

Areas of validity for approvals

North America



Europe



Eastern Europe
Asia



Australia

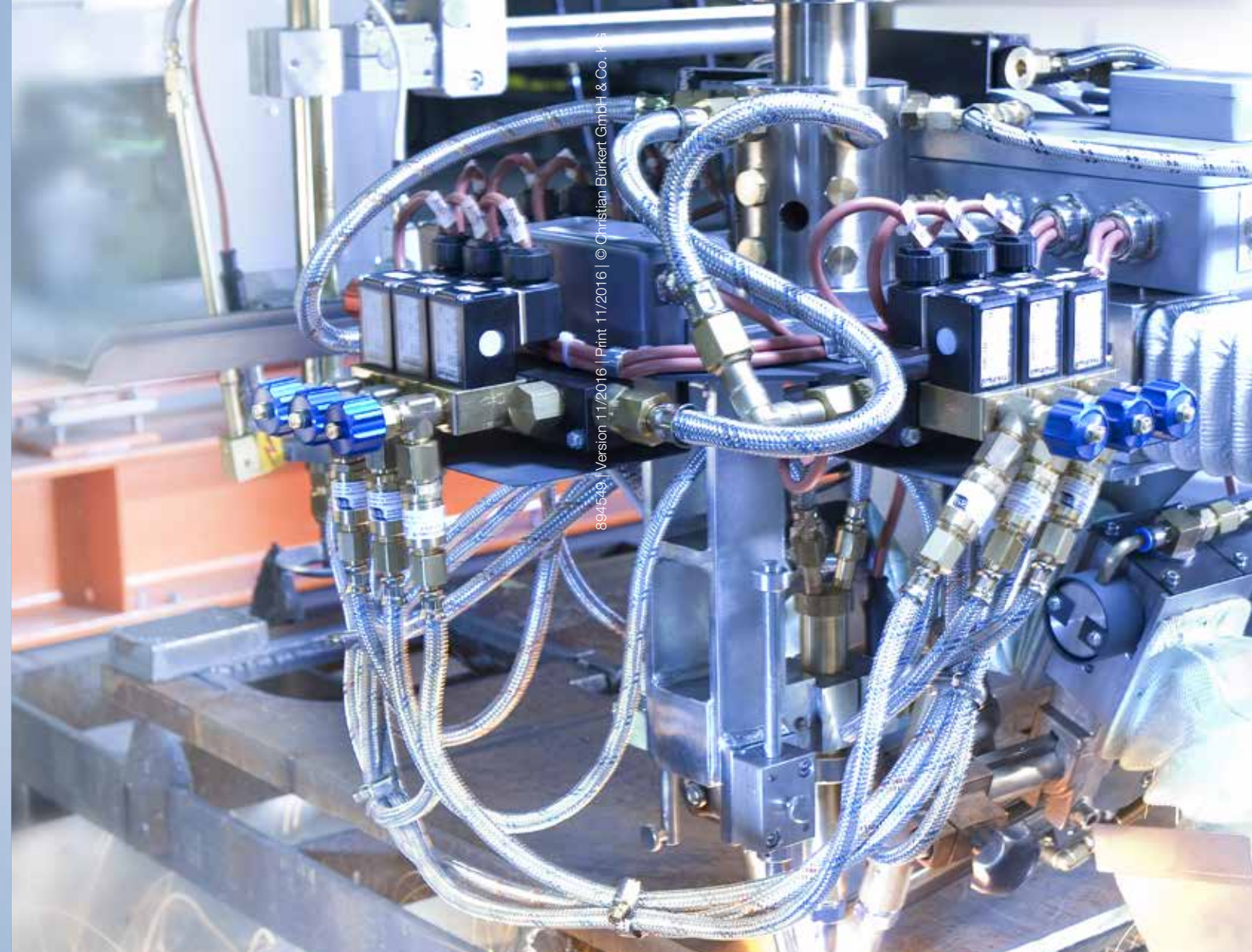
International



Europe



RoHS REACH
DGRL



894549 | Version 11/2016 | Print 11/2016 | © Christian Bürkert GmbH & Co. KG

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Overview of approvals
Solenoid valves



Overview of approvals: Solenoid valves (issued November 2016)

