

# DIGITAL METER AND PULSER No. 226-CP



**ADVANCED FLUID  
MANAGEMENT SOLUTIONS**



\* excluding electrical  
parts and consumables

**FOR OIL AND ALLIED PRODUCTS**  
MID certificate version available as well



**FOR DIESEL FUEL**



**FOR ANTIFREEZE AND  
WINDSHIELD WASHING LIQUID**





**ADVANCED FLUID  
MANAGEMENT SOLUTIONS**

*the human side  
of Quality*



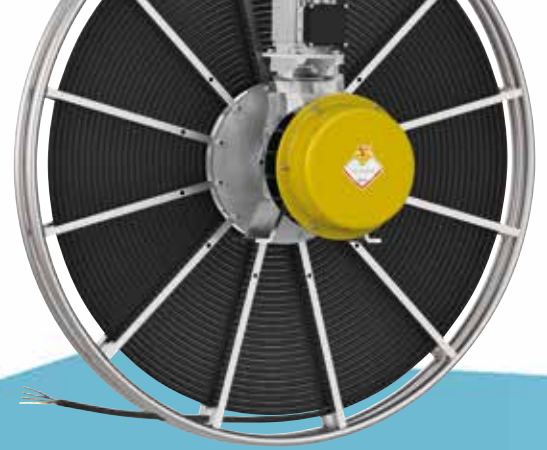
founded in 1975

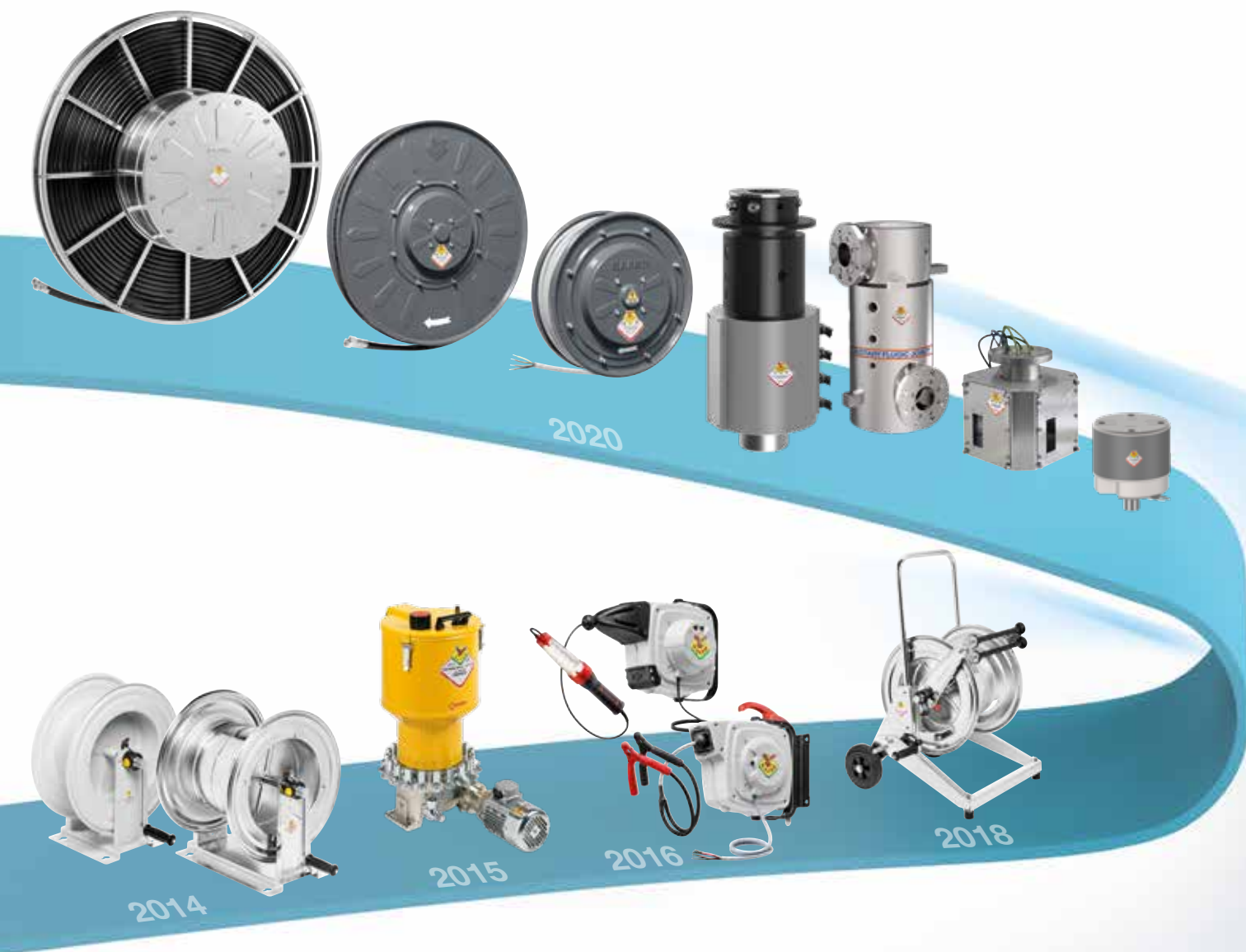






**ADVANCED FLUID  
MANAGEMENT SOLUTIONS**





More than **5000** products available  
for your business





**ADVANCED FLUID  
MANAGEMENT SOLUTIONS**

**VISION**

**DESIGN**

**TECHNOLOGY**

**QUALITY**

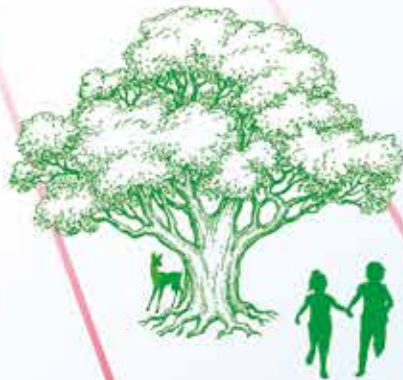
**EFFICIENCY**

**ASSISTANCE**

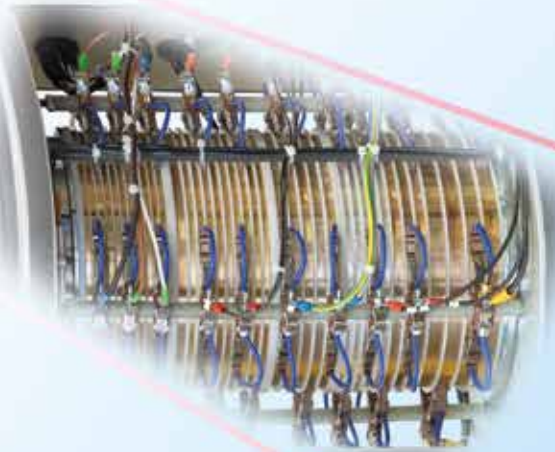
**ENVIRONMENT**

**PACKAGING**

**SHARING**







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## DIGITAL METER AND PULSER

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Digital  
meter







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**MID Digital  
meter**



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**Digital meter  
pulser version**



**RAASM** digital meters and pulsers are designed and produced to correctly measure the quantity of the dispensed fluids.

