Reliability characteristic data for:

Solenoid valve

Prepared	T. Mori 8-Mar-2012
Checked	
Approved	T. Doi 8-Mar-2012

Model number: VQC series

B10 data

Based on the following endurance test results of the Solenoid valve VQC series, and assuming a failure mode following the Weibull distribution the following B10 data has been estimated. (90% confidence level)

	B10
VQC4*01 series (Rubber seal type)	42.7 million cycles

NOTE:

The estimated reliability data provided is only applicable to the component in the stated operating conditions.

Use of this data for any assessment under standards or otherwise, is at the sole risk of the user.

This product is not a safety component and is not supplied to provide a safety function.

Endurance test results

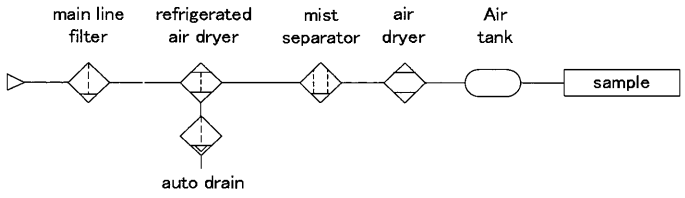
For reference

VQC 4*01 series

- 10 rubber seal type were tested up to 50 million cycles, and found to have zero failure.

Endurance test conditions

1) Test circuit



2) Pressure: 0.7MPa
3) Lubrication: None
4) Air supply: Dry air
5) Operating freq.: 5 times / sec.
6) Laboratory: Life test room
7) Ambient temp.: Normal temp. (13 to 33°C)
8) Load: 50cm^3

Result of design assessment and validation to EN ISO 13849-1:2008 & EN ISO 13849-2:2008

This component conforms to the basic safety principles ☐ yes

This component conforms to the basic safety principles and well tried safety principles ☑ yes

Product number	IMM No.
VQC4101-5-X10	VQC4000-TFP52
VQC4101R-X17	VQC4000-TFP53
VQC4301R-X17	
VQC4401R-X17	
VQC4501R-X17	
VQC4401R-5-X92	VQC4000-TFP54
VQC4701R-5-X11	VQC4000-TFP55
VQC4801R-5-X11	

The component is not a safety component as defined by Article2(c) of the Machinery Directive 2006/42/EC