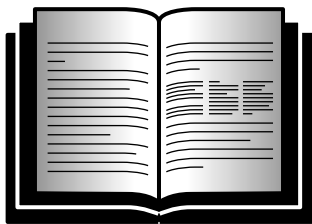


**i**
**CE EAC UK  
CA**
**s. 560****s. 540  
s. 550****s. 530  
s. 520****s. 430  
s. 420  
s. 436****s. 390  
s. 380****(IT) AVVOLGITUBO**

Istruzione originale

**(GB) HOSE REELS**

Translation from Italian

**(FR) ENROULEURS**

Traduction de l'italien

**(DE) AUFROLLER**

Übersetzung aus dem Italienischen

**(ES) ENROLLADORES**

Traducción del italiano

**(PT) ROLDANAS**

Tradução do italiano

**(NL) SLANGHASPELS**

Vertaling uit het Italiaans

**(DK) KABELTROMLER**

Oversættelse fra italiensk

**(NO) SLANGEVINDER**

Oversættelse fra italiensk

**(SE) SLANGUPPRULLARE**

Översättning från italienska

**(FI) LETKUNKELAUSLAITTEET**

Käännös italian kielestä

**(RU) РАЗДАТОЧНАЯ КАТУШКА ДЛЯ ШЛАНГА**

Перевод с итальянского

**s. 330****s. 290****s. 440****s. 450**





Thank you for choosing a RAASM product.

Scan the QRcode to download the digital version of this manual.

**⚠ READ THIS MANUAL THOROUGHLY BEFORE USING THE EQUIPMENT.**

**It is the responsibility of the dealer (or exporter) to ensure that this user manual is translated into the language of the country where the product is purchased.**

## INDEX


<b>RELATED MANUALS</b> .....	3	INCREASING SPRING PRELOAD.....	30
<b>GENERAL INSTRUCTIONS AND INFORMATION FOR THE RECEIVER</b> .....	4	DECREASING SPRING PRELOAD .....	31
<b>INTRODUCTION</b> .....	5	HOSE REMOVAL ÷ HOSE REPLACEMENT.....	32
<b>INTENDED USE</b> .....	5	EARTHING.....	33
LIMITATIONS OF USE .....	5	PRESSURE-RELIEF VALVE .....	33
OPERATING PRINCIPLE.....	6	FILTER UPSTREAM.....	34
<b>PRODUCT ID</b> .....	6	<b>START-UP</b> .....	34
DESCRIPTION OF COMPONENTS .....	6	<b>INSTRUCTIONS FOR USE</b> .....	34
TECHNICAL CHARACTERISTICS AND MODELS.....	7	<b>MAINTENANCE AND CHECKS</b> .....	35
ACCESSORIES .....	8	<b>CLEANING</b> .....	35
<b>MEANING OF THE ATEX MARKING</b> .....	9	<b>TROUBLESHOOTING</b> .....	36
<b>SAFETY WARNINGS</b> .....	10	<b>DISPOSAL</b> .....	36
<b>IDENTIFICATION OF WARNINGS</b> .....	10		
<b>RESIDUAL RISKS</b> .....	12		
<b>STORAGE</b> .....	14		
<b>TRANSPORT AND MOVEMENT</b> .....	14		
<b>UNPACKING</b> .....	15		
<b>OVERALL DIMENSIONS</b> .....	16		
<b>INSTALLATION</b> .....	18		
WALL MOUNTING.....	19		
INSTALLATION OF ENCLOSED MODELS.....	20		
BRACKET APPLICATION .....	20		
WALL INSTALLATION OF ENCLOSED HOSE REEL .....	20		
WALL INSTALLATION OF ADJUSTABLE HOSE REELS.....	21		
WALL INSTALLATION OF OPEN ADJUSTABLE HOSE REEL s. 380, 420, 520, 550.....	22		
WALL INSTALLATION OF ENCLOSED ADJUSTABLE HOSE REEL s. 440 .....	23		
HOSE REELS SUPPLIED WITHOUT HOSE.....	23		
HOSE MOUNTING ON OPEN HOSE REELS s. 290, 330, 390	24		
HOSE MOUNTING ON OPEN HOSE REELS s. 430, 530, 540, 560.....	26		
HOSE INSTALLATION ON ENCLOSED REELS SUPPLIED WITHOUT HOSE .....	28		
<b>SPRING PRELOAD</b> .....	30		

## RELATED MANUALS

NUMBER	DESCRIPTION
V719	AUTOMATIC HOSE GUIDE
V722	REWINDING BRAKE
VR138	INSTRUCTIONS FOR TEMPLATE - REEL BRACKET

# GENERAL INSTRUCTIONS AND INFORMATION FOR THE RECEIVER

## Important safety instructions

 Read all the warnings and instructions given in this manual and in related manuals. Keep all instructions for future reference.

 **These instructions have been drawn up by the Manufacturer and are an integral part of the product.**

These instructions must be kept in a safe place, where staff and operators can stay conversant with and gain access to them, until such time as the equipment is decommissioned. They must be looked after with care, so as to avoid damage.

The pages and contents must not be removed, rewritten or in any case modified.

The operations described are intended for adequately trained and qualified operators.


The chapters that make up this manual contain the information that the manufacturer provides to ensure that the product meets the Essential Safety Requirements of the Machinery Directive (European Directive 2006/42/EC).

The instructions include important directions for safe installation, use and maintenance, as well as important warnings with regard to residual risks that remain even when all the precautions and measures described have been taken.

They are intended for all workers entrusted with transport, installation, commissioning, testing, training of personnel who will use the machine, maintenance, and with final decommissioning and demolition of the machine.

Disregard of these instructions will relieve the manufacturer of any liability in the event of breakdown and/or accidents to persons, property and animals or to the machine itself.

The employer is the party responsible for ensuring that all workers who will interact with the machine are made familiar with this document, and must make certain that the instructions are read, understood and applied.

 **Read these instructions carefully before carrying out any operation on the machine, making certain that the operating conditions and hazard situations to be avoided have been fully understood. Should there be any doubt as to their interpretation, contact the manufacturer.**

 **The instructions must always be readily accessible to workers entrusted with use, maintenance or any other operation carried out on the machine.**

The following prescriptions must also be respected.

Use only RAASM original replacement parts.

Do not modify any part of the machine — e.g. to adapt it for use with external devices and equipment — unless expressly authorized by the manufacturer.

Start up the machine only when positioned in an area completely free of external encumbrances that could be the cause of damage to persons or property.

Make sure to keep the workplace clear and clean.

Pay attention to all pictograms, symbols and warnings displayed on the machine.

 **Failure to comply with the following safety standards may result in injury to persons or damage to the hose reel and/or other equipment and/or property.**

The hose reel can be operated only after carefully reading the use and maintenance instructions.

The hose reel must only be used for its intended purpose.

Repairs and special maintenance work may only be carried out by specialised personnel.

It should be noted that frequently subjecting hoses to bends with small curvature radii could, in the long run, jeopardise the integrity of the hose itself, facilitating cracking.

When rewinding the hose, it must be accompanied as much as possible with two hands, in order not to subject it to shocks or abrasions that would compromise its integrity and also to avoid damage to persons and/or property.

Before commissioning the hose reel, check the earthing by visually inspecting the cable and the terminal and possibly measuring the resistance, in order to ensure protection against the risks deriving from the accumulation of electrostatic charges.

Do not use naked flames or carry out hot work near the hose reel. Do not expose the hose reel and the hose to heat sources; protect it from mechanical impacts possible in relation to the place of installation.

The electrical system and electrical equipment installed near the hose reel must comply with the current regulations in the country of use.

## INTRODUCTION

Hose reels are products designed to facilitate the use of manual activities involving the use of flexible hoses for various types of fluid by spring-loaded winding with automatic hose stop.

This range includes fixed and adjustable hose reels (with and without hose) available in painted steel, stainless steel AISI 304 - AISI 316, and with ABS drum:

20 bar/290 psi • 100 bar/1450 psi

150 bar/2175 psi • 200 bar/2900 psi

400 bar/5801 psi • 600 bar/8702 psi

Hose reels can be open or enclosed.

## INTENDED USE

Hose reels may only be used for professional use by operators who have been properly trained and instructed in their correct use.

Hose reels are devices designed to improve the winding/unwinding of hoses used for the transfer of a wide category of fluids.

**CAUTION! The hose reel may not be compatible if used in contact with certain types of fluids, follow the instructions in this manual - if not sure, contact RAASM Technical Service in advance.**

**CAUTION! The type of hose you wish to install must guarantee working pressure values greater than or equal to the value on the hose reel label.**

The hose reels are for manual use only; the hose is unwound by pulling the hose, the winding is done by accompanying the hose with two hands without ever releasing it before complete rewinding.

Depending on the model, the hose reels are intended to be used (see the item label or the field of use defined by the mnemonic code):

- In applications utilizing compressed air.
- For work with water.
- For work with oil.
- For work with grease.
- For work with diesel.
- For work with gas (see limitations of use).

Use of the equipment is permitted in standard environmental conditions (temperature range -20 °C - +40 °C, -4 °F-104 °F).

For installations in areas where compliance with the ATEX directive is required, the use of conductive or dissipative hoses is mandatory (resistance below 50 MΩ).

Only oils, greases and fluids that are compatible with the item's constituent materials and approved by the RAASM technical department may be used.

For assistance with the chemical compatibility of the fluid, obtain the safety data sheet and contact your dealer or RAASM's technical department ([technicaldept@raasm.com](mailto:technicaldept@raasm.com)).

## LIMITATIONS OF USE

Use by operators NOT adequately trained and instructed in the correct way to use it is prohibited.

The use of hose reels in environments where there is a risk of collision with moving vehicles and/or objects is prohibited.

The hose reels in this manual may not be put into operation without first connecting the inlet and outlet hoses.

The use of hose reels in corrosive environments is prohibited.

The hose reel is not intended to be subjected to the action of permanent and/or accidental structural loads.

It is forbidden to release the hose during winding. The hose must always be accompanied with two hands until it is completely rewound.

- The suction / delivery of fluids with temperatures at the hose reel inlet outside the prescribed limits is prohibited (see MEANING OF THE ATEX MARKING, page 9).
- Use with pressures outside the prescribed limits is prohibited (see TECHNICAL CHARACTERISTICS AND MODELS, page 7).
- It is forbidden to use the equipment in environments with oxygen concentrations above 21% vol.
- It is forbidden to use it as a portable device or carried by persons.
- Installation in the presence of indoor and/or outdoor explosive atmospheres, flammable gases classified as zones 0 (in compliance with directives 99/92/CEE - 2014/34/EU) is prohibited.
- Installation in the presence of indoor and/or outdoor explosive atmospheres, flammable dusts classified as zones 20 (in compliance with directives 99/92/CEE - 2014/34/EU) is prohibited.
- Underground installation in mines and in their surface systems, which could be exposed to the risk of firedamp and/or combustible dust (coal dust) being released, is prohibited.
- Installation in the presence of potentially explosive atmospheres of the hose reel equipped with the rewind brake or the automatic hose guide nozzle is prohibited.

In addition:

- Versions suitable for transporting flammable liquids ARE NOT suitable for liquids other than diesel.
- Versions suitable for transporting flammable gases ARE NOT suitable for gases other than manufactured or city gases, natu-

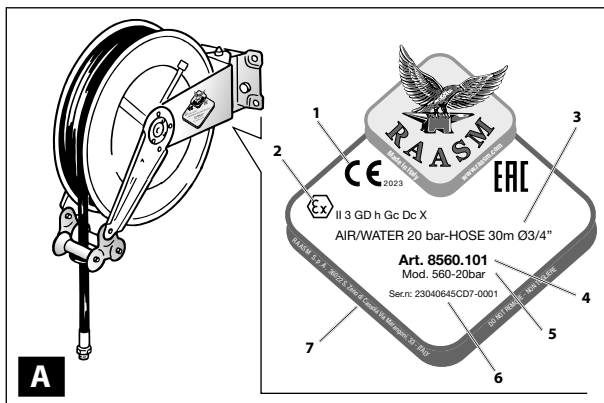
ral gas or methane, liquefied petroleum gas (LPG) (1°, 2°, 3°, category UNI EN 437).

Any use other than the intended context/use is excluded.

**CAUTION: the "X" in the ATEX marking indicates that the user must comply with the maximum temperatures of the transported fluids (see table in the explanation of the marking). The hose reel must also be protected against impact; the installer is responsible for providing the necessary guards. For more information, please contact the RAASM technical department ([technicaldept@raasm.com](mailto:technicaldept@raasm.com)).**

## OPERATING PRINCIPLE

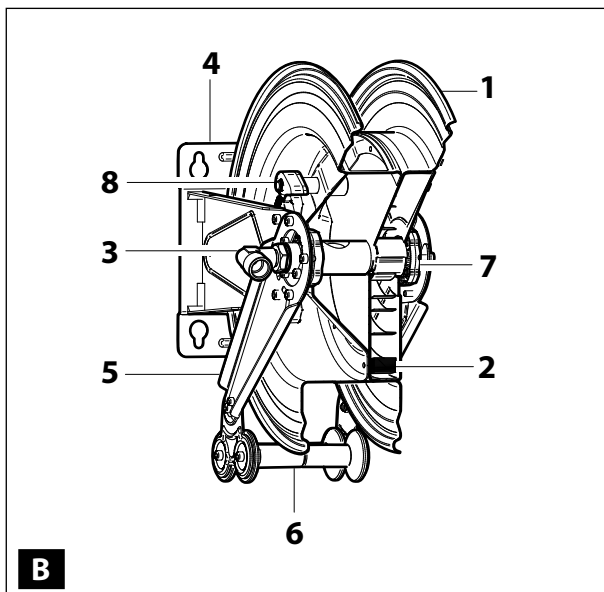
The energy stored by the spiral spring inside the winder is used to automatically rewind the hose. During the unwinding of the hose, the spring is charged and then releases its energy during rewinding. Even with the hose fully wound, the spring remains partially under load; the number of charge turns present in the spring with the hose fully wound is referred to as "preload". To prevent the inlet hose from being twisted, the fluid passes through a rotating element fitted with seals, called a "joint". The joint and the central pivot of the winder are the connecting elements between the inlet hose (which remains stationary) and the outlet hose (which is unwound and wound).



## PRODUCT ID

A label identifying the product is attached to the side of the hose reel, fig. A. Below is an explanation of the reported data:

1. CE marking with year of manufacturing.
2. ATEX marking.
3. Product description.
4. Product code (e.g. Art.8560.101).
5. Model (e.g. Mod.560-20bar).
6. Serial number (e.g. 23040645CD7-001).
7. Manufacturer's data.



## DESCRIPTION OF COMPONENTS

Hose reels mainly consist of the following components:

	DESCRIPTION	MATERIALS
1	Winding drum	- Steel - ABS (only for items 9xxx.xxx)
2	Rewind spring	Steel
3	Joint	- Steel - Brass (only for items xxx.1xx and xxx.6xx ; 20 bar air, water or diesel)
4	Base bracket	Steel
5	Roller arms	Steel
6	Hose guide rollers	Technopolymer
7	Bushings	- Technopolymer - Brass (only for models 56x)
8	Rack and stop tooth unit	Technopolymer

## TECHNICAL CHARACTERISTICS AND MODELS

The item code describes the main technical characteristics of the product: the series to which it belongs, the material of the structure, fluid passage and joint, application and operating pressure.

Below is an explanation of an example code: 8430.1000

### 8430.1000

**8** = Automatic spring-loaded hose reel with metal drum.

**9** = Automatic spring-loaded hose reel with ABS drum.

### 8430.1000

Identifies the size (dimension).

**23** = SERIES 290 FIXED with polyurethane hose.

**29** = SERIES 290 FIXED.

**32** = SERIES 330 FIXED with polyurethane hose.

**37** = SERIES 390 ADJUSTABLE with polyurethane hose.

**33** = SERIES 330 FIXED.

**38** = SERIES 390 ADJUSTABLE (called SERIES 380).

**39** = SERIES 390 FIXED.

**42** = SERIES 430 ADJUSTABLE (called SERIES 420).

**43** = SERIES 430 FIXED.

**44** = SERIES 440 ADJUSTABLE ENCLOSED.

**45** = SERIES 430 FIXED ENCLOSED.

**46** = SERIES 430 NARROW ENCLOSED.

**52** = SERIES 530 ADJUSTABLE (called SERIES 520).

**53** = SERIES 530 FIXED.

**54** = SERIES 540 FIXED.

**55** = SERIES 540 ADJUSTABLE (called SERIES 550).

**56** = SERIES 560 FIXED.

### 8430.1000

Indicates the material of the hose reel and the hose installed.

**0** = PAINTED steel - BLACK RUBBER hose.

**1** = PAINTED steel - BLUE RUBBER hose.

**2** = STAINLESS steel AISI 304 - BLACK RUBBER hose.

**3** = STAINLESS steel AISI 304 - BLUE RUBBER hose.

**4** = STAINLESS steel AISI 304 - STAIN RESISTANT hose fittings AISI 316.

**5** = Stainless steel 316 - STAIN RESISTANT hose fittings STAINLESS STEEL 316.

**6** = PAINTED steel with STAINLESS STEEL fluid passage AISI 304 - EPDM hose for AdBlue®.

**8** = PAINTED steel - POLYURETHANE hose.

**9** = PAINTED STEEL - POLYURETHANE hose with STAINLESS STEEL fluid passage AISI 304.

### 8430.1000

Indicates the type of fluid for which the hose reel is intended, the maximum operating pressure of the hose reel (without hose).

**CAUTION: for hose models, the maximum pressure may be limited by the nominal working pressure of the hose.**

**10** or **15** = Air-water - 20 bar / 290 psi; brass joint.

**20** or **25** = Water 130 °C / 266 °F - 100 bar / 1450 psi; stainless steel joint.

**30** = Water 130 °C / 266 °F - 200 bar / 2900 psi; stainless steel joint.

**35** = Water 130 °C / 266 °F - 400 bar / 5801 psi; stainless steel joint.

**40** or **45** = Oil - 150 bar / 2175 psi; galvanised steel joint for painted versions and stainless steel joint for stainless steel versions.

**50** = Grease - 400 bar / 5801 psi; galvanised steel joint for painted versions and stainless steel joint for stainless steel versions.

