



**AZIENDA CON SISTEMA  
DI GESTIONE QUALITÀ  
CERTIFICATO DA DNV GL  
= ISO 9001 =**

**VASI DI ESPANSIONE PER ACQUA SANITARIA E IMPIANTI DI RISCALDAMENTO**

Domestic hot water and heating systems expansion tanks / Surpresseurs à vessie pour eau sanitaire et chauffage / AusdehnungsgefäÙe für Brauchwasser Und Heizungsanlagen / Vasos de expansión para agua sanitaria y calefacción / Vasos de expansão para água sanitária e sistemas de aquecimento

**D, DV, DP, DPV, DPH**

**VASI DI ESPANSIONE PER IMPIANTI DI RISCALDAMENTO**

Expansion tanks for heating systems / Vases d'expansion pour chauffage / AusdehnungsgefäÙe für Heizungsanlagen / Vasos de expansión para calefacción / Vasos de expansão para sistemas de aquecimento

**ER, ERCE**

**VASI DI ESPANSIONE PER IMPIANTI SOLARI**

Expansion tanks for solar systems / Vases pour installations solaires / AusdehnungsgefäÙe für Solaranlagen / Vasos para instalaciones solares / Vasos de expansão para sistemas solares

**DS, DSV**

## **NORME DI INSTALLAZIONE, USO E MANUTENZIONE**

**INSTALLATION AND MAINTENANCE MANUAL**

**MANUEL D'INSTALLATION ET D'ENTRETIEN**

**ANLEITUNG FÜR MONTAGE, GEBRAUCH UND WARTUNG**

**MANUAL DE INSTALACIÓN, USO Y MANTENIMIENTO**

**MANUAL DE INSTALAÇÃO, UTILIZAÇÃO E MANUTENÇÃO**



**AVVERTENZE GENERALI / GENERAL WARNINGS / AVERTISSEMENTS GÉNÉRAUX /  
ALLGEMEINE WARNUNGEN / ADVERTENCIAS GENERALES / AVISOS GERAIS**

Il mancato rispetto delle avvertenze e delle indicazioni contenute in questo manuale comporta l'invalidazione della garanzia / *Failure to comply with the prescriptions of this manual will invalidate product's warranty* / Le non-respect des avertissements et des indications contenus au sein du présent manuel entraîne la perte de la garantie / *Bei Nichtbeachtung der in diesem Handbuch enthaltenen Hinweise und Angaben erlischt die Garantie* / La inobservancia de las advertencias e indicaciones contenidas en este manual invalidará la garantía. / *O desrespeito pelos avisos e indicações contidos neste manual invalidará a garantia*

Rispettare sempre le leggi e norme vigenti nel paese di installazione / *Always follow norms and regulations of the country where the product is installed* / Respectez toujours les lois et règles en vigueur dans le pays d'installation / *Beachten Sie immer die im Installationsland geltenden Gesetze und Vorschriften* / Respete siempre las leyes y reglamentos vigentes en el país de instalación / *Observar sempre as leis e regulamentos em vigor no país de instalação*

I vasi di espansione Elbi sono progettati per essere utilizzati con acqua oppure con miscele di acqua e glicole fino ad un rapporto 70:30; e con aria o azoto sul lato pre-carica / *Elbi expansion tanks are designed for use with water or with water – glycol mixture up to a 70:30 ratio; they shall be pre-charged using compressed air or nitrogen* / Les vases d'expansion Elbi sont conçus pour être utilisés avec de l'eau ou avec des mélanges d'eau et de glycol jusqu'à un rapport 70:30; et avec de l'air ou de l'azote du côté préchargement / *Elbi-Ausdehnungsgefäße sind für den Einsatz mit Wasser oder Wasser-Glykol-Gemischen bis zu einem Verhältnis von 70:30 und mit Luft oder Stickstoff auf der vorgeladenen Seite vorgesehen* / Los vasos de expansión Elbi están diseñados para ser utilizados con agua o mezclas de agua y glicol hasta en una proporción 70:30; también con aire o nitrógeno en el lado de precarga / *Os vasos de expansão Elbi são projetados para serem usados com água ou misturas de água e glicol até uma proporção de 70:30; e com ar ou nitrogénio no lado pré-carregado.*

