1.4 DESCRIPTION

Accumulators are pressure vessels subjected to the specific current regulations or accepted ones of the Countries where they will be installed.
For all the European Countries, design, construction and accumulator testing must be carried out according to the Directive 2014/68/EU on Pressure Equipment.
EPE ITALIANA, also in virtue of the quality system using EN ISO 9001:2008, works according to forms H and H1 of total quality guarantee and design control issued by the Notify Body.
The above mentioned Directive includes the pressure equipment that exceeds 0.5 bar. So all the accumulators are involved in this Directive even if it provides different procedures of testing and certification.
Please keep in mind that accumulators up to 1 litre of volume, even if manufactured according to the Directive 2014/68/EU, are not marked EC and are not provided with the conformity declaration.
For volumes higher than 1 litre, after the testing, each accumulator is stamped with the mark CE followed by the number that identifies the Notify Body.
For these high pressure and low pressure accumulators, the documentation necessary includes the conformity declaration and the operator's manual.
It is also possible to supply accumulators in accordance with Directive ATEX 2014/34/EU (enclosure VIII) and with harmonized regulations EN 13463-1 related to non-electrical equipment to be used in environment with potentially explosive atmosphere and to be included into the classification ATEX EX II2GDcT4 and IM2c.
EPE ITALIANA provides also other tests and certifications for those Countries in which EC regulations are not accepted:
- ASME-U.S. for USA, Canada, South Africa, etc..
- ML (ex SQL) for China.
- Australian Pressure Vessel Standard AS1210-1997 for Australia.
- EAC for Russia.
- DDP passport for Algeria
- RINA, BS-L Lloyd's Register, ABS, DNV, CCS for naval applications.
- For other Countries, which require a specific test, accumulators are in any case manufactured according to the European Directive but are supplied without EC marking and with factory test only.

The documentation related to each regulation is normally provided in a proper envelope along with the goods. If it's not available, it will be sent by post or in another way as soon as possible.
In order to define correctly both the price and the availability, it is necessary that in the inquiry it is mentioned the required certification.

1.4.0 REPORT TEST

All EPE components are completely tested and, upon request, you can receive the certificate of inspection by the factory.

1.4.1 EAC PASSPORT

In order to import products into the Russian Federation and former Soviet republics (Belarus, Ukraine, Kazakhstan), you must have the EAC passport. This certificate confirms to the end user that the product complies with the local regulations on safety of pressure vessels and safety devices. Without the passport, the goods cannot be cleared and the end user (importer) cannot start-up or use the product because it is classified not safe.

1.4a

1.4.2 AUSTRALIAN PRESSURE VESSEL STANDARD

In Australia, it is necessary to define the level of risk that a vessel under pressure represents.
The level of risk is a ok of: volume to pressure, type of contente fickle/unstable, its compressibility, operating conditions (static, movable, proximity to public, etc.).
The degree of risk level is expressed in the Australian Standard with some letters according to "AS4343-1999 - Equipment under pressure - Level of risk".
Any pressure vessel that has a level of risk higher than the level "E" should belong to a registered drawing.
The registration of the drawings is issued by a Government agency in every State of Australia called "Work Safe Australia".
The "Work Safe" will issue the registrations only for vessels under pressure showing to be in accordance with Australian standards: AS1210-1997 - pressure vessels - and, normally, this registration is accepted by the other Australian States.

1.4.3 ML (EX SQL) - CHINA

With the entry of China into the WTO (World Trade Organization), the Chinese State Council has officially issued (02/19/2003) the new regulations on safety supervision of special equipment to be entered in the Chinese market.
The organization "General Administration of Quality Supervision Inspection and Quarantine" (AQSIQ) was authorized to take care of the direct control and management of this special equipment used in China.
To this control system must therefore be subject even the special equipment that are imported into China from all over the world.
In place of Safety Quality License Office (SQLO), the offices of SELO (Special Equipment Licensing Office) directly under AQSIQ, become the new operational reference.
SELO is solely responsible for the management of documentation and for the evaluation of the manufacturer in order to obtain of the license (Manufacture License ML).
EPE ITALIANA was authorized by SELO to export its products in China with License ML No. TS2200710-2020.

1.4.4 RINA

RINA certification for the marine industry. RINA is a third party that, in accordance with its rules, tests and certifies various pressure equipment that will be used in the marine industry.
RINA is an associate member of IACS and is authorized to act on behalf of the Italian administration in accordance with EU Directive 94/57 and about 70 other flag administrations.

