HEIDENHAIN

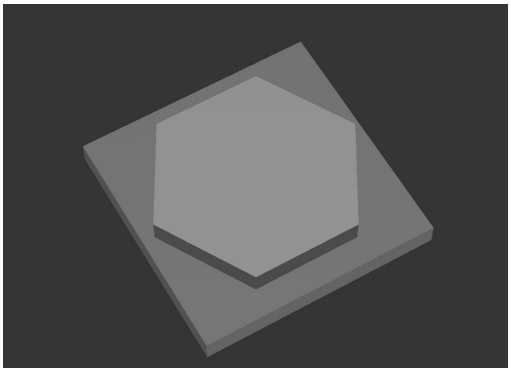
NC solutions

Description of NC program 2030

English (en)
9/2017

1 Description of the NC program 2030_en.h

NC program for creating a regular polygon



Description

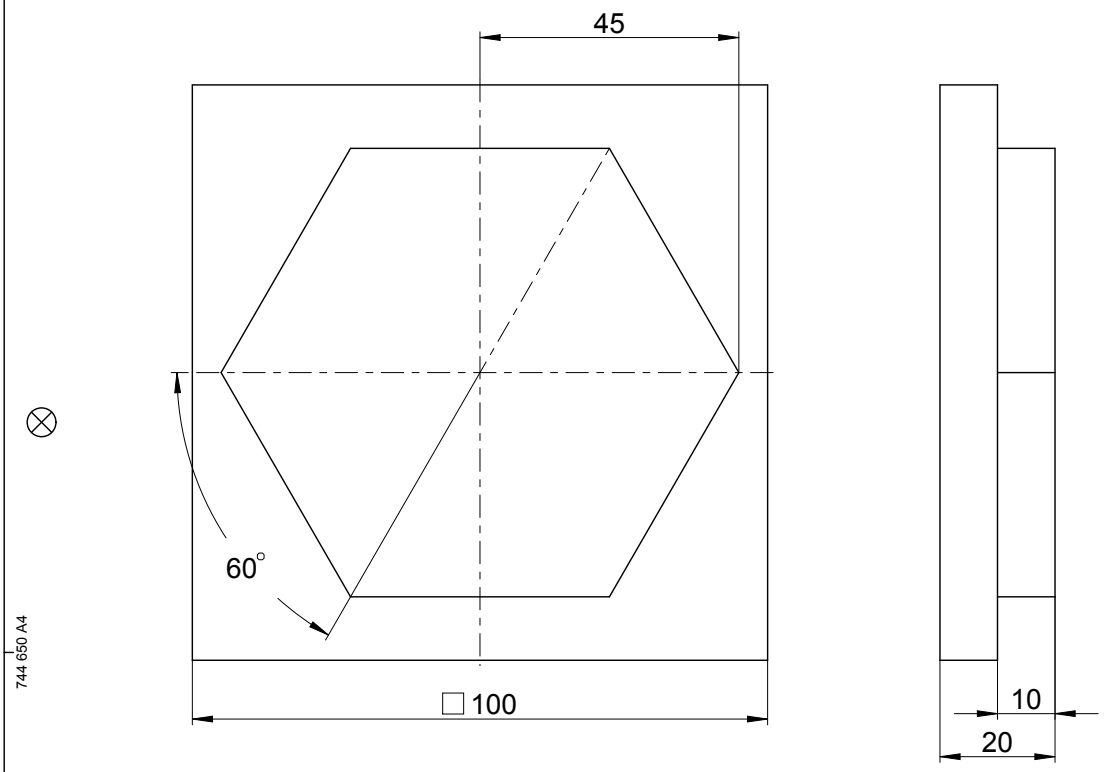
With this NC program, the control machines a regular polygon. You define this polygon by its circumradius.

At program start, you define the tool and all the parameters required for machining.

The control then makes multiple calculations and subsequently begins machining. In the first step, the control pre-positions the tool at the calculated plunging position and at the set-up clearance. Subsequently, the tool moves to the defined milling depth and then to the first corner of the polygon following an arc. In a loop, the control calculates the next corner and approaches it. The control continues to repeat this loop until the specified number of corners has been created. Then the control moves the tool along an arc back to the plunging position.

Finally, the control retracts the tool and ends the NC program.

Parameter	Name	Meaning
Q1	CENTER X–AXIS	Center of the polygon in the X axis
Q2	CENTER Y–AXIS	Center of the polygon in the Y axis
Q3	MILLING DEPTH	Milling depth of the contour
Q4	DIRECTION OF ROTATION	Direction of the milling path ■ +1 for a counterclockwise milling path ■ -1 for a clockwise milling path
Q5	NUMBER OF CORNERS	Number of corners on the polygon
Q6	CIRCUMRADIUS	Radius from the center to the corners of the polygon
Q7	ANGLAR POSITION OF THE FIRST CORNER	Angular position of the corner where machining begins
Q10	SAFETY CLEARANCE	Safe Z position, referenced to the workpiece datum, which the control approaches in rapid traverse
Q11	FEED RATE FOR PLUNGING	Traversing speed of the tool in the Z axis
Q12	FEED RATE FOR MILLING	Traversing speed of the tool in the X/Y plane
Q14	SIDE ALLOWANCE	Oversize in the X/Y plane
Q15	RADIUSCORRECTION	Direction of the radius compensation ■ 0 for a milling path without radius compensation (R0) ■ +1 for a milling path with radius compensation to the left (RL) ■ +2 for a milling path with radius compensation to the right (RR)