Il dimensionamento del vaso di espansione e dell'impianto devono essere eseguiti da personale specializzato, nel rispetto delle norme e leggi vigenti nel paese di installazione / *Proper expansion tank sizing and system design shall be performed by a professional technician according to local laws and regulations* / Les dimensionnements du vase d'expansion et du système doivent être effectués par du personnel spécialisé, conformément aux normes et lois en vigueur dans le pays d'installation / *Die Dimensionierung des Ausdehnungsgefäßes und der Anlage muss von Fachpersonal unter Beachtung der im Aufstellungsland geltenden Vorschriften und Gesetze vorgenommen werden* / El dimensionamiento del vaso de expansión y del sistema debe ser realizado por personal especializado, de acuerdo con las normas y leyes vigentes en el país de instalación / *O dimensionamento do vaso de expansão e do sistema deve ser realizado por pessoal especializado, em conformidade com os regulamentos e as leis em vigor no país de instalação*

Per applicazioni particolari contattare l'ufficio tecnico Elbi / *For special applications, contact the Elbi Tech. Dept.* / Pour des applications spéciales, contactez le bureau technique Elbi / *Für spezielle Anwendungen wenden Sie sich an das technische Büro von Elbi* / Para aplicaciones especiales, contacte con la oficina técnica de Elbi / *Para aplicações especiais, entre em contato com o escritório técnico da Elbi*

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This manual contains instructions for the correct installation, commissioning, maintenance and disposal of the product. This manual shall be given to the end user or the system's manager after installation.

### **Product description**

The product is a bladder expansion tank.

*D* and *DP* series expansion tanks are designed to be suitable for potable water. They can also be used in pressure boosting systems.

*ER* series expansion tanks are suitable for closed circuit technical water systems, including heating systems. They are not suitable for potable water.

*DS* series expansion tanks are designed for use in solar panel systems, where fluid temperature can reach very high values.

### **Warnings**

Elbi S.p.A. is only responsible for the supply of the products. In no case Elbi S.p.A. shall be responsible for the system operation and the correct installation of his products within the system.

Elbi S.p.A. shall not be held responsible for unauthorized modifications to its products or use of non-original spare parts.

The product has been designed for operation as an expansion tank. Improper use is forbidden and may cause personal and material damage.

Always check the compatibility of the products with the liquids inside the system.

The vessel shall be drained in case it is left offline at temperatures below freezing point.

Elbi S.p.A. expansion tanks are fitted with a technical data label showing the maximum allowable pressure and temperature. Do not exceed these values in order to avoid personal and material damage. Elbi S.p.A. expansion tanks are not designed for vacuum/negative pressure applications.

### **Installation**

Installation shall be performed by specialized personnel.

The product has been designed for installation under cover, protected from bad weather and aggressive fluids. The floor shall be capable of sustaining the weight of the vessel and its content and shall be provided with drains adequate to the volume of the tank. Always make sure that the installation site can be accessed by authorized personnel only. Dimensions of the installation site and its accesses shall be large enough to allow passage, installation and maintenance.

Always use lifting and transport means suitable for the product. Move the vessel when it's empty.

The product has not been designed to sustain external loads and/or loads caused by wind or earthquake.

Feed lines shall be equipped with all required safety devices in order to ensure the expansion tank always operates within its limits.

### Installation steps

- 1) Be sure that the system is cold and empty.
- 2) Remove the expansion tank from its packaging and check its conditions.
- 3) The expansion tank shall be placed in a flat stable position on an even and uniform surface. Consider adequate space around the hot water cylinder for maintenance. The vessel must be installed with the water connection facing downwards.
- 4) Connect the expansion tank to the system. Be sure to properly ground the tank.
- 5) With the plant cold and empty, set the precharge pressure to a value suitable for proper operation
- 6) Perform a pressure test to check that all connections are adequately tightened.

### **Commissioning**

Cleaning of system's piping and vessels is strongly recommended.

Heating plants can be cleaned using suitable detergents and corrosion inhibiting products; potable water systems can be cleaned by flushing the system with a high flow rate of water for at least 10 minutes.

### **Maintenance**

Maintenance shall be performed by a specialized technician at least once per year. Maintenance of the expansion tank shall be performed with the plant shut-down, cold and disconnected from electrical feeds (if any). Check temperature and pressure conditions of the plant before proceeding.

- Check the precharge pressure and proceed with a refill if required.
- Check the conditions of the vessel.
- External surface of the tank shall be cleaned using water and mild soap.

