



USER MANUAL INSTRUCTION

S-SCG-288.8
ISSUE STATUS: B
DATE: 17/12/2025
NO. P250470
B25049





Applicable for Refrigerant Valves CVD1+CVD2


Read these instructions carefully before any fitting

Instructions for usage in accordance with **TPED 2010/35/EU**
ADR (Section 1.8.7.3 & 1.8.7.4)

APPROVAL Π 0409

This product is covered by the terms and conditions of the manufacturer's warranty; the manufacturer has the right to make changes to the current instructions sheet without prior notification.

Main Classes of Risks	
	Explosions
	Asphyxiating gases
 	Flammable and Explosive gases

 **Danger**

- Gas leaks can cause fatal fires or explosions
- Only trained personnel should work on gas systems
- Inspect the gas system regularly
- Replace adapters and Products as recommended
- Failure to follow these instructions carefully could result in serious health risks

Unless these instructions have been carefully read beforehand, no one is authorized to use the product. Consequently, it is necessary to make the instructions available to the following subjects:

- Valve fitters, who are required to log in to all the sites where the products have been installed, as detailed below
- Cylinder fitter, who must log in to all the sites described hereunder at every site where the products have been installed
- Operators for maintenance who work on the product, the cylinder, the installation, or any of its components
- Operators responsible for cylinder filling
- Inspectors
- Any other operator working on the product or the cylinder

The manufacturer warrants that the products comply with the above policies. Therefore, the aforementioned subjects must comply with the regulations applicable in the country where the product is used and check the existence of specific regulations regarding its use.

Failure to follow these instructions automatically voids the product warranty provided by the manufacturer and releases the manufacturer from liability for any proven damages.

Do not alter or remove markings on the product.



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GENERAL DESCRIPTION AND FUNCTIONAL FEATURES – The manually operated valve is designed for ISO 10297 preventing unauthorized manipulation of the shut-off system when opened. Applicable for refrigerant of which operating temperatures -20°C to 65°C (minimal storage temperature of gas package is -40°C.) The valve's specific purpose is to make it possible to fill the cylinder and supply refrigerant. If provided with pressure relief device in the event that the cylinder experiences overpressure, the pressure relief device opens, keeping the cylinder from explosion. Various sizes and couplings of inlet and outlet ports are available according to major international standards.

Family reference number	Valve type	Gas	Applicable standard	Valve test pressure (bar)	Seat diameter (mm)	Operating Temperature (°C)
CVD1+CVD2	Cylinder Valve (Diaphragm gland seal valve)	Refrigerant R12, R12B1, R12B2, R22, R23, R32, R114, R115, R125, R134a, R142b, R152A, R160, R218, Rc318, R404A, R407C, R407F, R410A, R417A, R422A, R422D, R500, R502, R503 and R1318	EN ISO 10297 :2014+A1:2017	48	8	-20/+65 (-40/+65 Storage temp.)

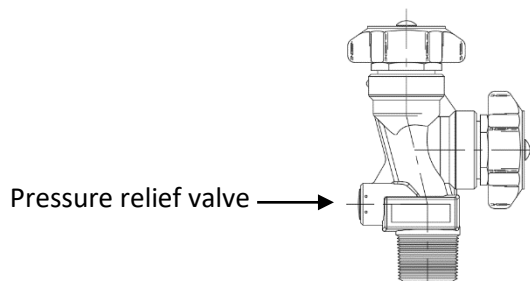


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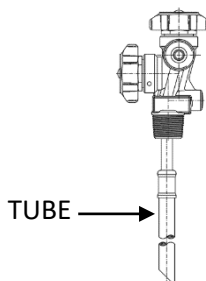
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VALVE WITH ADDITIONAL ACCESSORIES

PRESSURE RELIEF VALVE - Check to ensure that it does not have any bending, distortion, cracking or damage



TUBE - Each valve shall visually inspect to ensure there is no distortion that could adversely affect the function of the valve.



Do not use flames near the valve installation location.

Do not utilize the valve for other applications.

PRE-FITTING INSPECTION – Check to ensure that the valve must be protected from the elements and stored in a clean, dry environment. It must not be subjected to bumps, impacts or deformation of any kind. Deformed or damaged valves cannot be used.

FITTING ON CYLINDER / VALVING

- Refrigerant valves are supplied for usage with various gases and different cylinder neck threads. Before fitting of the valve to a cylinder, check the information on the valve / valve packaging to ensure the appropriate gas types and stem thread compatible with the cylinder to be fitted.