The wide range available guarantees maximum chemical compatibility with low, medium and high viscosity fluids such as windshield washing fluid, antifreeze, diesel fuel, oil and similars.

Their installation on dispensing gun, directly on pump outlet or in-line, can be done very easily to accurately measure every single fluid dispensing operation, even remotely.

**Our sales department  
is at your disposal to provide  
information and solutions.**

**[www.raasm.com](http://www.raasm.com)**



# DIGITAL METERS

for lubricating oil, hydraulic oil, diesel fuel, antifreeze and windshield washing liquid and allied products.



## STUDY, AND DESIGN

The RAASM digital meter combines modern construction technology with a simple and intuitive design.

All the components are produced in Italy, including the electronic board.

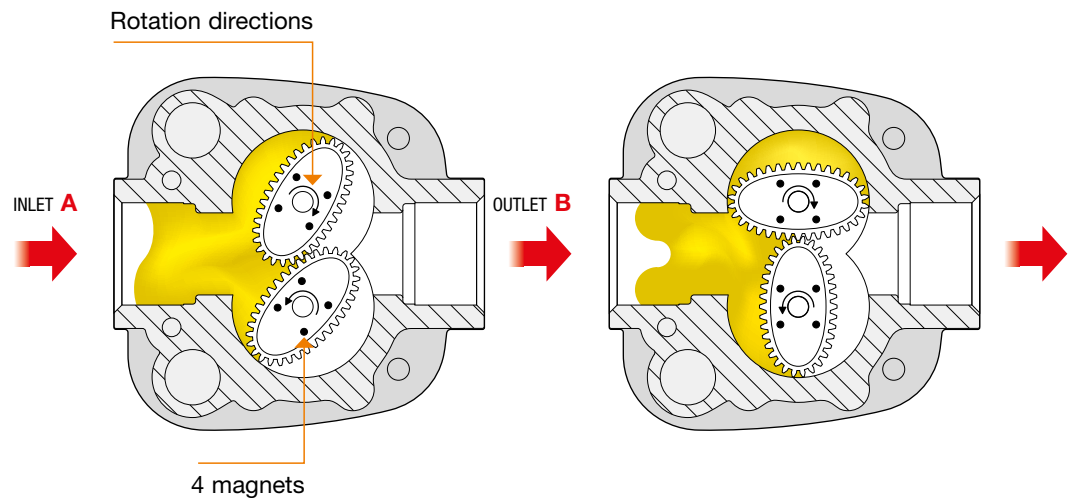
Suitable for use in indoor and outdoor environments, the aluminium body is rugged and resists contamination.

The sealed electronic board provides continuous reliability.

## LIFE TESTS

A sophisticated test room enables careful testing of the quality of new products before they are put on the market.

## MEASURING PRINCIPLE



When the fluid enters in the oval gear chamber through the inlet "A", the gears start to rotate.

The gears start to rotate because of the pressure of the fluid which comes out from the outlet "B".

Each rotation corresponds to a determinate quantity of fluid.



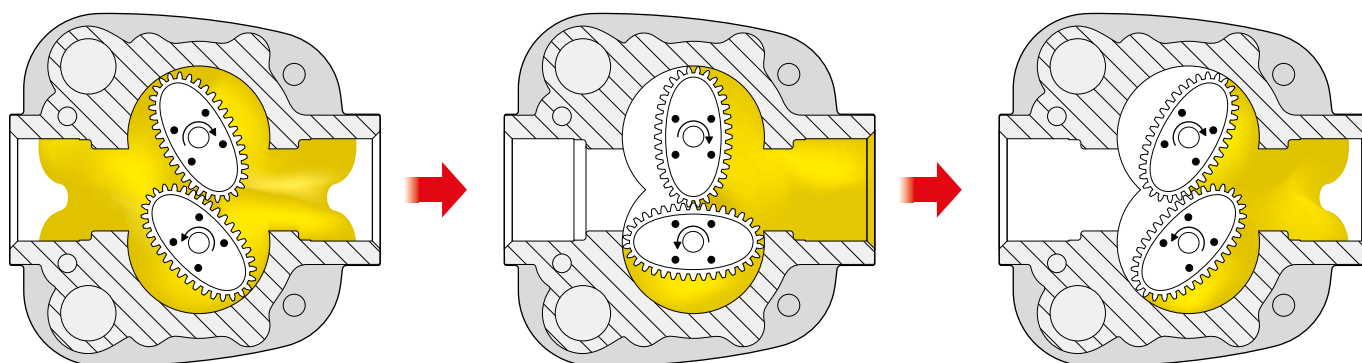
#### ASSEMBLY LINES

Dedicated equipment specially designed to facilitate assembly operations, at the same time allowing an effective and automatic control of quality.



#### STORAGE OF COMPONENTS

Our vertical stores enable quick and careful preparation of the components and spare parts intended for assembly and sale.



Correct dimensional tollerances between gears and chamber grant the reliability and the accuracy of the meter.

