



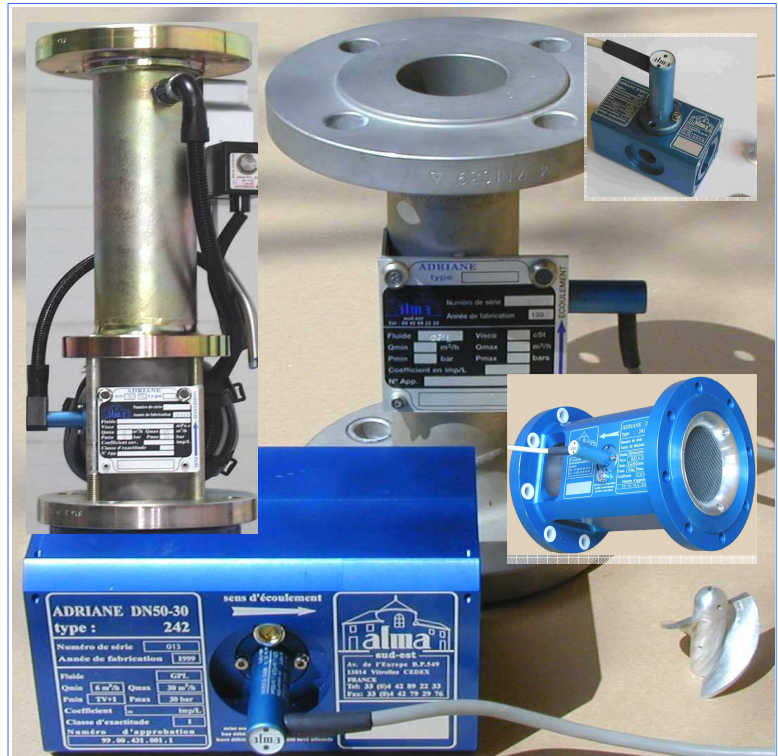
Turbine Flow Meter

Adriane Turbine Meters from 3/4" up to 4"

alma has developed and produces a wide range of specialized **Turbine Meters**, sizing 3/4" up to 4", and 3 up to 200 m3/h for petroleum products & LPG.

Each model is designed for a specific use

- ☑ On-truck metering for pumped products: Heating Oil and LPG
- ☑ On-truck Gravity measurement for gasoline
- ☑ Trucks Loading racks
- ☑ Railcars loading stations
- ☑ Trucks and railcars unloading
- ☑ Mobile measurement
- ☑ Pipeline metering skids



ADRIANE Turbines, main characteristics



EEC MID approval: ALMA TURBINE METERS - LNE-12393 rev1 - 2008/09/01, Décret n° 2006-447, arrêté du 28 avril 2008, Directive 2004/22/CE du 31 mars 2004



2" LPG, one piece, aluminum

The **alma** ADRIANE Turbines Meters performs with reliability:

- ☑ High accuracy, repeatability and long life reliability
- ☑ Very low pressure drop: optimum flow rate
- ☑ Efficient double pulse transmitter for low flow control
- ☑ Special aluminum housing for On Truck applications
- ☑ Flow conditioner integrated: **no straight lengths required**
- ☑ Both vertical or horizontal installation

2H00 Pulse Transmitter:

- ☑ Model : *Ex II 1 G Ex ia IIB T4 INERIS 03ATEX 0114X* or *Ex II 1 G Ex ma II T5 INERIS ATEX 0114X*
- ☑ Supply: 12 VDC, 20 mA.
- ☑ Protected against short cuts and polarity inversion
- ☑ Outputs: 2 open collectors, max 13.2 Vdc - 30 mA.
- ☑ Cable connection: 4 wires shielded, 3 m (length on request)
- ☑ *Not affected by "blade or liquid vibrations"*
- ☑ Static switching: detection of slow blade motion

2H00 pulses emitter



Turbines Selection chart

Product	model	Max Flow	housing	connection	main use	approval
LPG	DN 20-3	3-10 m ³ /h	Mono-Alu	square 45x45	distributors	pending
	DN 50-30.242	30 m ³ /h	Mono-Alu	square 100x100	On-truck	MID
	DN 50-30.312	30 m ³ /h	Inox	flanges PN 40/PN50	Miscellaneous	MID
	DN 50-60.242	60 m ³ /h	Mono-Alu	square 100x100	LPG	pending
	DN 50-60.312	60 m ³ /h	Inox	flanges PN 40/PN50		
Heating oil	DN 50-40.241	40 m ³ /h	Mono-Alu	square 100x100	On-truck	MID
	DN 50-40.242 with 2 x 2H00	40 m ³ /h	Mono-Alu	square 100x100	Miscellaneous Heating oil	MID
	DN 50-40.311	40 m ³ /h	Inox	flanges PN 16/PN20		
Multi-products	DN 80-80.241	80 m ³ /h	Mono-Alu	square 110x110	Miscellaneous metering	MID MID
	DN 80-80.371	80 m ³ /h	Assembly	flanges 3" PN 16/20		
	DN 100-80.371	80 m ³ /h	Assembly	flanges 4" PN 16/20		
	DN 100-150.371	150 m ³ /h	Assembly	flanges 4" PN 16/20	On-truck gravity	
	DN 100-80.241	80 m ³ /h	Mono-Alu	flanges TTMA 4"		
	DN 100-80.241-V	80 m ³ /h	Mono-Alu	TTMA + sight glass		
	TCA 80-80-470	80 m ³ /h	Ass. L=470	flanges 3" PN 20	Miscellaneous	MID
	TCA 100-80-490	80 m ³ /h	Ass. L=490	flanges 4" PN 20	Truck-railcar	MID
	TCA 100-150-490	150 m ³ /h	Ass. L=490	flanges 4" PN 20	Loading	MID
	TCA 100-150-855	150 m ³ /h	Ass. L=855	flanges 4" PN 20	unloading	
	DN 100-200.371	200 m ³ /h	Assembly	flanges 4" PN 16/20	Miscellaneous metering	pending
	TCA 100-200-490	200 m ³ /h	Ass. L=490	flanges 4" PN 20		

Specific designs:

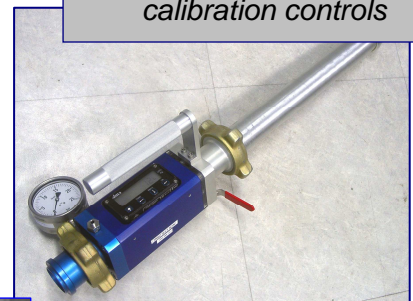
Turbocompt, 3" & 4",
trucks & railcars loading
with optional air detector



Mobile Gravity metering unit
Trucks unloading



LPG Mobile metering unit
used for Trucks
calibration controls



TTMA turbine
On-Trucks gravity metering



Autonomous Turbine meter

FC006EN - august 2009