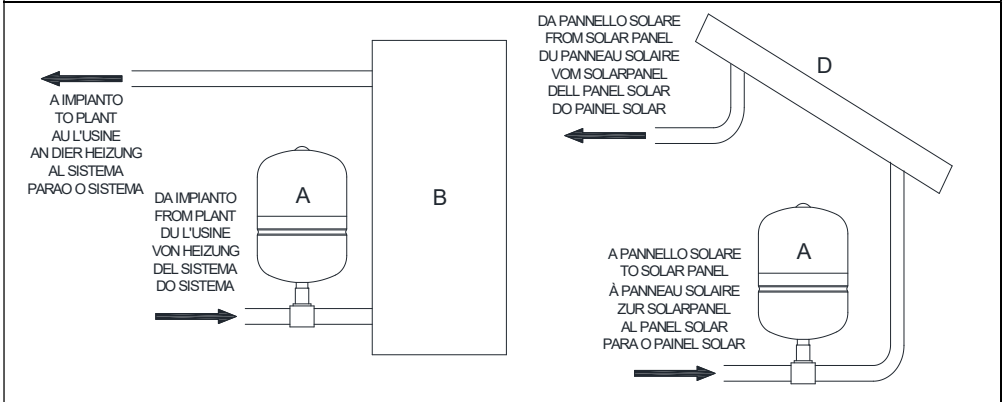
### **Disposal**

At the end of its lifecycle, dispose of the product according to the laws and norms of the country of installation. The vessel and its components (either metallic or non-metallic) shall be sent to operators authorized to dispose of them.

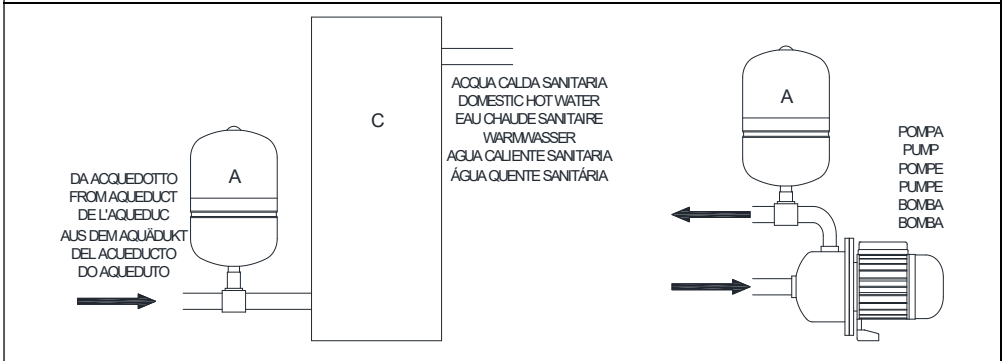
The product shall not be managed as household waste.

**SCHEMA DI INSTALLAZIONE / INSTALLATION SCHEME / SCHÉMA D'INSTALLATION / INSTALLATIONS DIAGRAMM / ESQUEMA DE INSTALACIÓN / DIAGRAMA DE INSTALAÇÃO**

**IMPIANTO DI RISCALDAMENTO / HEATING SYSTEM / SYSTÈME DE CHAUFFAGE / HEIZUNGSANLAGE / INSTALACIÓN DE CALEFACCIÓN / SISTEMA DE AQUECIMENTO**



**IMPIANTO ACQUA SANITARIA / SANITARY WATER SYTEM / SYSTÈME D'EAU SANITAIRE / BRAUCHWASSERANLAGE / INSTALACIÓN DE AGUA SANITARIA / SISTEMA DE ÁGUA SANITÁRIA**



**LEGENDA / LEGEND / LÉGENDE / LEGENDE / LEYENDA / LEGENDA**

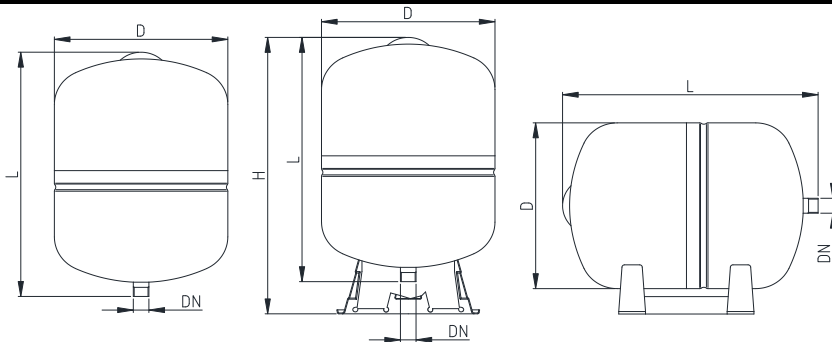
A	Vaso di espansione / <i>expansion tank</i> / Vase d'expansion / <i>Ausdehnungsgefäß</i> / Vaso de expansión / <i>Vaso de expansão</i>	C	Preparatore di acqua calda sanitaria / <i>DHW cylinder</i> / préparateurs ECS / <i>Warmwasserspeicher</i> / Preparador de ACS / <i>Preparador de água quente sanitária</i>
B	Caldiaia / <i>Boiler</i> / Chaudière / <i>Kessel</i> / Caldeira	D	Pannello solare / <i>Solar panel</i> / Panneau solaire / <i>Solarpanel</i> / Panel solar / <i>Painel solar</i>

