Close clamp", page 355.
VALUE	see the Value field in "Entering the instruction Open/Close clamp", page 355.

■ ***WTVACUM***

NAME	see the Name field in "Entering the instruction Enable/Disable vacuum", page 355.
VALUE	see the Value field in "Entering the instruction Enable/Disable vacuum", page 355.