



ISTRUZIONI D'USO E MANUTENZIONE - INSTRUCTIONS FOR USE AND MAINTENANCE
INSTRUCTIONS D'UTILISATION ET D'ENTRETIEN - GEBRAUCHS- UND WARTUNGSANLEITUNG
INSTRUCCIONES DE USO Y MANTENIMIENTO - ΟΔΗΓΙΕΣ ΧΡΗΣΗΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗΣ
INSTRUKCJA OBSŁUGI I KONSERWACJI - NAVODILA ZA UPORABO IN VZDRŽEVANJE
INSTRUCȚIUNI DE UTILIZARE ȘI ÎNTREȚINERE - KÄYTTÖ- JA HUOLTO-OHJEET
BRUKS- OG VEDLIKEHOLDSANVISNING - NAUDOJIMO IR TECHNINĖS PRIEŽIŪROS INSTRUKCIJA
LIETOŠANAS UN APKOPES INSTRUKCIJA - 使用与保养说明
إرشادات الاستخدام والصيانة - UPUTSTVA ZA UPOTREBU I ODRŽAVANJE
NÁVOD K POUŽITÍ A ÚDRŽBĚ - INSTRUÇÕES DE USO E MANUTENÇÃO
BRUKS- OCH UNDERHÅLLSANVISNING - UPUTE ZA UPORABU I ODRŽAVANJE



For:

- MAXIVAREM LS	40-50-60L
- EXTRAVAREM LR	12-18-25-35-40L
- MAXIVAREM LR	35-50-60 L
- SOLARVAREM	8-12-18-19-25-40 L
- EXTRAVAREM LC	8-12-18-24-25-40 L
- IDROVAREM	19-24 L
- INTERVAREM LS/LC	8-12-19-20-24-25-40 L; 19BP-20BP L
- INOXVAREM	8-20 L; 20BP L
- PLUSVAREM	8-20-50-60 L
- ULTRAVAREM	8-12-19-24-25-60 L; 19BP-20BP L
- AQUAVAREM	8-19-20-24-40-60 L
- STARVAREM	18-35-50-80-100-150 L
- MAXIVAREM LC	50-60-80-100 L

DICHIARAZIONE DI CONFORMITA' UE - EU DECLARATION OF CONFORMITY- DÉCLARATION UE DE CONFORMITÉ
EU-KONFORMITÄTSEKTLÄRUNG - DECLARACIÓN DE CONFORMIDAD UE
ΔΗΛΩΣΗΣ ΣΥΜΜΟΡΦΩΣΗΣ UE - DEKLARACJA ZGODNOŚCI WE
IZJAVA O SKLADNOSTI EU-DECLARAȚIE DE CONFORMITATE UE - EU-VAATIMUSTENMUKAISUUSVAKUUTUS
EU-SAMSVARSEKTLÆRING - EB ATITIKTIES DEKLARACIJA - ES ATBILSTĪBAS DEKLARĀCIJA
UE符合性声明 - “UE” إعلان مطابقة الاتحاد الأوروبي - EU IZJAVA O SKLADNOSTI - EU PROHLÁŠENÍ O SHODĚ
DECLARAÇÃO DE CONFORMIDADE UE - EU-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE - EU DEKLARACIJA O USAGLAŠENOSTI