GLI SCHEMI PRESENTATI HANNO VALORE PURAMENTE INDICATIVO. LA PROGETTAZIONE DELL'IMPIANTO DEVE SEMPRE ESSERE ESEGUITA DA UN PROGETTISTA TERMOTECNICO ESPERTO / THE ABOVE SCHEMES ARE PURELY INDICATIVE. PROPER DESIGN OF THE SYSTEM SHALL ALWAYS BE PERFORMED BY EXPERIENCED PERSONNEL / LES SCHÉMAS PRÉSENTÉS SONT FOURNIS SONT À TITRE INDICATIF. LA CONCEPTION DU SYSTÈME DOIT TOUJOURS ÊTRE EFFECTUÉE PAR UN CONCEPTEUR THERMOTECNIQUE EXPERT / DIE DARGESTELLTEN DIAGRAMME SIND REIN INFORMATIV. DIE AUSLEGUNG DER ANLAGE MUSS IMMER VON EINEM ERFAHRENEN WÄRMETECHNISCHEN PLANER DURCHGEFÜHRT WERDEN / LOS ESQUEMAS PRESENTADOS SON PURAMENTE INDICATIVOS. EL DISEÑO DEL SISTEMA SIEMPRE DEBE SER REALIZADO POR UN TÉCNICO EXPERTO / OS DIAGRAMAS APRESENTADOS SÃO MERAMENTE INDICATIVOS. O PROJETO DO SISTEMA DEVE SER SEMPRE REALIZADO POR UM PROJETISTA ESPECIALIZADO EM TÉRMICA

**DATI DIMENSIONALI / DIMENSIONAL DATA / DONNÉES DIMENSIONNELLES /  
ABMESSUNGEN / DATOS DIMENSIONALES / DADOS DIMENSIONAIS**

D/DV					DP/DPV/DPH				
V [l]	D [mm]	L [mm]	H [mm]	DN	V [l]	D [mm]	L [mm]	H [mm]	DN
24	320	340		1"	24	270	504		1"
35	400	390		1"		320	350		1"
50	400	500	570	1"	35	400	400		1"
80	400	745	820	1"	50	400	505	570	1"
100	500	640	735	1¼"	80	400	755	820	1"
150	500	875	945	1¼"	100	500	645	735	1¼"
200	600	915	1020	1¼"	150	500	880	945	1¼"
300	650	1085	1190	1¼"	200	600	920	1020	1¼"
500	775	1220	1330	1¼"	300	650	1090	1190	1¼"
<b>ER/ERCE</b>					500	775	1225	1330	1¼"
V [l]	D [mm]	L [mm]	H [mm]	DN	DS/DSV				
24	320	340		¾"	V [l]	D [mm]	L [mm]	H [mm]	DN
35	400	390		¾"	24	320	340		1"
50	400	500		¾"	35	400	390		1"
80	400	745	820	¾"	50	400	500	570	1"
100	500	635	735	¾"	80	400	745	820	1"
150	500	870	945	¾"	100	500	635	735	1¼"
200	600	910	1020	1"	150	500	870	945	1¼"
250	650	1065	1170	1"	200	600	910	1020	1¼"
300	650	1080	1190	1"	300	650	1080	1190	1¼"
500	775	1215	1330	1"					

Dimensioni indicative soggette alle tolleranze di fabbricazione / **Typical dimensions subject to fabrication tolerances** / Dimensions typiques soumises aux tolérances de fabrication / **Typische Abmessungen unterliegen Fertigungstoleranzen** / Dimensiones típicas sujetas a tolerancias de fabricación / **Dimensões típicas sujeitas a tolerâncias de fabricação**