744 650 A4

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RoHS	1:1 / A4			
Maße in mm / Dimensions in mm		Einzelteilzeichnung / Component Drawing		●blanke Flächen/Blank surfaces
Werkstückkanten nach ISO 13715 Workpiece edges ISO 13715 -0.3 +0.3	Allgemeintoleranzen ISO 2768-mH ≦6mm: ±0,2 General tolerances ISO 2768-mH ≦6mm: ±0,2		Tolerierung nach ISO 8015 Tolerances as per ISO 8015	Oberflächen nach ISO 1302 Surfaces as per ISO 1302
			Oberflächenbehandlung: Surface treatment:	

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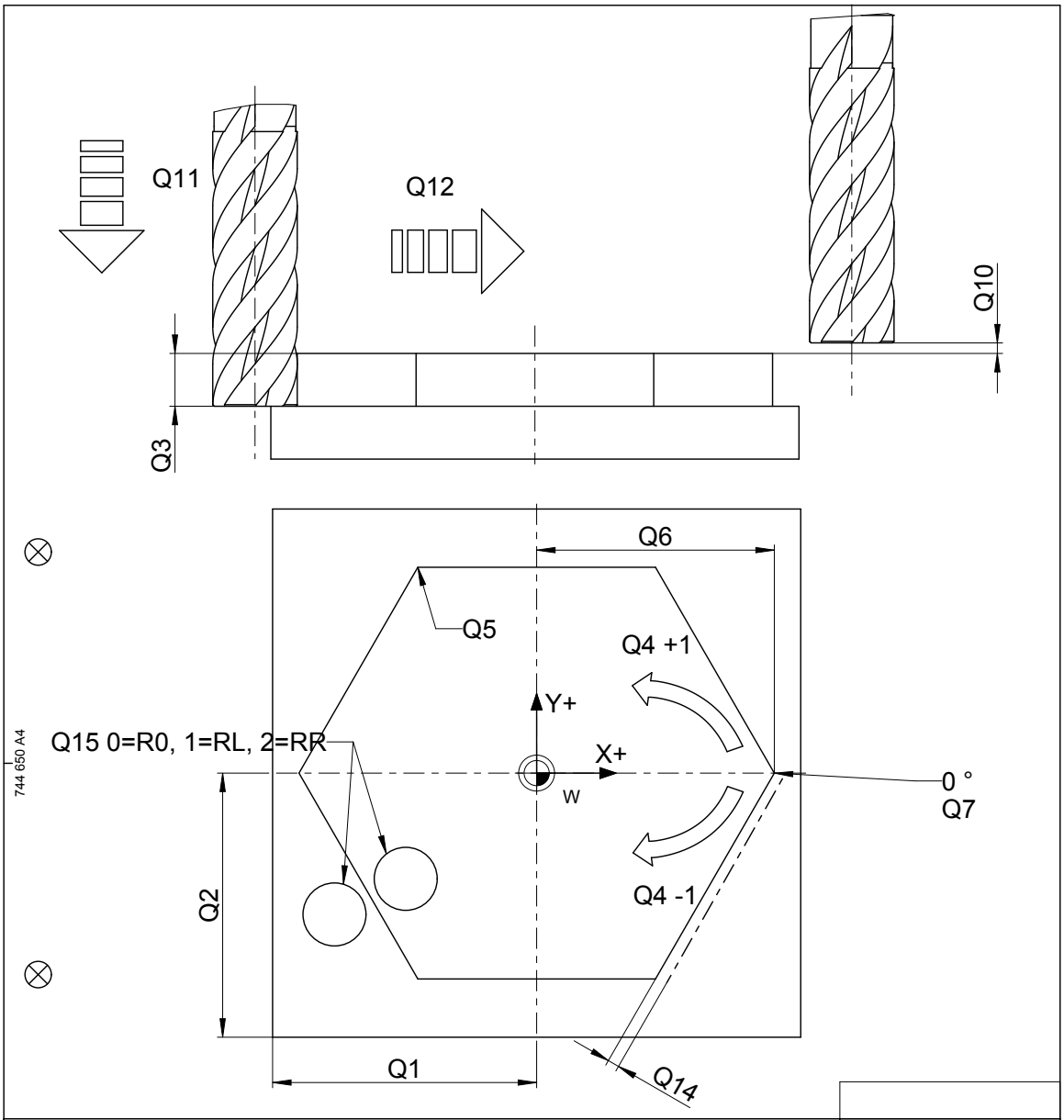

			ID number
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Original drawing Scale: 1:1	Format: A4	Bausatz Assembly kit Montage-ZZ / Assembly Drawing	Werkstoff: Material:
RoHS			●blanke Flächen/Blank surfaces
Maße in mm / Dimensions in mm			
Werkstückkanten nach ISO 13715 Workpiece edges ISO 13715 -0.3 +0.3	Allgemeintoleranzen ISO 2768-mH ≦6mm: ±0,2 General tolerances ISO 2768-mH ≦6mm: ±0,2	Tolerierung nach ISO 8015 Tolerances as per ISO 8015 Oberflächenbehandlung: Surface treatment:	Oberflächen nach ISO 1302 Surfaces as per ISO 1302

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