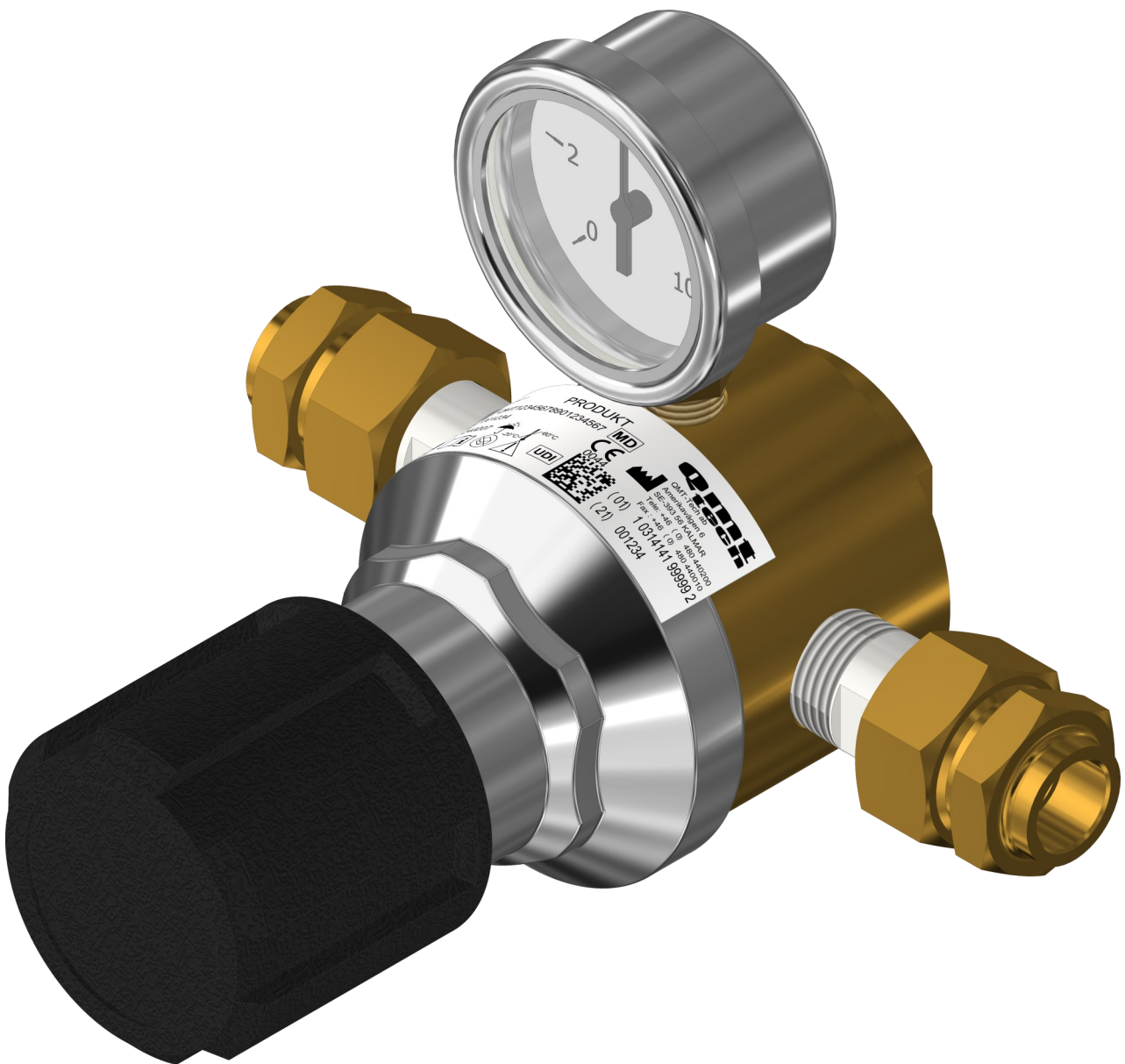


INSTRUCTION FOR USE

Pressure regulator 483



Thank you for choosing Pressure Regulator 483 from QMT-Tech ab

Your new Pressure Regulator is an advanced medical device with high-quality components and features for safe operation and high performance.

Read the information for use before installation, commissioning and use so that you are well informed about how it is installed, commissioned and used safely.

Information on use is supplemented with instructions on installation, operation and maintenance for a long and trouble-free use.

We wish you a long, safe and trouble-free use.

This manual describes the Pressure Regulator's functions for safe installation, commissioning and use.

The information for use should be read and understood by all intended users.

The following symbols are used in the user manual:



Warning



Note, important information



Read the instruction for use

Digital copy can be downloaded from qmt3.com

Section	Page
Intended Use	4
Overview	5
Overview reference list	6
Installation and commissioning	7-8
Operating instructions	9
Maintenance	10
Warnings and important information!	11
Spare parts list	12
Technical data	13
Part numbers	14
Regulatory information	15
Used product, Recycling	15

Intended Use:

The pressure regulator is used to reduce a higher inlet pressure to a lower outlet pressure.