- IT** ELBI S.p.A. dichiara sotto la propria responsabilità che questo serbatoio a pressione è stato progettato, fabbricato e collaudato in conformità a quanto prescritto dalla Direttiva 2014/68/UE
- UK** ELBI S.p.A. declares, under its own responsibility, that this Pressure Vessel was designed, manufactured, and inspected in conformity with the Directive 2014/68/EU
- FR** La société ELBI S.p.A déclare sous sa propre responsabilité que ce réservoir à pression a été projeté, fabriqué, et essayé conformément à la Directive 2014/68/UE
- ES** ELBI S.p.A. declara bajo su propia responsabilidad que este depósito a presión ha sido diseñado, fabricado e inspeccionado en conformidad a cuanto expuesto en la Directiva 2014/68/UE
- DE** Die Firma Elbi garantiert hiermit, dass sie ihre Gefäße gemäß den Vorschriften Nr. 2014/68/EU ihre Druckkessel geplant und herstellt hat.
- NL** ELBI S.p.A. verklaart onder de eigen verantwoordelijkheid dat dit drukvat werd ontworpen, vervaardigd en getest in overeenstemming met hetgeen wordt voorgeschreven door de Richtlijn 2014/68/EU.
- PT** ELBI S.p.A. declara sob a própria responsabilidade que este reservatório a pressão foi projectado, fabricado e testado de acordo com as exigências da Directriz 2014/68/UE.
- SV** ELBI S.p.A. försäkrar under eget ansvar att denna tryckbehållare har utarbetats, tillverkats och slutbesiktigats i enlighet med bestämmelserna i Direktiv 2014/68/EU.
- RU** АО "ELBI S.p.A." с ответственностью заявляет, что данный напорный резервуар был спроектирован, произведен и испытан в соответствии с требованиями Директива 2014/68/ЕС.
- EL** Η ELBI S.p.A. δηλώνει υπό την αποκλειστική της ευθύνη ότι το παρόν δοχείο πίεσης σχεδιάστηκε, κατασκευάστηκε και δοκιμάστηκε σύμφωνα με όσα προβλέπονται από την Ευρωπαϊκή Οδηγία 2014/68/ΕΕ.
- HR** ELBI S.p.A. izjavljuje pod vlastitom odgovornošću da je ovaj tlačni spremnik projektiran, proizveden i tehnički pregledan u skladu s odredbama Direktive 2014/68/EU.
- RO** Compania ELBI S.p.A. a declarat pe proprie răspundere că acest rezervor sub presiune a fost proiectat, fabricat și inspectat în conformitate cu Directiva 2014/68/UE.
- CZ** Společnost ELBI S.p.A. prohlašuje na vlastní odpovědnost, že tato tlaková nádrž byla navržena, vyrobena a prozkoušena v souladu s požadavky směrnice Evropského parlamentu a Rady 2014/68/EU.
- PL** Firma ELBI S.p.A. oświadcza, na własną odpowiedzialność, że niniejszy zbiornik ciśnieniowy został zaprojektowany, wyprodukowany i sprawdzony zgodnie z wymogami Dyrektywy 2014/68/UE.

(\* ) Rilasciato da / Issued by / Délivré par / Emitido por / Herausgegeben von / Uitgegeven door / Publicado por / Utfärdats av / выдан / εκδόθηκε από / Izdano od / Emise de către / Vystaveno / Wydane przez

BUREAU VERITAS ITALIA, S.p.A.

Amministratore Delegato  
ELBI S.p.A.  




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**MADE IN ITALY**

# Dichiarazione di conformità UE

EU DECLARATION OF CONFORMITY - DÉCLARATION UE DE CONFORMITÉ - DECLARACIÓN UE DE CONFORMIDAD - EU-KONFORMITÄTSEKTLÄRUNG - EU-CONFORMITEITSVERKLARING - DECLARAÇÃO UE DE CONFORMIDADE - EU-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE - ЕС Декларация Соответствия - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΕ - EU-IZJAVA O SUKLADNOSTI - DECLARAȚIE UE DE CONFORMITATE - EU PROHLÁŠENÍ O SHODĚ - DEKLARACJA ZGODNOŚCI UE

