COOLING SPECIALIST	**TECHNICAL SPECIFICATION**		HYDAC **06-019-001**
21/NOV/2019	**HELICOIL MACHINING PARAMETERS**		**REV. 00**
ISSUED BY	IBS PRODUCTION	APPROVED BY	MARINO D.

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REV.	DESCRIPTION	AUTHOR	DATE
00	First Emission	D.Marino	21/11/2019

Foreward

DST (Design Standard Team) is the HYDAC Cooling group internal committee that is proposed to define all information needed for all cooling specialists (designer/project engineer) to improve the development process.
Aim of this committee is to set up all required internal documentation in order to standardize the way of work in all technical office belonging or related to Hydac Cooling

Introduction

Technical Specifications are defining rules that needs to be applied necessarily for cooler manufacturing.

This document is officially released in English Language. Other translated documents must refer to same released revision.

1. Scope

Aim of this document is to provide to operators correct parameters for pre-hole machining designed for standard helicoil® insert application.

This document is applied in production plant of IBS Technology in Tradate (IT).

2. References

The following referenced documents are indispensable for the application of this document. References apply always to the latest edition of the named document.

04-019-001 – Standard drawing VAX
04-019-003 – Standard Helicoil machining on VAX
EN 22768-1 - General tolerances. Tolerances for linear and angular dimensions without individual tolerance indications.
EN 22768-2 - General tolerances. Geometrical tolerances for features without individual tolerance indications.

3. Terms and definitions

For the purposes of this document, the definitions given in 02-005-001 and the following apply.

3.1 Helicoil

Helicoil® is a registered trademark that define a helical insert made of coiled wire.

4. Machining parameters

References dimension for Helicoil inserts are showed in Figure 1; corresponding machining parameters are resumed in Table 1.

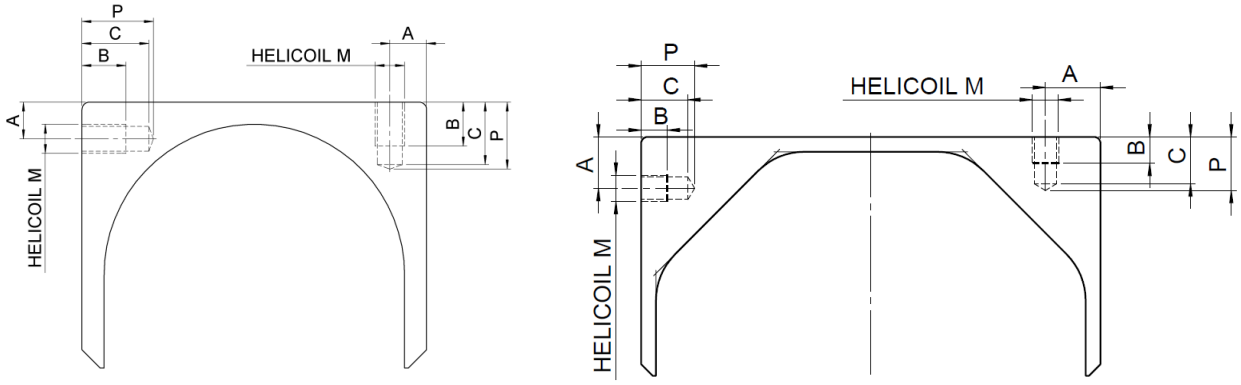

FIGURE 1. Standard references for Helicoil inserts

	Tank type	*Insert DIM*	*A*	*B* *(thread depth)*	*C* *(pre-hole dim)*	*P* *(machining)*
M6	**45**	M6x1d	5.5	7	9.5	**10.6**
	63	M6x1.5d	7	10	13	**14.1**
	82	M6x2d	10	13	16	**17.1**
	94	M6x2d	10	13	16	**17.1**
	113	M6x2d	12	13	16	**17.1**
	140	M6x2d	12	13	16	**17.1**
	160	M6x2d	12	13	16	**17.1**
M8	**45**	N/A	N/A	N/A	N/A	**N/A**
	63	M8x1d	7	10	12	**13.5**
	82	M8x1d	9	10	13	**14.5**
	94	M8x1.5d	10	13.3	17	**18.5**
	113	M8x2d	11	17.3	21	**22.5**
	140	M8x2d	11	17.3	21	**22.5**
	160	M8x2d	11	17.3	21	**22.5**
M10	**45**	N/A	N/A	N/A	N/A	**N/A**
	63	N/A	N/A	N/A	N/A	**N/A**
	82	N/A	N/A	N/A	N/A	**N/A**
	94	N/A	N/A	N/A	N/A	**N/A**
	113	M10x1d	11	12.5	15	**16.9**
	140	M10x1.5d	11	16.5	21	**22.9**
	160	M10x1.5d	11	16.5	21	**22.9**
M12	**45**	N/A	N/A	N/A	N/A	**N/A**
	63	N/A	N/A	N/A	N/A	**N/A**
	82	N/A	N/A	N/A	N/A	**N/A**
	94	N/A	N/A	N/A	N/A	**N/A**
	113	N/A	N/A	N/A	N/A	**N/A**
	140	M12x1.5d	11	19.8	24	**26.5**
	160	M12x1.5d	11	19.8	24	**26.5**

TABLE 1. Machining parameters for standard helicoil