Intended User:

Installation - Installer / Pipe fitter

Daily Use - Hospital Operations Technician

Maintenance - Technicians from QMT-Tech or other technicians authorized for the task by QMT-Tech ab.

Target group:

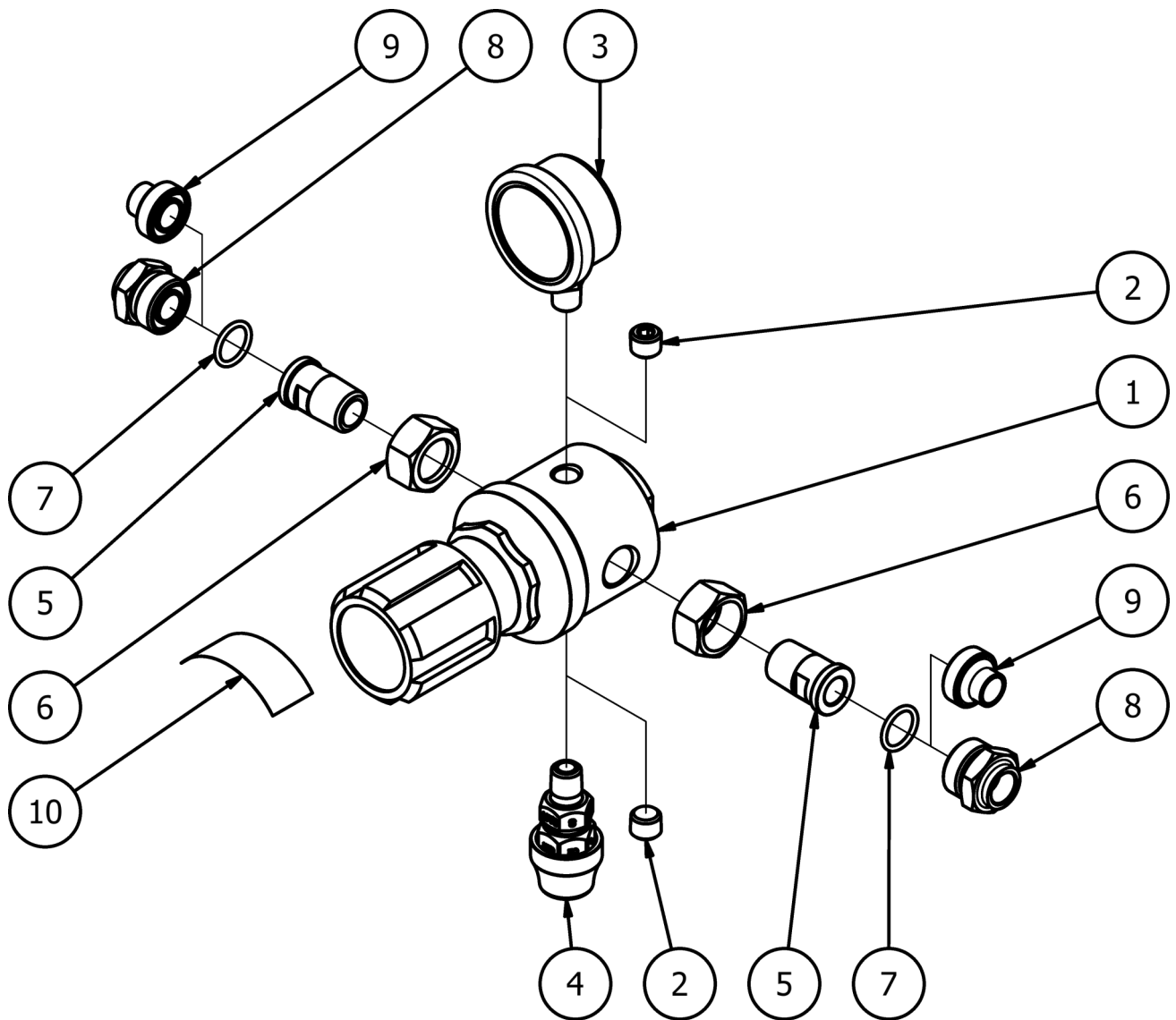
Not limited as the medical gases are used in all places of the hospital.

Indications:

Non-specific as the medical gases are used in all places of the hospital.

Contra indications:

Non-specific as the medical gases are used in all places of the hospital.



- 1 Pressure regulator 483
- 2 1/4" NPT plug
- 3 Pressure gauge 0-10 bar (outlet pressure)
- 4 Terminal unit (gas specific gas sort dependent)
- 5 Dim. 15 mm Connection Pipe NOTE! for low pressure max 16,0 bar
- 6 Assault Nut G3/4" NOTE! for low pressure max 16,0 bar
- 7 O-Ring 17,3x2,4 EPDM NOTE! for low pressure max 16,0 bar
- 8 Connection for brazing dim. 15 mm NOTE! for low pressure max 16,0 bar
- 9 Connection for welding dim. 15 mm NOTE! for low pressure max 16,0 bar
- 10 UDI-label



NOTE! The equipment listed above may vary depending on the area of use and the options chosen.