Aggiornato 20/12/2021

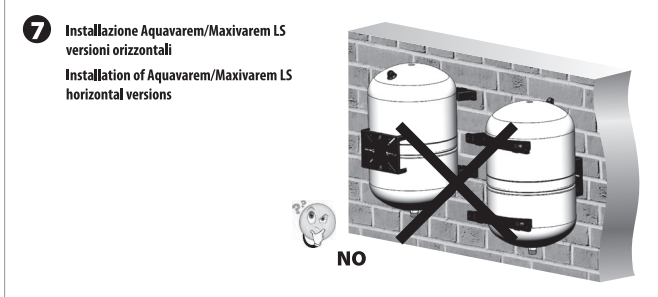
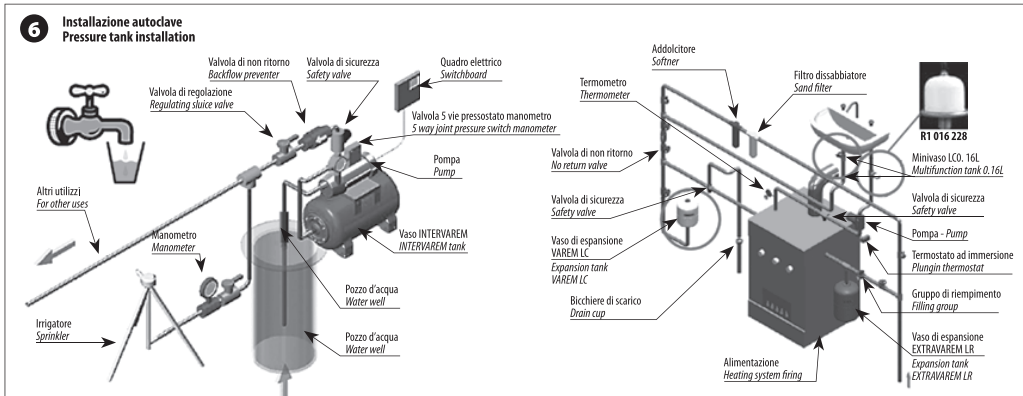
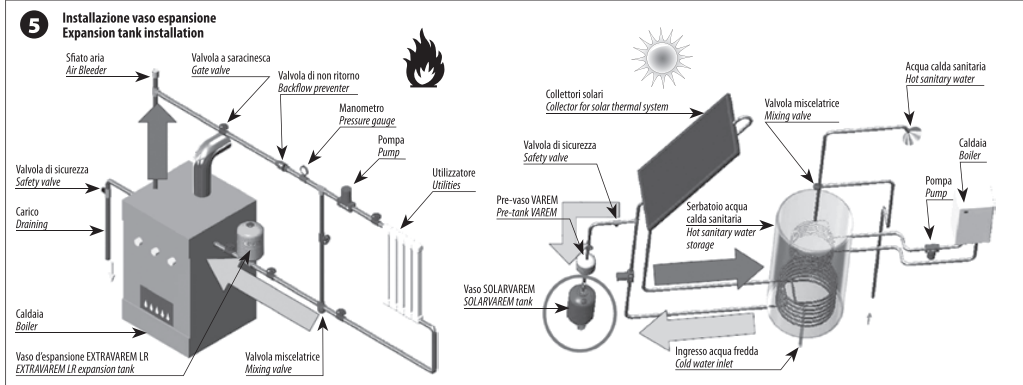
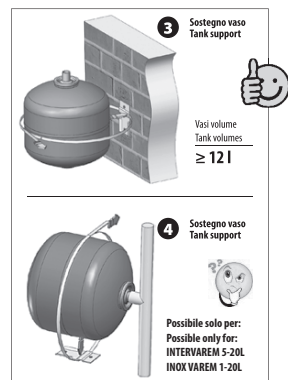
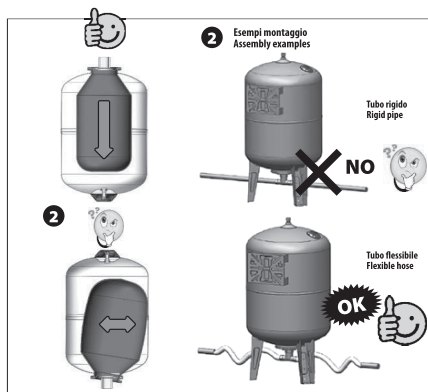
Copia conforme all'originale

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According to

EN 13831

CE 0948

Fluidi gruppo 2

Group 2 fluids

ENTE NOTIFICATO

NOTIFIED BODY

TÜV Italia s.r.l.

Via Carducci, 125

Ed. 23 I-20009

Sesto San Giovanni (MI)

VAREM PRODUCTS	VOLUME (L)	MODUL D	MODUL B	DRAWING
MAXIVAREM LS	750-1000	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-21-01-278715-17042	M021A-CE
MAXIVAREM LS	2000	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-21-01-278715-17042	M034A-CE
MAXIVAREM LS	80-100-150-200-300-500	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-11-278715-15134	M025A-CE
PLUSVAREM	20-50-80-100-200-300-495	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-21-02-278715-17242	M033A-CE
MAXIVAREM LC	150-200-250-300-400	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-01-278715-13949 Rev.2	M028A-CE
MAXIVAREM LR	80-100-150-200-250-300-400-500-600-700	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-11-278715-15134	M029A-CE
MAXIVAREM LR	1000	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-16-04-003769-9701	M027B-CE
SOLARVAREM	150-200-300-500	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-01-278715-13949 Rev.2	M032A-CE
ZINCAREM	100-200-300-500	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-11-278715-15134	M025A-CE
ULTRAVAREM	80-100	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-11-278715-15134	M025A-CE
INOXVAREM	50-100-200-300-500	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-17-02-278715-10784	INOX-LS-CE
AQUAVAREM	100-140-200-280-430	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-01-278715-13942 Rev.2	M035A-CE
STARVAREM (6bar)	200-280	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-01-278715-13943 Rev.1	M036A-CE
STARVAREM (10bar)	100-150-200-280-430	PED-0948-QSD-419-14 REV.004	TIS-PED-MI-19-01-278715-13942 Rev.2	M035A-CE

