

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Aquametro Oil & Marine AG
Address	Ringstr. 75, Therwil, 4106, Switzerland
Type	Flowmeters
Trade Name	CONTOIL® VZO / VZOA, CONTOIL® VZF II / VZFA II and DOMINO® ARD
Application	Marine, offshore and industrial applications for the use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2002. Types CONTOIL® VZO / VZOA, CONTOIL® VZF II / VZFA II and DOMINO® ARD are approved in fuel oil, lubrication oil and hydraulic oil systems. DOMINO® ARD is additional approved for fresh water systems (no sea water) on ships classed or intended for Classification with Lloyd's Register.
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, 2021 IACS UR P2 and E10 (Rev. 8, Febr. 2021)
Ratings	Nom. Dia. (mm): DN 15, 20, 25, 40 and 50 Nom. Press. (bar): PN 16 and 25 Electric enclosure: IP66 / IP 68 / IP69 Temperature range: max. 130°C / 180°C

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This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2090082TA (prev. 05/20053(E4))

The Design Appraisal Document HMD 16388-05, Issue No. 5 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

DESCRIPTION	<p>Aquametro Oil & Marine flowmeters with hydraulic part and different read-out options. The hydraulic part consists of a rotary piston and is working on volumetric principle (positive displacement). The read-out options can be as follows: electronic read out (electronic display module) or mechanical read out (mechanical display module with roller counter, roller counter with reed or roller counter with inductive pulser).</p> <p>Rotary piston flowmeter consists of one hydraulic part CONTOIL® / DOMINO® with the following display options:</p> <p>CONTOIL® VZO / VZOA – mechanical display module</p> <p>CONTOIL® VZF II / VZFA II – electronic display module</p> <p>DOMINO® ARD – mechanical display module</p> <p>Different measurement units:</p> <p>RW – roller register for local indication</p> <p>RV – roller register for local indication with integrated reed-type pulser for remote indication</p> <p>IN - roller register for local indication with inductive pulser module for remote indication</p> <p>INA – like IN with higher resolution; pulser according to IEC 60947-5-6 (NAMUR)</p> <p>VZF II / VZFA II – multifunctional electronic display module and adjustable outputs</p>
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