HEIDENHAIN

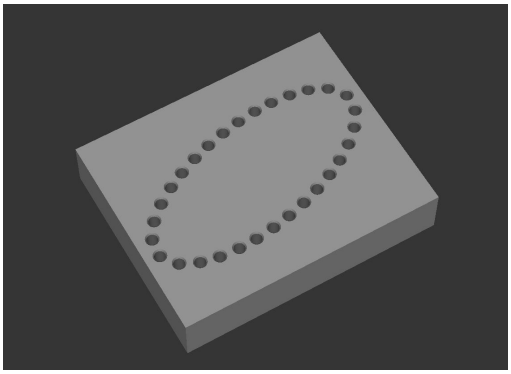
NC Solutions

Description of NC program 1010

English (en)
4/2017

1 Description of the NC program 1010_en.h

NC program for defining a point pattern as an ellipse.

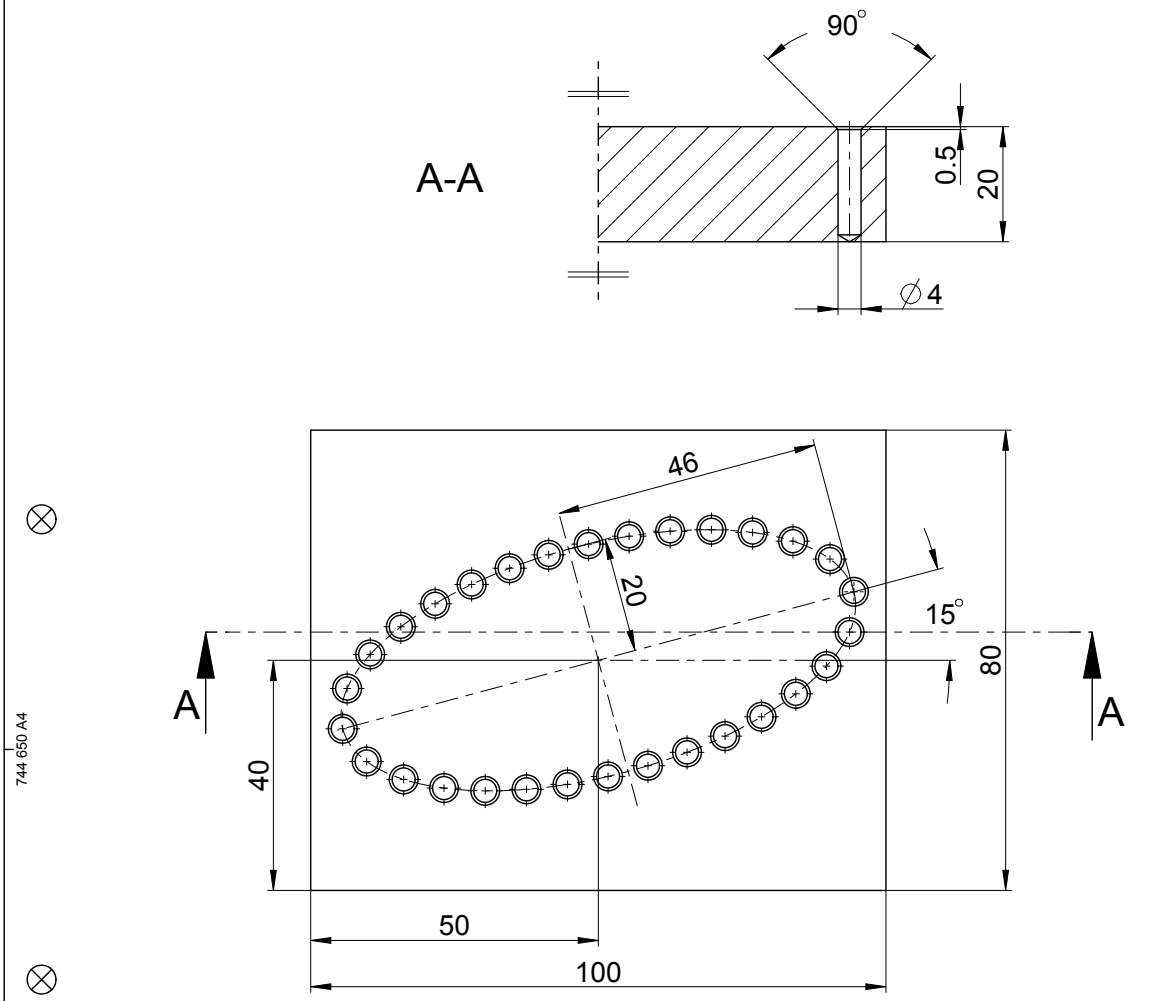


Description

With this NC program the control generates a point pattern in the form of an ellipse. The control calls a machining cycle at the calculated positions, enabling you to simply select the type of machining.