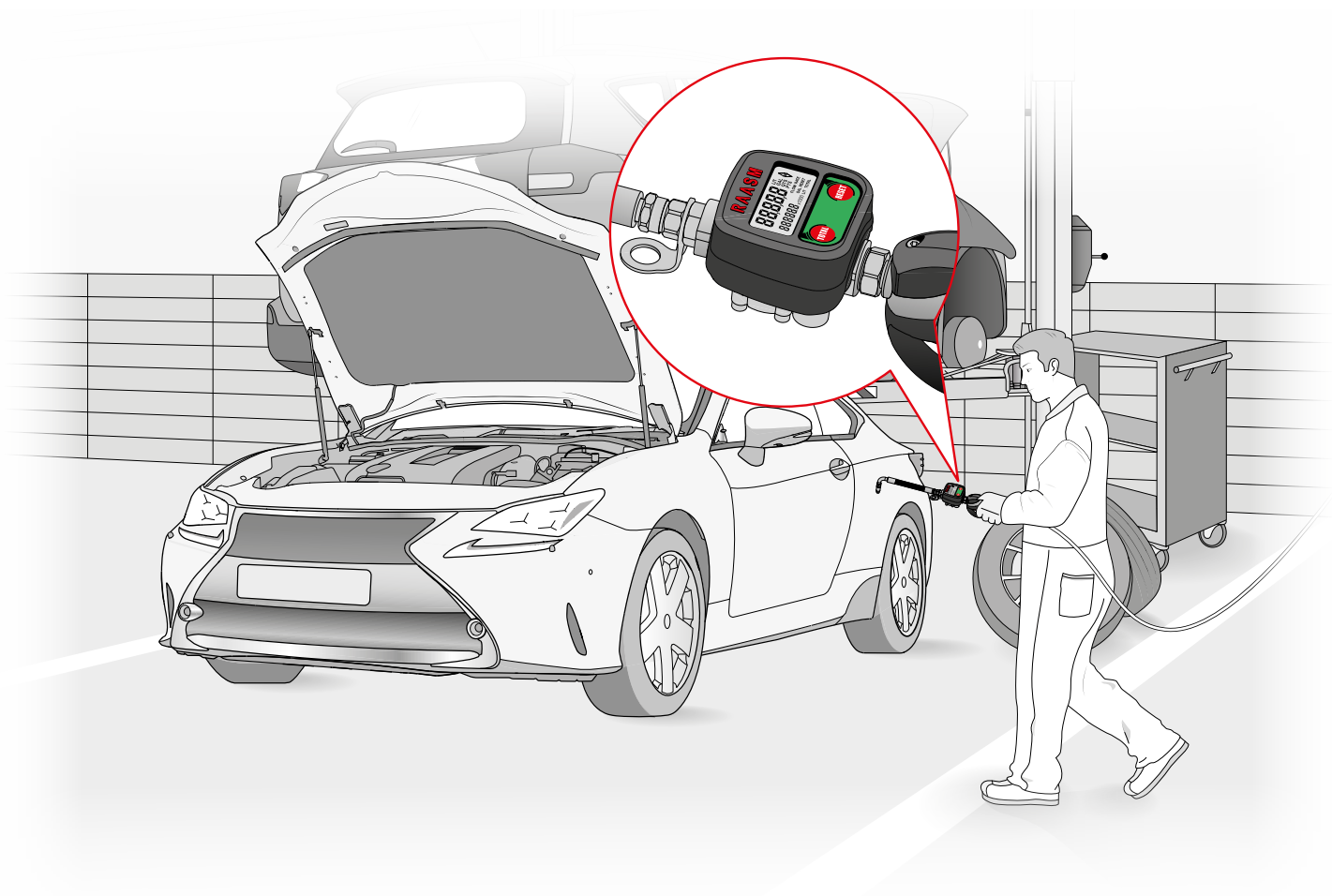
**4 magnets**, placed on one of the two gear, give the pulses to the microprocessor during every rotation.





# DIGITAL METERS







Battery low  
level indicator

5 digit  
resettable totalizer

6 digit non resettable totalizer  
and instant flow rate

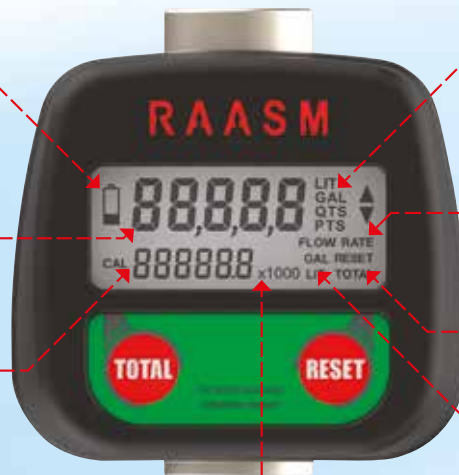
Total may be multiplied  
by x10 - x100 - x1000