**60** = Diesel - 10 bar / 145 psi; brass joint.

**70** = Welding - 20 bar / 290 psi; brass joint.

**80** = Gas - 20 bar / 290 psi; brass joint.

### 8430.1000

Progressive identifying the length of the hose.


### 8430.1000



If present, it indicates a double-inlet hose reel.



TUBE SECTION	CAPACITY	TYPE
--------------	----------	------




 $\varnothing$ 12 mm $\varnothing$ 0.47"	max. 16 m max. 52'	290
 $\varnothing$ 14 mm $\varnothing$ 0.55"	max. 14 m max. 45'	
 $\varnothing$ 16 mm $\varnothing$ 0.63"	max. 10 m max. 35'	




 $\varnothing$ 12 mm $\varnothing$ 0.47"	max. 18 m max. 60'	330
 $\varnothing$ 14 mm $\varnothing$ 0.55"	max. 16 m max. 52'	
 $\varnothing$ 16 mm $\varnothing$ 0.63"	max. 12 m max. 40'	




 $\varnothing$ 12 mm $\varnothing$ 0.47"	max. 22 m max. 72'	380 390
 $\varnothing$ 14 mm $\varnothing$ 0.55"	max. 20 m max. 65'	
 $\varnothing$ 16 mm $\varnothing$ 0.63"	max. 18 m max. 60'	

 $\varnothing$ 17 mm $\varnothing$ 0.67"	max. 21 m max. 70'	450
 $\varnothing$ 19,5 mm $\varnothing$ 0.77"	max. 16 m max. 52'	440 430
 $\varnothing$ 22 mm $\varnothing$ 0.87"	max. 14 m max. 45'	420

 $\varnothing$ 22 mm $\varnothing$ 0.87"	max. 20 m max. 65'	436
 $\varnothing$ 28 mm $\varnothing$ 1.10"	max. 15 m max. 49'	

 $\varnothing$ 18,5 mm $\varnothing$ 0.73"	max. 28 m max. 92'	520 530
 $\varnothing$ 20 mm $\varnothing$ 0.79"	max. 26 m max. 85'	
 $\varnothing$ 22 mm $\varnothing$ 0.87"	max. 24 m max. 75'	

 $\varnothing$ 22 mm $\varnothing$ 0.87"	max. 30 m max. 100'	540 550
 $\varnothing$ 28 mm $\varnothing$ 1.10"	max. 22 m max. 72'	
 $\varnothing$ 34 mm $\varnothing$ 1.34"	max. 17 m max. 55'	

 $\varnothing$ 22 mm $\varnothing$ 0.87"	max. 60 m max. 200'	560
 $\varnothing$ 30 mm $\varnothing$ 1.10"	max. 40 m max. 130'	
 $\varnothing$ 35 mm $\varnothing$ 1.34"	max. 30 m max. 100'	

## ACCESSORIES

The accessories that can be installed on the hose reels are as follows:

- Rewinding brake for hose reel series S.430, S.530, S.540, S.560.

**CAUTION: the brake is not a component intended for installation in ATEX zones.**

- Automatic hose guide nozzle:

**CAUTION: the automatic hose guide nozzle is not a component intended for installation in ATEX zones.**

- Fixed support.

- Adjustable support.

**CAUTION: ensure that the hose reel does not collide with other elements during rotation.**

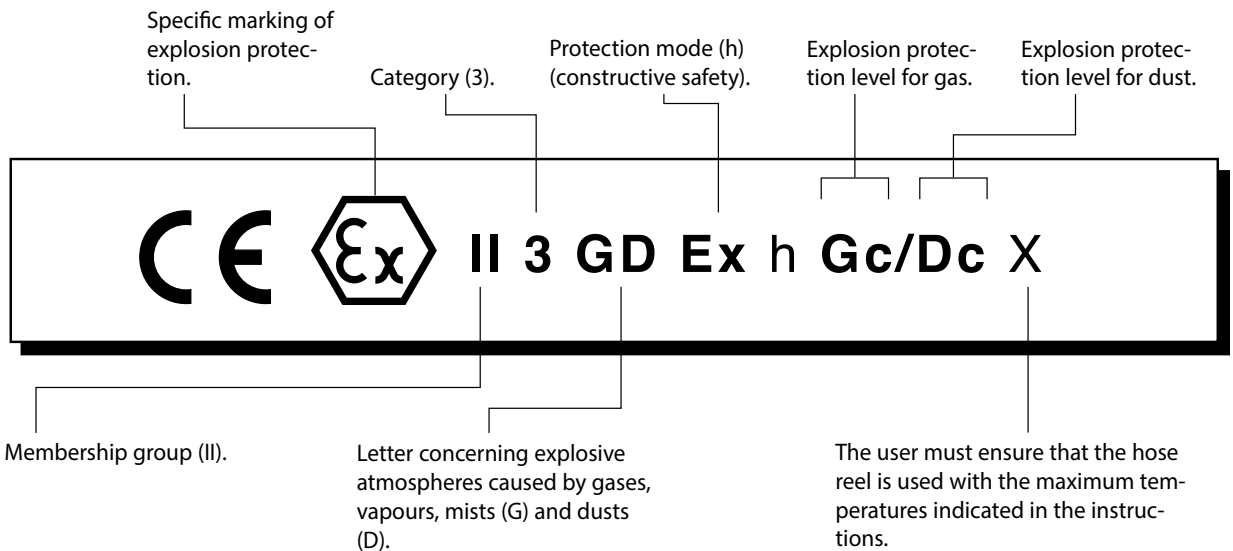
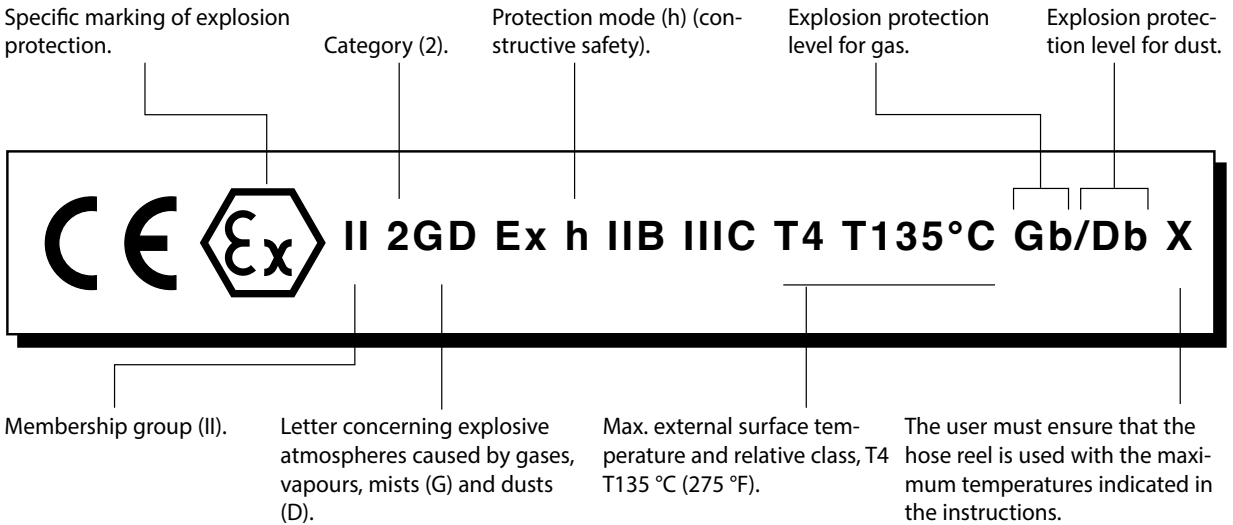
- Brackets for anchoring on HE beam.

For information on these accessories, please contact the RAASM technical department ([technicaldept@raasm.com](mailto:technicaldept@raasm.com)).



# MEANING OF THE ATEX MARKING

Max temperatures for several fluids	
Air	40 °C (104 °F)
Oil/antifreeze	80 °C (176 °F)
Grease	40 °C (104 °F)
Water	130 °C (266 °F)
Nitrogen, oxygen	40 °C (104 °F)
Combustible gases (methane, LPG, city gas)	40 °C (104 °F)
Combustible liquids (diesel)	40 °C (104 °F)


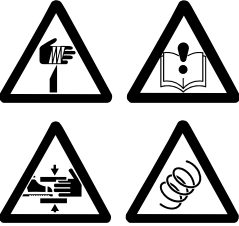









# SAFETY WARNINGS

## IDENTIFICATION OF WARNINGS

The following warnings refer to all operations involving transport, connection to earth, installation, commissioning, testing, training of machine operators, maintenance, utilization and final decommissioning and demolition of the equipment.

The exclamation mark is used to indicate warnings of a general nature, whilst the hazard triangle draws attention to specific procedures and/or risks. Wherever these symbols appear in this manual or as labels affixed to the machine, look up and check the relative notes on these pages.

 <b>IMPORTANT NOTICES</b>	
	<p><b>RISK OF INJURY DURING TRANSPORT, UNPACKING, DISPOSAL</b></p> <ul style="list-style-type: none"> <li>- Mishandling during transport can cause the packaging to fall, possibly resulting in injury to persons in the vicinity and/or damage to the item.</li> <li>- When opening the packaging, take care not to cut yourself using a cutter or similar sharp instruments.</li> <li>- Pay attention to the rewind spring when disposing of the product. The spring, if damaged or following an accidental fall, could release all stored energy causing injury to people or damaging objects in the vicinity.</li> </ul>
	<p><b>RISK OF INJURY FROM PRESSURE PIPES</b></p> <ul style="list-style-type: none"> <li>- Fluid and/or grease discharged under pressure from guns, nozzles, or due to leakage due to cracks in pipes or damage to components can cause damage, even serious, to the skin and/or other parts of the body.</li> <li>- Do not point the dispensing device at people and/or body parts, animals.</li> <li>- Never place hands over the outlet of a gun or nozzle, or in the way of other pressure/dispensing outlets.</li> <li>- Never attempt to reduce or interrupt spray by means of hands or other parts of the body, even gloves, etc..</li> <li>- At the end of dispensing, relieve the pressure from the equipment located upstream of the hose reel, and do the same before carrying out any work on the equipment.</li> <li>- Before putting the hose reel into operation, check that the delivery hoses are securely connected to their respective parts.</li> <li>- Before using the hose reel, always check all hoses and relevant fittings for signs of wear.</li> </ul>
	<p><b>RISK FROM MOVING PARTS</b></p> <p>Moving parts can crush, wound and possibly sever fingers and/or other body parts (e.g. feet).</p> <ul style="list-style-type: none"> <li>- Do not release the hose during unwinding or rewinding.</li> <li>- Never reach with the hands and/or other parts of the body into the areas indicated in this manual.</li> <li>- Do not tamper with the hose reel or operate without safety guards.</li> <li>- Pressurised components can start up without warning. Before carrying out any checks, handling, transport, maintenance, relieve the pressure upstream of the hose reel (e.g. air pump).</li> </ul>
	<p><b>BURN RISK</b></p> <p>Some parts of the hose reel have hot surfaces during fluid transit (130 °C / 266 °F max).</p> <ul style="list-style-type: none"> <li>- Do not touch hot parts without the use of gloves and suitable protective clothing to avoid the risk of burns and/or scalds.</li> </ul>
	<p><b>RISK FROM TOXIC VAPOURS AND FLUIDS</b></p> <p>Toxic vapours and fluids can cause serious harm if inhaled or ingested, or splashed/squirted onto the eyes, skin and/or other parts of the body.</p> <p>Before using any fluid product, always read the relative safety data sheet to ensure familiarity with the specific risks.</p> <p>Store hazardous fluids in suitable containers. When disposing of materials, ensure compliance with statutory regulations in the country of use.</p>

	<p><b>RISK OF FIRE AND EXPLOSION</b></p> <p>Follow these instructions to limit the risk of fires and explosions:</p> <ul style="list-style-type: none"> <li>- Do not put your hands and/or other body parts inside the areas marked in this manual.</li> <li>- Make certain the work environment is well ventilated.</li> <li>- Remove any items from the work area that could be a source of fire risk, such as cigarettes, torches, plastic sheets, etc.</li> <li>- Proceed with earthing of the hose reel, see EARTHING page 33.</li> <li>- Only dispense fluids within the limits of use.</li> <li>- Keep the work area clean and free of clutter.</li> <li>- Do not connect or disconnect electrical components, or operate switches, when there are fumes in the air.</li> <li>- Stop any delivery of fluid or grease immediately in the event of sparks or electric shocks occurring. Not dot use the machine again until the problem has been identified and remedied.</li> <li>- Keep a fire extinguisher near the work area, and in any event ensure compliance with current fire and general safety regulations in the country of use.</li> </ul>
	<p><b>RISK DERIVING FROM IMPROPER USE</b></p> <p>The use of equipment other than that specified in this manual can result in serious injury and even death. Improper use also has the effect of invalidating any form of guarantee and relieve the manufacturer of all liability.</p> <p>Do not operate the hose reel and the relevant accessories if tired, or under the influence of drugs and/or alcohol.</p> <p>Do not exceed the maximum operating pressure and/or permissible temperature range for the use of the equipment, as indicated in this manual.</p> <p>Do not leave the equipment unattended in the work area when pressurized.</p> <p>When not in use, relieve pressure from the equipment located upstream of the hose reel.</p> <p>Check the state of the equipment every time before use.</p> <p>Renew any damaged and/or worn parts immediately, using RAASM original replacements.</p> <p>Do not make any modifications to the hose reel. Any intervention must be approved in advance by the manufacturer. Modifications, if not approved, will result in the voiding of the warranty and any liability for the manufacturer, as well as possible damage to the equipment and risks to one's own health and the health of third parties.</p> <p>Do not allow children and/or animals near the work area.</p> <p>Abide by all current provisions concerning matters of safety.</p>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>When using the equipment, wear protective equipment to protect against chemical hazards (including: goggles, protective gloves, safety shoes).</p>

## RESIDUAL RISKS



### 1. Risk of impact caused by uncontrolled rewinding of the hose.

When unwinding and rewinding the hose, make sure that no persons are in the vicinity of the hose.

When unwinding and winding the hose, hold the hose with two hands.

Accidental release of the hose could cause it to rewind uncontrollably, endangering persons and objects in its path.

**CAUTION:** water hammer generated by closing the fluid passage too quickly could cause the drum to rotate and disengage from its stop position.

Always operate the shut-off valves slowly.

Slowly release the dispensing gun lever.



### 2. Risks of impact, entanglement, crushing of the hose and fixed parts during winding operations.

To accompany the hose during winding, ALWAYS place your hands underneath the hose stop buffer [X], fig. 1.

NEVER put your hands between the hose stop buffer and the hose guide nozzle. Crushing HAZARD due to stop of the hose stop on the hose guide nozzle during the winding phase, fig. 2.

### 3. Risk due to high pressure.



A rupture in the hose can cause high pressure/temperature fluids to leak out. Before each use, check that the equipment is in good condition, handle hoses with suitable protective gloves.

Pay attention near the points of connection with one or more hoses.

During installation, appraise the use of suitable hose retaining devices, depending on the pressures circulating in the pipes:

- To avoid possible 'whiplash' due to high pressure.
- To prevent possible hose ejection from the hose reel fittings.

### 4. Risk of burns.

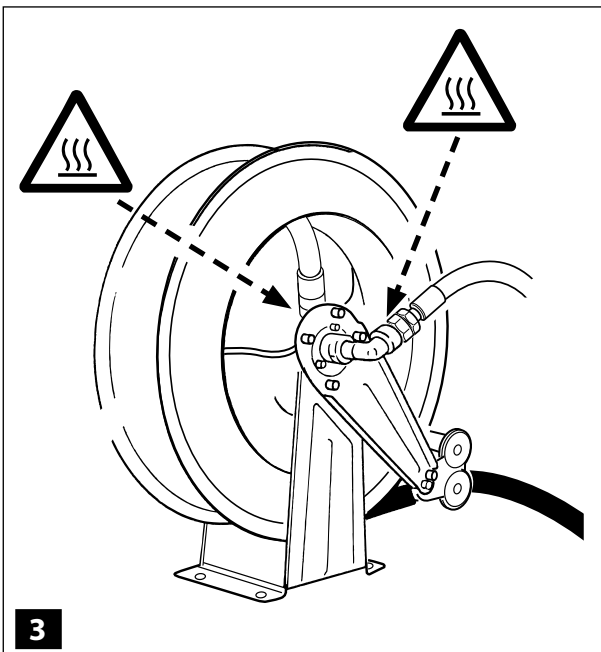
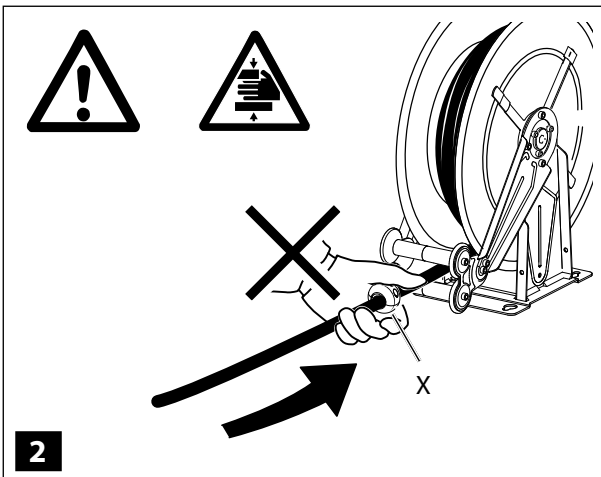
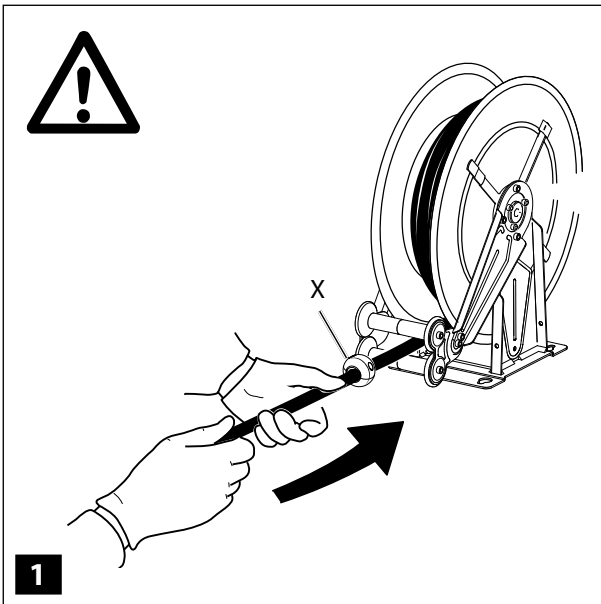


Risk of burns from non-insulated hot surfaces such as the joint and internal connections between the hose reel and the hose, fig. 3. Do not touch such parts without first putting on protective gloves suitable for withstanding temperatures of up to 130 °C / 266 °F.