VAREM PRODUCTS	VOLUME (L)	MODUL D1	DRAWING	PS (bar)	PT (bar)	Standard pre-charge (bar)	TS (°C)
IDROVAREM-INTERVAREM	24(*)-40	PED-0948-QSD1-391-14 REV.003	M001A-CE	8/10(*)	12/15(*)	2/3.5(*)	-10 / +99
MAXIVAREM LS	40-50-60	PED-0948-QSD1-391-14 REV.003	M002A-CE	10	15	2	-10 / +99
MAXIVAREM LC	50-60-80-100	PED-0948-QSD1-391-14 REV.003	M012A-CE	10	15	2	-10 / +99
EXTRAVAREM LC	40	PED-0948-QSD1-391-14 REV.003	M004A-CE	8	12	3.5	-10 / +99
EXTRAVAREM LR	40	PED-0948-QSD1-391-14 REV.003	M005A-CE	5	7.5	1.5	-10 / +99
MAXIVAREM LR	35(**)-50-60	PED-0948-QSD1-391-14 REV.003	M006A-CE	6 / 5(**)	9 / 7.5(**)	1.5	-10 / +99
SOLARVAREM	25(*)-40-50-60-80-100	PED-0948-QSD1-391-14 REV.003	M007A-CE	8 / 10(*)	12 / 15 (*)	2.5	-10 / +99 (130)
ULTRAVAREM	24-60	PED-0948-QSD1-391-14 REV.003	M008A-CE	10	15	2	-10 / +99
ZINCAREM	60	PED-0948-QSD1-391-14 REV.003	M002A-CE	10	15	2	-10 / +99
AQUAVAREM	24-40-60V-60H-100H	PED-0948-QSD1-391-14 REV.003	M010A-CE	10	15	2	-10 / +99
STARVAREM	35-50-80-100-150	PED-0948-QSD1-391-14 REV.003	M011A-CE	6	9	1.5	-10 / +120

(*) Bolted flange / flangia avvitata

MODUL A

According to

EN 13831

CE

Fluidi gruppo 2

Group 2 fluids

VAREM PRODUCTS	VOLUME (L)	DRAWING	PS (bar)	PT (bar)	Standard precharge (bar)	TS (°C)
IDROVAREM-INTERVAREM	8-12-19-20-24-25	M001A-CE	8	12	2	-10 / +99
PLUSVAREM	8	M003A-CE	16	24	2	-10 / +99
EXTRAVAREM LC	8-12-18-24-25	M004A-CE	8	12	3.5	-10 / +99
EXTRAVAREM LR	12-18-25	M005A-CE	6	9	1.5	-10 / +99
SOLARVAREM	8-12-18-25	M007A-CE	8	12	2.5	-10 / +99 (130)
INOXVAREM	8-20	M009A-CE	8	12	2	-10 / +99
AQUAVAREM	19-20	M010A-CE	10	15	2	-10 / +99

CE

TÜV Italia s.r.l. Via Carducci, 125
Ed. 23 I-20009 Sesto San Giovanni (MI)

CE 0948

ENTE NOTIFICATO

NOTIFIED BODY

Bovolenta, 20/12/2021

Copia conforme all'originale
CE02-Mod.D - UNICO - (Revisione 12-2021)

VAREM[®]
Amministratore Delegato
Cooke Industries

Categoria prodotti (2014/68/UE)

Products category according to (2014/68/UE)

PS = pressure service (see product label) / (vedere etichetta prodotto)

V = volume (see product label) / (vedere etichetta prodotto)

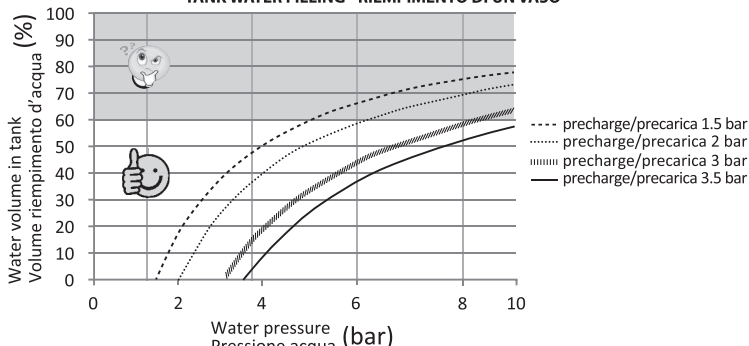
- $PS \times V \leq 50$ without CE marking / senza marchio CE (Art. 4.3)
- $50 < PS \times V \leq 200$ Category I / Categoria I CE (modul A)
- $200 < PS \times V \leq 1000$ Category II / Categoria II CE0948 (modul D1)
- $1000 < PS \times V \leq 3000$ Category III / Categoria III CE0948 (modul B+D)
- $PS \times V > 3000$ Category IV / Categoria IV CE0948 (modul B+D)

