

ADRIANE TURBINE

Turbine flow meter dedicated to refined petroleum product metering



Adriane Turbine



Product certification



Material in conformity with Measuring Instruments Directive 2014/32/UE



ISO 9001 : 2015



ATEX conformity
Zone 1 Gas group B



European certifications in accordance with directives concerning measuring instruments and equipment installed in explosive area



Pressure Equipment Directive 2014/68/UE
**only for the turbine DN 150-600*

Application

ADRIANE turbine covers many applications such as:

- On truck metering: by gravity or by pump
- Oil terminal metering: skid and pipeline
- Loading / unloading metering for truck, ship, railcar
- Autonomous & mobile metering
- Master meter for calibration and verification

Constitution

▪ Turbine size:	1" ¾ to 6"
▪ Body:	Aluminum or stainless steel
▪ Rotor, axle and bearing:	Aluminum, carbon and tungsten carbide
▪ Flanges:	Square, TTMA, PN, ASA, TW

Product benefits

- High accuracy, repeatability & life-time
- Low pressure loss for optimum flow rate
- Dual pulse emitter
- Compact size and lightweight
- Vertical and horizontal installation
- Evolutive design
- Plug & play connection with any electronic calculator



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Key features

For 35 years, ALMA has been providing measuring solutions for petroleum products. Using its acquired expertise, ALMA has now developed a turbine flow meter for oil terminals, pipelines and tankers. A vast improvement on the mechanical meter, the turbine meter is renowned in the petrochemical industry for its high performance, design, ease of installation and versatility.

High performance

The Adriane turbine offers high performance due to its frictionless component technology, which in turn gives unparalleled precision and repeatability, making it the best turbine meter on the market. The absence of mechanical wear makes it robust, reliable and highly durable, thus reducing the need for maintenance interventions.

Design

The multi-product feature of the Adriane, designed to meter any refined petroleum product, means a need for fewer meters at

multi-fuel counting facilities. Furthermore, its insensitivity to impurities (up to 0.8mm), reduces the need for filters and avoids reduced flow rates. This in turn optimizes flow and reduces off-loading time.

Ease of installation

Light and compact, the Adriane turbine can easily be integrated into any metering system. Its 'plug & play' transmitter/pulsar connects easily to all types of electronic control systems, thus reducing installation time costs.

Versatility

The extensive range of Adriane turbines means greater versatility. They are specifically adapted to the needs of the petrochemical industry in terms of applications, products, flows, materials compatibility and hydraulic couplings. Adriane turbines ensure optimum precision for measuring systems and thus reduce operating costs.

ADRIANE TURBINE

Mesured liquids:	All refined hydrocarbons (heating oil, diesel, fuel, jet, urea, gasoline, LPG, AdBlue®, biofuel, Ethanol, EMAG)	Pressure:	Depending on flanges
Flow rate:	From 2,5 m ³ /h to 600 m ³ /h 40 l/min to 10 000 l/min	Temperature:	-10°C to +50°C (other limits depending on the product types)
Accuracy:	0,1%	Viscosity:	Up to 13 Cst
Repeatability:	0,02%	Atex :	II 2 G c IIC T6
Scale interval:	1L	Certificate:	LNE-12393 (Welmec 8.8 Guide and OIML R117-1)

Product Designation	Nominal Diameter (mm)	Flow (m ³ /h)		Liquids	Viscosity (mm ² /s)	Max. Pressure (bar)	Body	Rotor
		Min.	Max.					
ADRIANE TURBINE DN 32-25 1"1/4*	32	2,5	25	Multi-product	13	25	Alu	Alu
ADRIANE TURBINE DN 50-30 LPG	50	6	30	LPG	1	30	S.S.	Alu
ADRIANE TURBINE DN 50-50 FOD	50	4	50	FOD	10	30	Alu	Alu
ADRIANE TURBINE DN 50-50 GASOLINE	50	4	50	Gasoline	10	30	Alu	Alu
ADRIANE TURBINE DN 50-60 LPG*	50	6	60	LPG	1	30	Alu	Alu
ADRIANE TURBINE DN 80-80	80	8	80	Multi-product	13	30	Alu	Alu
ADRIANE TURBINE DN 80 80 CHEM.	80	8	80	AdBlue®	13	30	S.S.	Titane
ADRIANE TURBINE DN 100-80	100	8	80	Multi-product	13	30	Alu	Alu
ADRIANE TURBINE DN 100-150	100	15	150	Multi-product	13	30	Alu	Alu
ADRIANE TURBINE DN 150-600	150	60	600	Multi-product	13	20	Steel	Alu

*uncovered by the LNE-12393 certificate

TURBINE INTEGRATED



- ❶ 3" Turbine DN80-80
- ❷ 4" Turbine DN100-150
- ❸ 2" Turbine DN50-30 GPL
- ❹ 2" Turbine DN50-50 FOD
- ❺ 4" Turbine DN100-150

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