- Use a proper valve tools for assembling to avoid damage of valve. A valving square is located above the cylinder connection, do not use any other valve surfaces / sections to apply torque.



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Following is the torque requirement for fitting the valves onto the cylinders.

⚠ IT IS IMPORTANT TO CAREFULLY READ ALL NOTES PROVIDED								
Tapered threads	Seamless steel cylinder and composite cylinders with steel boss		Welded steel cylinders		Aluminium alloy cylinders and composite cylinders with aluminium alloy boss			
Taper Valve stem size	MIN Torque [N · m]	MAX Torque [N · m]	MIN Torque [N · m]	MAX Torque [N · m]	MIN Torque [N · m]	MAX Torque [N · m]	MIN Torque [N · m]	MAX Torque [N · m]
17E	120	150	90	130	75	95	75	140
25E	200	300	110	250	95	110	95	180
Parallel threads	Seamless steel cylinder and composite cylinders with steel boss			Parallel threads	Aluminium alloy cylinders and composite cylinders with aluminium alloy boss			
Parallel Valve stem size	MIN Torque [N · m]	MAX Torque [N · m]		Parallel Valve stem size	MIN Torque [N · m]		MAX Torque [N · m]	
M18	100	130		M18 ^a	85		100	
M25	100	130		M25 ^a	95		130	
M30	100	130		M30 ^a	95		130	
a) Value specified by EN ISO 13341								
b) If not specified, it is the installer's responsibility to apply the minimum torque to ensure a seal and prevent possible disassembly of the valve.								

VALVE GUARDING

- Valve guarding / protection must be always used during handling, transportation or storage of the gas package. Valve caps or other kinds of valve protection must strictly comply with ISO 11117.

- If the cylinder with the valve is not in use (no pressure device connected), the outlet thread must be always fitted with a cap or plug.

WARNING: Unprotected valves are susceptible to mechanical damage potentially resulting in uncontrolled and violent gas discharge

FILLING

- The product is supplied in various versions of connection standards. Check the connection standard in information on the valve packaging or on body of the cylinder valve, ensure your filling hardware is fully compatible with the valve and its connection geometry. In case of doubts contact valve manufacturer.

- Use adequate connection torques, do not over torque filling adaptors, when in doubts consult with valve manufacturer.

- Respect maximum working pressure of valve, never overfill gas package.

- If the valves are equipped with Residual Pressure Device (RPD), only proprietary filling adaptors specified by valve manufacturer shall be used.

- The ON / OFF handwheel / spindle key must be fully open during the entire filling. Note: Open anticlockwise, close clockwise.

- Do not apply excessive force when closing the valve; the torque should not go beyond the values outlined in ISO 10297 (i.e. 5.6 Nm for

Ø 52mm handwheel). Be cautious of this guideline when using pneumatic tools.

WARNING: Non-compatible filling hardware, improper filling procedure or excessive filling pressures may lead to dangerous valve damage

WARNING: Valve contamination may result in valve malfunction including spontaneous ignition, fire and explosion.

WARNING: Do not use leak detection or cleaning fluids containing ammonia or other substances, that can cause stress corrosion cracking in brass materials



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GENERAL HANDLING

- Avoid mechanical damages of valves, minimize vibrations and mechanical impacts.
- Inspect the condition of valves during the lifetime, immediately sort and dispose all valves showing traces of extensive wear, deformation or damage.
- Choose appropriate storage conditions and transportation protection, minimize exposure to natural elements and bad weather
- Respect the range of working / storage temperatures, avoid overheating (e.g. by intense sunshine) or valve blockage by freezing in winter conditions.
- Always open valve fully but slowly and gradually, rapid opening may lead to dangerous adiabatic compression downstream followed by ignitions and fire.
- Use valves either in fully open or fully closed, avoid gas discharge through crack-open valve seat
- Never use valve as grip point or crane fix point during lifting and manipulation with cylinder
- Always transport, handle, store or manipulate with gas package and valve mechanical protection on. Do not remove protection caps before pressure cylinder is steady and safely fixed to installation area.
- Avoid and prevent any alterations and modifications of valves, do not use valves out of intended applications.
- Avoid unauthorized use or handling of valves through whole service cycle of valve.

WARNING: Not respecting of any of rules mentioned above may lead to irreversible damage— a damaged valve poses a significant risk to the life and health of its owner, operators, and users.

