



HEIDENHAIN



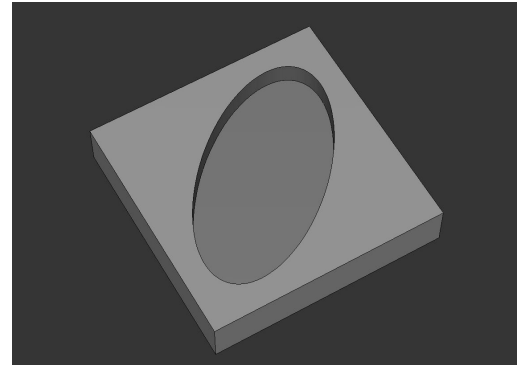
NC Solutions

Description of NC program 2125

English (en)
8/2017

1 Description of the NC program 2125_en.h

NC program for milling a pocket with an external contour of an ellipse



Description

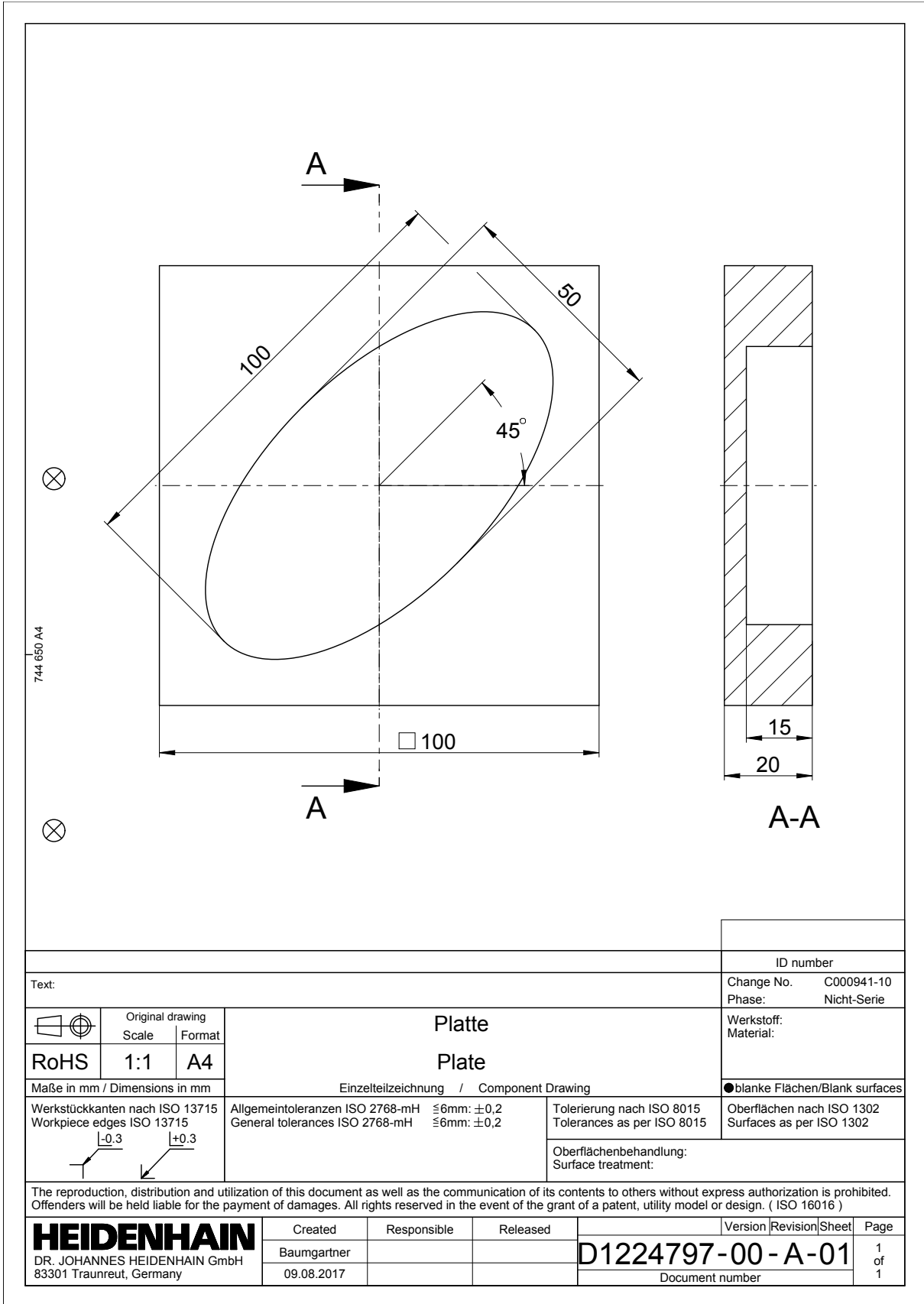
With this NC program, the control mills a pocket with an external contour of an ellipse. The control calculates the contour and roughs it out with the SL cycles.