Example/Esempio

100 Liter tank, PS=10 bar → $PS \times V = 1000$ → category II

Vaso 100 Litri, PS=10 bar → $PS \times V = 1000$ → categoria II

TANK WATER FILLING - RIEMPIIMENTO DI UN VASO



INSTRUCTIONS FOR USE AND MAINTENANCE

1. General information.

VAREM membrane expansion vessels and/or pressure tanks are manufactured in accordance with the essential safety requirements of European Directive 2014/68/EU. These instructions for use are drawn up in compliance with and for the purpose set forth in article 3.4 - Attachment I to Directive 2014/68/EU and are enclosed with the products.

2. Product description and intended use.

- Heating: VAREM expansion vessels are used to absorb the increase in water volume due to thermal expansion caused by the rise in temperature, thereby limiting the increase in pressure in the system.

- VAREM membrane pressure tanks are necessary for long-lasting, regular operation of sanitary water distribution and pumping systems, constituting a reserve of pressurized water and thereby limiting pump intervention.

- All vessels and/or pressure tanks are designed to be used with group 2 fluids; any other type of fluid is not permitted (unless otherwise specifically approved in writing by VAREM).

VAREM expansion vessels and pressure tanks consist of a closed metal container fitted with an internal membrane. VAREM membranes have a balloon-like conformation and feature a flange attachment, which prevents water coming into direct contact with the metal sides of the vessel (the AQUAVAREM line is instead equipped with a diaphragm membrane featuring a protection liner on the metal wall of the vessel; the STARVAREM heating line is simply fitted with a diaphragm membrane and has no protection liner).

Do not hang the horizontal type Aquavarem and Maxivarem LS vessels to the wall (fig.7) For the Aquavarem 19-25-40L expansion vessels, follow the installation instructions in figure 8 (provide suitable supports if necessary, see figure 3).

3. Technical Features.

The technical features of the expansion vessels and/or pressure tanks are indicated on the plate attached to each individual product (article 3.3 - Attachment I to Directive 2014/68/EU). The label indicates: Code, Serial no., Date of manufacture, Capacity, Operating temperature (TS), Pre-charge, Maximum operating pressure (PS).

The label is attached to the VAREM expansion vessel and/or pressure tank and must not be removed or the information displayed modified. The products must be used in compliance with the technical features indicated on the VAREM label and the prescribed limits must under no circumstances be violated.

4. Installation.

- **Correct dimensioning of the vessel according to its use;** an incorrectly dimensioned vessel and/or pressure tank can cause damage to persons and objects. Dimensioning must be performed by specialised technicians.

- **Correct installation performed by specialised technicians** in compliance with national regulations, observing the prescribed tightening torque values of the fitting (fig. 1) and the assembly suggestions (fig. 2). If several tanks are installed in series or in parallel, they must be connected at the same height. Should vessels with a volume greater than 12 litres be mounted with the fitting facing upwards, an appropriate support will be necessary (fig. 3); do not install the tank cantilevered if it is not supported (fig. 4).

- Heating vessels must be installed in close proximity to the boiler and connected to the return or back-flow piping (fig. 5).

- Pressure tanks must be positioned in the direction of the pump flow (fig. 6). Expansion vessels having a capacity of greater than 300L must be anchored to the ground. Install the expansion vessel in a suitable place and in a such way as to prevent damage due

to water leaks.

- **Pressure on the safety valve, which must be present on the system, must be lower than or equal to the maximum pressure of the vessel/pressure tank;** should the safety valve be missing and the maximum operating pressure exceeded, damage may occur to persons, animals and objects.

- **The pre-charge pressure stated on the label is intended for standard applications;** it can be adjusted to 0.2 bars lower than the system minimum pressure (*) but always within a range of 0.5-3.5 bars. The pre-charge must be checked (by means of a calibrated pressure gauge applied on the valve) before installing the product.

- Prevent corrosion of the painted tank by not exposing it to aggressive environments, including during storage. For storage and use in aggressive environments, use suitable products (INOXVAREM and/or ZINCVAREM range).

