CERTIFICATE

(1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **DEKRA 18ATEX0094 X** Issue Number: **0**

(4) Product: **Air Operated Double Diaphragm Pumps type HDB1½, HDB40, HDB2, HDB50, HDB3, HDB4, HDF1, HDF25, HDF2, HDF3M, HDF4M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, 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 product 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 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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 382092600, Issue 0.

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

EN ISO 80079-36 : 2016 **EN ISO 80079-37 : 2016** **EN 60079-25 : 2010**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2 G **II 2 D**	**Ex h ia IIC T5 Gb** **Ex h ia IIIC T100 °C Db**	**All types provided with pulse output option**
II 2 G **II 2 D**	**Ex h mb IIC T5 Gb** **Ex h mb tb IIIC T100 °C Db**	**All types provided with integral solenoid option**
II 1 G **II 1 D** **I M1**	**Ex h IIC T5…225 °C (T2) Ga** **Ex h IIIC T100 °C…T200 °C Da** **Ex h I Ma**	**All types without aluminum parts and without above listed options**

Date of certification: 14 May 2019

DEKRA Certification B.V.

R. Schuller
Certification Manager

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(13) # SCHEDULE

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0094 X** Issue No. **0**

(15) **Description**

Air Operated Double Diaphragm Pumps type HDB1½, HDB40, HDB2, HDB50, HDB3, HDB4, HDF1, HDF25, HDF2, HDF3M, HDF4M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, and Natural-gas Operated Double Diaphragm Pumps type G15, G20, G30 are used to pump liquids and provide Ex h protection by means of constructional safety "c".

The Pumps type S05, S1F, S15, S20, S30 may be provided with an Integral Solenoid that provides Ex mb and Ex tb protection.

All Pump types may be provided with a Pulse Output Kit providing Ex ia protection, except for type G15, G20, G30.

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

For details on the type designation, markings, options, thermal data, mechanical data and electrical data see Annex 1 to this certificate.

Installation instructions

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

(16) **Report Number**

No. 382092600, Issue 0.

(13) # SCHEDULE

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0094 X** Issue No. **0**

(17) **Specific conditions of use**

The ambient temperature range is as specified in Annex 1.

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 $3*I_{rat}$ 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 ISO 80079-36 : 2016 section 6.7.5 table 8, 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.

Pumps provided with the pulse output kit and used in a potentially explosive atmosphere caused by the presence of combustible dust shall be installed in such a way that the pulse output kit is protected against impact.

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

Covered by the standards listed at item (9).

In addition the individual parts are serpately certified based on compliance with the standards:

Solenoids:
EN 60079-0 : 2006 EN 60079-18 : 2004 EN 61241-0 : 2006 EN 61241-1 : 2004
IEC 60079-0 : 2007 IEC 60079-18 : 2009 IEC 60079-31 : 2008

Switching amplifier:
EN 60079-0 : 2009 EN 60079-11 : 2007 EN 61241-11 : 2006

Proximity sensor:
EN 60079-0 : 2012 + A11 : 2013 EN 60079-11 : 2012

(19) **Test documentation**

As listed in Report No. 382092600, Issue 0.

(20) **Certificate history**

Issue 0 - 382092600 Initial certificate