Unit: Litre - Gallon -  
Pint - Quarter

FLOW RATE  
indication

TOTAL or RESET TOTAL

Total-Unit: Litre - Gallon



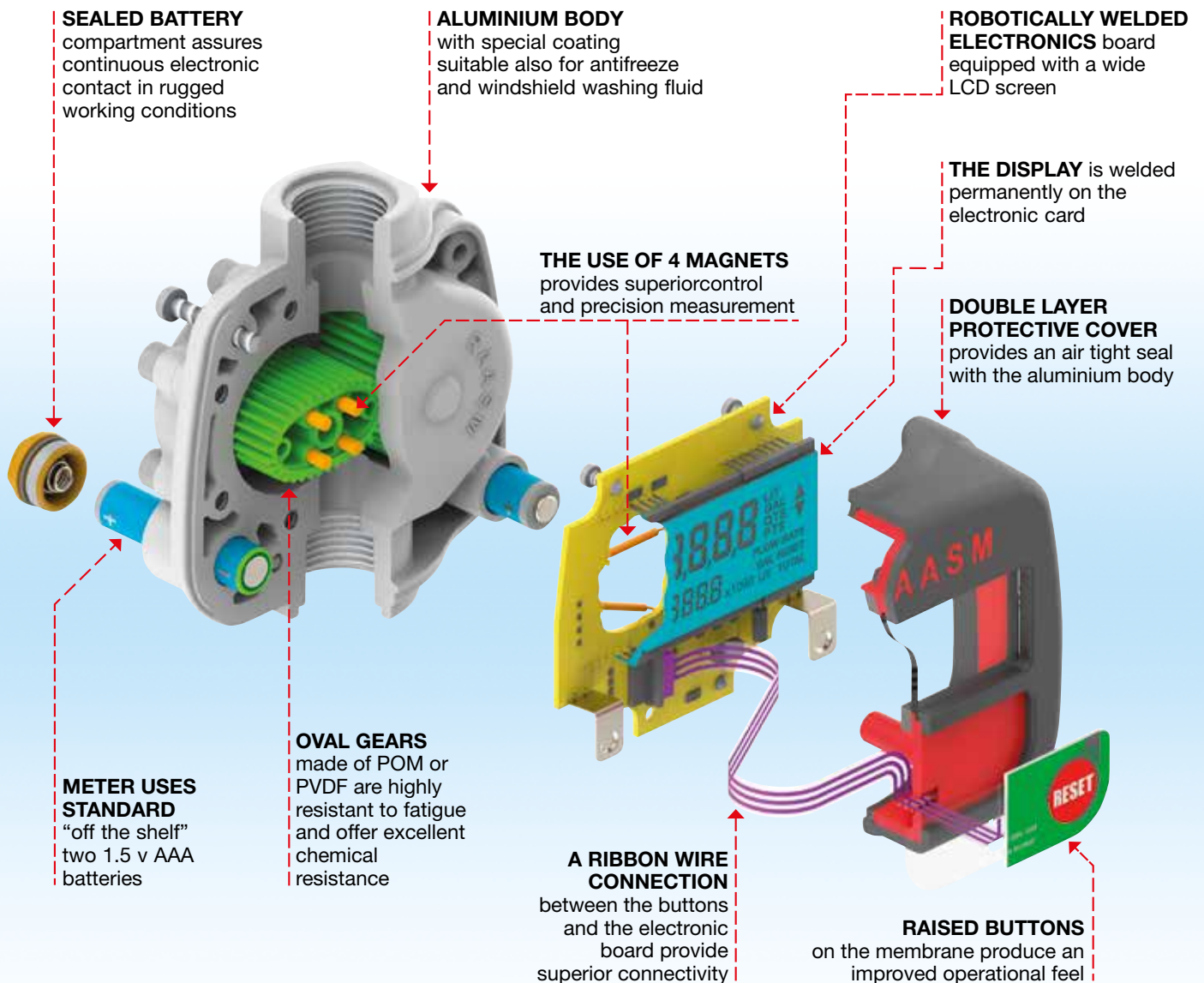
## PERFORMANCE

- Precision  $\pm 0,3\%$
- Repeatability  $\pm 0,2\%$
- Pressure loss  $< 0,5$  bars at max flow rate
- Temperature  $\Delta T$   $-10 \div +60$  °C ( $-14 \div +140$  °F)

The display shows simple and intuitive information to allow easy use.



# Technical features





# DIGITAL METER

**RAASM's digital meters,** besides gauging the liquid delivered, can show instant flow rates, provide a reset total and allow the setting of different units of measurement.

RAASM's digital meters are suitable for a wide variety of fluids, from low to medium to high viscosities, including lubricants, diesel fuel, antifreeze, window wash liquid and other fluids compatible with the material of the meter.

Flow rate **35 l/min**



Flow rate **70 l/min**



Flow rate **100 l/min**






⚠ Not type-approved for public use

**FOR OIL AND ALLIED PRODUCTS**

**FOR OIL AND ALLIED PRODUCTS**

**FOR OIL AND ALLIED PRODUCTS**

P/N	37780	37781	37782
Compatible fluids	Oil and allied products	Oil and allied products	Oil and allied products
Body's material	Aluminium	Aluminium	Aluminium
Gear's material	POM	POM	POM
Inlet	G 1/2" (f)	G 3/4" (f)	G 1" (f) + Flange
Outlet	G 1/2" (f)	G 3/4" (f)	G 1" (f) + Flange
Delivery	1 - 35 l/min	1 - 70 l/min	1 - 100 l/min
Max operating pressure	70 bar	70 bar	70 bar
Burst pressure	200 bar	200 bar	200 bar
Accuracy	± 0,3%	± 0,3%	± 0,3%
Net weight 	0,494 kg	0,618 kg	1,100 kg
Packing 	N° 1 - 0,002 m³	N° 1 - 0,002 m³	N° 1 - 0,005 m³
Gross weight 	0,85 kg	1 kg	1,35 kg
Dimensions (A - B - C)	94 - 92 - 57 mm	94 - 92 - 77 mm	112 - 92 - 98 mm

**Meters mounted on line** for continuous counting of the transported fluid



Flow rate **90 l/min**



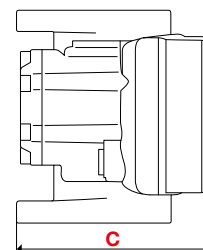
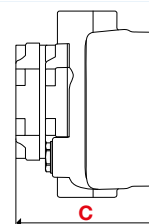
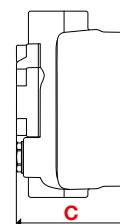
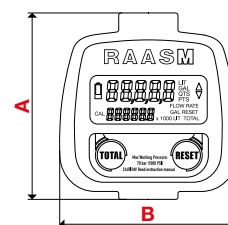
Flow rate **120 l/min**



Flow rate **40 l/min**



Overall dimensions (mm)



**FOR DIESEL FUEL**

**33710**

Diesel fuel

Aluminium

POM

G 3/4" (f)

G 3/4" (f)

1 - 90 l/min

70 bar

200 bar

± 0,3%

0,618 kg

N° 1 - 0,002 m<sup>3</sup>

0,83 kg

93 - 92 - 77 mm

**FOR DIESEL FUEL**

**33711**

Diesel fuel

Aluminium

POM

G 1" (f) + Flange

G 1" (f) + Flange

1 - 120 l/min

70 bar

200 bar

± 0,3%

0,912 kg

N° 1 - 0,005 m<sup>3</sup>

1,35 kg

112 - 92 - 98 mm

**FOR ANTIFREEZE AND WINDSHIELD WASHING LIQUID**

**37785**

Antifreeze and windshield washing liquid

Oxidized aluminium

PVDF

G 1/2" (f)

G 1/2" (f)

1 - 40 l/min

70 bar

200 bar

± 0,3%

0,63 kg

N° 1 - 0,002 m<sup>3</sup>

0,82 kg

94 - 92 - 57 mm



**Meter with oil valve and nozzle for counting multiple dispensing**








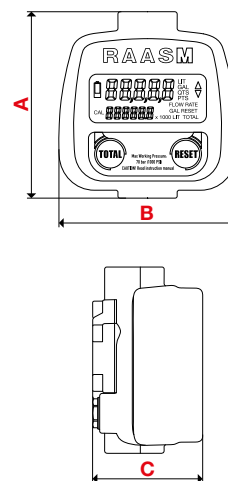
# MID DIGITAL METER

RAASM MID-certified digital meter is designed to measure oil and similar products in compliance with current European legislation. It let you view the total amount supplied - which cannot be reset - while the partial supplies can be displayed and saved. The instantaneous flow rate can be consulted on the display, as well as the number of dispensing operations saved to memory. It can also be mounted on guns already in use, provided the transparent display p/n 38119 and automatic nozzle p/n 38116 are also used.