Make sure that the tank does not constitute a conductive part and that there is no stray current in the system in order to prevent the risk of tank corrosion.

5. Maintenance.

Maintenance and/or replacement must be carried out by specialised, authorised technicians in compliance with current national regulations, making particularly sure that:

- none of the electrical equipment on the system is live;

- the expansion vessel has cooled down sufficiently;

- the expansion vessel and/or pressure tank is completely drained of water and the air pressure is discharged before performing any operations on the same. The presence of pre-charge air is very dangerous and might originate the projection of pieces, which may cause serious damage to persons, animals and objects. The presence of water in the tank considerably increases its weight.

Regular checks:

- Pre-charge: check that the pre-charge pressure corresponds to the value indicated on the label with a tolerance of +/-20% once a year. IMPORTANT: to perform this operation, the water must be emptied completely from the tanks (empty tanks).

- If the vessel and/or pressure tank is not charged, set the pre-charge value to the same value indicated on the label.

Visually check once a year that no corrosion has formed on the outside of the tank; in the event of corrosion the tank MUST be replaced.

To replace the membrane (where possible) observe the procedure and the tightening torque values indicated on the website www.varem.com

6. Safety Precautions and residual risks.

Failure to comply with the following provisions may cause lethal injuries, damage to objects and property and make the tank unusable. **The pre-charge pressure must be adjusted within the nominal values in a range of 0.5-3.5 bars.** It is forbidden to drill and/or flame-weld the expansion vessel and/or pressure tank. The expansion vessel and/or pressure tank must never be uninstalled when in operation. Do not exceed the maximum operating temperature and/or maximum pressure permitted. It is forbidden to use the expansion vessel and/or pressure tank for use other than its intended use. All VAREM expansion vessels and/or pressure tanks are inspected, tested and packed before being dispatched. The manufacturer is not liable for any damage caused by incorrect transport and/or handling in the event of failure to use the most suitable means, which guarantee integrity of the products and safety of persons. VAREM DOES NOT accept any responsibility whatsoever for damage/injury caused to persons and objects deriving from improper dimensioning, use, installation or operation of the product or integrated system. **Do not use the LR ranges for sanitary use.**

(*) The minimum pressure of a PRESSURE TANK system corresponds to the pressure switch start value, while that of the EXPANSION VESSEL corresponds to a cold system without circulation.

EXPANSION VESSEL

PROBLEM	CAUSE	REMEDY
System safety valve intervenes	Inadequate tank volume	Replace with tank having correct volume
	Tank discharged	Restore pre-charge
	Inadequate pre-charge	Check that the pre-charge value is 0.2 bars lower than the pressure of a cold system without circulation (within a range of 0.5-3.5 bars)
Tank very hot	Installation on boiler flow piping	Install tank on return piping

PRESSURE TANK

PROBLEM	CAUSE	REMEDY
System safety valve intervenes	Inadequate tank volume	Replace with tank having correct volume
	Tank discharged	Restore pre-charge
	Inadequate pre-charge	Check that the pre-charge value is 0.2 bars lower than the pressure switch start value (within a range of 0.5-3.5 bars)
Tank very hot	Excessive compression of pre-charge air	Replace with tank having correct volume
Frequent pump interventions	Inadequate tank volume	Replace with tank having correct volume
	Inadequate pre-charge	Check that the pre-charge value is 0.2 bars lower than the pressure switch start value (within a range of 0.5-3.5 bars)
Noisy tank	Tank does not discharge properly	Check that the pre-charge value is 0.2 bars lower than the pressure switch start value (within a range of 0.5-3.5 bars)
Vibrations on tank	Defective tank fixing or inadequate tank discharge	Check that the pre-charge value is 0.2 bars lower than the pressure switch start value (within a range of 0.5-3.5 bars)

EU DECLARATION OF CONFORMITY

Varem S.p.a - via Sabbioni, 2 - 35024 Bovolenta (PD) - declares that this Declaration of Conformity is released under its own and sole responsibility and covers the following products:

Description of products: expansion vessels and/or pressure tanks

Trademark: Varem

Model/Type: see cover of this Declaration of Conformity

The expansion vessels and/or pressure tanks referred to in the above declaration comply with the relevant Union harmonisation Legislation: Pressure Equipment Directive 2014/68/EU (PED).

For category I according to module A, for category II according to module D1, categories III and IV in accordance with forms B+D (see table on page 3).

The following harmonised Standards have been applied: EN13831:2007.

This Declaration of Conformity covers expansion vessels and pressure tanks bearing the CE mark and included in categories I, II, III and IV. It must not be considered for equipment included in the category referred to in article 4.3 of Directive 2014/68/EU.