**Note:** the risk may also extend to the hoses used at the inlet and outlet of the hose reel. In the case of hose reels supplied without hose, it is the customer's responsibility to check that these are suitable for their intended use and to provide any protective devices during their use.

The risk refers to the hose reel models intended for use with HOT WATER.

### 5. Residual risks for ATEX environments.





CAUTION - The phenomena of static electricity on people can cause ignition hazards. People isolated from the earth can easily absorb and retain an electrostatic charge. Insulation from the earth may be due to the fact that the floor or the soles of their shoes are made of non-conductive material. There are many mechanisms by which a person can become electrostatically charged: walking on a floor, standing up, removing clothes, handling plastic, pouring and picking up electrostatically charged material in a container, being very close to highly charged objects.

If an electrostatically charged person touches a conductive object (e.g. a handle, a handrail, a metal container), a spark may occur at the point of contact. Such sparks, which the person hardly sees, hears or even feels, can cause a trigger. Sparks originating from people are capable of igniting gases, vapours and even some of the most sensitive dusts.

People working in places where flammable atmospheres may be present may become electrostatically charged. This can be prevented by using a conductive or dissipative floor and by ensuring that people wear dissipative footwear.



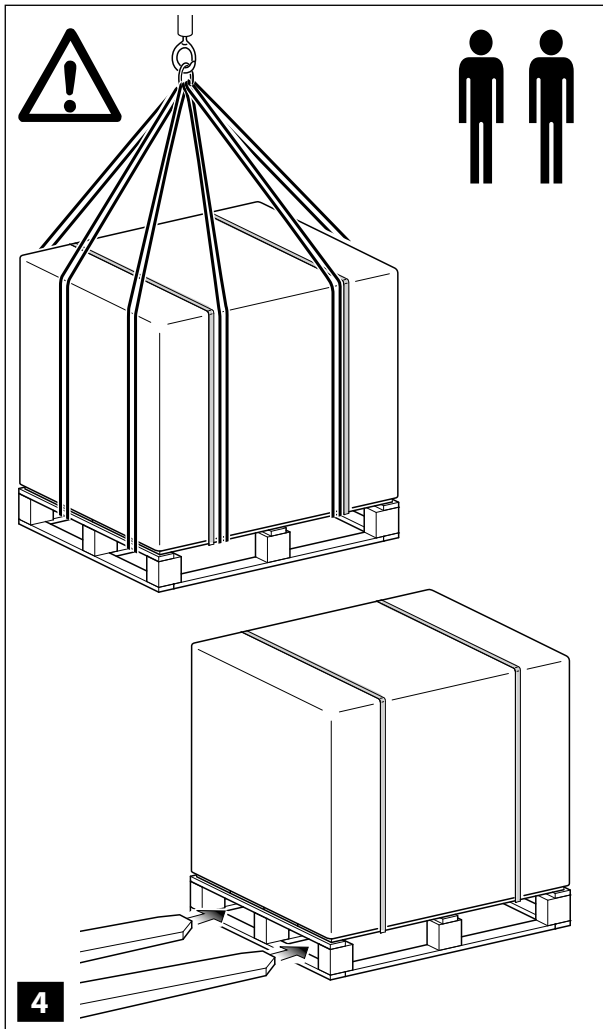
CAUTION - Rapid changes in pressure can cause danger of ignition, always act slowly on shut-off valves.

CAUTION - Cavitation operation can ignite flammable liquid vapours. It is forbidden to use the equipment for such operations with flammable liquids.

CAUTION - Careless handling of conductive objects can lead to an ignition hazard. Connect all conductive objects to earth.

CAUTION - Do not start a visibly damaged hose reel. Unplanned friction could trigger the explosion of hazardous fluid vapours.

CAUTION - Use of the hose reel in particularly aggressive environments (corrosive chemicals, in highly saline areas such as port reception facilities or coastal installations) may cause surface alteration and be a source of danger. The use of the hose reel in these environments is prohibited.



## STORAGE

The storage location must be a sheltered and closed environment with a temperature of not less than -5 °C / 23 °F, not higher than +40 °C / 104 °F and with a humidity rate not exceeding 80%.

The packaging must also not be subjected to shocks, vibrations, and overlying loads.

## TRANSPORT AND MOVEMENT



Transport must take place by means of a pallet truck, fork-lift or similar means, specially designed for handling goods on pallets, fig. 4.

During transport, ensure that the packaging cannot move, tilt or fall as a result of shocks.

Once removed from the packaging, it is the responsibility of the personnel (customer) to ensure safety during lifting and transport operations by means of **suitability and conformity of the handling equipment and accessories.**

### **PAY ATTENTION to the mass of the hose reel.**

SERIES	WEIGHT without hose	MAX WEIGHT with hose*
290	10 kg / 22.04 lbs	12 kg / 26.45 lbs
330	11,2 kg / 24.69 lbs	13,5 kg / 29.76 lbs
390	14 kg / 30.86 lbs	19 kg / 41.88 lbs
430	16,5 kg / 36.37 lbs	24 kg / 52.91 lbs
530	22,5 kg / 49.60 lbs	33 kg / 72.75 lbs
540	34 kg / 74.95 lbs	48 kg / 105.82 lbs
560	48 kg / 105.82 lbs	65 kg / 143.30 lbs

\* Weight considering the longest installable hose.

**Lifting and transporting of items weighing more than 20 kg / 44.09 lbs must be carried out by specialised personnel and at least two persons.**

**IT IS FORBIDDEN for hose reels weighing more than 20 kg / 44.09 lbs BE MOVED BY HAND by one PERSON.**

**Special care and caution must be exercised during such operations.**

Should it become necessary to transport the hose reel after having removed it from its packaging, if it cannot be put back in, take all measures and precautions to ensure that the product is securely fastened inside the transport vehicle.

## UNPACKING



The hose reel is supplied in standard packaging consisting of:

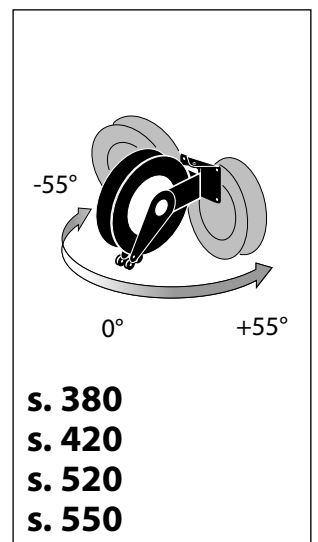
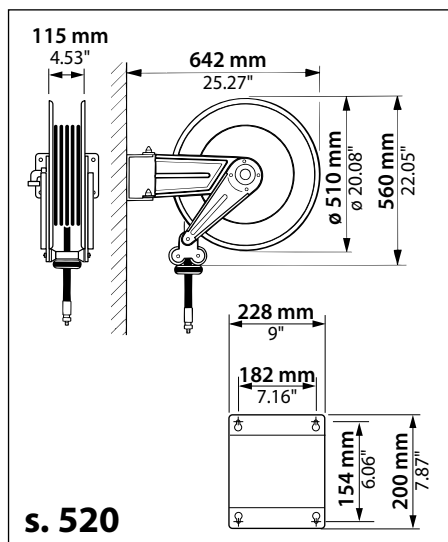
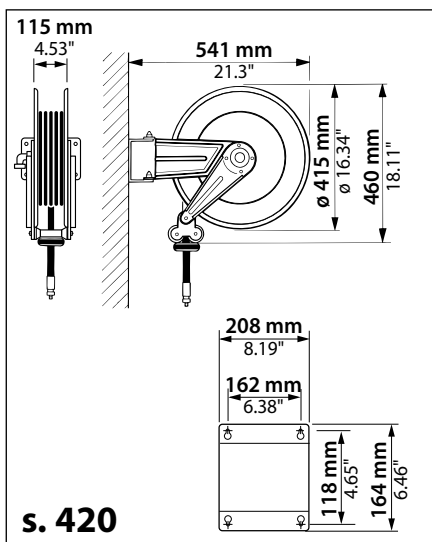
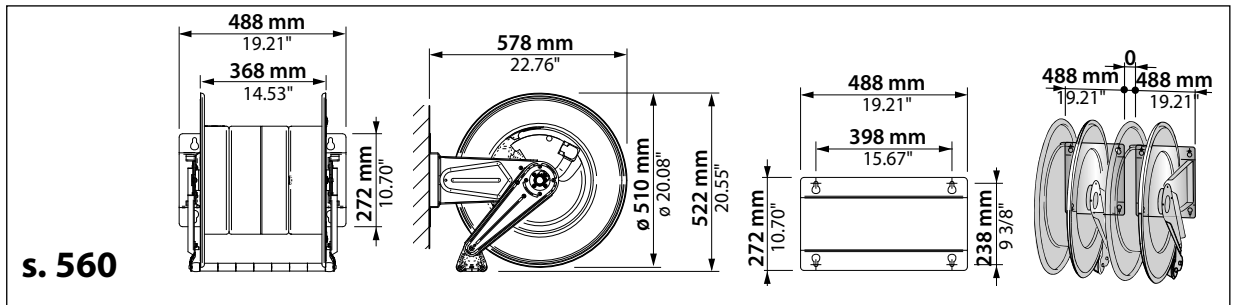
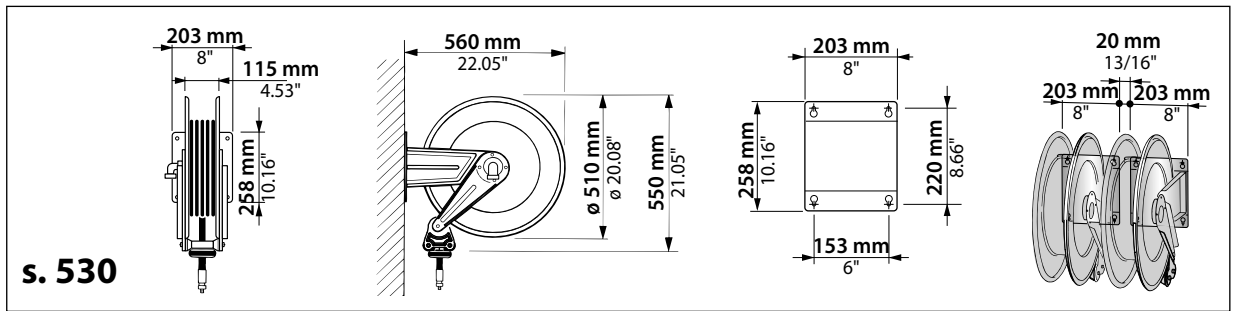
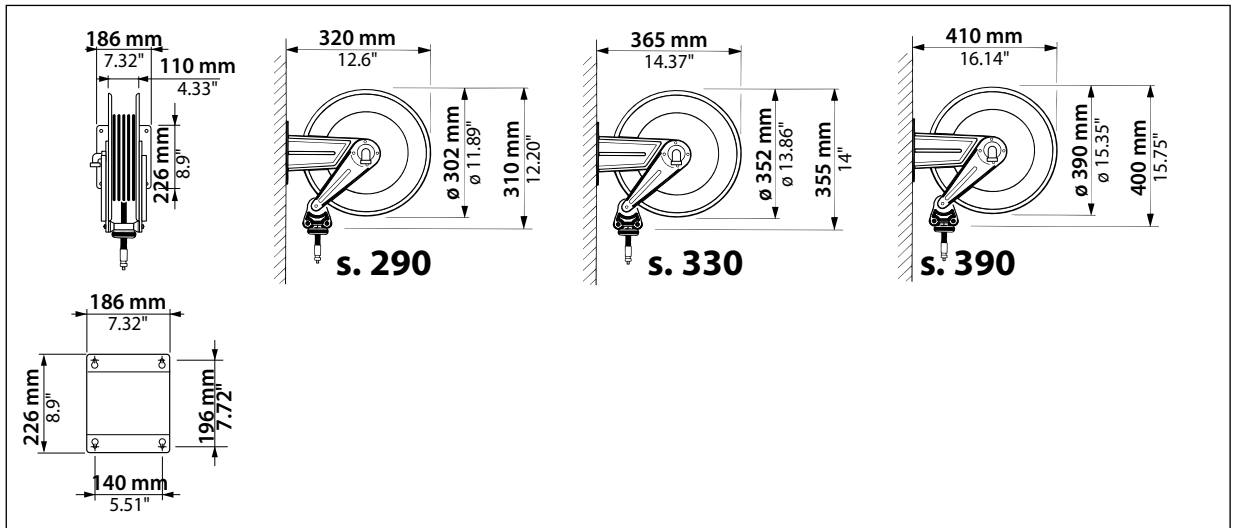
- Exterior cardboard.
- Moulded cardboard protectors on the inside.
- Plastic straps.
- Plastic protective bag.

### **Check the integrity of the packaging on arrival:**

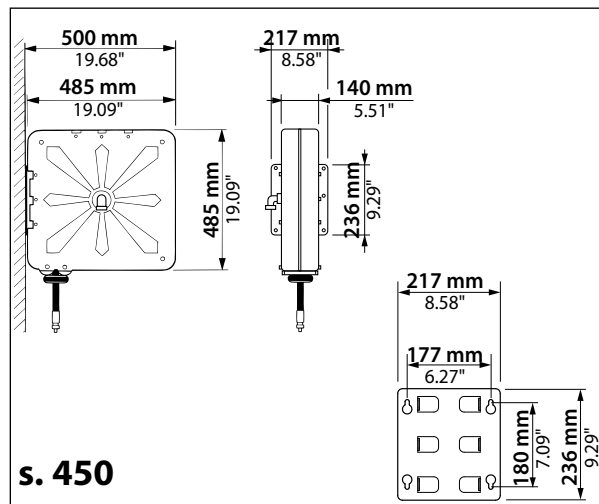
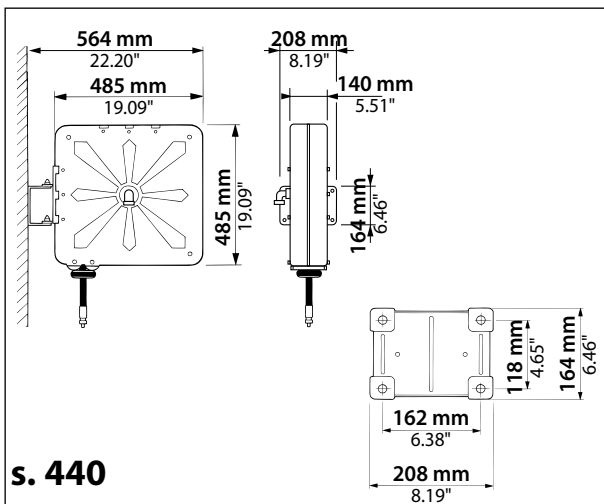
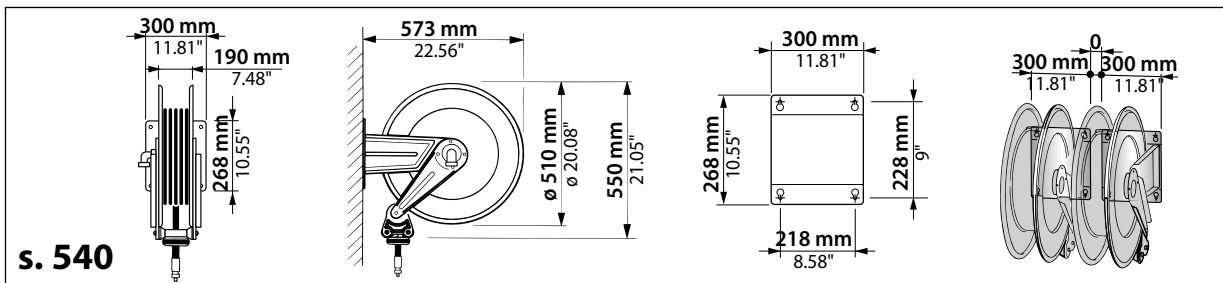
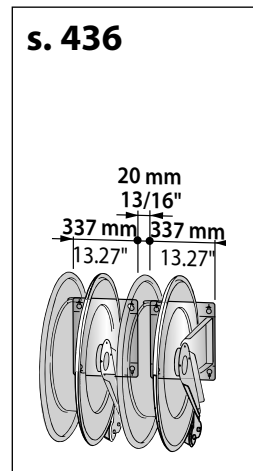
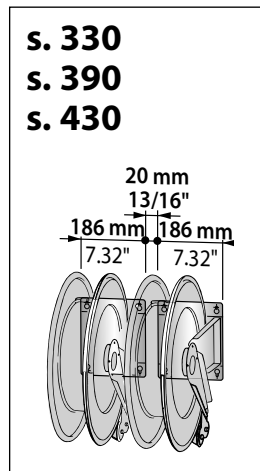
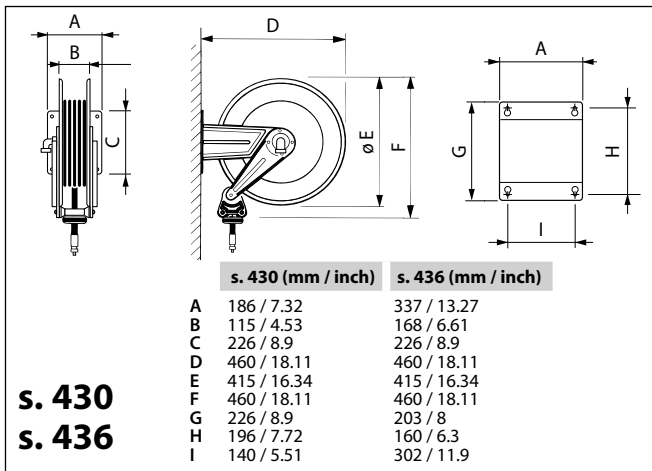
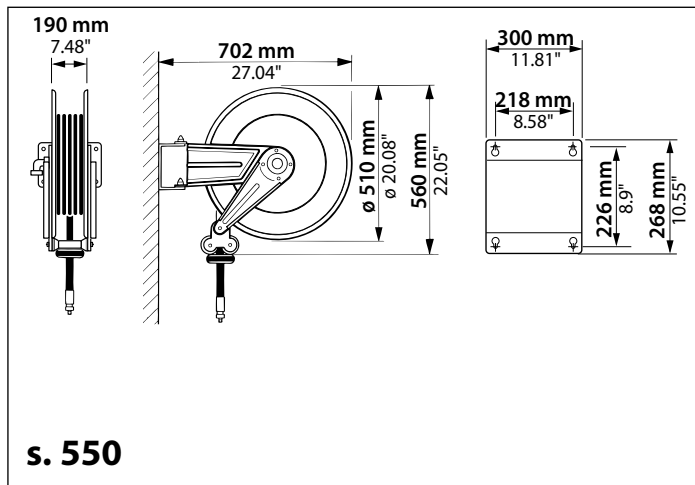
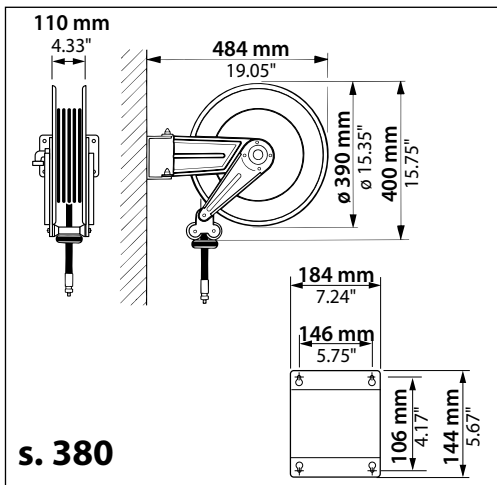
- It must not show any signs of damage or breakage.
- It must not present signs that can lead to the supposition of exposure to heat sources, water, etc.
- It must not show any signs of tampering.

