

[1]

EU-TYPE EXAMINATION CERTIFICATE



[2] **Equipment and protective systems intended for use in potentially explosive atmospheres**
Directive 2014/34/EU - Annex III

[3] Certificate Number: **EPT 19 ATEX 3552** issue 0

[4] Equipment: **Pneumatic piston pumps**
 Model: **series SP**

[5] Manufacturer: **Z.P. ARROW S.r.l.**

[6] Address: **Via Giolitti, 15 - 36056 Tezze sul Brenta VI**

[7] This equipment and its accepted variations are specified in the annex to this Certificate.


[8] Eurofins Product Testing Italy S.r.l., Notified Body n. 0477 in accordance with Article 21 of Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II of the Directive.
 The examination and test results are recorded in the confidential Report N° EPT.19.REL.01/19-13-000104.

[9] Compliance with the essential health and safety is assured through the verification of them and by compliance with the harmonized standards:

EN ISO 80079-36:2016, EN ISO 80079-37:2016

[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 annex to this Certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the specified equipment.
 Further requirements of the Directive 2014/34/EU apply to the manufacture and supply of this equipment. These requirements are not object of this Certificate.

[12] The equipment shall include the sign  and the following string:

II 1/2 G Ex h IIB T4 Ga/Gb

0°C < Tamb < +40°C

II 1/2 D Ex h IIIC T135°C Da/Db

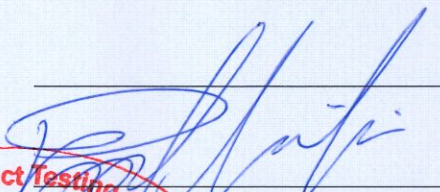
Place and date of issue:

Torino, 2019-12-20






 Dionisio Buccheri
 Directive Responsible



 Paolo Trisoglio
 Managing Director


eurofins
 Notified Body N. 0477



PRD N° 119B

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This Certificate has 3 pages and it is reproducible only in its entirety.
 Conditions of validity are reported below.



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ANNEX

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[15] **Equipment description**

The SP series pneumatic pumping system operates in the transfer, transport and feeding of medium and high viscosity liquid and pasty compounds.

The action of pumping is obtained by the reciprocating linear movement of a pumping piston actuated by a pneumatic motor. The pneumatic motor can be part of the complete system or the pumping piston can be considered individually to constitute an incomplete system, which will interface with other equipment.

The pumping piston is equipped in the bottom with a retention valve (sphere or clapet) with gravity closure.

The pneumatic motor consists of a piston and two valves, air supply and exhaust, so that the reciprocating linear movement is generated.

A detailed description of the characteristics of the equipment and its functionality can be found in the document "FASCICOLO TECNICO Sistema pneumatico di pompaggio serie SP".

The identifying code of the pumping system is made of eleven fields with symbols that have the following meanings.

1.	model	SP=pumping system
2.	type	P=pump, M=motor, V=pneumatic valve, MV=motor+valve, MP=motor+pump, MPV=motor+pump+valve
3.	pump diameter	20÷140 mm
4.	pumping tube length	S=short 250÷599 mm, L=long 600÷1600 mm
5.	pneumatic valve	V01=with snap distribution drawer, V02=with clapet integrated in the piston of the pneumatic motor, V03=with 5-way drawer, V04=with external 5-way valves
6.	motor diameter	(internal engine piston liner): 20÷140 mm
7.	motor length	(engine piston liner): 100÷210 mm
8.	type of liquid check valve	F=sphere, C=clapet
9.	metallic construction materials in contact with the fluid	A01=stainless steel 303, A02=stainless steel 304, A03=stainless steel 316, A04=aluminium, A05=bronze, A06=brass, A07=carbon steel, A08=ptfe
10.	seals partially in contact with the fluid materials	T01=ptfe, T02=nbr, T03=viton, T04=feed nbr, T05=polyethylene, T06=silicone, T07=epdm, T08=feed epdm, T09=polyurethane, T10=neoprene
11.	sphere or clapet valve materials	B01=epdm, B02=ptfe, B03=stainless steel, B04=carbon steel, B05=polyethylene,

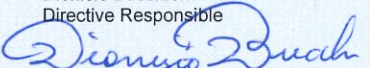
The significant construction and operating parameters are shown in the following table.

Temperature range allowed for ambient and process	0 °C ÷ 40 °C
Pressure range allowed for ambient and process	0,8 ÷ 1,1 bar absolute
Pneumatic motor feeding fluid	filtered and dehumidified air
Supply pressure range	6 bar absolute
Maximum linear speed of the pumping piston	0,5 m/s
Maximum linear speed of the engine piston	0,5 m/s
Maximum mass of the sphere (or clapet) of the bottom valve of the pumping piston	1000 g
Maximum mass of the sphere of the bottom valve on the plunger of the pumping piston	1850 g
Minimum thickness of the pumping piston jacket	1,5 mm
Minimum thickness of the motor jacket	2 mm
Minimum gap between plunger and pumping piston jacket	2 mm
Minimum gap between plunger and motor jacket	1 mm


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Directive Responsible



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Warning label

None.

Routine tests

None.

[16] **Assessment Report n° EPT.19.REL.01/19-13-000104**

This EU-TYPE EXAMINATION CERTIFICATE is issued after the positive result of the conformity assessment of the Directive 2014/34/EU and of the harmonized standards listed in this Certificate, performed by the Notified Body Eurofins Product Testing Italy S.r.l., and reported in the Assessment Report above cited.

[17] **Special condition for a safe use**

None.

[18] **Essential Health and Safety Requirements**

Assured by compliance with harmonized standards.

[19] **Descriptive documents**

The equipment object of this Certificate is described by the following scheduled documents; they cannot be modified without the explicit authorization of the Notified Body.

Code	Title	Rev.	Date
FT.ATEX_SP	FASCICOLO TECNICO Sistema pneumatico di pompaggio serie SP	01	19/09/19

[20] **Terms and conditions**

The product liability rests with the Manufacturer, his representative or, in the absence of a representative, with the importer, in accordance with the General Product Safety Directive 2001/95/EC.

[21] **Certificate History**

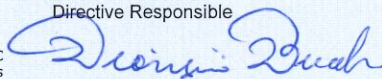
This Certificate is at its first issue.



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End of Certificate

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