



[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 2**

 [4] Equipment: **Submersible electropumps**
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.23.REL.03/2313100

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

EN IEC 60079-0:2018, EN 60079-1:2014, 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 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.

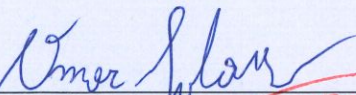
 [12] The equipment shall include the sign  and the following strings:

II 2 G
Ex db h IIB T4 Gb

0°C ≤ Ta ≤ +40°C

Place and date of issue:
 (DD-MM-YYYY)

Torino, 27-07-2023



Omar Galasso
 Deputy Head of Directive



Paolo Trisoglio
 Managing Director



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This Certificate has 6 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 of the motors can have the same diameter but different height: S=short, M=medium, L=long.

The equipment consists of the following parts:

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

Code designation

The equipment is identified by a code as follows:

<u>DR</u> <u>G</u> <u>750/2</u> / <u>80</u> <u>A</u> <u>0</u> <u>F</u> <u>T</u> <u>5</u>	
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨	
1. Impeller type DG = Vortex DR = Channels GR = Grinder AP = High head CP = Channels with chopper system type CP CT = Channels with chopper system type CT 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.

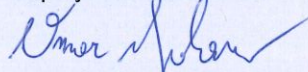
The fields ②, ③, ⑦ and ⑧ identify the motor model on the basis the series, power (P2) and poles, code of motor size and number of phases; the details are indicated in the tables below:

Single phase version				
Enclosure description (drive unit)	Rated power P2 (power on the shaft) [kW]	N° poles	Duty cycle in service S3	Commercial description (_code 2 & code 3 _code7 & code 8_)
G05M	0.55	2	N.A. – Equipment must be powered only if completely submerged	<u> G 75/2 AM </u>
	0.75	2		<u> G 100/2 AM </u>
G05L	1.1	2		<u> G 150/2 AM </u>
	1.5	2		<u> G 200/2 AM </u>
G06L	1.8	2		<u> G 250/2 EM </u>
	2.2	2		<u> G 300/2 EM </u>
	3	2		<u> G 400/2 EM </u>
G07S	4	2		<u> G 550/2 FM </u>
G07L	5.5	2		<u> G 750/2 FM </u>
G08L	7.5	2		<u> G 1000/2 GM </u>



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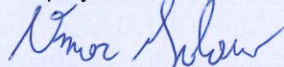


Three phase version				
Enclosure description (drive unit)	Rated power P2 (power on the shaft) [kW]	N° poles	Duty cycle in service S3	Commercial description (_code 2 & code 3 _code7 & code 8_)
G05M	0.55	2	50%	_G 75/2_AT_
	0.75	2	50%	_G 100/2_AT_
G05L	1.1	2	30%	_G 150/2_AT_
	1.5	2	30%	_G 200/2_AT_
	1.8	2	20%	_G 250/2_AT_
	0.75	4	15%	_G 100/4_AT_
	1.1	4	15%	_G 150/4_AT_
	1.5	4	15%	_G 200/4_AT_
G06S	2.2	2	20%	_G 300/2_ET_
	1.5	4	20%	_G 200/4_ET_
G06L	3	2	20%	_G 400/2_ET_
	1.8	4	20%	_G 250/4_ET_
	2.2	4	20%	_G 300/4_ET_
	3	4	15%	_G 400/4_ET_
G07S	4	2	20%	_G 550/2_FT_
	5.5	2	15%	_G 750/2_FT_
G07L	7.5	2	10%	_G 1000/2_FT_
	4	4	15%	_G 550/4_FT_
	5.5	4	15%	_G 750/4_FT_
G08L	9	2	15%	_G 1200/2_GT_
	11	2	15%	_G 1500/2_GT_
	13	2	10%	_G 1750/2_GT_
	7.5	4	15%	_G 1000/4_GT_
G10S	15	2	10%	_G 2000/2_HT_
	9	4	15%	_G 1200/4_HT_
	11	4	10%	_G 1500/4_HT_
	7.5	6	10%	_G 1000/6_HT_
G10L	18.5	2	15%	_G 2500/2_HT_
	15	4	15%	_G 2000/4_HT_
	9	6	15%	_G 1200/6_HT_
	11	6	15%	_G 1500/6_HT_
	13	6	15%	_G 1750/6_HT_
M08S	3	6	20%	_G 400/6_GT_
M08L	4	6	20%	_G 550/6_GT_
	5.5	6	20%	_G 750/6_GT_