	FOR OIL AND ALLIED PRODUCTS
P/N	37780M
Compatible fluids	Oil and allied products
Viscosity	90 ÷ 200 mPas
Body's material	Aluminium
Gear's material	POM
Inlet	G 1/2" (f)
Outlet	G 1/2" (f)
Delivery	1 ÷ 10 l/min
Minimum measurable quantity	0,5 l
Max operating pressure	1 : 20 bar
Burst pressure	200 bar
Precision class	0,5
MPE (maximum permissible error)	Max. value between: 0,01 l (minimum error) - 0,3% (supply > 2 l)
Working temperature	+5 °C ÷ +40 °C
Mechanical environment class	M2
Electromagnetic environment class	E2
Protection degree	IP65
Accuracy	± 0,3%
Net weight 	0,494 kg
Packing 	N° 1 - 0,002 m <sup>3</sup>
Gross weight 	0,65 kg
Dimensions (A - B - C)	94 - 92 - 57 mm

Overall dimensions (mm)



# Certification MID MI-005

Compliant with European Directive 2014/32/EU

## FEATURES REGULATIONS

STANDARDS, GUIDELINES AND OTHER REGULATIONS	OIML R 117-1- Wemec 7.2
MID IMPLEMENTATION DECREE	DECREE 19 May 2016, no. 84
METROLOGICAL MARKING OF DIGITAL METER LABEL	CE MXX 0476
EC TEST CERTIFICATE	MID 94-B-1
CHECKSUM CODE (unique digital meter software identifier)	C3.00



## WHAT'S THIS

The new RAASM MID-certified digital meter is the mandatory tool required for commercial transactions involving direct sale of lubricants for public use.

In compliance with the Measuring Instruments Directive 2014/32/EU, MID MI-005 certification focuses on the continuous, dynamic quantity measurement for liquids other than water.

RAASM offers solutions for the supply of oil and similar products suitable for every need, ensuring a high protection rating (IP65) and save data for 2000 dispensing operations.



## SEALED CLOSING

Lead sealed to guarantee that the instrument cannot be tampered with.