1.4.7 ASME-U.S.

ASME (American Society of Mechanical Engineers) is an organization that regulates the design and manufacture of pressure vessels. Accumulators are categorized as unfired pressure vessels and fall under the jurisdiction of ASME Code when required by State law.
Accumulators specifically fall under the section of the code referred to Section VIII, Division 1. This section requires certification on vessels with internal diameters of 6" or greater and with the "U" symbol as evidence that they were designed and manufactured in accordance with the Code. The "U" symbol is an internationally recognized symbol of design and quality manufacturing.
The essential criteria of ASME Certification is a requirement of strength and material traceability. Accumulators must be manufactured with materials that meet ASME specifications and require a design factor of 4:1 in the ratio of burst pressure to rated pressure.
This 4:1 requirement is mandatory for all accumulators with ASME Certification with the exception of those that comply with a specific rule within the Code called "Appendix 22".
Appendix 22 permits that accumulators manufactured with "forged" shells, with connections of a specified maximum size, may be certified with a design factor of 3:1 in the ratio of burst pressure to rated pressure.
ASME requires that each vessel is marked with the design pressure at the Minimum Design Metal Temperature (MDMT) for the vessel.
ASME Certification requires third party surveillance of an approved quality system and requires witness by a third party of all hydrostatic testing.
Currently, unlike many other standards around the world, there is no ASME national requirement for periodic inspection of accumulators after installation. However, local laws would dictate such inspections.

1.4.8 2014/68/EU EUROPE

The Pressure Equipment Directive is one of the series of technical harmonization directives covering subjects such as machinery, simple pressure vessels, gas appliances, etc., which were identified by the European Community's program for the elimination of technical barriers to trade.
The purpose of the PED is to harmonize national laws of Member States regarding the design, manufacture, testing and conformity assessment of pressure equipment and assemblies of pressure equipment.
The program aims to ensure the free placing on the market and putting into service of relevant equipment within the European Union and the European Economic Area.
The Directive requires that all pressure equipment and assemblies within its scope must be safe when placed on the market and put into service.
The Pressure Equipment Directive applies to the design, manufacture and conformity assessment of pressure equipment and assemblies of pressure equipment with maximum allowable pressure greater than 0.5 bar above atmospheric pressure (i.e.:1.5 bar of absolute pressure).
The PED Conformity Assessment Forms apply to all accumulators using fluids of Group 2 (i.e.: non-hazardous), with a volume greater than 1 litre and a product of service pressure (PS) and volume (V) greater than 50 bar x litre or for any pressure vessel where PS exceeds 1000 bar.
PED applies in the member States of the European Union (EU) and the European Economic Area (EEA). Similar requirements to PED have been adopted by many other countries, which joined the European Union.
The EU member States are: Austria, Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Czech Republic, Romania, Slovakia, Slovenia, Spain, Sweden, Hungary, and United Kingdom.
The European Economic Area (EEA) includes the 27 EU countries listed above, plus Iceland, Liechtenstein, Norway and Switzerland.

1.4.9 ATEX (2014/34/EU)

Fall within the scope of the Directive 2014/34/EU also non-electrical equipment that have to be used in potentially explosive atmospheres so they must be certified Atex according to the customer's risk area. See section 0.8.
As required by the regulation 2014/34/EU, in addition to the deposit of the technical dossier, EPE ITALIANA monitors its internal production and constantly checks that the production cycle is consistent with the risk analysis performed on the equipment and it carries out a self-certification.

1.4.10 DNV

«Det Norske Veritas» (DNV) Certification, section «Maritime».
DNV certifies all materials, components and systems that are relevant to the operation of ships in terms of safety and quality. The Classification is a particular type of certification, which is used to confirm that the ships and all structures that exist within it conform to the requirements.
These requirements are specified in the regulations of DNV. The classification, in fact, provides that the same company that performs the classification, namely the institution of the third party, establishes the requirements.

1.4.12 ALGERIAN PASSPORT

EPE Italiana is able to supply its components with the Algerian passport for all applications that it's required.
After the approval of the preliminary dossier from the Algerian Ministry of Energy and Certification with endorsement by the Algerian Consulate in Italy and the Italian Chamber of Commerce, will be issued the final dossier in French language and carried out, by third party, the pressure test on the equipment subjected to this certification.

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In the spirit of continuous improvement, our products may be changed.

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