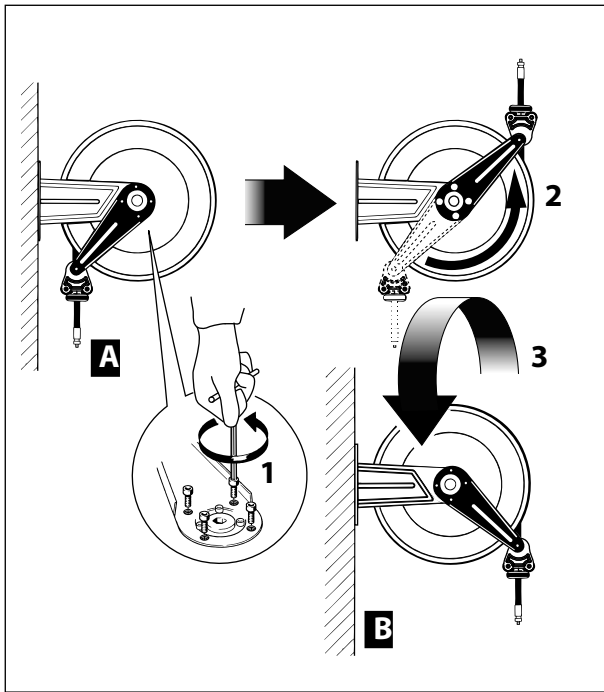
To remove the packaging, cut the strapping and separate the cardboard from the plastic components. When disposing of packaging, sort the materials according to the regulations in your country.

# OVERALL DIMENSIONS









## INSTALLATION



**Installation must be carried out in a workmanlike manner. The installation of hose reels (fastening, hose assembly, hydraulic or pneumatic connection) must be carried out by qualified and authorised personnel.**

No flammable smoke or dust must be present during installation.

Hose reels should be installed indoors or outdoors but protected from weather and sunlight (e.g. under a canopy).

During installation, there must be no moving equipment that could jeopardise the safety of those carrying out the installation.

The support or wall surface must be sufficiently flat and adequately strong to bear the weight of the equipment and the fluid filled hose. The base of the hose reel must rest firmly on the entire fixing surface.

See OVERALL DIMENSIONS, page 16 and make sure to leave space around the hose reel so that all components are easily accessible.

The hose reel can be installed:

**[A]-[B]-[C]** wall mounted for single use or in banks.

**[D]** on bench or floor.

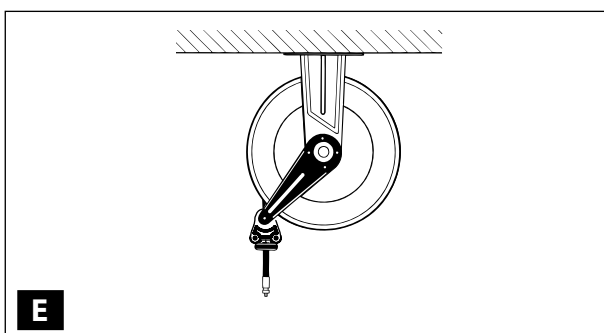
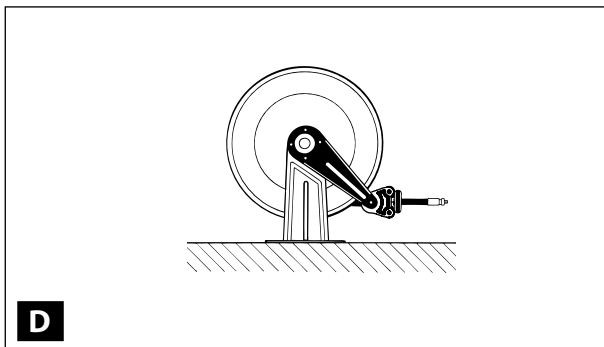
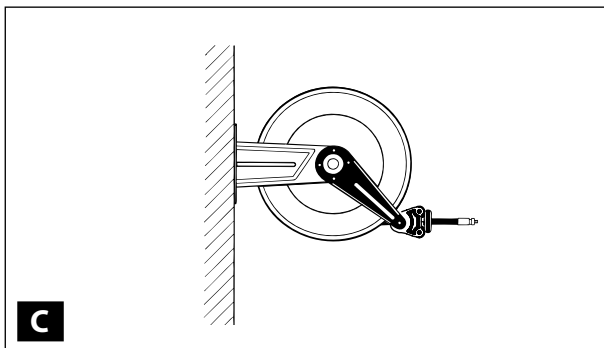
**[E]** ceiling mounted (with rotation of swivel arms).

To go from position **[A]** the position **[B]** the arms must rotate 180° and the hose reel must be flipped.



### WARNINGS

**CAUTION: it is forbidden to apply the adjustable hose reel version to the ceiling.**



The hose reel is attached to the support by means of screws and plugs (not supplied) through the holes in the base bracket.

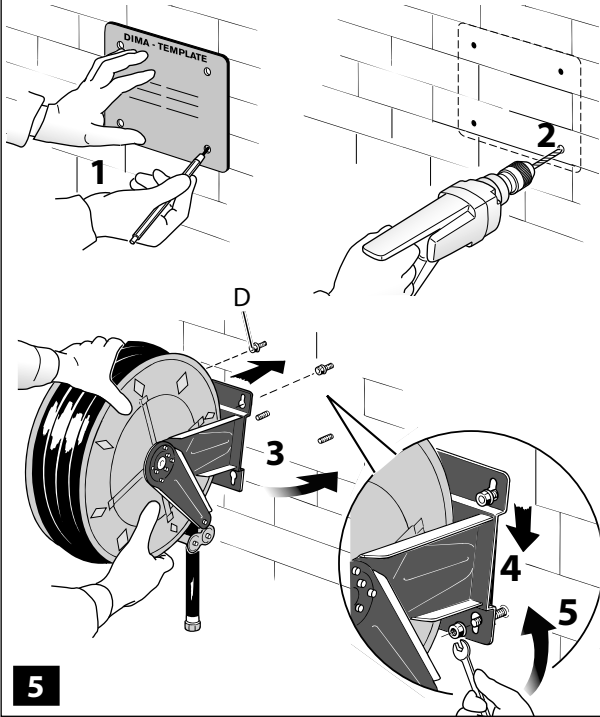
Series	Plugs	Torque wrench setting
From S.270 to S.450	M8	15 N·m (11.06 lbf·ft)
From S.520 to S.560	M10	25 N·m (18.43 lbf·ft)

Note: the 4 plugs, bolts and screws used for installation (not supplied) must be adequate to support the load of the hose reel including the hose (filled with fluid) and its accessories.

Use plugs with a load rating of at least  $\geq 4$  kN ( $\geq 400$  kg / 881.85 lbs) per plug.

The supporting surface must be made of suitable solid material and structurally dimensioned with a load rating of at least  $\geq 4$  kN ( $\geq 400$  kg / 881.85 lbs) in both compression and tension.

**s. 290, 330, 390, 430, 530, 540, 560**



**WALL MOUNTING**

After choosing the ideal position, checking the wall's consistency and thickness, indicated the holes for the plugs (see template supplied with your hose reel) and checking that they do not intercept hydraulic pipes or electrical cables, proceed with drilling fig. 5. Screw by 3 - 4 rotations the nuts [D] only in the plugs of the upper holes. Insert the hose reel into the appropriate seats. Tighten the 4 fixing nuts, fig. 5.

GB

**OPTIONAL**

<p><b>s. 290</b></p> <p>186 mm 7.32"</p> <p>152 mm 6"</p> <p>264 mm 10.39"</p> <p>294 mm 11.57"</p>	<p><b>s. 330</b></p> <p><b>s. 390</b></p> <p><b>s. 430</b></p>	<p><b>s. 530</b></p> <p>203 mm 8"</p> <p>160 mm 6.3"</p> <p>302 mm 11.89"</p> <p>338 mm 13.31"</p>
<p><b>s. 540</b></p> <p>300 mm 11.81"</p> <p>220 mm 8.66"</p> <p>300 mm 11.81"</p> <p>340 mm 13.38"</p>	<p><b>s. 560</b></p> <p>488 mm 19.21"</p> <p>399 mm 15.67"</p> <p>313 mm 12.32"</p> <p>347 mm 13.66"</p>	

**WALL MOUNTING WITH OPTIONAL BRACKET**

After choosing the ideal position, checking the wall's consistency and thickness, checking that the holes for the plugs do not intercept hydraulic pipes or electrical cables, fix the bracket [C] to the wall as indicated in fig. 6.

Screw by 3 - 4 rotations the nuts [D] only in the upper part of the bracket.

Insert the hose reel in the special seats (fig. 6). Tighten the 4 fixing nuts.

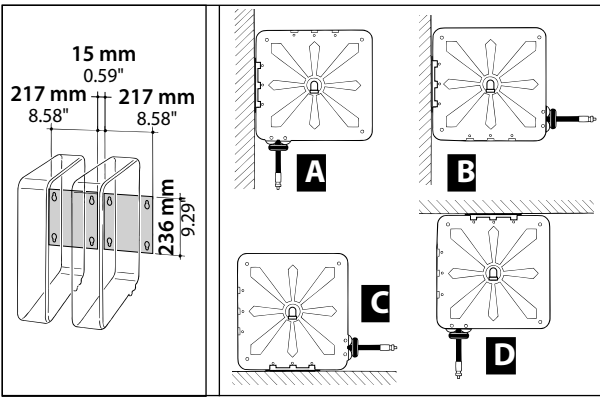
## INSTALLATION OF ENCLOSED MODELS

The hose reel can be installed:

**[A]-[B]** wall mounted for single use or in banks.

**[C]** on bench or floor.

**[D]** ceiling mounted.

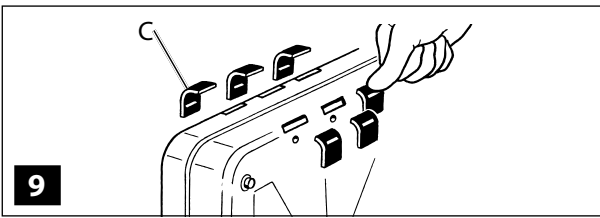
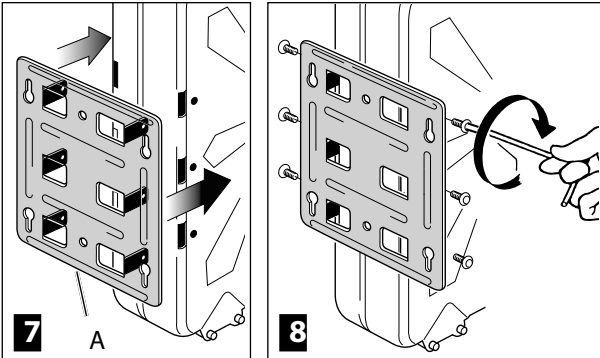


## BRACKET APPLICATION

Fasten the bracket **[A]** to the hose reel (fig. 7).

Guide the 6 screws by fixing them in sequence (fig. 8).

Then apply the technopolymer corner caps **[C]** to the free holes (fig. 9).

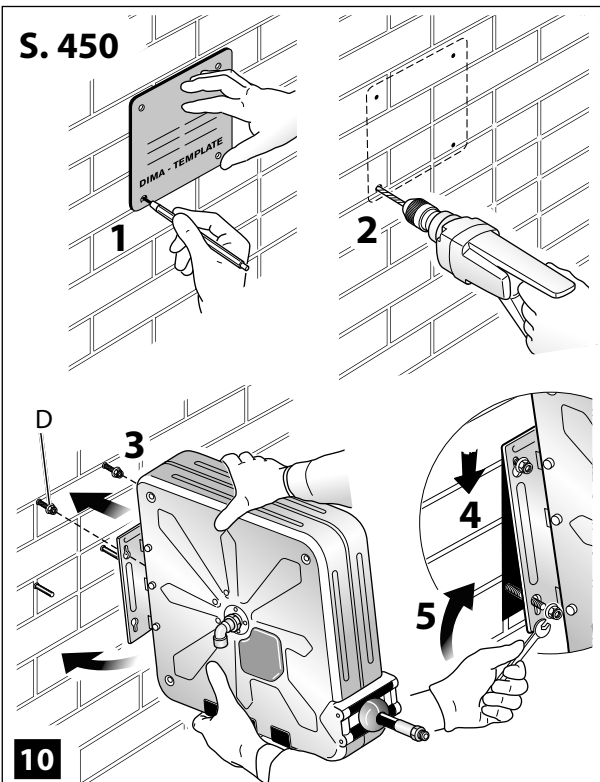


## WALL INSTALLATION OF ENCLOSED HOSE REEL

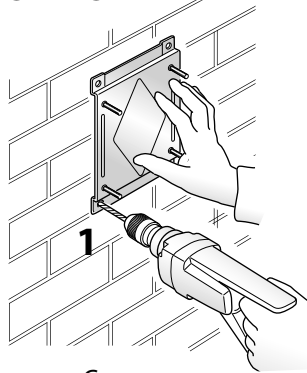
After choosing the ideal position, checking the wall's consistency and thickness, indicated the holes for the plugs (see template supplied with your hose reel) and checking that they do not intercept hydraulic pipes or electrical cables, proceed with drilling fig. 10.

Screw by 3 - 4 rotations the nuts **[D]** only in the plugs of the upper holes.

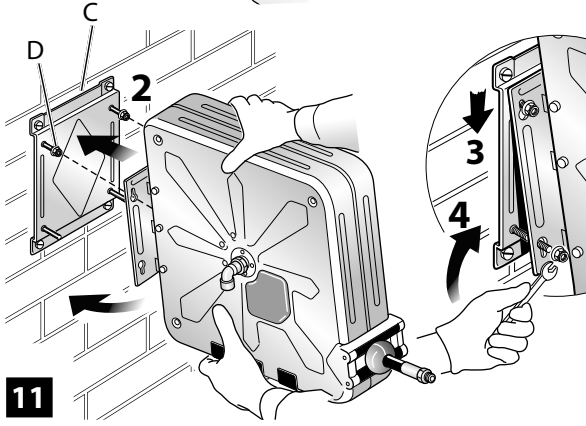
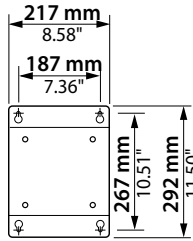
Insert the hose reel into the appropriate seats. Tighten the 4 fixing nuts.



## OPTIONAL



## S. 450



11

## WALL MOUNTING WITH OPTIONAL BRACKET

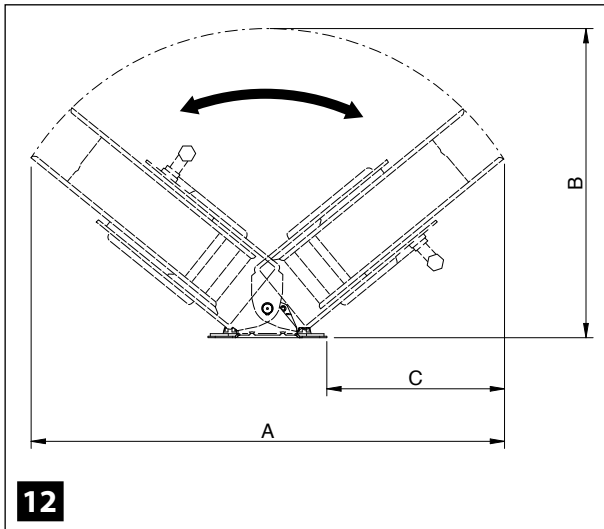
After choosing the ideal position, checking the wall's consistency and thickness, checking that the holes for the plugs do not intercept hydraulic pipes or electrical cables, fix the bracket [C] to the wall as indicated in fig. 11.

Screw by 3 - 4 rotations the nuts [D] only in the upper part of the bracket.

Insert the hose reel into the appropriate seats (fig. 11).

Tighten the 4 fixing nuts [D].