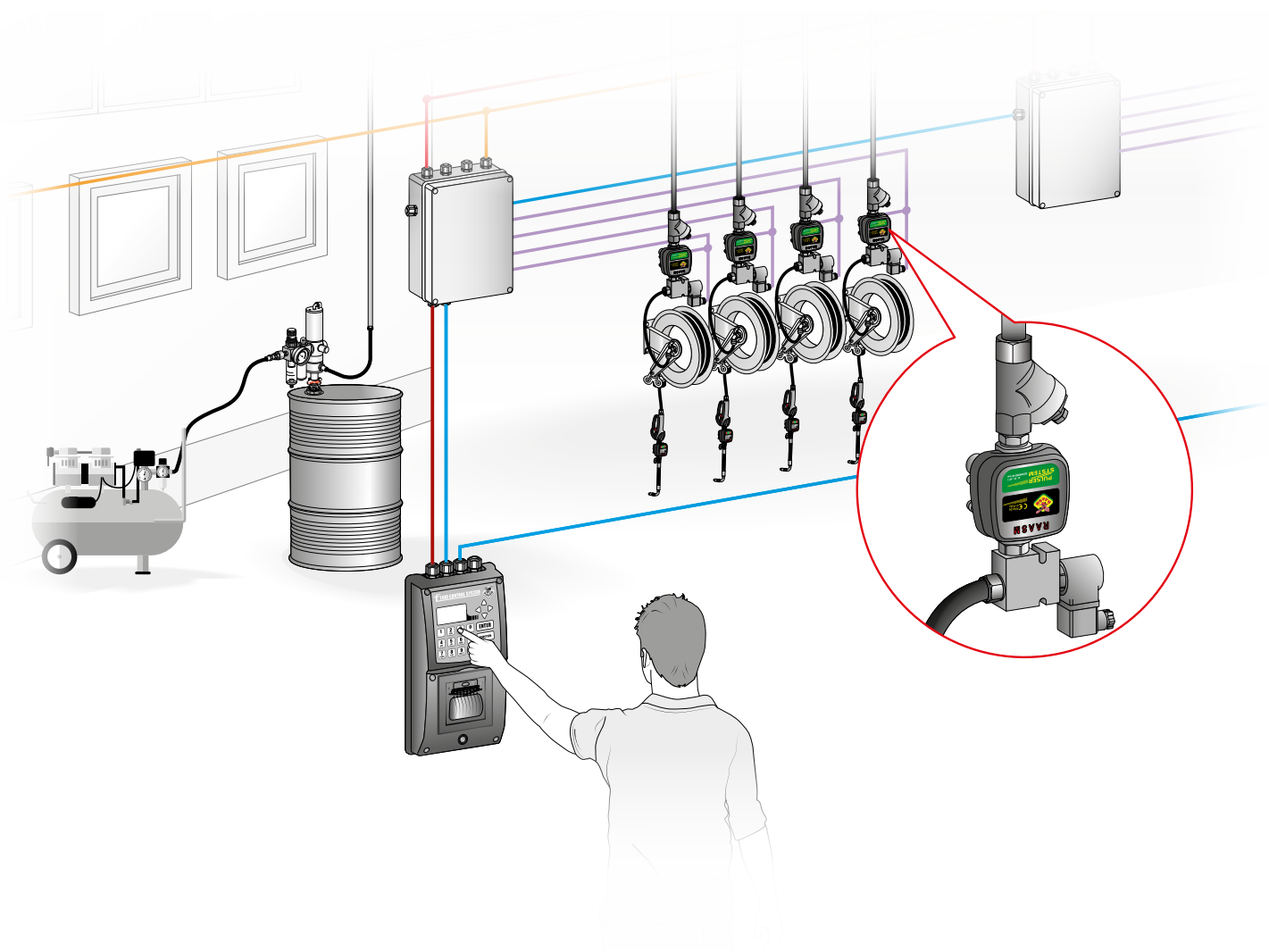




# DIGITAL METERS PULSER VERSION







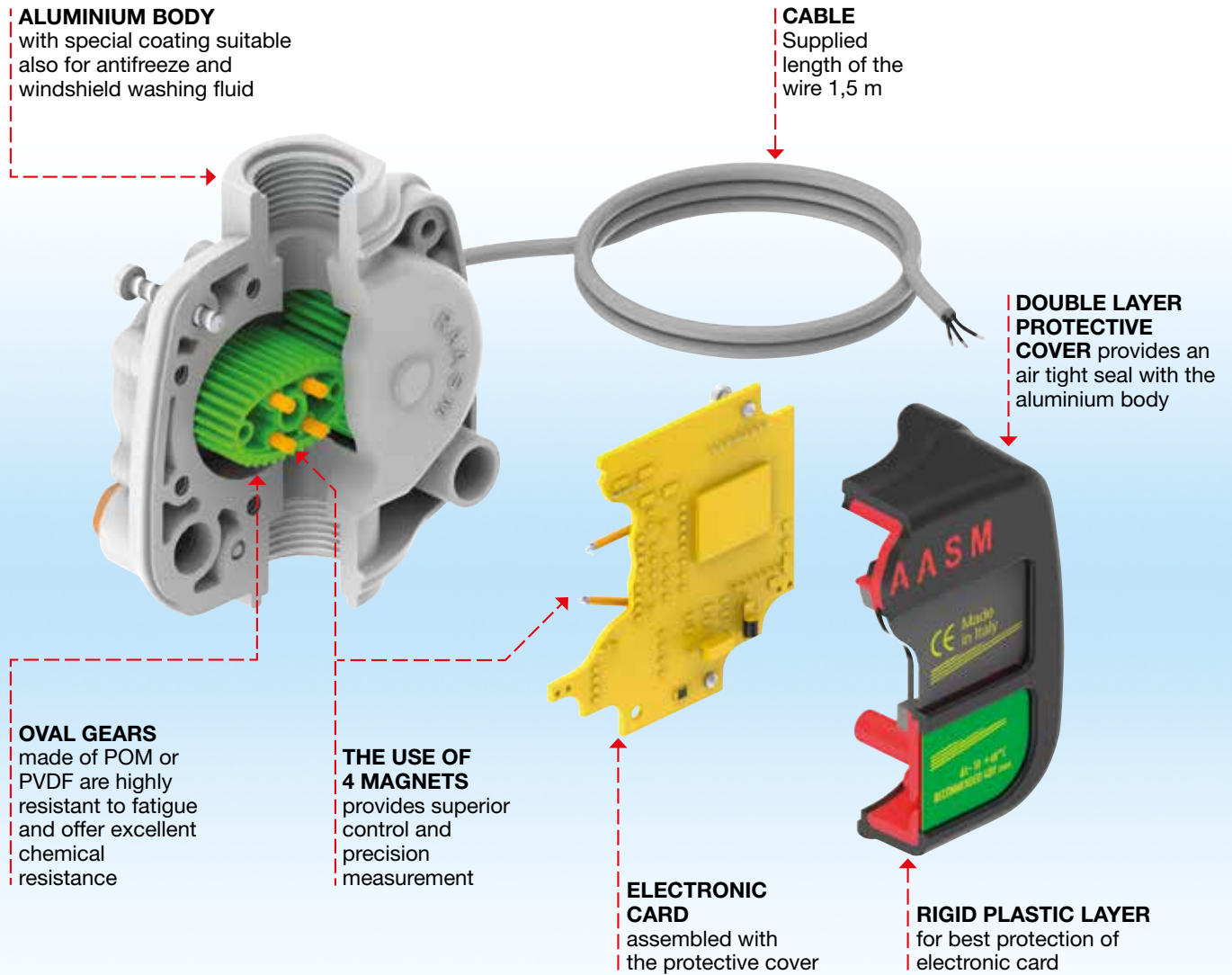


## PERFORMANCE

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- Precision  $\pm 0,3\%$
- Repeatability  $\pm 0,2\%$
- Voltage max 48 V DC
- Max amperage 0,2 A
- Temperature  $\Delta T -20 \div +70\text{ }^{\circ}\text{C}$  ( $-14 \div +158\text{ }^{\circ}\text{F}$ )
- Length of the wire 1,5 m
- Kind of signal: clean contact (Reed switch)
- 2 channels (in quadrature)
- not type-approved for public use

# Technical features





# DIGITAL METERS PULSER VERSION

The pulser meter is used to measure fluids and to transmit data. It is usually installed on centralized systems to control and manage delivery of fluids.

Flow rate **35 l/min**



Flow rate **70 l/min**



Flow rate **100 l/min**



⚠ Not type-approved for public use

**FOR OIL AND ALLIED PRODUCTS**

**FOR OIL AND ALLIED PRODUCTS**

**FOR OIL AND ALLIED PRODUCTS**

P/N	39610	39613	39615
Compatible fluids	Oil and allied products	Oil and allied products	Oil and allied products
Body's material	Aluminium	Aluminium	Aluminium
Gear's material	POM	POM	POM
Inlet	G 1/2" (f)	G 3/4" (f)	G 1" (f) + Flange
Outlet	G 1/2" (f)	G 3/4" (f)	G 1" (f) + Flange
Delivery	1 - 35 l/min	1 - 70 l/min	1 - 100 l/min
Max operating pressure	70 bar	70 bar	70 bar
Burst pressure	200 bar	200 bar	200 bar
Accuracy	± 0,3%	± 0,3%	± 0,3%
Pulser per liter	842	423	282
Max voltage	48 V DC Max	48 V DC Max	48 V DC Max
Max amperage	0,2 A	0,2 A	0,2 A
Max power	10 W	10 W	10 W
Net weight 	0,55 kg	0,66 kg	1,100 kg
Packing 	N° 1 - 0,002 m <sup>3</sup>	N° 1 - 0,002 m <sup>3</sup>	N° 1 - 0,003 m <sup>3</sup>
Gross weight 	0,65 kg	1 kg	1,75 kg
Dimensions (A - B - C)	94 - 92 - 57 mm	94 - 92 - 77 mm	112 - 92 - 98 mm

Pulser mounted on line for continuous counting of the transported fluid





Flow rate **90 l/min**



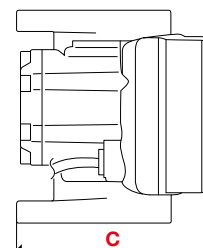
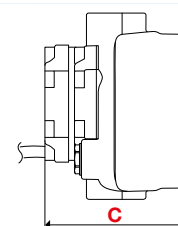
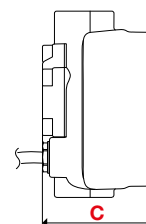
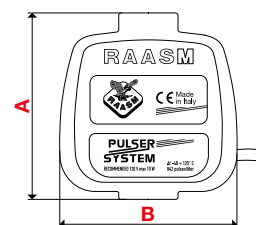
Flow rate **120 l/min**



Flow rate **40 l/min**



Overall dimensions (mm)



