

[1]

EU-TYPE EXAMINATION CERTIFICATE


[2]

**Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU – Annex III**

[3]

Certificate Number: **EPT 19 ATEX 3283 X** issue 0

[4]

Equipment: **Submersible electropumps**
Series: **Grey**

[5]

Manufacturer: **ZENIT ITALIA S.R.L.**

[6]

Address: **Via dell'industria, n. 11 - 41018 San Cesario sul Panaro (MO)**

[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 the Directive 2014/34/EU of the European Parliament and of the Council of 26th 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.01/55854.

[9]

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

**EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016,
and with the standard EN 60079-0:2018**

[10]

If the sign "X" is placed after the Certificate number, it indicates that the equipment is subject to the 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 strings:

II 2G

Ex db IIB T4 Gb

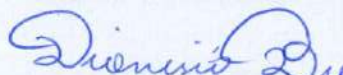
Ex h IIB T4 Gb

0°C ≤ Tamb ≤ 40°C



Place and date of issue:

Torino, 2019-06-18



Dionisio Bucchieri
Directive Responsible



Paolo Trisoglio
Managing Director



PRD N° 119B

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This Certificate has 5 pages and it is reproducible only in its entirety. Conditions of validity are reported below.



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[15] Equipment description

The equipment, series Grey, is a range of submersible electric pumps for pumping sewage and waste water. The equipment has the type of protection "Ex db" and "Ex h" with EPL Gb. It is suitable for gas Group IIB.

The enclosures, depending on drive unit, have eleven standard sizes. The enclosures of the motors can have the same diameter but different height (identified as Short and Long).

The equipment consist of the following parts:

- Metallic enclosure EN-JGL 250 or AISI 316 (the paint used does not exceed 2 mm);
- Electrical motor;
- Pump;
- Cable and Cable gland;

The equipment are identified by a code as follows:

<u>DR G 750/2 / 80 A 0 F T 5</u>								
① ② ③			④ ⑤ ⑥ ⑦ ⑧ ⑨					
1. Impeller type DG = vortex DR = open channel GR = grinder AP = high pressure 2. Series G = GREY pumps 3. Motor power [HP * 100] / motor poles 4. Outlet diameter [mm]	5. Hydraulic model 6. Version number 7. Motor size 8. Motor phases M = Single – phase T = Three – phase 9. Supply voltage frequency 5 = 50 Hz 6 = 60 Hz							

Detailed information are defined in the manufacturer's safety instructions document.

Identification:

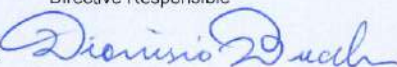
The code ③ identifies the motor model on the basis of its power (P2) and number of poles; the details are indicated in the tables below:

Single phase version		
Enclosure description (drive unit)	Rated power P2 (power on the shaft) [kW]	N° poles
G05M	0.55	2
	0.75	2
G05L	1.1	2
	1.5	2
G06L	1.8	2
	2.2	2
	3.0	2
G07S	4.0	2
G07L	5.5	2
G08L	7.5	2



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Three phase version					
Enclosure description (drive unit)	Rated power P2 (power on the shaft) [kW]	N° poles	Enclosure description (drive unit)	Rated power P2 (power on the shaft) [kW]	N° poles
G05M	0.75	2	G08L	9	2
	0.55	2		11	2
G05L	1.1	2		13	2
	1.5	2		7.5	4
	1.8	2	15	2	
	G10S	0.75	4	9	4
		1.1	4	11	4
1.5		4	7.5	6	
G06S	2.2	2	G10L	18.5	2
	1.5	4		15	4
G06L	3	2		9	6
	1.8	4		11	6
	2.2	4	13	6	
	3	4	M08S	3	6
G07S	4	2	M08L	4	6
	5.5	2		5.5	6
G07L	7.5	2			
	4	4			
	5.5	4			

Equipment characteristics:

Maximum supply voltage: 700 Vac for three phase version / 250 Vac for single-phase version
 Rated frequency: 50 Hz or 60 Hz
 Rated power: 0.55 kW to 18.5 kW
 Insulation class: H (180°C)
 Duty: S1
 Degree of protection: IP 68 (20 m depth 4 hours - according to IEC 60079-0 and IEC 60034-5)
 Maximum immersion height: 20 m
 Ambient temperature: from 0 °C to +40 °C
 Maximum liquid temperature: 40 °C

The equipment are provided with three bimetallic thermal protectors in the stator windings with a nominal switching temperature of 150 °C; as alternative, bimetallic protectors can be replaced by PTC thermistors or PT100 sensors.

The equipment is provided with a leakage probe to detect the entrance of water in the oil chamber.

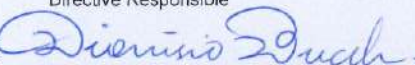
Mounting:

The equipment is intended to be installed in vertical position.


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Cable entries

The cable entries, integrated in the motor body, are part of this certification.

Warning label

Flameproof joints cannot be repaired
See user manual

Routine tests

None

[16] Assessment Report n° EPT.19.REL.01/55854

This EU-Type Examination Certificate is released after the positive result of the conformity assessment of the Council Directive 2014/34/EU and to harmonized technical 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] Specific condition of use

- Supply through inverter: thermal protectors must be properly connected to control panel in order to shut down the power supply in the event of overheating (see safety instructions).
- The submersible pump shall operate only completely submersed. The equipment must be equipped with at least two level sensors (in redundancy) to shut down the power supply when the liquid to be pumped is below the minimum level (pump fully submerged).
- The leakage probe must be electrically connected in accordance with safety instructions.
- For replacement purpose, the fasteners shall be Class A2-70, A2-80, A4-70 or A4-80 (see safety instructions)

[18] Essential Health and Safety Requirements

Assured by compliance with harmonized standards.

[19] Descriptive documents

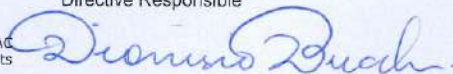
The equipment object of this Certificate are described by the following documents that are scheduled documents and therefore they cannot be modified without the explicit authorization of the Notified Body.

Type of document	Document identification	Rev.	Date
Technical note	ATEX-IECEx Certification Grey series Technical note	0	2019-05-23
Safety instructions	First installation manual	-	2019-05-31
Assembly drawings	28812 - DRIVE UNIT G05M-X05M	-	2019-05-24
	28813 - DRIVE UNIT G05L-X05L	-	2019-05-24
	28814 - DRIVE UNIT G06S - X06S	-	2019-05-24
	28815 - DRIVE UNIT G06L - X06L	-	2019-05-24
	28816- DRIVE UNIT G07S - X07S	-	2019-05-24
	28817 - DRIVE UNIT G07L - X07L	-	2019-05-24
	28818 - DRIVE UNIT G08L - X08L	-	2019-05-24
	28819 - DRIVE UNIT G10S - X10S	-	2019-05-24
	28820 - DRIVE UNIT G10L - X10L	-	2019-05-24
	26187 - DRIVE UNIT M08S - MX08S/ M08L-MX08L	B	2019-05-31
Ex Cables and Cable glands	A074	0	2019-04-30
ATEX H20 Probe (Zenit)	EX 22844	0	2007-10-05
	28154	0	2017-04-08
	A068	B	2019-05-28


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[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.

The following conditions may render this certificate invalid:

- changes in the design or construction of the product;
- changes or amendments to the Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.

[21] History

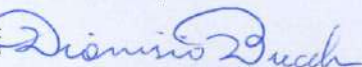
Issue	Description	Date
0	First Emission.	2019-06-18


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End of Certificate