1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3	EU - Type Examination Certificate Number:	**Baseefa10ATEX0026 – Issue 15**
4	Product:	**Type 27 & 77 Solenoid Operator**
5	Manufacturer:	**Bifold Fluidpower Limited**
6	Address:	**Chadderton, Oldham, Greater Manchester, OL9 9XA, UK**

7 This re-issued certificate extends EU Type Examination Certificate No. **Baseefa10ATEX0026** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, 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.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

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

EN IEC 60079-0:2018 **EN 60079-1:2014** **EN 60079-31:2014**

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 2GD **Ex db IIC T6 Gb (Tamb -60°C to +40°C)***
Ex tb IIIC T85°C Db (Tamb -60°C to +40°C)* IP66/67
***alternative Temperature class/Ambient combinations may also be marked, see schedule**

SGS Fimko Oy Customer Reference No. **1688** Project File No. **22/0377**

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13 # Schedule

14 ## Certificate Number Baseefa10ATEX0026 – Issue 15

15 Description of Product

The Type 77 and Type 27 Solenoid Operators are rated at up to 240Vac or dc and have a maximum power dissipation of 14W. The Type 77 Solenoid Operator comprises a stainless steel cylindrical enclosure, whereas the Type 27 comprises an aluminium cylindrical enclosure, both have a spigot cover fitted with a silicone rubber seal.

In addition to the above there is also a two winding alternative designated the 'Pulse-Pulse Solenoid operator' which has a maximum combined coil rating limited to 20.5W.

The base of the enclosure is fitted with an adaptor bush which incorporates venting holes to allow the unit to be fitted onto a valve assembly rated up to a maximum pneumatic pressure of 10 bar. For hydraulic valves and valves with pneumatic pressures greater than 10 bar the top of the valve is provided with additional venting holes.

Internally the unit is fitted with a coil holder, coil and armature onto which is mounted an adjusting rod which forms a cylindrical joint with the adaptor bush and operates the valve when the solenoid is activated.

The cover may be fitted with a pushbutton or a rotary operator which can be used to operate the valve manually either momentarily or permanently.

The cover is secured using four stainless steel socket head cap screws grade of grade A4-70.

The equipment is marked:

Ex db IIC T6 Gb (Tamb -60°C to +40°C)*

Ex tb IIIC T85°C Db (Tamb -60°C to +40°C)* IP66/67

*The following alternative Temperature class/Ambient combinations may also be marked

T5/T100°C (Tamb -60°C to +55°C)

T4/T135°C (Tamb -60°C to +90°C)

An M20 or ½" NPT cable entry hole is provided as specified on the certified drawings for the accommodation of suitable IECEx Equipment (not a Component) certified cable entry device, with or without the interposition of a suitable IECEx Equipment certified (not a Component) flameproof thread adapter.

An M20 cable entry is provided unless the marking 'K85' appears in the Model No. marked on the label, in which case a ½" NPT cable entry hole is provided.

16 Report Number

See Certificate History

17 Specific Conditions of Use

None

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product:

Clause	Subject
1.4.1	External effects
1.4.2	Aggressive substances etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Issue	Date	Description
0-SL0070	0	2022.06.30	TYPE 27 & 77 SOLENOID LABEL - ROTORK BRAND - L240

Current drawings which remain unaffected by this issue:

Number	Issue	Date	Description
0-SC0004	1	09.07.20	Solenoid Lid Options G.A
0-SC0006	0	17.04.09	Latched Energised and Tamperproof Solenoid Options
0-SC0008	1	29.03.11	Override Cover Assembly
0-SC0009	0	12.02.15	Serial Numbers IIB, Type 77
**0-GA0870	0	07.11.17	General Arrangement L209 Variant – Fixed Head Operator
0-SC0003	11	20.09.21	Type 27 and 77 Solenoid Operator
0-SC0007	5	24.11.21	Sol. Operator Pulse-Pulse.
0-SL0056	4	13.01.22	Type 27 & 77 Solenoid housing label Ex d
0-SL0058	5	2022.02.07	Type 27 & 77 Solenoid housing label Ex d
0-SL0068	0	2022.01.17	Label Type 27 and 77 Solenoid Operator

