

# Declaration on environmental compatibility in the fields of EMC<sup>1)</sup>, climate and mechanical stress

**RE 30146-U/09.07**  
Replaces: 02.06

1/4

## Type VT-HACD-DPQ

Digital Controller for electro-hydraulic  
Injection Molding Machines

### Product types

– VT-HACD-DPQ-1-2X/V0/1-...-1 according to data sheet RE 30146

## Description of the product family

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The VT-HACD-DPQ is a complete hydraulic injection axis control solution. An injection profile is created from parameters that are entered by the machine operator into a machine sequential logic controller. The application dependant configuration and parameterisation is to be done by the end user with the software BODAC.

<sup>1)</sup> in the sense of the EMC law dated 30th August 1995 and Directive 89/336/EEC)

## The above products comply with the following standards:

### 1. EMC (electromagnetic compatibility)

Testing according to specialized basic standard EN 61000-6-2:2005, VDE 0839 part 6-2

EN 61000-4-2:1995 +A1:1998 +A2:2000 IEC 1000-4-2	VDE 0847-4-2	ESD (electrostatic discharge)	Air discharge: Severity 3 / assessment criterion A Contact discharge: Severity 3 / assessment criterion A
EN 61000-4-4:1995 +A1:2001 +A2:2001 IEC 1000-4-4	VDE 0847-4-4	BURST (transient discharge)	Supply voltage: Severity 3 / assessment criterion A Data cable up to: Severity 3 / assessment criterion A
EN 61000-4-5:1995 +A1:2001 IEC 1000-4-5	VDE 0847-4-5	SURGE (surge voltages)	Supply voltage: Severity 1 / assessment criterion A
EN 61000-4-6:1996 +A1:2001 IEC 1000-4-6	VDE 0847-4-6	RF fields conducted interference	Severity 3 / assessment criterion A

### 2. Climate

Testing according to EN 60068-2 / IEC 68-2 (Environmental test)

EN 60068-2-1:1994		Cold test	2 cycles -5 °C Dwell time 2 hours
EN 60068-2-2:1993		Dry heat test	2 cycles +55 °C Dwell time 2 hours
EN 60068-2-1:1994 EN 60068-2-2:1993		Storage temperature	-25 °C, dwell time 16 hours +85 °C, dwell time 16 hours
	IEC 68-2-14:1986	Temperature cycle	2 cycles -5 °C to +55 °C Dwell time 3 hours each at min. / max. temperature
EN 60068-2-30:1999		Damp heat, cyclical	Variant 2 +25°C to + 40°C 93 % to 97 % relative humidity 2 cycles, 24 hours each

## The above products comply with the following standards (continued):

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### 3. Mechanical stress

Vibration and shock test according to EN 60068-2 / IEC 68-2 / DIN 40046 (Environmental test)  
Tests were carried out in three axes (X/Y/Z)

EN 60068-2-6:1996			Sine test	10 cycles, 5 to 500 Hz to 5 Hz at a logarithmic frequency change rate of 1 oct./min. 5 to 57 Hz, amplitude 0.3 mm (p-p) 57 to 500 Hz, amplitude 2 g
	IEC 68-2-36:1973	DIN 40046-24:1977	Random test Broadband-noise	20 to 500 Hz, amplitude 0.01 g <sup>2</sup> / Hz (2.2 g RMS), testing time 30 min
EN 60068-2-27:1993			Shock test	Half sine 15 g / 11 ms, 3 x in positive / 3 x in negative direction per axis; in total, 6 individual shocks

Bosch Rexroth AG  
Hydraulics  
Zum Eisengießer 1  
97816 Lohr am Main, Germany  
Telefon +49 (0) 93 52 / 18-0  
Telefax +49 (0) 93 52 / 18-23 58  
documentation@boschrexroth.de  
www.boschrexroth.de

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