Approval type	Direct-acting plunger valves						Direct-acting pivoted-armature and toggle valves				Servo-controlled piston valves					Servo-controlled diaphragm valves			Area of validity	
	6011	6012	6013	6014	6027	2610	0330	0331	0121	0131	6240	5404	0407	0340	6213	6281	0290	5282	Countries	
National approvals	UL, UR	■ UR	■ UR	■	■	■	■		■ UR		■	■		■	■	■	■	■	USA	
	cURus (coil)	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	USA, Canada	
	CSA (general purpose)	■	■	■	■		□	■	■	■	□			■	□	□	■	■	Canada	
	EAC	■	■	■ Ex	■ Ex	■ Ex	■	■ Ex	■ Ex	■ Ex	■	■ Ex	■	■ Ex	■ Ex	■ Ex	■ Ex	■ Ex	■	Russia, Belarus, Kazakhstan
	CRN			■	■	■		■	■			■	■		■	■		■	■	Canada
	Sicherheitsabsperrentile					■									■					EU
Explosion-protection approvals	ATEX Cat. 2			■	■	■		□	□	□		■	■	■	□	■	■		□	EU
	IECEX Cat. 2			■	■	■		□	□	□		■	■	■	□	■	■		□	global
	cFMus			□	□	□		□	□	□		□	□ max. DN 25		□	□		□		USA, Canada
	KOSHA			■	■	□		□	□	□		■	■		□	■	■		□	South Korea
	NEPSI			■	■	□		□	□	□		■	■		□	■	■		□	China
Water approvals	KTW W270	■		■		■		■							■	■	■	■	Germany	
	NSF61	■		■				□							□				USA, Canada	
	Watermark														■	■			Australia	
	VDE (EN 60730)														■	■			Germany, Austria	
	UL Fire Protection															■			USA	
Gas approvals	AGA	■													■				Australia	
	CSA Gas			■		□		■						■					Canada	
	DVGW Gas			■		■					■						■		Germany, EU	
Hygienic approvals	FDA																		USA	
	EC1935/2004			□				□	□						□				EU	
Application-specific approvals	DNV GL						■	■											Germany	
	Fire protection on railway vehicles		□	■	■	■		■	■		□		■		■	■			Germany	

■ National approvals

■ Explosion-protection approvals

■ Water approvals

■ Gas approvals

■ Hygienic approvals

■ Application-specific approvals

UR: only UR (Recognised)

Ex: products are also Ex-approved

□ Planned

Tip: Visit www.burkert.com/type/6013 to find out more about each type



Bürkert – Your approved partner worldwide

Approvals and directives are an important element of plant safety and regional growth. Only those who continuously meet the requirements of the latest standards can set a course of growth for products in the future. At Bürkert we accept these challenges each day and, in doing so, support the success of our customers.

- Continuous monitoring of approvals
- Customer-specific testing
- Accredited test laboratory
- Individual customer consulting and support
- Creation of documentation

EU Declaration of Conformity (EU DoC):

The EU Declaration of Conformity is a written confirmation at the end of a conformity assessment in which the manufacturer bindingly declares and confirms that the product that it brings to the market is compliant with the basic health and safety requirements of all relevant European Directives, in other words, that it conforms to them (statutory obligation). The EU Declaration of Conformity is only a basis for the CE marking of the relevant product if it falls under the area of application of an EU Directive.

Certification:

Certification refers to a process verifying compliance with specific requirements. Certification is a sub-process of the conformity assessment. Certifications are often temporally limited by independent certification authorities such as DQS, TÜV or DEKRA and the standards are checked independently.

EU Directive:

In European law, EU Directives are legal acts of the European Union and, as such, part of the secondary Union Law (EU Law). Directives are issued based on a procedure prescribed in the EU Treaties depending on the topic of the Directive. A Directive is a legal act in which a specified goal must be realised by all EU countries. The individual countries can independently determine how they put the Directives into execution.

Manufacturer's declaration (Mdec):

The manufacturer's declaration is a written confirmation at the end of an evaluation declaring and confirming bindingly that its product has the characteristics specified on the declaration (no stipulated by law). The manufacturer's declaration includes, for instance, technical data in addition to or differing from the operating manual that is necessary for a customer requirement.

Standard

Standard (guideline, benchmark, rule, regulation) stands for a recognised good engineering practice.

Standardisation

Standardisation is the formulation, issuance and application of rules, guidelines or features by a recognised organisation and its standardisation board. It should be based on verified results of science, technology and experience with the aim of promoting optimal benefits for society. The specifications are created by consensus and accepted by a recognised institution.



Information about the overview of approvals

The CE mark is an indication that the product conforms to the statutory requirements of the EU for guaranteed protection of health, safety and the environment. It is required for the introduction of products to the market in the EU and, therefore, is not listed in this table.

The CCC approval (China) is not required for the products/types specified here.

Environmental Directives, such as the European chemical regulation REACH and Directive 2011/65/EU (RoHS) are, insofar as they pertain to the individual products/types, also included.

Further information about the product portfolio:

- Selection Chart: Solenoid valves
(print version available via your contact person)
- or simply visit www.burkert.com

National approvals



UL, UR: Underwriters Laboratories is an independent organisation with headquarters in the USA that inspects and certifies products with respect to their safety.

- UL (Listed) = certified device
- UR (Recognised) = certified component

cULus, cURus: Certified according to US and Canadian requirements by Underwriter Laboratories. The UL basically also checks the Canadian standards. In the future this approval will replace the UL, UR and CSA at Bürkert.

CSA: The Canadian Standard Organisation is the authoritative body for national standardisation in Canada. Only products that are tested and certified according to the relevant standard may bear the CSA mark. There are several parallels to the UL certification in the US.