CE 1370



Divisione Termoidraulica

AZIENDA CON SISTEMA  
DI GESTIONE QUALITÀ  
CERTIFICATO DA DNV GL  
= ISO 9001 =

<p><b>Data di fabbricazione /</b> Date of manufacturing / <b>Date de construction /</b> Año de fabricación / <b>Herstellungsjahr /</b> Fabricagedatum / <b>Data de fabricação /</b> Tillverkningsdatum / <b>Дата производства /</b> Ημερομηνία κατασκευής / <b>Datum proizvodnje /</b> Data de fabricare / <b>Datum výroby /</b> Data produkcji</p>		<p><b>Numero di fabbrica /</b> Serial number / <b>N. de matricule /</b> Numéro de série / <b>Serien Nummer /</b> Fabrieksnummer / <b>Número de série /</b> Seriennummer / <b>Заводской номер /</b> Αριθμός μητρώου / <b>Tvornički broj /</b> Număr de serie / <b>Výrobní číslo /</b> Numer seryjny</p>	
<p><b>Volume V /</b> Capacity / <b>Volume /</b> Capacidad / <b>Inhalt /</b> Inhoud / <b>Volume /</b> Volym / <b>Объем /</b> Όγκος (σε λίτρα) / <b>Zapremina /</b> Capacitate / <b>Objem /</b> Pojemnosť</p>		<p><b>Famiglia – Modello /</b> Family – Model / <b>Famille – Modèle /</b> Famiglia – Modelo / <b>Famille – Modell /</b> Familie – Model / <b>Família – Modelo /</b> Familj – Modell / <b>Класс – Модель /</b> Οικογένεια – Μοντέλο / <b>Skupina – Model /</b> Familie – Model / <b>Řada – Model /</b> Rodzina – Model</p>	
<p><b>Pressione Massima Ammissibile /</b> Maximum Allowable Pressure / <b>Pression Max de Service /</b> Presion Max de Funcionamiento / <b>Maximal zulässiger Druck /</b> Maximaal toelaatbare druk / <b>Pressão máxima Aceitável /</b> Max tillåtet tryck / <b>Максимально Допустимое Давление (бар) /</b> Μέγιστη Επιτρεπόμενη Πίεση / <b>Najveći dozvoljeni tlak /</b> Presiune maximă admisă (bari) / <b>Maximální povolený tlak /</b> Maksymalne dopuszczalne ciśnienie</p>		<p><b>Temperatura di servizio TS (°C) /</b> Operating temperature / <b>Température de service /</b> Temperature de servicio / <b>Betriebs-temperatur /</b> Bedrijfstemperatuur / <b>Temperatura de funcionamento /</b> Drifttemperatur / <b>Рабочая температура /</b> Θερμοκρασία λειτουργίας / <b>Radna temperatura /</b> Temperatură de operare / <b>Provozní teplota /</b> Temperatura pracy</p>	
<p><b>Categoria /</b> Category / <b>Catégorie /</b> Categoría / <b>Kategorie /</b> Categoria / <b>Kategori /</b> категории / <b>Κατηγορία /</b> Kategoriji / <b>Categoriei /</b> Kategorie / <b>Kategorii /</b></p>		<p><b>Fluidi del gruppo /</b> Fluids in group / <b>Fluides du groupe /</b> Fluidos del grupo / <b>Fluiden der Gruppe /</b> Ingeedeeld in groep / <b>Fluidos do grupo /</b> Fluidier i grupp / <b>Жидкости в группе /</b> ρευστά της ομάδας / <b>Fluide iz Skupine /</b> Fluidele din grupa / <b>Tekutiny skupiny /</b> plynów z grupy</p>	
<p><b>Pressione di Prova Idraulica /</b> Hydraulic test pressure / <b>Pression d'essai hydraulique /</b> Presión de prueba hidráulica / <b>Hydraulische Betriebsdruckprüfung /</b> Hydraulischeproefdruk / <b>Pressão de teste Hidráulica /</b> Testtryck Hydrauliskt / <b>Рабочая температура /</b> Πίεση Υδραυλικής Δοκιμής / <b>Ispitni hidraulički tlak /</b> Presiune de testare hidraulică / <b>Tlak hidraulické zkoušky /</b> Ciśnienie próby hydraulicznej</p>		<p><b>(* N° Certificato Approvazione CE /</b> CE type examination certificate / <b>Certificat d'homologation CE /</b> Certificado de homologacion CE / <b>CE Zulassung /</b> Nr. EG-goedkeuringsformulier(en) / <b>N° Certificado(s) Aprovação CE /</b> Intygnummer för CE-godkännande / <b>№ Европейского Сертификата-тов Соответствия /</b> Αρ. Πιστοποητικού (-ών) Έγκρισης ΕΚ / <b>Br. certifikata - odobrenja CE /</b> Certificat de omologare CE / <b>Č. certifikátu-ů ES schválení typu /</b> Nr certyfikatu zatwierdzenia typu WE</p>	