GB



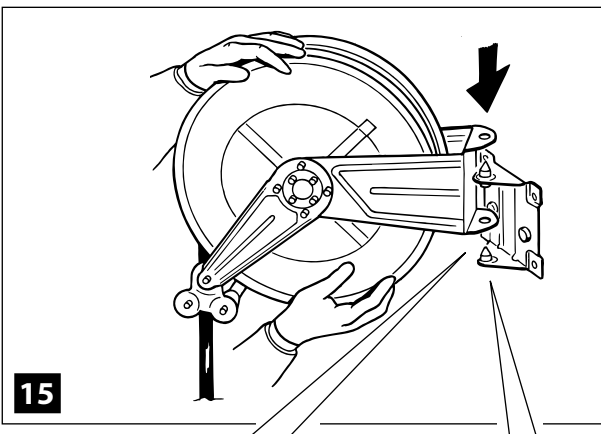
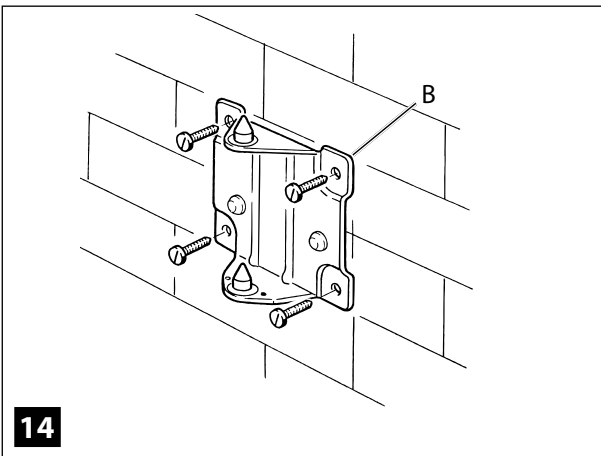
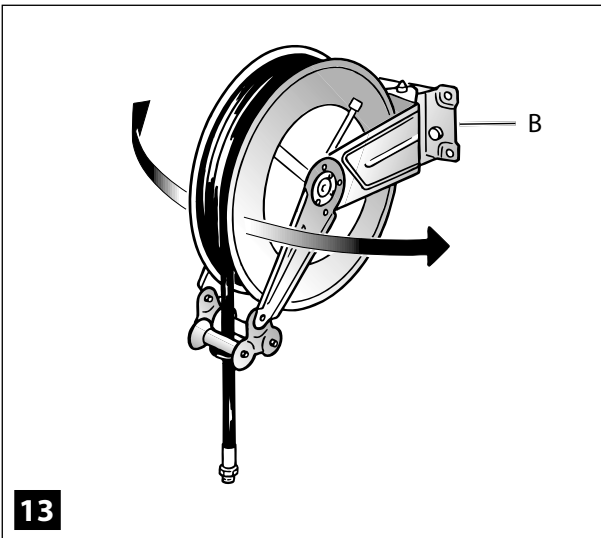
12

## WALL INSTALLATION OF ADJUSTABLE HOSE REELS

ADJUSTABLE HOSE REEL DIMENSIONS			
SERIES	A	B	C
390	681 mm / 26.81"	484 mm / 19.05"	249 mm / 9.80"
430	827 mm / 32.55"	540 mm / 21.25"	310 mm / 12.20"
450	883 mm / 34.76"	577 mm / 22.71"	338 mm / 13.30"
530	993 mm / 39.09"	644 mm / 25.35"	383 mm / 15.07"
550	965 mm / 37.99"	700 mm / 27.55"	332 mm / 13.07"

## WALL INSTALLATION OF OPEN ADJUSTABLE HOSE REEL s. 380, 420, 520, 550

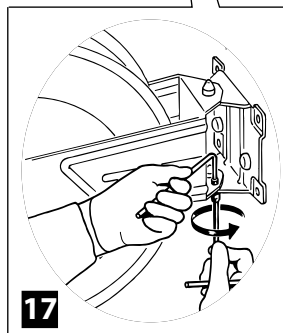
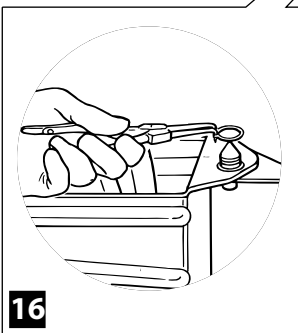
After choosing the ideal position, checking the wall's consistency and thickness, checking that the holes for the plugs do not intercept hydraulic pipes or electrical cables, fix the bracket **[B]** to the adjustable hose reel (fig. 13, 14).

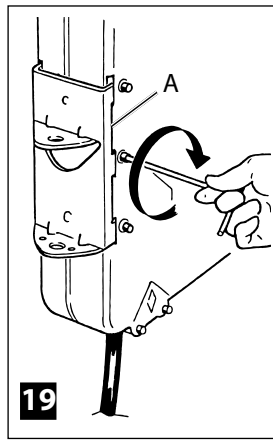
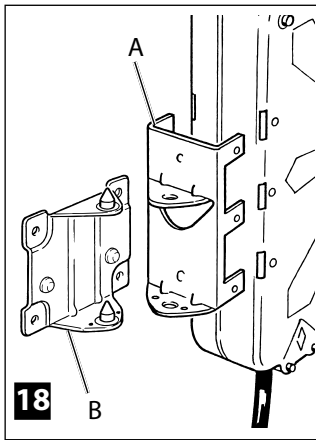


Connect the hose reel and apply the two safety Seeger rings as indicated in fig. 16.

L'enrouleur ainsi monté peut librement tourner de 55° droite/gauche.

If the hose reel is to be installed in the "non-swivelling" position, fix the two bolts with relative self-locking nuts, as shown in fig. 17.





## WALL INSTALLATION OF ENCLOSED ADJUSTABLE HOSE REEL s. 440

Fix the bracket [A] to the hose reel, paying attention to the exact installation position with respect to the wall bracket [B] (see fig. 18).

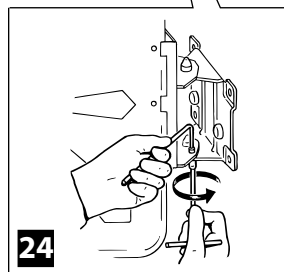
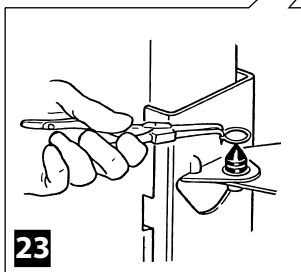
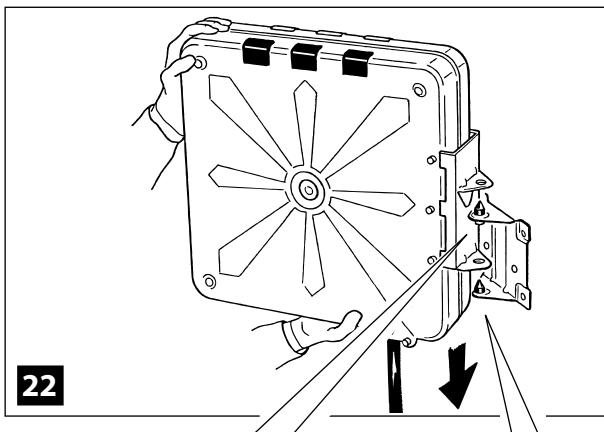
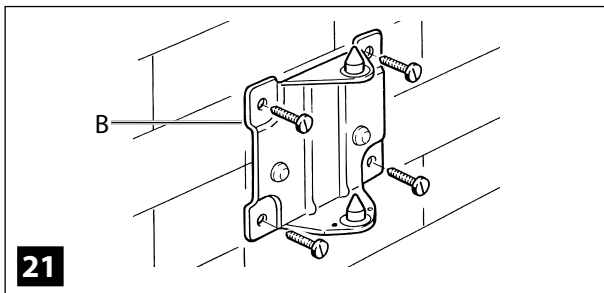
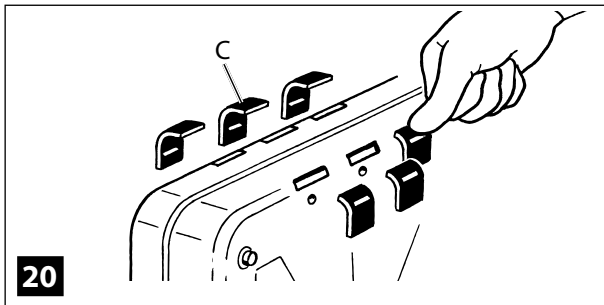
Guide the 6 screws by fixing them in sequence (fig. 19).

Then apply the technopolymer corner caps [C] to the free holes (fig. 20).

Apply the bracket [B] to the wall (fig. 21).

Lastly, hook the hose reel to the bracket [B] and apply the two safety Seeger rings (fig. 23).

If the hose reel must be installed in one of the "non-adjustable" positions, fix the two bolts [D] with their self-locking nuts as indicated in fig. 24.



## HOSE REELS SUPPLIED WITHOUT HOSE

The hose reels can be supplied without tube.

**All maintenance, assembly and disassembly of the hose must be done in a safe, non-ATEX area.**

The type of hose and its fittings and nipples to be installed must be chemically compatible with the fluid to be dispensed. The use of fluids other than those for which the hose reels were designed is prohibited.

### IMPORTANT!

**The hose type and its fittings and nipples must be able to withstand pressures equal to or higher than the operating ones indicated for each hose reel model on the label.**

The diameter of the hose reel drum must be at least twice the minimum bending radius of the hose selected for installation.

Before installation, check the data in the data sheet provided by the hose manufacturer (chemically compatible fluids, nominal diameters, operating pressure, temperature limits, minimum bending radius, etc.).

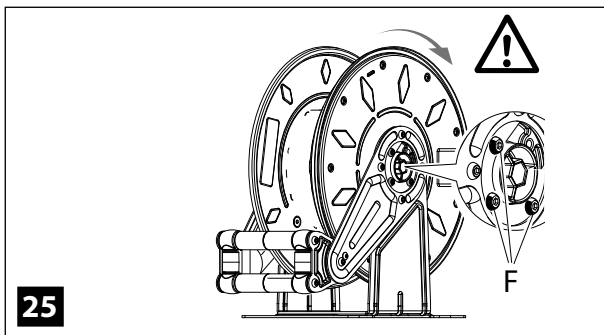
Hoses of different diameter/section can be connected with suitable adapters between the hose reel outlet connection and hose.



**Use only flexible hoses also for the inlet connection. Rigid tubes may not be installed under penalty of voiding the warranty.**

**Take care during all stages of hose assembly on stainless steel models. Do not use screwdrivers, carry out operations manually to avoid seizing of screws.**

**CAUTION! For installations in areas where compliance with the ATEX directive is required, the use of conductive or dissipative hoses is mandatory (resistance below 50 MΩ).**



## WARNINGS

The manufacturer declines any responsibility for any faults, troubles or malfunctions eventually caused by the type of hose or by the manner in which the same is fitted by the dealer, user or by others.

## WARNINGS

The manufacturer accepts no liability for any malfunctions or failures caused by the transfer of fluids other than those intended for the purchased item.

## HOSE MOUNTING ON OPEN HOSE REELS s. 290, 330, 390



Wear all necessary personal protection equipment (goggles, gloves, safety footwear).

Place the hose reel on a flat, stable surface (fig. 25).

**Do not unscrew** the 3 screws [F] without first having completely unloaded the spring (fig. 26).

Turn the drum clockwise to disengage the pawl from the stop rack (fig. 25).

**Slowly turn** the drum anti-clockwise until the spring is completely unloaded (fig. 26).

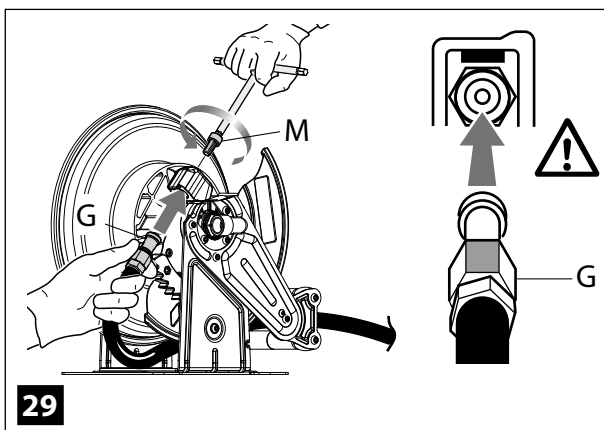
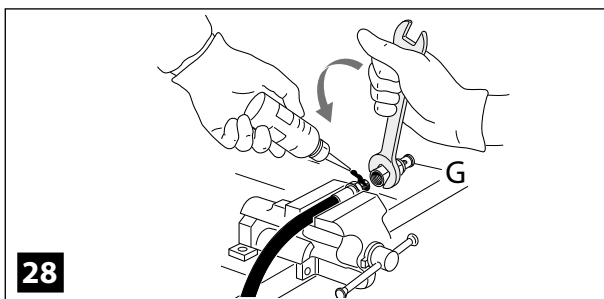
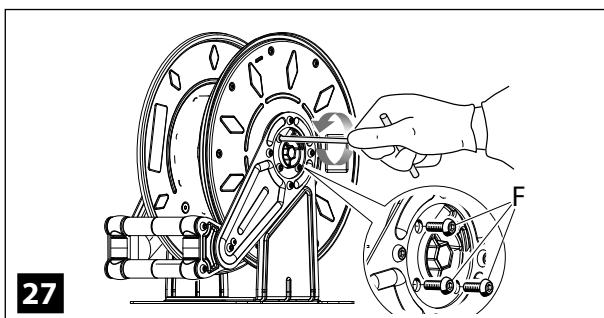
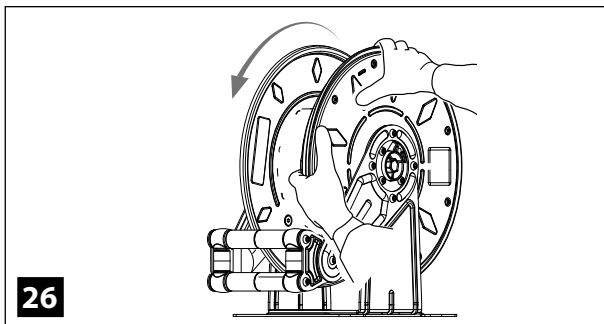
Unscrew the 3 fixing screws [F] of the spring side bushing (fig. 27).

Apply sealant to the nipple provided [G] and attach it to the hose end fitting. Tighten the nipple in place with a spanner (fig. 28).

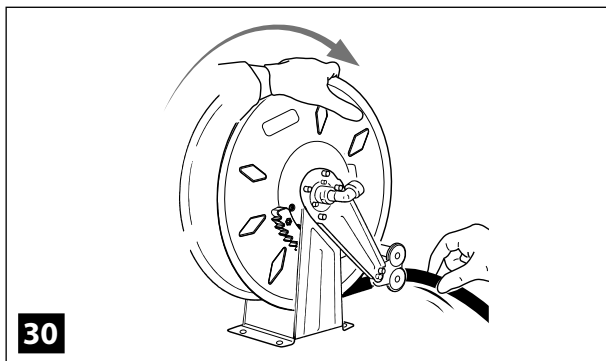
Tighten to the torque = 20 N·m (15 lbf·ft).

Route the hose through the hose guide and attach it **following** the natural bend of the hose. Check that the O-ring on the nipple [G] and the O-ring under the head of the screw [M] are both correctly seated. Install the nipple [G] with one side of the hexagon parallel to the side of the anti-rotation stop and use a spanner to lock it firmly into place with the screw [M] (fig. 29).

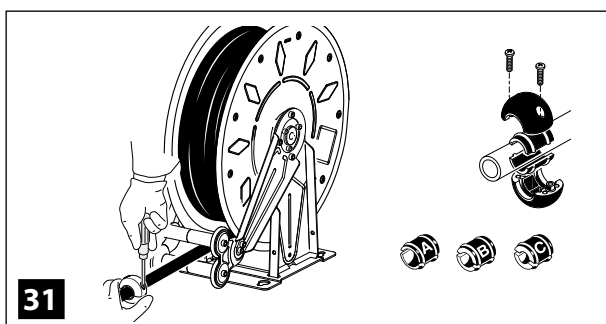
Tighten to the torque = 9 N·m (7 lbf·ft).



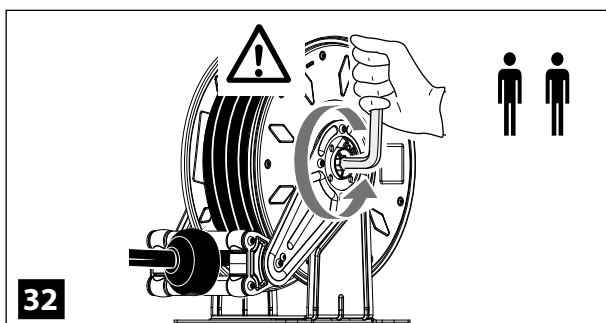




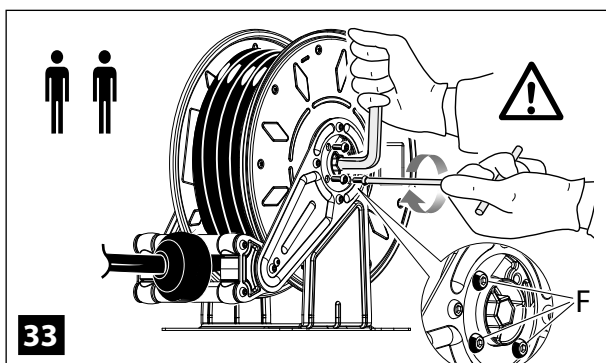
Wind on the hose by turning the drum clockwise. When doing so, guide the hose to the left and right to let it fill the full width of the drum (fig. 30).



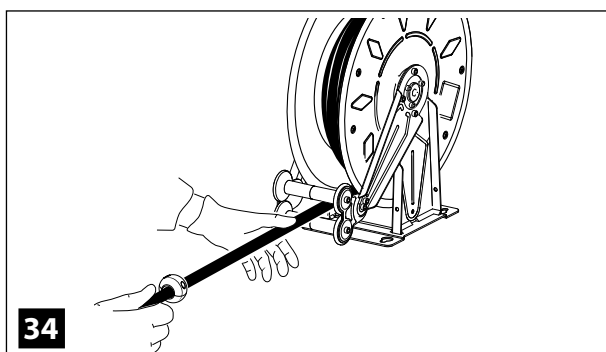
Fix the hose stop at the desired length, choosing the hose stop [A], [B], [C] most appropriate to the diameter of the hose (fig. 31).