FOR DIESEL FUEL	FOR DIESEL FUEL	FOR ANTIFREEZE AND WINDSHIELD WASHING LIQUID
<b>39614</b>	<b>39616</b>	<b>39611</b>
Diesel fuel	Diesel fuel	Antifreeze and windshield washing liquid
Aluminium	Aluminium	Oxidized aluminium
POM	POM	PVDF
G 3/4" (f)	G 1" (f) + Flange	G 1/2" (f)
G 3/4" (f)	G 1" (f) + Flange	G 1/2" (f)
1 - 90 l/min	1 - 120 l/min	1 - 40 l/min
70 bar	70 bar	70 bar
200 bar	200 bar	200 bar
± 0,3%	± 0,3%	± 0,3%
412	275	806
48 V DC Max	48 V DC Max	48 V DC Max
0,2 A	0,2 A	0,2 A
10 W	10 W	10 W
0,66 kg	1,200 kg	0,55 kg
N° 1 - 0,002 m <sup>3</sup>	N° 1 - 0,003 m <sup>3</sup>	N° 1 - 0,002 m <sup>3</sup>
1 kg	1,40 kg	0,65 kg
93 - 92 - 77 mm	112 - 92 - 98 mm	94 - 92 - 57 mm



Single valve pulser meter connected with solenoid valve to be used with FCS system

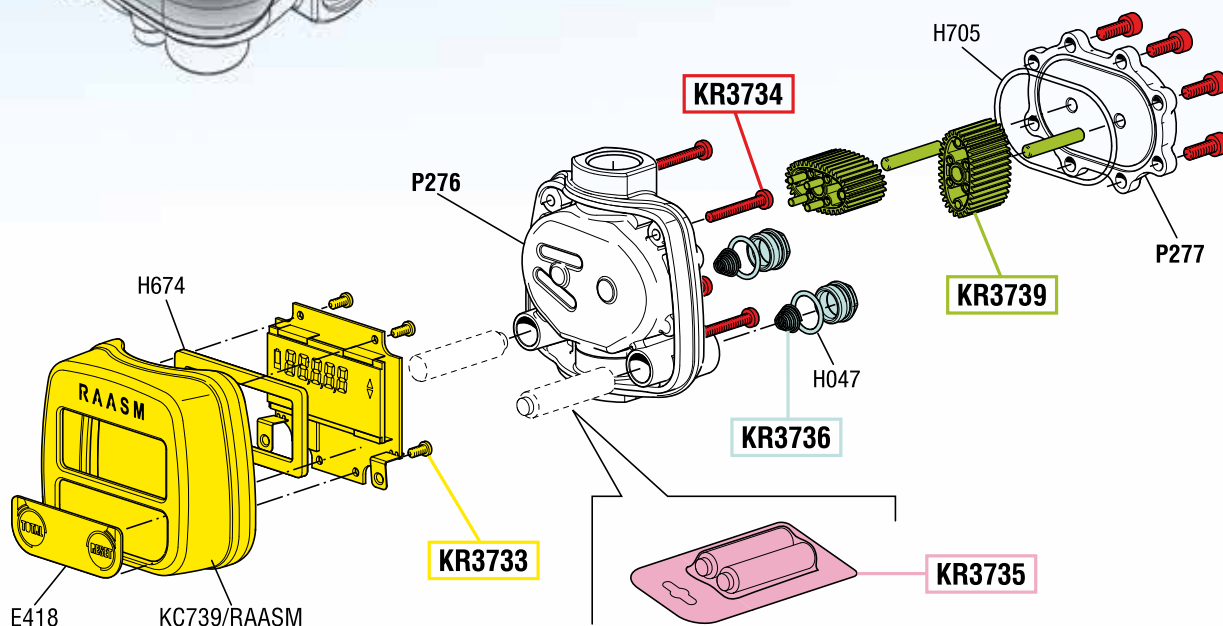




# ORIGINAL

## *spare parts*

Always choose RAASM  
original spare parts.



# GENERAL SALES CONDITIONS

## FOR FOREIGN MARKETS



The following general sales conditions regulate the sale of goods and services by the company RAASM S.p.A. for customers residing outside the territory of the Italian State.

### **Art. 1 GOODS DELIVERY TERMS**

The goods are delivered ex works RAASM S.p.A. The subsequent transport/shipment must occur by, in the name and at the expense of the purchasing customer, even by means of a carrier appointed and designated by the same. All risks arising from loading, subsequent custody and transport are borne entirely by the purchasing customer.

### **Art. 2 MINIMUM ORDERS**

Each order cannot be for less than € 1,500.00, net of fees, taxes, customs duties, discounts and rebates and any other charges not included in the price of the goods. If, at the option of RAASM S.p.A., orders for lower amounts are accepted, an extra charge of € 155,00 shall be applied for order management administrative expenses.

### **Art. 3 ACCESSORIES**

All the accessories given in the price list (plugs, oil bar taps, oil guns, grease guns, probes, protection caps, clutches, swivelling supports, etc.) are supplied exclusively for fitting to or combining with the items RAASM S.p.A. produces

### **Art. 4 COMPLAINTS**

Any defects immediately noticed after a brief inspection of the goods (damage, shortages or different product from that ordered) must be notified in writing to our company within 8 (eight) days of receipt the goods. Any defects in the product noticeable only during its use must be notified in writing to RAASM S.p.A. within 8 (eight) days of being detected.

Any returns of goods must be authorized in advance by RAASM S.p.A. and freight charges are at the customer's expenses.

### **Art. 5 DELIVERY TIMES/TERMS**

Delivery times and dates are only approximate and are subject to change. Any delays in delivery do not entitle the customer to cancel the order or claim compensation for damages caused by delay of delivery. Delivery times for urgent orders must be agreed directly with RAASM S.p.A. RAASM S.p.A. has the right not to carry out the order and/or totally or partially carry it out, without this giving rise to reimbursement or claims for compensation for damage.

### **Art. 6 PACKS AND PACKAGING**

Packaging costs are included in the price, except for special packing, which shall be charged at cost.

### **Art. 7 PRICES**

The current Price list cancels and replaces the previous price list. In the event of changes to our price list and/or individual items, the goods shall be forwarded at the price in force on the day of the order confirmation. The price list and/or the prices of individual items can be changed even without notice, according to the changes in market conditions or technical innovations/modifications made to the product. The prices are understood to be ex works RAASM S.p.A.