CRN: The Canadian Registration Number is issued for products that include the print policies of the individual Canadian provinces with respect to the durability of the housing.

Safety shut-off valves: The Pressure Equipment Directive is a Directive of the European Parliament and establishes the requirements of pressure devices for the introduction of pressure devices into the EU market.

EAC: The EAC mark is the conformation that a product has undergone a conformity procedure and satisfies the technical requirements prescribed there (Eurasian Conformity). It applies for the introduction of products into the markets of Russia, Kazakhstan and Belarus. The certificate is issued by an authorised certification authority.



IECEX Cat. 2: IECEX covers devices and protective systems that will be used in explosion-prone areas (international). The approval is national law in Australia and New Zealand only; however, it is often recognised and taken as a basis for national Ex approvals (China, Japan, Korea, Brazil, etc.). The requirements originate from the IEC 60079 series of standards.

ATEX, Cat. 2: ATEX covers devices and protective systems that will be used in explosion-prone areas (Europe). Directive 2014/34/EU specifies the requirements. In order to fulfil the requirements of the Directive, harmonised standards are applied (EN 60079-x series). It is assumed that when the standards are fulfilled, the requirements of the Directive are also fulfilled.

cFMus: This approval certifies products for use in explosion-prone areas and is recognised in the entire North American sphere. At Bürkert this approval will replace FM and CSAEx in the future.

KOSHA: Safety components, pressure containers and products for the Ex area must be approved by KOSHA in South Korea. An IECEX approval can serve as a basis, but national testing criteria can be added.

NEPSI: Explosion-protected electrical operating equipment are tested and certified by NEPSI in China. An IECEX approval can serve as a basis, but national testing criteria can be added.



ACS: The ACS approval is a hygienic inspection of wetted materials and is mandatory in France. Without the ACS approval of materials or other components for potable water applications, this market remains closed to the product.

KTW W270: The KTW guideline is the approval of plastics and other non-metallic materials (e.g. sealing materials) for use with potable water in Germany. Manufactured components are tested according to KTW requirements and the base material is tested according to DVGW worksheet W270.

VDE: VDE (Association for Electrical, Electronic & Information Technologies) certifies valves in accordance with EN 60730. In addition to the functionality, the safety requirements of products are tested.

NSF61: NSF International is an independent organisation of the US government. It specifies the minimum requirements for materials, components, products or systems that come into contact with potable water/potable water preparation. The main test criterion is the effects on the health.

Watermark: Watermark is a certification for products for use in process and potable water applications in Australia. The responsible authority is the Australian Gas Association (AGA).

WRAS: Products and materials with a WRAS approval comply with the requirements specified by the responsible water supply by, for instance, not contaminating the water. This approval is recognised in the United Kingdom.



AGA: The Australian Gas Association tests and certifies products and machines from the gas, electrical and sanitation areas. The certificates are exclusively approved for the Australian market.

CSA Gas: The CSA Gas approval applies for the Canadian sphere. It is comparable with the AGA certificate in Australia and serves as a basis for the use of a gas solenoid valve in Canada.

DVGW Gas: DVGW CERT GmbH is a European certification authority in gas and water applications. Together with its test laboratories, it tests, certifies and monitors technical products for gas and water, quality systems and environmental management systems in accordance with DIN EN ISO 9000 ff. and DIN EN ISO 14001 as well as companies and individual persons (qualified experts).



FDA: The Food and Drug Administration (FDA) in the USA works with the quality and safety of foods and pharmaceuticals as well as cosmetic articles, vaccines, medical devices, etc. Its primary goal is to protect the health of users.

EC 1935/2004: The European regulation specifies uniform regulations for materials and objects that come or could come into direct contact with foods. The aim is to protect human health and consumer interests.



DNV GL: In 2014 GL and DNV merged to create the DNV GL Group. DNV GL is the world's largest shipping and offshore classification organisation and is a consultant for the oil and gas industry. It offers consulting in the value creation chain in the energy sector. With the goal to protect lives, property and the environment, DNV GL improves the safety and sustainability of various products.

Fire protection on railway vehicles: DIN EN 45545 places high demands on the fire protection of installed components and materials within a railway vehicle. The products are classified according to different fire classes. The classification is certified in a conformity process.

SIL: The safety requirement level is not an approval, rather a term from the area of functional safety and is also identified as Safety Integrity Level (SIL) in international standardisation according to IEC 61508/IEC 61511. It serves for the evaluation of electrical, electronic and programmable electronic (E/E/PE) systems in regard to the reliability of safety functions. The safety-related design principles that must be complied with in order to minimise the risk of a malfunction are specified by the desired level.

Machinery Directive: The Machinery Directive (Directive 2006/42/EC) regulates a uniform level of protection for accident prevention for machinery and machine components for introduction to the market within the European Economic Area (EEA), as well as Switzerland and Turkey.