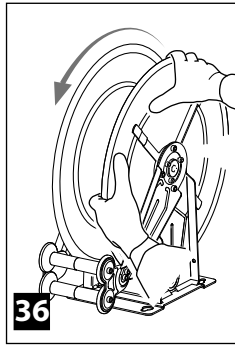
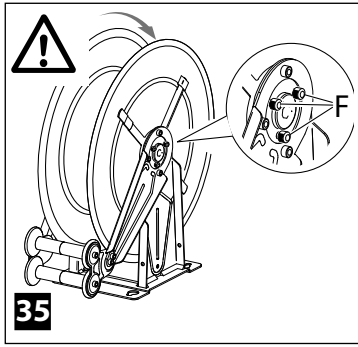
The following operation must be carried out by 2 persons. Insert a 12 mm Allen key into the seat of the spring side bushing and take great care that **it does not fall out** during this and the next step (fig. 32). Preload the spring by turning the Allen key anti-clockwise at least 5 complete turns.



The following operation must be carried out by 2 persons. **Keeping** in place the 12 mm Allen key, screw in and tighten the 3 screws [F] (fig. 33). Now you can remove the 12 mm Allen key.



Fix the hose reel securely in place, then unwind the hose completely from the drum and rewind it to check for correct functioning. (fig. 34).



## HOSE MOUNTING ON OPEN HOSE REELS s. 430, 530, 540, 560



Wear all necessary personal protection equipment (goggles, gloves, safety footwear).

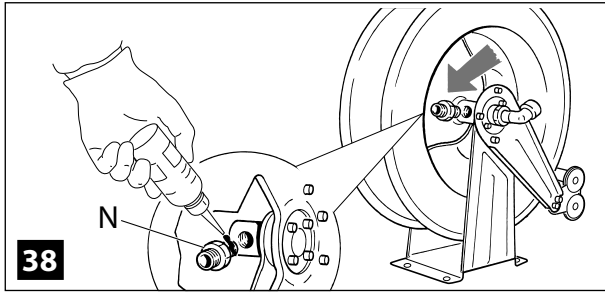
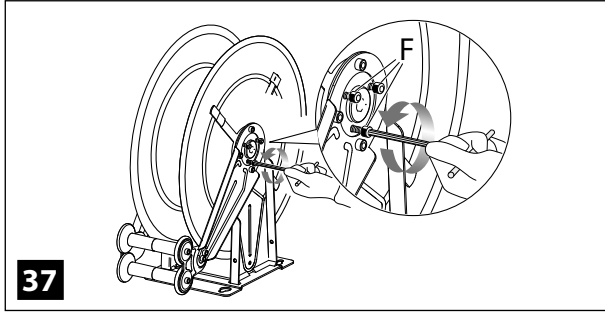
Place the hose reel on a flat, stable surface (fig. 35).

**Do not unscrew** the 3 screws [F] without first having completely unloaded the spring (fig. 36).

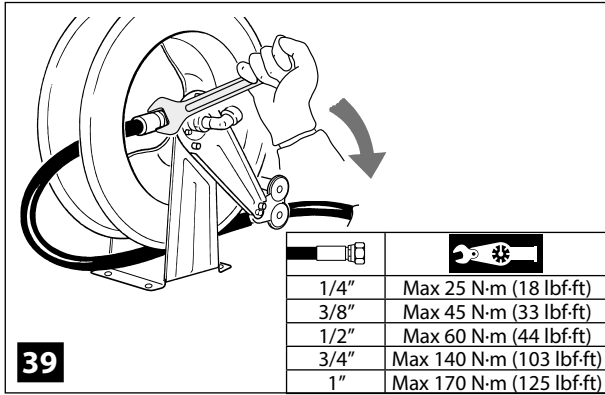
Turn the drum clockwise to disengage the pawl from the stop rack (fig. 35).

**Slowly turn** the drum anti-clockwise until the spring is completely unloaded (fig. 36).

Unscrew the 3 fixing screws [F] of the spring side bushing (fig. 37).

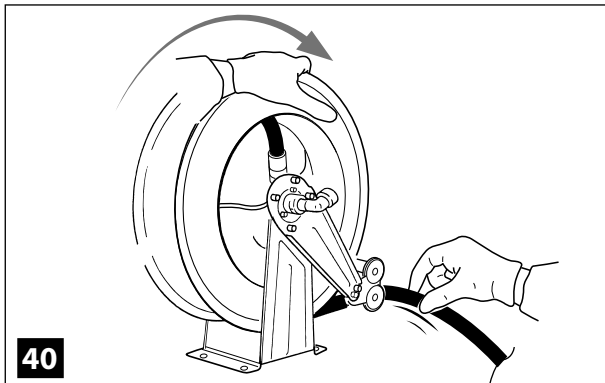


Apply sealant to the nipple [N] and screw it into the hole in the central pin. Tighten the nipple with a spanner to hold it in place (fig. 38)..

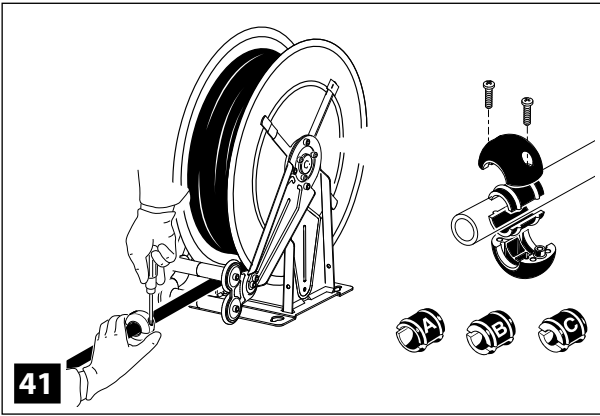


Insert the hose through the hose guide and install it by **following** the natural hose bending. Screw the hose fitting on the nipple and tighten it with a spanner (fig. 39).

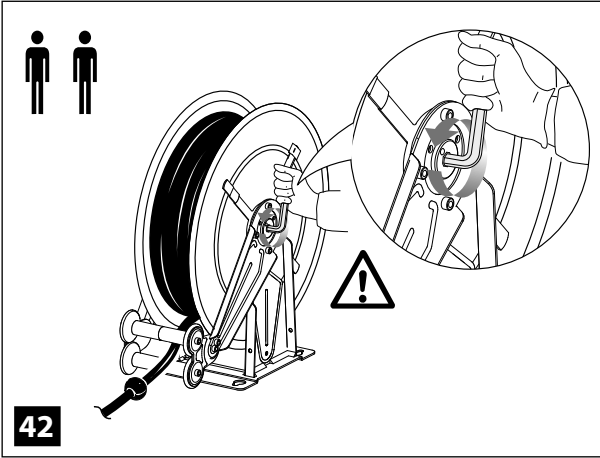
Tighten to the torque specified in the table.



Wind the hose by turning the drum clockwise. When doing so, guide the hose to the left and right to let it fill the full width of the drum (fig. 40).

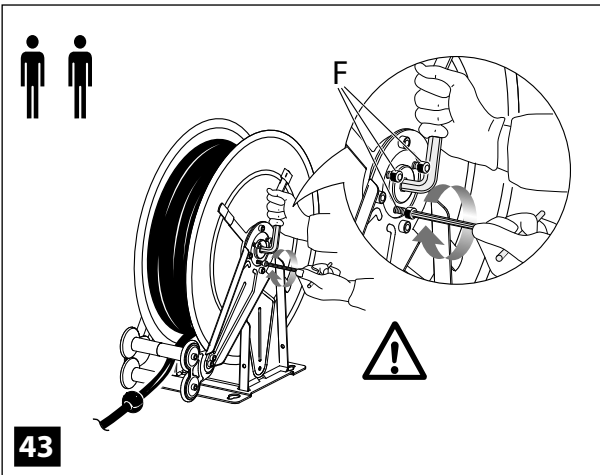


Fix the hose stop at the desired length, choosing the hose stop **[A]**, **[B]**, **[C]** most appropriate to the diameter of the hose (fig. 41).



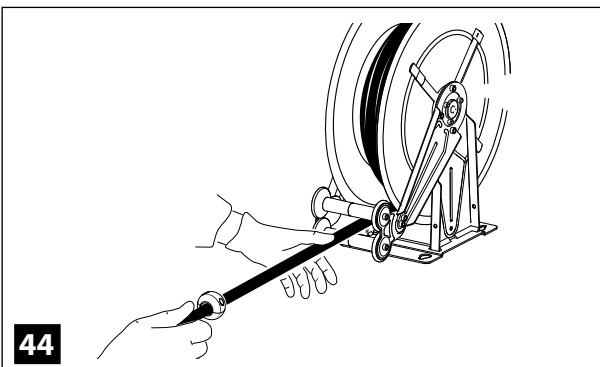
The following operation must be carried out by 2 persons. Insert a 12 mm Allen key into the seat of the spring side bushing and take great care that **it does not fall out** during this and the next step.

Pre-load the spring by turning the Allen key anti-clockwise at least 5 full turns for the S.430, S.530, S.540. For the S.560 turn at least 8 full turns (fig. 42).



The following operation must be carried out by 2 persons. **Keeping** in place the 12 mm Allen key, screw in and tighten the 3 screws **[F]** (fig. 43).

Now you can remove the 12 mm Allen key.



Fix the hose reel securely in place, then unwind the hose completely from the drum and rewind it to check for correct functioning (fig. 44).

## HOSE INSTALLATION ON ENCLOSED REELS SUPPLIED WITHOUT HOSE



Wear all necessary personal protection equipment (goggles, gloves, safety footwear).

Place the hose reel on a flat, stable surface (fig. 45).

Unscrew the 4 fixing screws [F] of the drum support bushing (fig. 45).

Remove the hose inspection cover using a small screwdriver (fig. 46).

Apply sealant to the nipple [N] and screw it into the hole in the central pin. Tighten the nipple with a spanner to hold it in place (fig. 47).

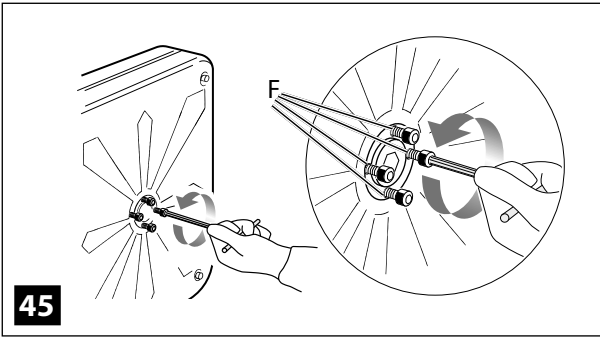
Insert the hose through the hose guide and install it by **following** the natural hose bending. Screw the hose fitting on the nipple and tighten it with a spanner (fig. 48).

Tighten to the torque specified in the table.

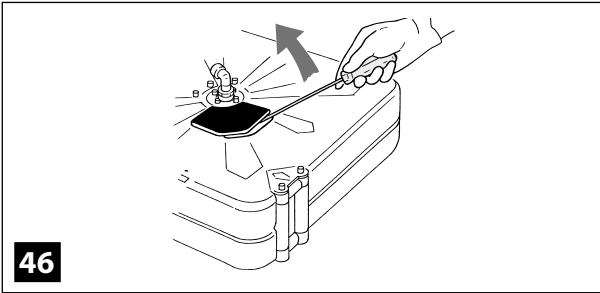
The following operation must be carried out by 2 persons.

Position the hose reel and hold it steady (fig. 49).

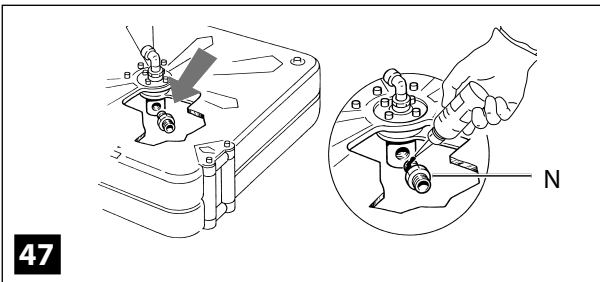
Insert a 12 mm Allen key into the drum support bushing and wind on the hose by turning the drum anticlockwise. When doing so, guide the hose to the left and right to use the full width of the drum.



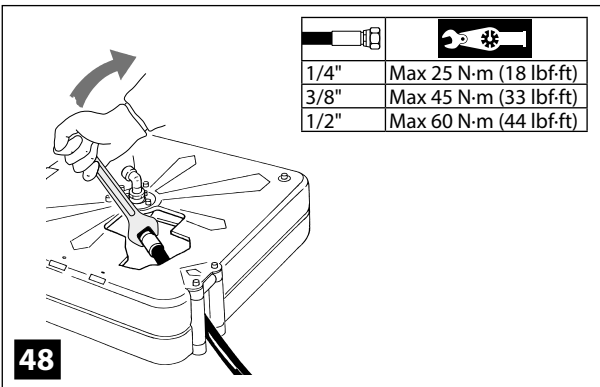
45



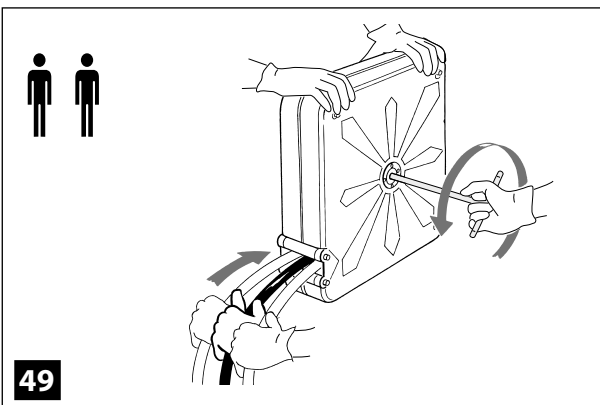
46



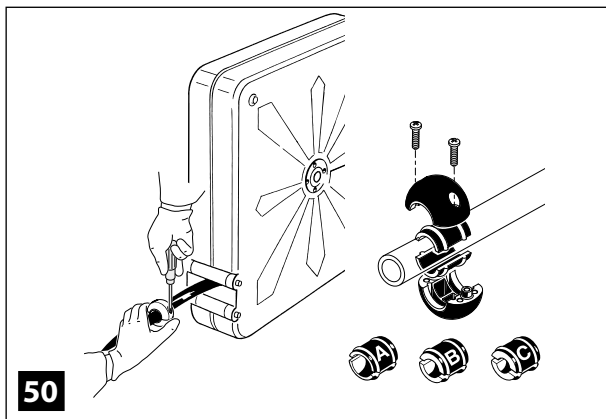
47



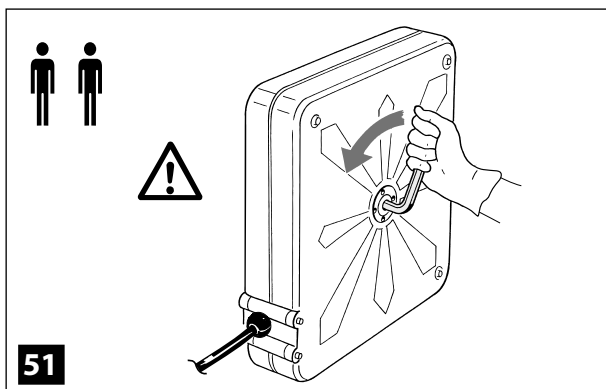
48



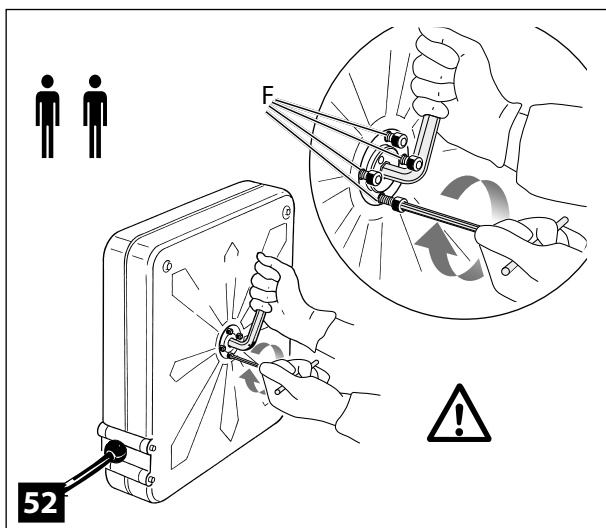
49



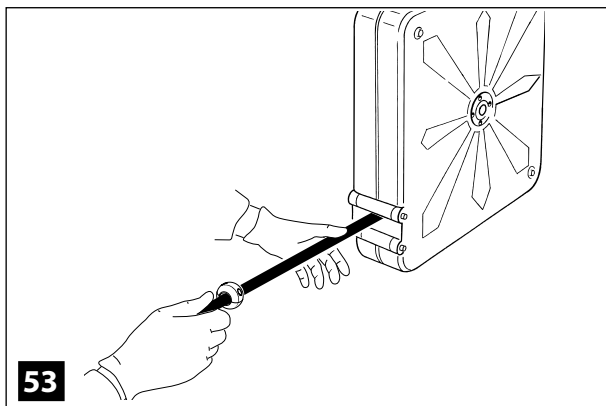
Fix the hose stop at the desired length, choosing the hose stop **[A]**, **[B]**, **[C]** most appropriate to the diameter of the hose (fig. 50).



The following operation must be carried out by 2 persons. Insert a 12 mm Allen key into the seat of the spring side bushing and take great care that **it does not fall out** during this and the next step (fig. 51). Preload the spring by turning the Allen key anti-clockwise at least 5 complete turns.



The following operation must be carried out by 2 persons. **Keeping** in place the 12 mm Allen key, screw in and tighten the 4 screws **[F]** (fig. 52). Now you can remove the 12 mm Allen key.



Fix the hose reel securely in place, then unwind the hose completely from the drum and rewind it to check for correct functioning (fig. 53).

## SPRING PRELOAD

For the correct functioning of the equipment, it is essential to apply the correct preload to the spring.