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Ratings:

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 (submerged application): S1

Duty (partially emerged/dry application): S3 (see parameters designation for duty percentage)

Degree of protection: IP 68 (20 m depth 4 hours - according to EN 60079-0 and EN 60034-5)

Maximum immersion height: 20 m

Ambient temperature: From 0 °C to +40 °C

Maximum liquid temperature: 40 °C

The equipment is 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 or horizontal position.

As indicated in the marking label, when the submersible pump is completely submerged it is designed to operate in service S1, in all other cases (partially submerged installation or dry installation) the service is restricted to S3 as detailed in the tables above.

Cable entries

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

Warning label

Flameproof joints cannot be repaired

See safety instructions

Routine tests

None.

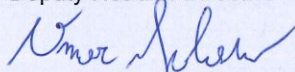
[16] Assessment Report n° EPT.23.REL.03/2313100

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.



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[17] Special conditions for a safe 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 electropump can operate in continuous duty service (S1) only when it is completely submerged. In dry applications, the equipment must only be powered in intermittent periodic service (S3). At least two level sensors (in redundancy) must be used to shut down the power supply when the liquid to be pumped is below the minimum level (see safety instruction).
- 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.

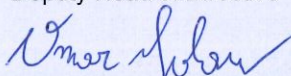
Type of document	Document identification	Rev.	Date
Technical note	* ATEX-IECEx Certification Grey series Technical note	2	2023-07-14
Safety instructions	* MOD UM GREY - Master_First Installation Manual Grey_Ex	1	2023-07-20
Assembly drawings	* 28812 - DRIVE UNIT G05M-X05M	B	2023-03-21
	* 28813 - DRIVE UNIT G05L-X05L	B	2023-03-21
	* 28814 - DRIVE UNIT G06S - X06S	B	2023-03-22
	* 28815 - DRIVE UNIT G06L - X06L	B	2023-03-22
	* 28816- DRIVE UNIT G07S - X07S	B	2023-03-22
	* 28817 - DRIVE UNIT G07L - X07L	B	2023-03-22
	* 28818 - DRIVE UNIT G08L - X08L	B	2023-03-22
	* 28819 - DRIVE UNIT G10S - X10S	B	2023-03-22
	* 28820 - DRIVE UNIT G10L - X10L	B	2023-03-22
Ex Cables and Cable glands	* 26187 DRIVE UNIT M08S - MX08S/ M08L-MX08L	D	2023-03-22
	*A074	A	2023-03-23
ATEX H2O Probe (Zenit)	EX 26871	0	2014-11-26
	EX 22844	0	2007-10-05
	28154	0	2017-04-08
	A068	B	2019-05-28
NPT Blanking element	A092	0	2022-04-06

Note: An * is included before the title of documents that are new or revised.


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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

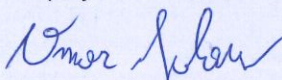
Issue	Description	Date
0	First Emission.	18-06-2019
1	- The assessment has been extended including the S3 service condition. - Special conditions for a safe use have been updated.	15-06-2022
2	- A new pump model (CP, CT) with multi-channel impeller and chopper system has been added - The stainless steel models have been removed - The maximum frequency in case of use with supply converter has been better formalized - Some small modification in the assembly drawings have been done (always maintaining the consistence with the already tested items) - The labels have been updated by including some modifications that do not directly impact with ATEX/IECEx requirements - The manufacturers documents have been updated to take into account the previous modifications	27-07-2023



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End of Certificate