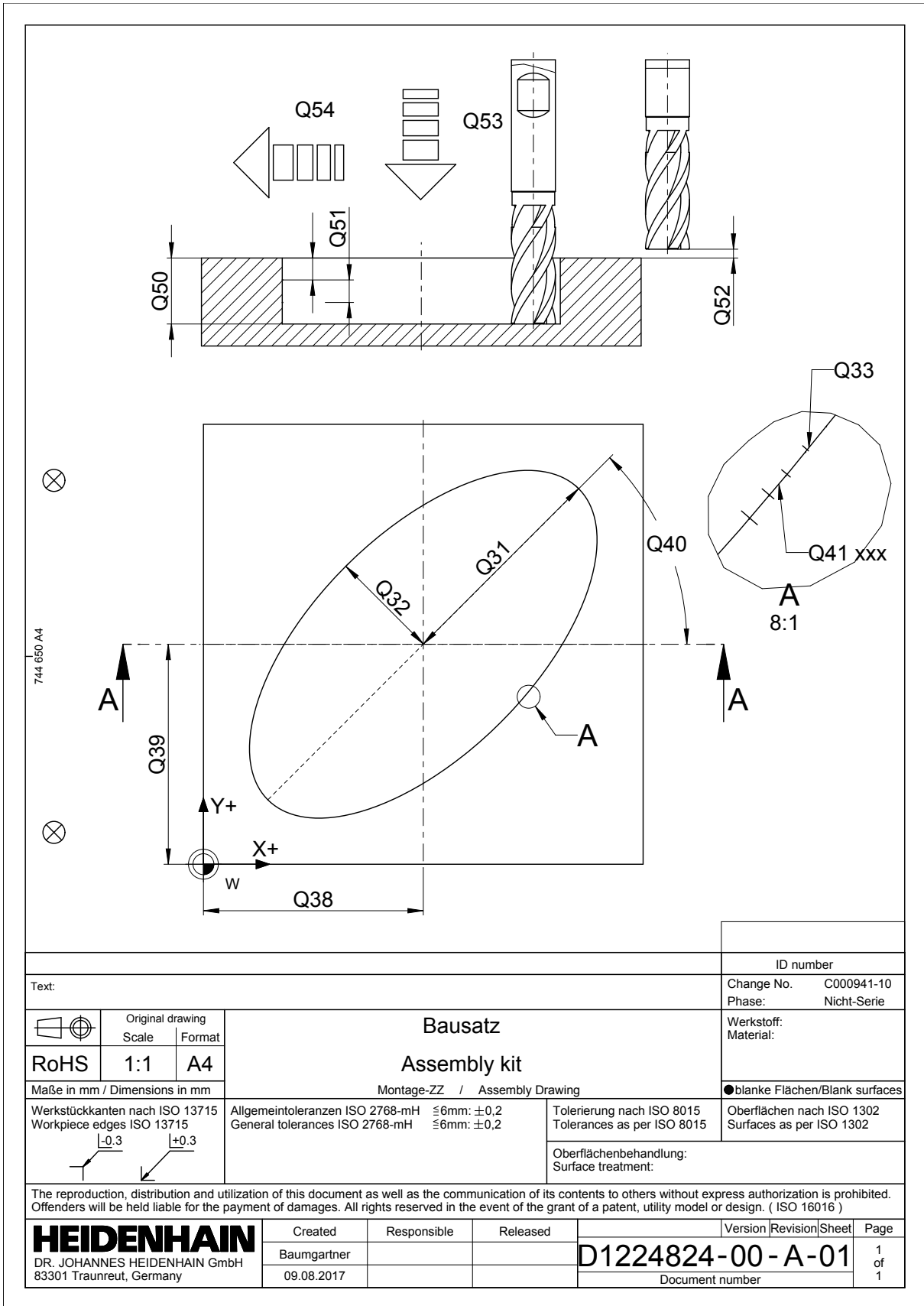
In the first part of the NC program, you define the tool and all the parameters required for the calculation.

Then the control starts the machining operation. After the conversion of the coordinates into the center of the ellipse, the subprogram LBL1 is assigned in a Cycle 14. In this subprogram 1, the control calculates the contour of the ellipse. The contour consists of individual points, for which the control calculates the X coordinate and the Y coordinate. The control then approaches the calculated point in a linear block. The control repeats this calculation and positioning process until the contour is closed. With the angle step parameter, you specify the incremental polar angle between two consecutive points and thereby indirectly define the point spacing as well as the accuracy of the contour. The control roughs out the calculated contour with Cycles 20 and 22.

After machining, the control retracts the tool and terminates the program.

Parameter	Name	Meaning
Q50	MILLING DEPTH	Depth of the pocket measured from the workpiece surface
Q51	PLUNGING DEPTH	Incremental depth at which the control feeds the tool along the tool axis.
Q52	SET UP CLEARANCE	Safe Z-axis position (referenced to the workpiece datum), which the control approaches in rapid traverse
Q53	FEED RATE PLUNGING	Traversing speed of the tool in the Z axis
Q54	FEED RATE MILLING	Traversing speed of the tool in the X/Y plane
Q31	LARGE RADIUS	Radius of the principle axis of the ellipse
Q32	SMALL RADIUS	Radius of the minor axis of the ellipse
Q33	ANGLE STEP	Incremental polar angle between two points of the contour
Q38	ELLIPSES CENTER X-AXIS	X coordinate of the center of the ellipse
Q39	ELIPPSES CENTER Y AXIS	Y coordinate of the center of the ellipse
Q40	ROTATION	Angle at which the ellipse is rotated around its center
Q41	RESET ANGLE VALUE	Parameter required for the calculation For this, 0 must always be defined.





ID number

Text:
 Change No. C000941-10
 Phase: Nicht-Serie

	Original drawing	Format
RoHS	Scale 1:1	A4

Bausatz
Assembly kit
 Montage-ZZ / Assembly Drawing

Werkstoff:
 Material:
 ●blanke Flächen/Blank surfaces

Werkstückkanten nach ISO 13715 Workpiece edges ISO 13715	Allgemeintoleranzen ISO 2768-mH General tolerances ISO 2768-mH	≤6mm: ±0,2 ≤6mm: ±0,2	Tolerierung nach ISO 8015 Tolerances as per ISO 8015	Oberflächen nach ISO 1302 Surfaces as per ISO 1302
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Oberflächenbehandlung:
 Surface treatment:

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Created	Responsible	Released
Baumgartner		
09.08.2017		

Version	Revision	Sheet	Page
D1224824-00-A-01			1 of 1
Document number			