Each spring has a predefined number of turns. These available turns are divided into:

- Preload turns: these are the turns that define the initial force with the hose fully wound.
- Working revolutions: these are the revolutions needed to wind the hose.
- Free end-of-stroke revolutions: this is the amount of unused revolutions. It is essential that the spring does not go flat during work cycles.

## INCREASING SPRING PRELOAD

(WITH HOSE COMPLETELY WOUND ONTO THE DRUM)



Wear all necessary personal protection equipment (goggles, gloves, safety footwear).

The hose reel must be securely attached and have the hose completely wound onto the drum (fig. 54).

The following operation must be carried out by 2 persons. Insert an Allen key 12 mm in the seat of the spring side bushing, making sure it does not come off during this operation and the following one (fig. 55).

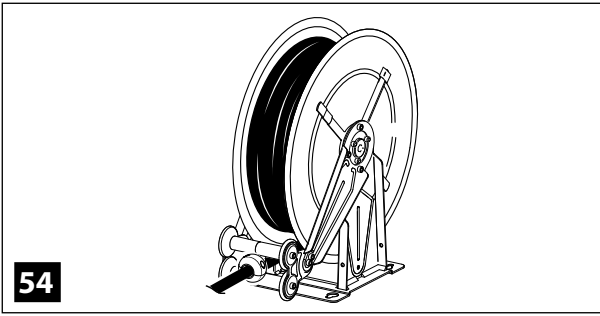
**Holding** the Allen key 12 mm in place, completely unscrew the 3 fixing screws [F] of the spring-side bushing (fig. 55).

The following operation must be carried out by 2 persons. Preload the spring further by turning the key anticlockwise, e.g. by 1 complete turn (fig. 56).

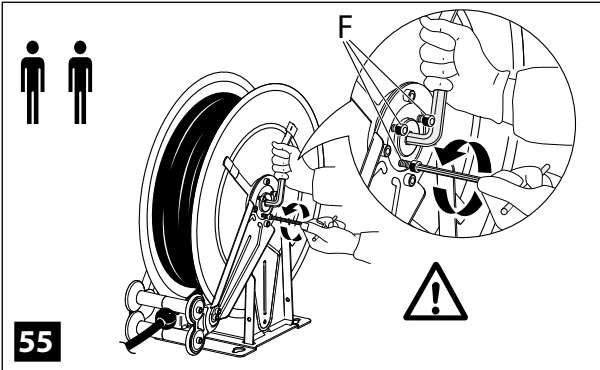
The following operation must be carried out by 2 persons. Still holding the 12 mm Allen key in place, screw and tighten the 3 screws [F] (fig. 57).

Now you can remove the 12 mm Allen key.

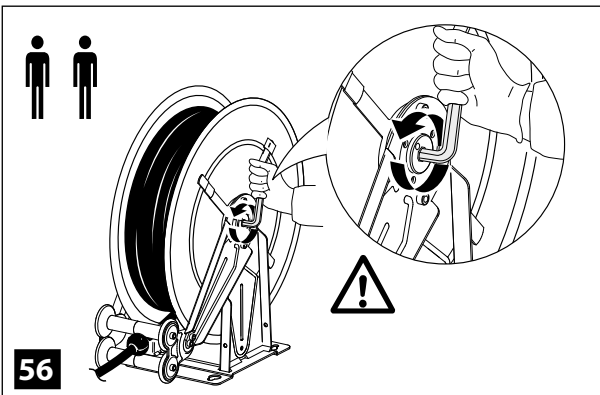
Using two hands, fully unwind the hose and rewind it on the drum to check its correct operation (fig. 58).



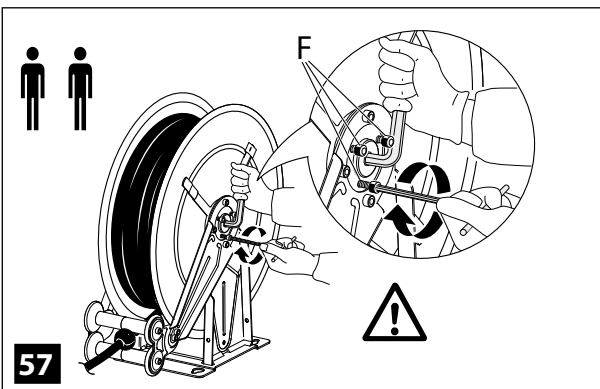
54



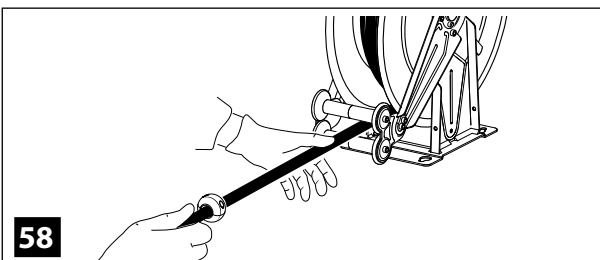
55



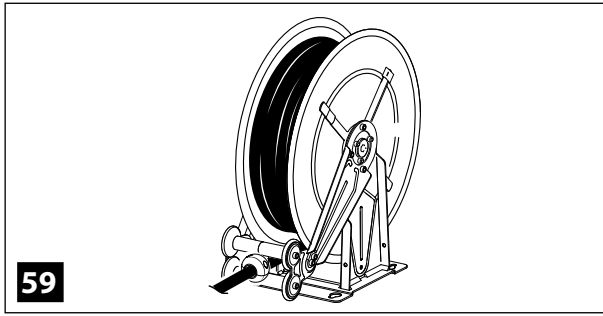
56



57



58



## DECREASING SPRING PRELOAD

(WITH HOSE COMPLETELY WOUND ONTO THE DRUM)

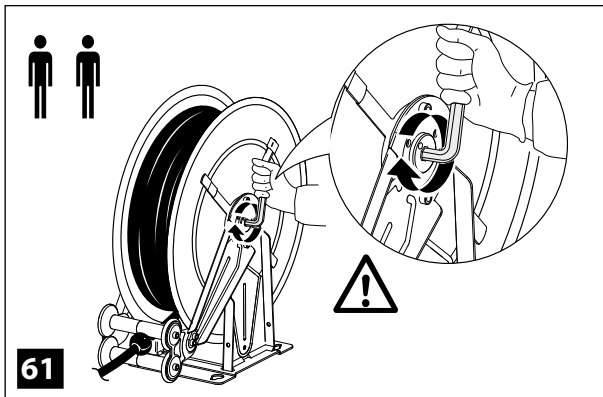
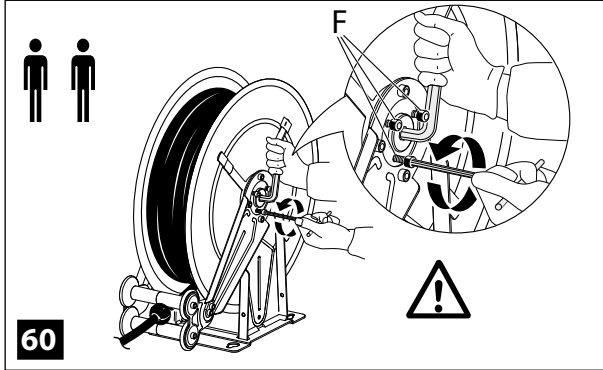


Wear all necessary personal protection equipment (goggles, gloves, safety footwear).

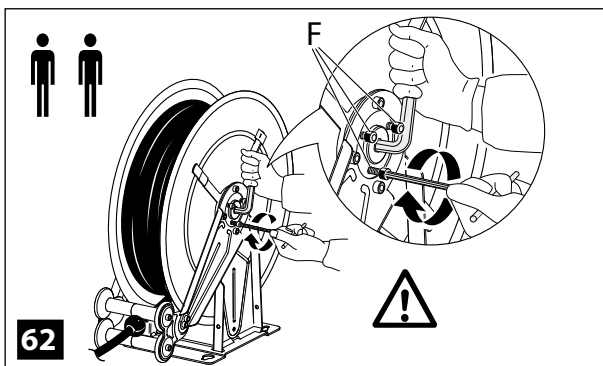
The hose reel must be securely attached and have the hose completely wound onto the drum (fig. 59).

The following operation must be carried out by 2 persons. Insert an Allen key 12 mm in the seat of the spring side bushing, making sure it does not come off during this operation and the following one (fig. 60).

**Holding** the Allen key 12 mm in place, completely unscrew the 3 fixing screws **[F]** of the spring-side bushing (fig. 60).

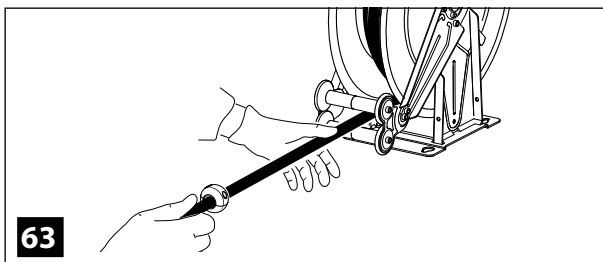


The following operation must be carried out by 2 persons. Decrease the preload of the spring by turning the key clockwise, e.g. by 1 complete turn (fig. 61).



The following operation must be carried out by 2 persons. Still holding the 12 mm Allen key in place, screw and tighten the 3 screws **[F]** (fig. 62).

Now you can remove the 12 mm Allen key.



Using two hands, fully unwind the hose and rewind it on the drum to check its correct operation (fig. 63).

## HOSE REMOVAL ÷ HOSE REPLACEMENT

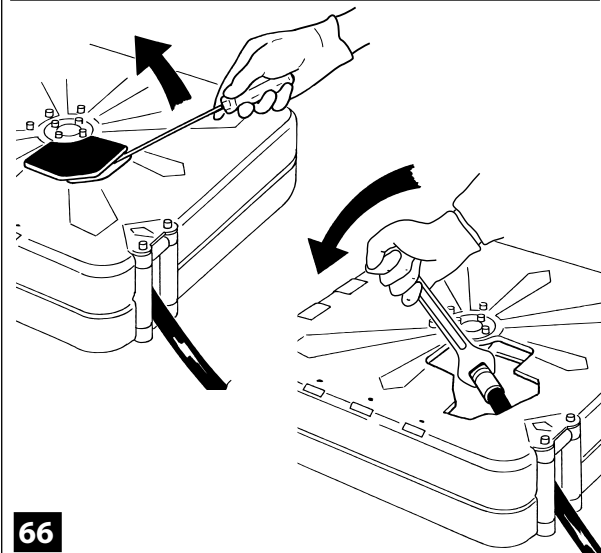
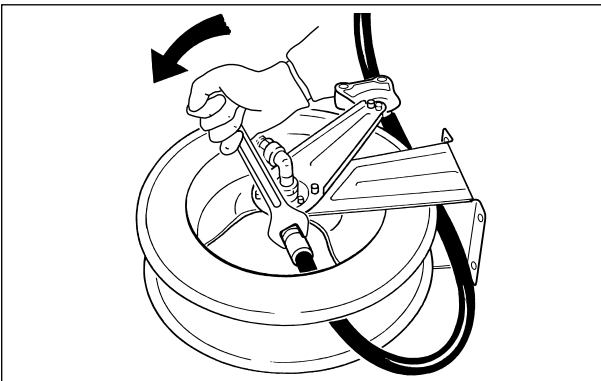
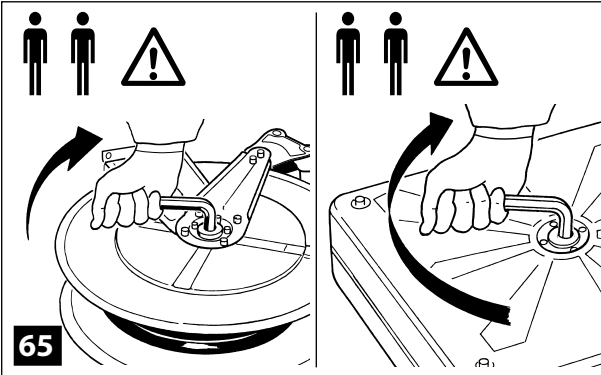
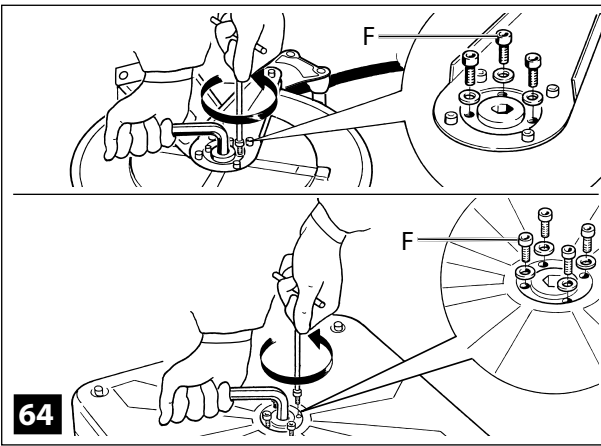


The following operation must be carried out by 2 persons. Make sure the entire hose is wound. Insert a 12 mm Allen key and, holding it in the position shown in fig. 64, unscrew the screws [F]. Then release the spring by turning the 12 mm Allen key clockwise. Support the spring with the key without letting it slip out (fig. 65). Unroll the hose and unscrew it from the nipples (fig. 66). Then carry out the hose assembly operations described on pages 24 to 28.

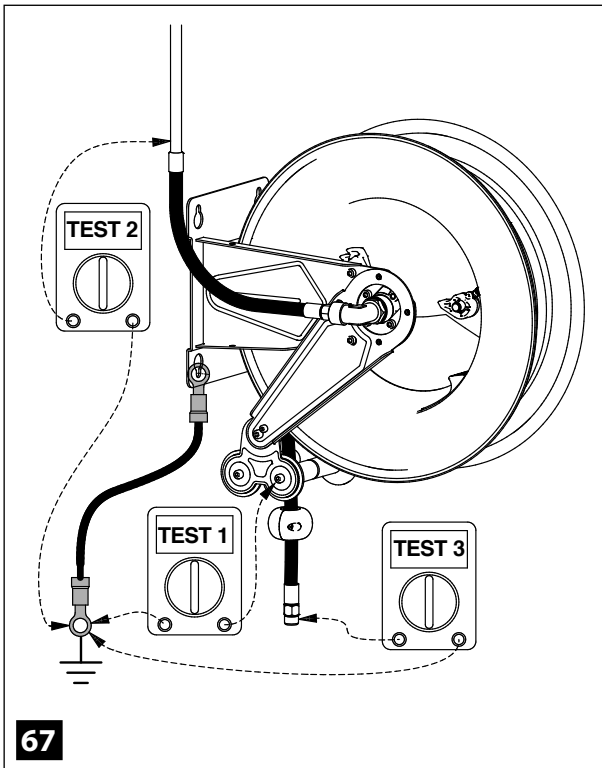


### WARNINGS

After each hose replacement, repeat the earthing tests.





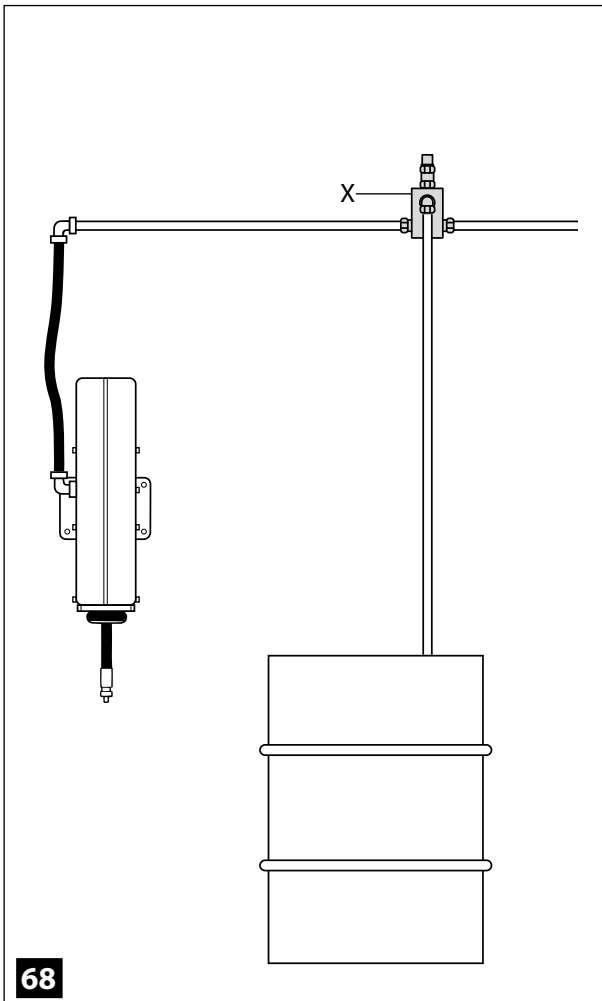


## EARTHING



- Before commissioning the hose reel, check the earthing in order to ensure protection against the risks deriving from the accumulation of electrostatic charges. Check that the earthing cable is not damaged and that the resistance measured by the instrument during the test shown in figure 67 is less than  $50 \times 10^6$  ohm (50M $\Omega$ ). For hose reels in category 3 perform the test 1. For hose reels in category 2 perform the tests 1, 2, 3. Repeat the check periodically.
- Do not use naked flames or carry out hot work near the hose reel. Do not expose the hose reel and the hose to heat sources.
- During cleaning of the connections or the internal parts in general, use products compatible with the fluids used. In particular for the components in contact with oxygen do not use hydrocarbon-based solvents, oily or greasy substances, as this could cause spontaneous combustion or even explosion.

If using flammable fluids, remember that it is necessary to comply with the obligations laid down the directive 99/92, including the classification of areas according to the fluid used, the characteristics of the room, the ventilation and pressure of use, classify the areas with risk of explosion generated around the coupling joints of the hose reel (potential emission sources), in order to define the type and extent of the zones generated and therefore the distances to comply with or the characteristics of the components to be installed in these zones and to prevent the risk of explosions generated by accidental leaks in the seals.



## PRESSURE-RELIEF VALVE



Install a pressure relief valve [X] upstream of the hose reel in order to preserve normal operation (of the hose reel, the hoses installed in it and any equipment installed after the hose reel) in the event of pressure surges in the system, e.g. water hammer, temperature increase, etc. (fig. 68). Remember that the pressure in a hydraulic circuit can increase in response to a rise in temperature, or if affected by "water hammer", which is a rapid and temporary increase in pressure generated when the fluid flow in a pipeline or hose is shut off abruptly (e.g.: by closing a valve).