In the first part of the NC program you define all parameters required for the calculation, the tool, and the machining cycle executed by the control at the calculated positions. The control then calls a subprogram. The control executes all calculations and positioning movements in this subprogram. In the subprogram the control first calculates an ellipse consisting of single points. It calculates the X and Y coordinate for each point. In the Q5 STEPPING ANGLE parameter you define the distance between these points and therefore the accuracy of the calculated path. The control then calculates the individual machining positions on this ellipse, traverses to these positions and calls the machining cycle.

Parameter	Name	Meaning
Q1	ELLIPSE HALF-AXIS IN THE X AXIS	Ellipse radius in X
Q2	ELLIPSE HALF-AXIS IN THE Y AXIS	Ellipse radius in Y
Q5	STEPPING ANGLE	Angle between two points on the elliptical path—the smaller the angle the more precise the calculated path
Q6	ROTATION OF THE ELLIPSE	Angle around which the ellipse is rotated. The center of rotation is the elliptical center
Q8	CENTER OF ELLIPSE IN THE X AXIS	Ellipse center coordinate in the X axis
Q9	CENTER OF ELLIPSE IN THE Y AXIS	Ellipse center coordinate in the Y axis
Q12	SAFETY CLEARANCE	Z clearance between the tool and workpiece surface approached by the control in rapid traverse before machining
Q2	NUMBER OF OPERATIONS	Number of machining steps executed on the ellipse



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Text:				Change No. C000941-10 Phase: Nicht-Serie
	Original drawing Scale / Format	Platte Plate Einzelteilzeichnung / Component Drawing		Werkstoff: Material:
RoHS	1:1 / A4			●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	Oberflächen nach ISO 1302 Surfaces as per ISO 1302
			Oberflächenbehandlung: Surface treatment:	

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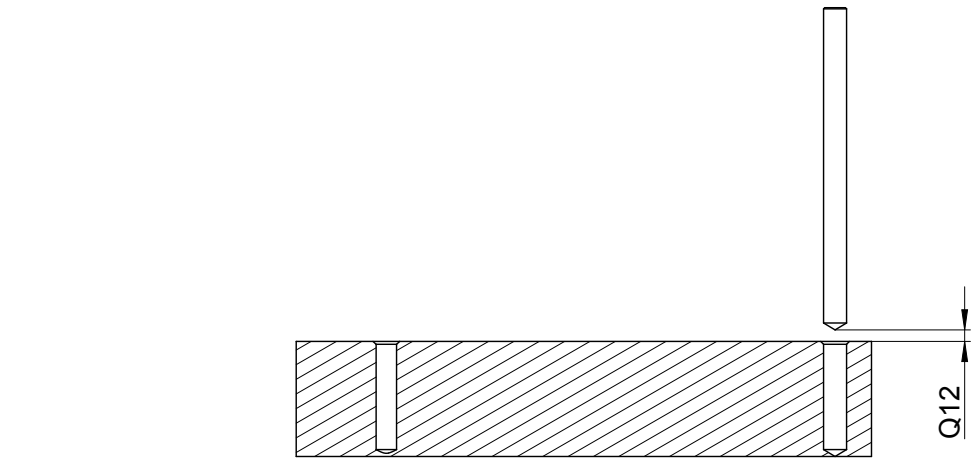

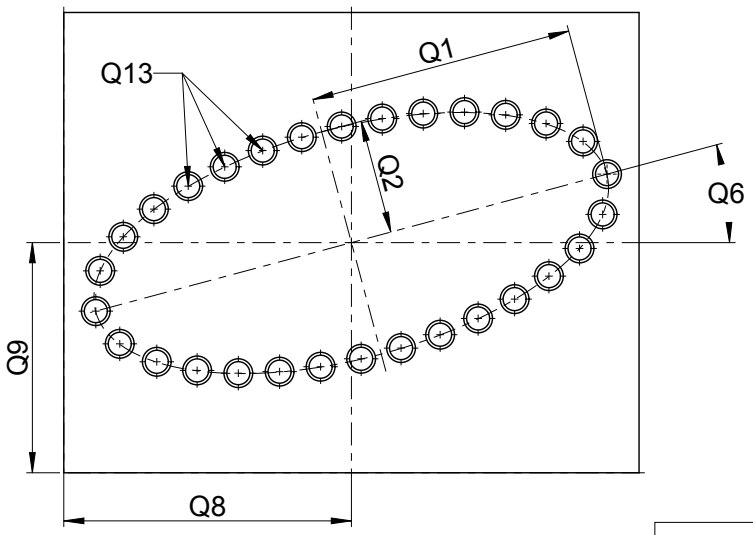

744 650 A4

				ID number
Text:				Change No. C000941-10 Phase: Nicht-Serie
	Original drawing Scale	Format	Bausatz Assembly kit	Werkstoff: Material:
RoHS	1:1	A4		
Maße in mm / Dimensions in mm			Montage-ZZ / Assembly 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 Oberflächenbehandlung: Surface treatment:	Oberflächen nach ISO 1302 Surfaces as per ISO 1302

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