

CERTIFICATE

(1) EC-Type Examination

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 09ATEX0071 X** Issue Number: **3**

(4) Equipment: **Air Operated Double Diaphragm Pumps type HDB1½, HDB40, HDB2, HDB50, HDB3, HDF1, HDF25, HDF2, HDF3M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, ST1½, ST40 and Natural-gas Operated Double Diaphragm Pumps type G15, G20, G30**

(5) Manufacturer: **Warren Rupp, Inc.**

(6) Address: **800 North Main Street, Mansfield, OH 44902, USA**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report number 211125100/2, Issue No. 3.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 13463-1 : 2001

EN 13463-5 : 2003

EN 60079-25 : 2004

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the code as listed on the next page.

This certificate is issued on 19 April, 2016 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.



R. Schuller
Certification Manager

Page 1/3



© Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 09ATEX0071 X**

Issue No. 3

(15) **Description**

Air Operated Double Diaphragm Pumps type HDB1½, HDB40, HDB2, HDB50, HDB3, HDF1, HDF25, HDF2, HDF3M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, ST1½, ST40 and Natural Gas Operated Double Diaphragm Pumps type G15, G20, G30 are used to pump liquids.

The Pumps type S05, S1F, S15, S20, S30 may be provided with an Integral Solenoid.

The Pumps type S05, S1F, S15, S20, S30, not provided with an integral solenoid, may be provided with a Pulse Output Kit.

Pumps rated as category 1 and M1 equipment do not contain aluminium parts.


Ambient temperature range -20 °C to +40 °C

Process temperature range -20 °C to +80 °C for models rated as category 1 equipment
-20 °C to +100 °C for models rated as category 2 equipment

In addition the ambient temperature range and the process temperature range do not exceed the operating temperature range of the applied non metallic parts as listed in the manuals of the pumps.

Supply pressure: 700 kPa max. for non-metallic pumps
860 kPa max. for metal pumps

The marking of the Pumps includes the following:

Marking		Type
	II 2 G Ex ia c IIC T5 II 2 D Ex c iaD 20 IP67 T100 °C	All types provided with the pulse output option
	II 2 G EEx m c II T5 II 2 D c IP65 T100 °C	All types provided with the integral solenoid option
	II 1 G c T5 II 1 D c T100 °C I M1 c	All types without aluminium parts and without the above listed options

Electrical data

Optional Integral Solenoid

Solenoid:	12 Vdc, 267 mA, 3,3 W	(integral solenoid option A1)
	24 Vdc, 136 mA, 3,3 W	(integral solenoid option A2)
	110 - 120 Vac, 29 mA, 50 - 60 Hz, 3,4 W	(integral solenoid option A3)
	220 - 240 Vac, 15 mA, 50-60 Hz, 3,4 W	(integral solenoid option A4)

Optional Pulse Output Kit

The sensors are to be connected to the supplied switching repeater according to the manufacturer's instructions.

Supply	20-125 Vdc or 20-250 Vac, $U_m = 250V$
Switching contacts	max. 250 V, 4 A; $\cos \phi > 0,7$; $U_m = 250V$

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 09ATEX0071 X**

Issue No. 3

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. 211125100/2, Issue No. 3.

(17) **Special conditions for safe use**

The ambient temperature range is as specified at (15).

Conductive Polypropylene, conductive Acetal or Conductive PVDF pumps are not to be installed in applications where the pumps may be subjected to oil, greases and hydraulic liquids.

The optionally provided solenoid shall be protected by a fuse corresponding to its rated current (max $3 \cdot I_{rat}$ according to EN 60127) or by a motor protecting switch with short circuit and thermal instantaneous tripping (set to the rated current) as short circuit protection. For solenoids with a very low rated current, a fuse with the lowest current value according to the indicated standard will be sufficient. The fuse may be accommodated in the associated supply unit or shall be separately arranged. The rated voltage of the fuse shall be equal or greater than the stated rated voltage of the solenoid. The breaking capacity of the fuse shall be as high as or higher than the maximum expected short circuit current at the location of installation (usually 1500 A). The maximum permissible ripple is 20% for all dc solenoids.

When operating pumps equipped with non-conductive diaphragms that exceed the maximum permissible projected area, as defined in EN 13461-1: 2009 section 6.7.5 table 9, the following protection methods must be applied:

- Equipment is always used to transfer electrically conductive fluids or
- Explosive environment is prevented from entering the internal portions of the pump, i.e. dry running.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

In addition compliance of the individual parts is assured by compliance with the standards:

EN 50014 : 1997 + A1, A2 EN 50020 : 1994 EN 50028 : 1987 EN 50281-1-1 : 1998
EN 60079-0 : 2006 EN 60079-11 : 2007 EN 61241-0 : 2006 EN 61241-11 : 2006

(19) **Test documentation**

As listed in Test Report No. 211125100/2, Issue No. 3.