**This drawing is common to this certificate and BAS02ATEX2048, BAS21UKEX0642 and is held with IECEx BAS 10.0008.

20 Certificate History

Certificate No.	Date	Comments
Baseefa10ATEX0026	20 April 2010	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2006, EN 60079-1: 2007, EN 61241-0: 2004 and EN 61241-1: 2004 is documented in Test Report No. GB/BAS/ExTR10.0014/00.
Baseefa10ATEX0026/1	7 April 2011	Amendment to the diametral tolerance for the adjusting rod. Omission of drawing 0-SC0001 (previously submitted in error). Alternative design of pushbutton override cover assembly. Minor drawing variations. Documented in Test Report No. GB/BAS/ExTR11.0084/00
Baseefa10ATEX0026/2	8 July 2011	Alternative internal design to form the Pulse-Pulse Solenoid Operator. This unit has two windings with a combined rating of 20.5W. Amended designation for the solenoid housing material. Documented in Test Report No. GB/BAS/ExTR11.0123/00
Baseefa10ATEX0026/3	2 April 2012	Alternative label design incorporating the complete range of temperature class and ambient temperature markings provided for by this certificate. Documented in Test Report No. GB/BAS/ExTR12.0086/00

Certificate No.	Date	Comments
Baseefa10ATEX0026/4	2 December 2013	A re-designation of the Type FP Solenoid Operator, to the Type 77 Solenoid Operator. A satisfactory assessment against the requirements of the updated standards IEC 60079-0: 2011 and IEC 60079-31: 2008 (superseding IEC 61241), complete with a review of the marking. Introduction of an alternative aluminium housing and cover material. Documented in Test Report No. GB/BAS/ExTR13.0291/00
Baseefa10ATEX0026/5	29 July 2014	This issue permits existing information (for example on Schedule Drawings) to be replaced by the revised certificate holders address. No other changes may be made to the certified design. Documented in Test Report No. None.
Baseefa10ATEX0026/6	17 February 2015	Clarification of the Type name. The Type 77 comprises a stainless steel housing and the Type 27 comprises an aluminium housing. To allow the introduction of alternative seal materials. To allow the Type 77 Solenoid Operators having Serial numbers as defined in drawing number 0-SC0009 to be marked with Ex d IIB T6 Gb. Documented in Test Report No. GB/BAS/ExTR14.0317/00
Baseefa10ATEX0026/7	23 June 2016	Minor drawing changes not affecting certification. Documented in Test Report No. GB/BAS/ExTR16.0164/00
Baseefa10ATEX0026/8	16 March 2017	To allow the introduction of an alternative low power circuit. To allow for correction of the Type designation listed on the EU-Type Examination Certificate Baseefa10ATEX0026 To allow for correction of description to include the Pulse Pulse Unit. Documented in Test Report No. GB/BAS/ExTR17.0076/00
Baseefa10ATEX0026/9	20 July 2017	To allow the introduction of an alternative low power circuit. Documented in Test Report No. GB/BAS/ExTR17.0211/00
Baseefa10ATEX0026/10	3 January 2018	To introduce an alternative non-rotational mounting arrangement to attach the adaptor bushing via the coil holder to the enclosure housing. Identification of threaded entry holes on the enclosure wall. Documented in Test Report No. GB/BAS/ExTR17.0274/00
Baseefa10ATEX0026/11	7 March 2018	To introduce alternative terminal plate with a different grounding point design. To introduce optional certification marks in addition to the existing one to be included on to the certification label marking. Documented in Test Report No. GB/BAS/ExTR 18.0041/00
Baseefa10ATEX0026/12	12 July 2019	To assess the Type 27 and 77 Solenoid Operator against the standards EN IEC 60079-0:2018, EN 60079-1:2014 and EN 60079-31:2014 To permit minor drawing changes to the certification label that do not affect certification Documented in Test Report No. GB/BAS/ExTR19.0100/00

Certificate No.	Date	Comments
Baseefa10ATEX0026/13	14 July 2020	To introduce an alternative Detented Manual Over-Ride Lid (alternative spigoted cover), which allows the valve to be operated manually. Documented in Test Report No. GB/BAS/ExTR19.0341/00.
Baseefa10ATEX0026 – issue 14	11 February 2022	This issue of the certificate incorporates previously issued primary & supplementary certificates. To remove drawings 138-10, 138-10-K85, 0-S0252 and 0-S0254 transferring critical details to drawing 0-SC0003 revision 11. To remove drawing 0-SC0001. To add drawing 0-SL0068. To add an alternative encapsulant. To update the nameplate drawings to include UKEX details. Documented in Test Report No. GB/BAS/ExTR21.0158/00
Baseefa10ATEX0026 – issue 15	2 November 2022	This issue of the certificate incorporates previously issued primary & supplementary certificates. To add an alternative marking drawing with a different manufacturer branding. The assessment is documented in test report GB/BAS/ExTR22.0138/00
For drawings applicable to each issue, see original of that issue.		