### **Art. 8 PAYMENTS**

Payments must be made exclusively to RAASM S.p.A. at the agreed conditions. Under no circumstances will deductions or roundings be accepted. In case of late payment with respect to the agreed conditions, RAASM S.p.A. reserves the right to charge interest at the current rate, effective from the day after that agreed for payment, plus any additional expenses. Discounts conditional on the payment term and already credited shall be recharged.

### **Art. 9 WARRANTY**

RAASM S.p.A. provides each product with the communication of particular instructions for the installation, use and maintenance requirements and the need to carry out possible checks on the product. All the technical information and data mentioned in the catalogue and in the price-list in force are not binding and can be changed without prior notice for the purpose of improving the quality of the products. All products manufactured by RAASM S.p.A. are guaranteed for a period of 5 (five) years from the date of delivery to the first user. The user must keep and show the sales invoice - or an equivalent document - together with the item's serial number in order to make a claim under the RAASM S.p.A. guarantee. The 5 (five) year guarantee does not apply to components which are subject to normal wear and tear (such as gaskets, diaphragms, O-rings, hoses, etc.), electronic components and items that are sold but not manufactured by RAASM S.p.A. (marked with a red asterisk in the current product catalogue) which are guaranteed for 1 (one) year from the date of delivery to the first user.

1 (one) year warranty is valid also for the following products:

- digital litre counters and FCS system;
- cable reels;
- electric, pneumatic or hydraulic motor supplied with our industrial hose reels S. 600 and 700.

Incorrect installation, use or maintenance of the product shall void the warranty. Upon written notice, the articles must be returned free to our Factory for checking and acceptance. In any case, the guarantee expires in the 10th year from the date of manufacture (indicated by the serial number), if the stated expiry takes place before the expiration terms indicated above (1 or 5 years from delivery to the first user).

The manufacturer declines any responsibility for possible inaccuracies contained in this catalogue, due to printing or transcription errors. The manufacturer reserves the right to make any changes or improvements of a functional, technical or aesthetic nature without prior notice.



# RAASM

## Art. 10 RESPONSIBILITY

RAASM S.p.A. is exempt from any responsibility and liability for accidents that may occur to persons and property, as a result of or during the use of the equipment, due to or depending on the same whenever the products have been damaged during transport, tampered with or modified, or improperly used, or stored, installed, protected and preserved without complying with the instructions of RAASM S.p.A. as given in the installation, use and maintenance instruction manuals for each product. RAASM S.p.A. is liable for the value for the supplied product and cannot be held responsible in any way for other possible costs or additional costs that the customer may bear.

## Art. 11 CONFIDENTIALITY

Information not in the public domain that is exchanged in the execution of the contract is subject to the obligation of confidentiality, secrecy and security; said information is covered as an industrial secret and is of a confidential and reserved nature and may not be disseminated to third parties; its use is permitted exclusively and strictly to execute the supply contract.

## Art. 12 INTELLECTUAL PROPERTY RIGHTS

The RAASM trademark, and likewise the name RAASM, RAASM S.p.A., the logo and the other distinctive signs are internationally registered trademarks, and RAASM S.p.A. does not authorise their use and application under any circumstances. Without prior written consent from RAASM S.p.A., the content of catalogues, price lists, instruction manuals and similar, including content on the website may not be reproduced, either entirely or partially, nor may it be transferred by electronic or traditional means, nor may it be modified or utilised by any means and for any purpose. All rights are held by RAASM S.p.A. The customer acknowledges that RAASM S.p.A. holds exclusive ownership of all the parts, images, photographs and signs not in common usage, the content in the catalogues, price lists, instruction manuals and similar and/or present on the website [www.raasm.com](http://www.raasm.com) and/or other channels and/or social networks used by RAASM S.p.A. for their informational and marketing campaigns pursuant to Copyright Law and the Industrial Property Code.

## Art. 13 INFORMATION ON THE PROCESSING OF DATA PURSUANT TO ITALIAN LEGISLATIVE DECREE 196/2003

In accordance with article 13 of Italian Legislative Decree 196/2003 - Personal Data Protection Code - you are hereby advised that the processing of the personal data, provided with the purchase of goods or services and/or the supply of goods or services is solely for the purposes of carrying out the contract-based obligations and to comply with the specific requests from customers/ suppliers, as well as adhering to legislative obligations, in particular accounting and tax obligations or to respect orders issued by public authorities or to exercise a right in court. The data shall also be used for commercial statistics for corporate use and to obtain commercial information on our products and services if expressly authorised by the applicant. The processing of data shall be done using hard-copy and computerised procedures, in the manner and within the limits necessary to achieve the aforementioned purposes. Data may be communicated and processed by other companies in the Group for the same specified purposes, and may be made known to employees of our company, consultants and other suppliers, always and exclusively within the limits of the aforementioned purposes. The provision of data is mandatory for the correct execution of the contract and pre-contract based obligations, and failure to do so could result in it being impossible to fully comply with contractual obligations, and make it impossible to provide updates on the new products and services offered by our company. Data shall be processed for the duration of the contract relationship in place and subsequently to fulfil any legal formalities.

## Art. 14 RIGHTS OF DATA SUBJECTS

The information is aimed at defining the limits and methods for the processing of data, based on which individual customers and/or suppliers may freely authorise the collection and subsequent use of data. Data subjects are entitled to the rights pursuant to article 7 of the aforementioned Code and in particular, the right to access their personal data, ask for the amendment, update and cancellation thereof, if incomplete, incorrect or collected in violation of the law, and may object to the processing for legitimate reasons, addressing requests in this regard to RAASM S.p.A. Pursuant to the same article the data subject also has the right to request the complete and updated list of the Data Supervisors, and to ask for the cancellation, transformation into anonymous form or blocking of data processed in violation of the law, and to oppose in any case, for legitimate reasons, the processing thereof.

To exercise these rights, and in the case of problems or any requests for clarification regarding what has been explained herein, kindly address these to RAASM S.p.A. - Via Marangoni, 33, Cassola (VI) - Italy or to the following email address: [info@raasm.com](mailto:info@raasm.com).

## Art. 15 DATA CONTROLLER

The Data Controller is RAASM S.p.A. with registered office at Via Marangoni 33, Cassola (VI) – Italy, and this is where the data processing shall take place.

## Art. 16 COMPETENT LAW COURT

Any disputes shall be settled by the Law Court of Vicenza, Italy.

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Lined area for notes, consisting of multiple horizontal lines.



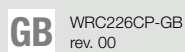


Company with quality,  
environment and safety system  
according to ISO 9001:2015,  
ISO 14001:2015 and  
ISO 45001:2018 standards

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