MAINTENANCE – Repairing can be only performed by a SCG certified personnel who possessed all necessary certificates in compliance with national standards for mounting and fixing of dedicated gas devices. Details of repair routine, essential equipment, safe environment and suitable spare parts for valve repair are a part of SCG Manual.


If only external parts are replaced, approval from the manufacturer must be obtained and only original spare parts may be used together with the relevant instructions prepared by the manufacturer.

If further repair work is carried out on the valve which is not in accordance with this instruction, the warranty rights for the valve will become invalid and the manufacturer will not be held liable in the event of a breakdown or accident.

If the valve is exposed to flame or water, the valve must be replaced and discarded.

Based on the type tests required by ADR and the international standard EN ISO 10297 Gas Cylinders — Cylinder Valves — Specification and Type Testing (as applicable), the manufacturer guarantees that, under the conditions of use specified in this document, the expected service life of the valves are 15 years. For the valves that have been dismantled from one cylinder and reassembled in another are not recommended for use, the manufacturer liability will expire after 15 years if the directions and fulfillments outlined in this agreement are not followed.

TRACEABILITY – Each valve is identified to ensure traceability of materials in accordance with the provisions of European Directives, this traceability refers to which valve or manufacturing lot it belongs to. The elements marked on the valve and also included in the declaration of conformity, as illustrated:

- ✓ Valve identification – commercial reference;
- ✓ Manufacturer's name or initials;
- ✓ Date of valve manufacturing;
- ✓  0409 marking as per European Directive.

Other markings may be placed on the valve or valves according to contractual specifications and/or requirements, but they do not contribute to major material traceability.



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In the case of any new components are replaced on the valve as those described above, the manufacturer does not guarantee their traceability.

The purchasers of the valve are responsible with manufacturer for ensuring the downstream traceability of the valve, even if the valve is resold to other parties, so that the manufacturer will always aware of product's existence.

SERVICE LIFE

If the owner and/or user of the valve has followed all instructions and warnings contained in this user manual with the conditions, frequency of use, environment and operating conditions are optimal and in accordance with applicable regulations/standards /legislation, the maximum service life of a valve is 10 years from the date of the Declaration of Conformity issued by the manufacturer (or from the date marked on the valve if a Declaration of Conformity is not available).

In some cases, by specifically written declaration by the manufacturer when special circumstances exist, the service life may extend up to 15 years from the date of the Declaration of Conformity issued by the manufacturer. If the valve is designed and manufactured in accordance with the particular standard, directive or regulation, the requirements of legalizations will formally apply.

At the end of its service life, the valve must be removed and disposed of in accordance with the "**MANAGEMENT OF REPLACED VALVES**" section.

Even if the service life has not yet been reached, it is strongly recommended to replace the valve during routine tank and/or cylinder overhauls if any part of the valve shows signs of major or minor damage.

Periodic inspections are performed at time intervals specified by any applicable federal, state, and/or municipal ordinances or other regulations and are the responsibility of the owner, operator, installer, and/or maintenance workers. They must be performed by qualified and authorized personnel. The manufacturer is not responsible for any personal injury, property damage, or other loss related to the valve by failure to follow the warnings and instructions and will void any warranty applicable to the product.

After expiration of the period of 10 years specified in Article 11 of Directive 85/374/EEC (also applicable also to clients not belonging to the European Community), the manufacturer shall have no liability for any direct or indirect damage to individuals and/or products. It is further noted that a valve and/or its seals may have sustained damage—even if no damage is visually apparent—if it has been exposed to salt water, hurricanes, storms, or other extreme weather conditions, or if it has been wholly or partially submerged in, or exposed to, debris such as mud, foliage, or seawater. Under such circumstances, the valve must be immediately removed from service, destroyed, and replaced.

MANAGEMENT OF REPLACED VALVES

A valve must be destroyed in a way that renders it permanently unusable whenever it is replaced, whether due to malfunction, irreparable damage, or the end of its service life. For instance, the input thread connection needs to be damaged. It is then necessary to dispose of the valve in accordance with any applicable federal, state, local, or other legislation. The owner of the valve must be aware and consider that proper separate waste collection, for a subsequent recycling, treatment, and proper disposal of the valve, contributes to environmental protection and prevents adverse health effects, in addition to promoting the reuse and/or recycling of the materials it is made of.

Any relevant federal, state, and/or municipal statutes or other restrictions that specify the owner's exposure to fines and penalties will apply if valves and/or their packaging are disposed of improperly or unlawfully.