## FILTER UPSTREAM



### ATTENTION

Install a filter upstream of the hose reel to prevent the entry of impurities that can cause electrostatic charge build-up in the hose reel.

## START-UP



**Commissioning should only be performed if the installation has been carried out in a workmanlike manner.**

**Commissioning must be carried out by qualified and authorised personnel.**

No flammable smoke or dust must be present during commissioning.

Before putting the equipment under pressure, check that the hose unwinds completely and rewinds correctly. With the hose completely unwound, check that the hose is not damaged (tears, crushing).

Make sure in particular that with the hose fully unwound, the drum does not get stuck in the stop position (stop tooth in the rack). If this happens, at least one turn must be removed from the spring preload.

Repeat the unwinding and rewinding operation 3 times, verifying the correct rewinding of the hose on the drum.

Proceed to pressurise the equipment.

Check that there are no leaks at the hose junction points with the inlet joint and the centre pin (connection point of the outlet hose). Check for leaks also in rotation by having the drum make 3 revolutions in unwinding and rewinding. In the case of an air hose reel, leak detection sprays can be used to detect compressed air leaks.

With the equipment under pressure, completely unwind the hose and check that there are no leaks along the hose.

## INSTRUCTIONS FOR USE

- Pull the hose out to the desired length
- Secure the hose in the safety position (tooth engaged in the rack).
- At the end of the job, to rewind the hose, pull the hose further out until the tooth is disengaged from the stop rack, then rewind the hose by accompanying it with two hands without ever letting go.
- Do not leave the hose unattended, always rewind the hose in the absence of personnel.

## MAINTENANCE AND CHECKS



MAINTENANCE	MAINTENANCE TYPE	OPERATOR	FREQUENCY
Cleaning	Routine.	User.	Weekly. Before each use if the installation is in a particularly dusty environment. See CLEANING, p. 35.
Checking pipes and fittings.	Routine.	User.	Weekly. If signs of degradation are noted on the surface, stop work and proceed with replacement.
External surface inspection.	Routine.	User.	Monthly. If you see signs of corrosion on the external surfaces, do not use the equipment.
Spring operation check.	Routine.	User.	6 months.
Leak test. Use a foam spray for leak detection.	Routine.	Specialised operator.	6 months.
Wall or ceiling hose reel wall fixing check, including screws and plugs.	Routine.	Specialised operator.	6 months.
Replacing hoses.	Extraordinary.	Specialised operator.	Immediate replacement if signs of deterioration of the hose are noticed during weekly inspections. Replace the hose at least once every 5 years.
Joint replacement.	Extraordinary.	Specialised operator.	Immediate replacement if signs of deterioration of the joint are noticed during weekly inspections. <b>For ATEX environments:</b> at least once every 5 years.
Spring replacement.	Extraordinary.	Specialised operator.	<b>For ATEX environments:</b> check the condition of the spring annually. If signs of corrosion are noticed, replace it immediately. <b>For ATEX environments:</b> every 7 years replace the spring or no more than 15.000 winding and unwinding cycles. For reasons of safety and product integrity, please contact an authorised centre with specialised personnel for this type of operation.

GB

Replacement of parts must only be carried out by qualified personnel.

**⚠ In particular, opening the spring casing is a potential hazard for the operator if not performed by specially trained personnel.**

If any abnormalities are observed, stop using the equipment and contact the manufacturer or the dealer from which it was purchased, without delay.

If repairs are needed, only original spare parts and expressly authorised by the manufacturer should be used. Spare parts exploded views are available at [www.raasm.com](http://www.raasm.com) in the support section.

**CAUTION: Lubricating fluids and greases used in the maintenance of the product must be disposed of according to the regulations in force in the country of origin.**

### CLEANING

Clean all parts of the equipment including the fittings and the joint.

**⚠ Do not clean the hose reel using direct jets of water at high pressure.**

- The jet could remove the grease in the spring holder casing and the one in the swivel joint, thereby affecting its operation.
- You should remove dust deposits and layered deposits, especially on rotating parts such as the inside and outside of the drum.
- For routine cleaning of the hose reel use a wet (water) cloth and dry at the end of work.
- When cleaning models with a technopolymer or painted drum, the use of dry cloths could cause electrostatic charge build-up.

**CAUTION for ATEX environments: after each service, carry out an earthing check (see chapter EARTHING, page 33).**

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The hose struggles to rewind.	Low preload.	Increase the spring preload (see chapter INCREASING SPRING PRELOAD, page 30).
	The hose is too rigid.	Replace the hose (see chapter HOSE REMOVAL ÷ HOSE REPLACEMENT, page 32).
	Damaged spring.	Replace the spring. For reasons of safety and product integrity, please contact an authorised service centre with specialised personnel for this type of operation.
There is a drop in pressure.	Leak.	Visually check the joints. If it is a hose reel for compressed air, use a leak detector.
Reduced flow rate.	Hose obstruction.	Check that the hose is not obstructed by dirt or crushed.
The rollers of the hose guide nozzle are noisy or do not move.	Absence of lubricant.	Apply lubricant suitable for use on technopolymer.
The hose reel has no stop positions.	Broken stop tooth, stop tooth spring or rack.	Replace components.
The hose reel vibrates.	Loosening of fixing screws.	Tighten screws.
The stop tooth disengages from the rack.	Water hammer generated by closing the fluid passage too quickly could cause the drum to rotate and disengage from its stop position.	<ul style="list-style-type: none"> <li>- Always operate the shut-off valves slowly.</li> <li>- Slowly release the dispensing gun lever.</li> <li>- If the problem persists, please contact the RAASM technical department at <a href="mailto:technicaldept@raasm.com">technicaldept@raasm.com</a>.</li> </ul>

## DISPOSAL



**CAUTION: when disposing of the hose reel, pay attention to the rewind spring, report the presence of the spiral spring inside the drum to the authorised disposer.**

**CAUTION: disassembly of the spiral spring must only be carried out by specialised and authorised personnel.**

**CAUTION: when disposing of the hose reel, pay attention to the spiral spring.**

**CAUTION: the separation of all hose reel components must be carried out by two people.**

**The separation of all components must be done outside an ATEX environment.**

**Separation of components must be performed by qualified and authorised operators.**

Please contact an authorised waste disposal company to dispose of the product.

Apart from the rewind spring, the individual parts that make up the equipment are easily separable in order to facilitate the separate disposal of the various materials upon disposal. Such disposal must follow the regulations in force in the country of origin. To differentiate materials once separated, please refer to the chapter "description of components".

Follow the procedure below to separate the components:

1. Disconnect the inlet and outlet hoses. See instructions in chapter HOSE REMOVAL ÷ HOSE REPLACEMENT, p. 32.

**CAUTION: heat the fittings to facilitate unscrewing (presence of glue).**

**CAUTION: the spring must be unloaded during these operations.**

**CAUTION: hoses may contain residues of used fluids. Use gloves and goggles both for protection against chemical hazards to avoid contact with the substances contained.**

2. Separate the hose stop buffer from the outlet hose.
3. Unscrew the connection screws of the arms and remove them.
4. Separate the hose guide rollers from the rest of the arm components.
5. Remove the stop tooth and rack.
6. Remove the screws holding the bushings.
7. Pull the drum out of the support brackets.
8. Separate the bushings from the drum.

# EU DECLARATION OF CONFORMITY pursuant to Annex II Part A of the Directive 2006/42/EC



**RAASM S.p.A.**  
Via Marangoni, 33  
36022 S. Zeno di Cassola - Vicenza - Italy

GB

DECLARES THAT the machine models listed below, hose reels, comply in all their parts with the following APPLICABLE EUROPEAN DIRECTIVES: 2014/34/EU

**Protection method**             **II 2GD Ex h IIB IIIC T4 T135 °C Gb/Db X**

AND ARE IN COMPLIANCE WITH THE FOLLOWING HARMONIZED STANDARDS:  
UNI EN ISO 12100 : 2010, UNI EN 1127-1 : 2019, UNI EN 80079-36 : 2016, UNI EN 80079-37 : 2016.

**Mod. 420, 421, 422, 423, 424, 430, 431, 432, 433, 434, 435, 436, 437, 440, 450, 520, 521, 522, 523, 524, 530, 531, 532, 533, 534, 535, 536, 537, 539, 540, 541, 542, 543, 544, 545, 546, 548, 549, 550, 551, 552, 553, 554, 560, 561, 562, 563, 564, 565, 566, 585**

Models are identification codes different from series: refer to the label to identify the exact model and be sure of the level of ATEX protection.  
If you purchase a model without a hose, fit a static dissipating hose to maintain the same level of ATEX protection.

Serial number: see product marking

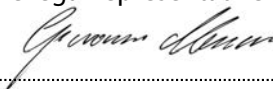
Year of construction: see product marking

The legal entity authorised to compile the technical file is RAASM S.p.A. via Marangoni, 33 – 36022 S.Zeno di Cassola (VI)

The "Hose reel Series 430-530-540-560" technical file is deposited at TÜV Italia S.r.l. (receipt of deposit of technical file no. TUV IT 2018 ATEX 008 AR).

Date  
**05/2023**

Place  
**S. Zeno di Cassola**

The legal representative  
  
.....  
Giovanni Menon

# EU DECLARATION OF CONFORMITY pursuant to Annex II Part A of the Directive 2006/42/EC



**RAASM S.p.A.**  
Via Marangoni, 33  
36022 S. Zeno di Cassola - Vicenza - Italy

DECLARES THAT the machine models listed below, hose reels, comply in all their parts with the following APPLICABLE EUROPEAN DIRECTIVES: 2014/34/EU

Protection method



**II 3 GD Ex h Gc/Dc X**

AND ARE IN COMPLIANCE WITH THE FOLLOWING HARMONIZED STANDARDS:

UNI EN ISO 12100 : 2010, UNI EN 1127-1 : 2019, UNI EN 80079-36 : 2016, UNI EN 80079-37 : 2016.

**Mod. 9430, 9431, 9432, 9433, 9434, 9450**

**Mod. 288, 290, 292, 328, 330, 332, 378, 380, 382, 390, 391, 392, 393, 438, 350-20bar, 352-20bar, 380-20bar, 420-20bar, 421-20bar, 422-20bar, 423-20bar, 424-20bar, 430-20bar, 431-20bar, 432-20bar, 433-20bar, 434-20bar, 520-20bar, 521-20bar, 522-20bar, 523-20bar, 524-20bar, 530-20bar, 531-20bar, 532-20bar, 533-20bar, 534-20bar, 540-20bar, 541-20bar, 542-20bar, 543-20bar, 544-20bar, 550-20bar, 551-20bar, 552-20bar, 553-20bar, 554-20bar, 560-20bar, 561-20bar, 562-20bar, 563-20bar, 564-20bar**

Models are identification codes different from series: refer to the label to identify the exact model and be sure of the level of ATEX protection.

If you purchase a model without a hose, fit a static dissipating hose to maintain the same level of ATEX protection.

Serial number: see product marking

Year of construction: see product marking

The legal entity authorised to compile the technical file is RAASM S.p.A. via Marangoni, 33 – 36022 S.Zeno di Cassola (VI)

Date

**05/2023**

Place

**S. Zeno di Cassola**

The legal representative

Giovanni Menon



RAASM S.p.A.



### UK DECLARATION OF CONFORMITY

Manufacturer details	<b>RAASM S.p.A.</b>	
	Via Marangoni, 33 36022 S.Zeno di Cassola (VI) Italy	Piva 02313320240
	<a href="mailto:info@raasm.com">info@raasm.com</a>	<a href="http://www.raasm.com">www.raasm.com</a>

**The manufacturer hereby declare under his sole responsibility that the product:**

Description:	<b>Hose reel</b>
--------------	------------------

Model:	<b>Mod. 420, 421, 422, 423, 424, 430, 431, 432, 433, 434, 435, 436, 437, 440, 450, 520, 521, 522, 523, 524, 530, 531, 532, 533, 534, 535, 536, 537, 539, 540, 541, 542, 543, 544, 545, 546, 548, 549, 550, 551, 552, 553, 554, 560, 561, 562, 563, 564, 565, 566, 585</b>
--------	---

**Complies with the prescriptions of the following UK Regulations and designated standards:**

The Supply of Machinery (Safety) Regulations 2008 No. 1597 [as amended]	HEALTH AND SAFETY 2008 No. 1597
Equipment and Protective System Intended for use in Potentially Explosive Atmospheres Regulation 2016	HEALTH AND SAFETY 2016 No. 1107



Explosive atmospheres -Explosion prevention and protection - Part 1: Basic concepts and methodology	BS EN 1127-1:2019
Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements (ISO80079-36:2016)	BS EN ISO 80079-36:2016

**The manufacturer declare furthermore under his sole responsibility**

The Responsible Person for drawing up the technical documentation is:	Name	<b>Marco</b>
	Surname	<b>Lunardon</b>

The technical file "Hose reel series 430-530-540-560" is filed with TÜV Italia S.r.l. (TUV IT 2018 ATEX 008AR)

The Authorised Representative in UK is:	<b>HEALTH &amp; SAFETY PROJECT ENGINEERING LTD</b>
	Address: 47 Newtown Road, Bishop's Stortford, CM23 3SB, Hertfordshire, UK
	e-mail: <a href="mailto:ivano.manfrin@engineer.uk.net">ivano.manfrin@engineer.uk.net</a>

Manufacturer		Date	Authorized Representative in UK	
Name	<b>Giovanni</b>	<b>03/05/2023</b>	Name	<b>Ivano</b>
Surname	<b>Menon</b>		Surname	<b>Manfrin</b>
Role	<b>Legal representative</b>		Role	<b>Designated Authorised Representative in UK</b>
Sign			Sign	



**RAASM S.p.A.**



**UK DECLARATION OF CONFORMITY**

Manufacturer details	<b>RAASM S.p.A.</b>	
	Via Marangoni, 33 36022 S.Zeno di Cassola (VI) Italy	Piva 02313320240
	<a href="mailto:info@raasm.com">info@raasm.com</a>	<a href="http://www.raasm.com">www.raasm.com</a>

**The manufacturer hereby declare under his sole responsibility that the product:**

Description:	<b>Hose reel</b>
Model:	<b>Mod. 9430, 9431, 9432, 9433, 9434, 9450 Mod. 288, 290, 292, 328, 330, 332, 378, 380, 382, 390, 391, 392, 393, 438, 350-20bar, 352-20bar, 380-20bar, 420-20bar, 421-20bar, 422-20bar, 423-20bar, 424-20bar, 430-20bar, 431-20bar, 432-20bar, 433-20bar, 434-20bar, 520-20bar, 521-20bar, 522-20bar, 523-20bar, 524-20bar, 530-20bar, 531-20bar, 532-20bar, 533-20bar, 534-20bar, 540-20bar, 541-20bar, 542-20bar, 543-20bar, 544-20bar, 550-20bar, 551-20bar, 552-20bar, 553-20bar, 554-20bar, 560-20bar, 561-20bar, 562-20bar, 563-20bar, 564-20bar</b>

**Complies with the prescriptions of the following UK Regulations and designated standards:**

The Supply of Machinery (Safety) Regulations 2008 No. 1597 [as amended]	<b>HEALTH AND SAFETY 2008 No. 1597</b>
Equipment and Protective System Intended for use in Potentially Explosive Atmospheres Regulation 2016	<b>HEALTH AND SAFETY 2016 No. 1107</b>



**II 3 GD Ex h Gc/Dc X**

Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology	<b>BS EN 1127-1:2019</b>
Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements (ISO 80079-36:2016)	<b>BS EN ISO 80079-36:2016</b>

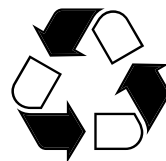
**The manufacturer declare furthermore under his sole responsibility**

The Responsible Person for drawing up the technical documentation is:	Name	<b>Marco</b>
	Surname	<b>Lunardon</b>
The Authorised Representative in UK is:	<b>HEALTH &amp; SAFETY PROJECT ENGINEERING LTD</b>	
	Address: 47 Newtown Road, Bishop's Stortford, CM23 3SB, Hertfordshire, UK	
	e-mail: <a href="mailto:ivano.manfrin@engineer.uk.net">ivano.manfrin@engineer.uk.net</a>	

Manufacturer		Date	Authorized Representative in UK	
Name	<b>Giovanni</b>	<b>03/05/23</b>	Name	<b>Ivano</b>
Surname	<b>Menon</b>		Surname	<b>Manfrin</b>
Role	<b>Legal representative</b>		Role	<b>Designated Authorised Representative in UK</b>
Sign			Sign	







La costruttrice declina ogni responsabilità per le possibili inesattezze contenute nel presente opuscolo imputabili ad errori di stampa o di trascrizione, per danni a cose o persone nel caso non vengano osservate tutte le norme antinfortunistiche utili al normale esercizio e regolare funzionamento, nonché per montaggi, installazioni ed uso non eseguiti in conformità alle sue indicazioni ed istruzioni; si riserva inoltre di apportare senza preavviso ed in totale libertà operativa ogni e qualsiasi variante e miglioria d'ordine funzionale-tecnico ed estetica. Verificate nel nostro sito la presenza di documentazione aggiornata.

The manufacturer declines all responsibility for possible inaccuracies contained in this booklet due to printing or transcription errors, for damage to property or persons, in case all the safety regulations useful to normal and regular operation are not complied with, as well as, for any assembly, installation and use which is not carried out in conformity with the directions and instructions provided. Moreover, the manufacturer reserves the right to make any technical-functional and design change or improvement, without any previous notice and with the utmost operational freedom. Check out our website for updated documentation.

- PRODOTTO RAASM -  
- PRODUCT RAASM -  
- PRODUIT RAASM -  
- PRODUKT VON RAASM -  
- PRODUCTO RAASM -

**RAASM** S.p.A. - 36022 S.ZENO DI CASSOLA -VI- ITALIA  
Tel. 0424 571150 - Fax 0424 571155  
[www.raasm.com](http://www.raasm.com) - e-mail: [info@raasm.com](mailto:info@raasm.com)  
MADE IN ITALY