Installation:

1. Installation may differ slightly depending on the pressure regulator's area of use and options selected.
2. Connect the inlet fitting into the system inlet pipe, item 8 if it is for brazing or item 9 if it is for welding. NOTE! when brazing or welding, shielding gas must be flushed inside the pipes during joining. If it is a high-pressure connection, this is screwed with the appropriate connector into the inlet thread of the pressure regulator 1/2" NPT.
3. Connect the outlet fitting into the system's outlet pipe, item 8 if it is for brazing or item 9 if it is for welding. NOTE! when brazing or welding, shielding gas must be flushed inside the pipes during joining. The outlet connection can also be threaded into the pressure regulator's outlet connection 1/2" NPT depending on the area of use and options selected.
4. Fit the pressure regulator into the inlet and outlet connections (item 8 or 9) with O-ring detail 7 and tighten the assault nut detail 6. If other in- and outlet connections have been used, the pressure regulator is assembled into these according to good installation practice.

Commissioning:

1. Check that the pressure regulator adjustment knob is fully screwed counterclockwise.
2. Carefully pressurize the inlet pipe to the intended working pressure.
3. Leak detection of all inlet fittings using an appropriate leak detection method. Examples of leak detection methods are leak detection spray or ultrasonic microphone, etc.
4. Also check that the outlet pressure does not increase. Either on mounted pressure gauge or other pressure measuring equipment connected downstream of the pressure regulator.
5. Turn the adjustment knob slowly clockwise to increase the outlet pressure to the desired operating pressure.
6. Allow the pressure regulator to stabilize, if necessary readjust the pressure on the adjustment knob. Keep in mind that if the pressure is lowered, the outlet side piping system must release the pressure using the appropriate method before pressure drop can be noted.
7. Leak detection of all inlet fittings using an appropriate leak detection method. Examples of leak detection methods are leak detection spray or ultrasonic microphone, etc.
8. Also check that the outlet pressure does not increase. Either on mounted pressure gauge or other pressure measuring equipment connected downstream of the pressure regulator.
9. Make a note of all the results of the commissioning tests and archive the documents.



- Pressurized gas has a high energy content! Terminate all pressurization if leaks or shape abnormalities are detected.
- When the system is pressurized, no intervention may be performed other than adjusting the set pressure.
- The user is responsible for checking that all connectors are intended for the operating pressures, that the correct function is achieved and that the correct operating pressure is set.



- In accordance with EN ISO 7396-1, appropriately sized safety valve shall be fitted downstream of the pressure regulator.
- Keep in mind that pressure regulators in medical gas systems in accordance with EN ISO 7396-1 can, depending on the application, have requirements to be doubled for maintenance and redundancy.
- In accordance with EN ISO 7396-1, service shut-off valves shall be installed upstream and downstream of a line pressure regulators for emergency and maintenance.
- Installation and commissioning must be carried out by a person with the required knowledge.
- Results from installation and commissioning must be documented and saved after the process has been completed. Documents must be available during final system inspection.
- Keep in mind that pipes must be marked with the medical gas it transports according to current regulations.
- It is advisable to install an alarm point downstream of the pressure regulator to monitor the set pressure of the pressure regulator.

Operating instructions:

1. The pressure regulator does not need any recurring supervision to function.
2. Adjustment of the set pressure may need to be made.
3. Turn the adjustment knob clockwise to increase the pressure and counterclockwise to decrease the pressure.
4. After a readjustment, check that the pressure was as expected after the pressure regulator have been allowed to stabilize.
5. Wipe and/or wash the regulator with mild detergent if necessary.

Recurring tests:

1. Check at least quarterly that the outlet pressure matches any connected remote monitoring and/or alarm system.
2. Make a note of the results of the controls and archive them.



- Keep in mind that a pressure regulator's outlet pressure is raised by turning the adjustment knob clockwise and the outlet pressure is lowered by turning the adjustment knob counterclockwise.



- Operation and tests on the medical gas pipeline system must be carried out by a person with the required knowledge.
- Results from tests must be documented and saved after the process has been completed.

Maintenance instruction:

1. Leak check the pressure regulator and its connections at least annually.
2. Check that the pressure regulator can be adjusted both upwards and downwards at least annually. Reset the intended outlet pressure after the function check.
3. Renovation of the pressure regulator must be done at least every 3 years, wear parts such as gaskets and elastomers are then replaced.

Tests:

1. Leak check the pressure regulator and its connections at least annually and after a renovation of the pressure regulator.
2. Functional checks according to clause 2 of the maintenance instructions must be carried out at least annually and after a renovation of the pressure regulator.



- Make sure that the pressure regulator is depressurized before starting renovation.
- Make sure that a renovated pressure regulator is correctly assembled before pressurizing.
- Only original spare parts may be used during renovation as incompatible parts and materials can lead to serious faults and risks.



- Service and maintenance may only be performed by technicians from QMT-Tech ab or technicians accredited by QMT-Tech ab.
- Service and maintenance not performed in accordance with this manual may void any issued warranties.
- Results from tests and maintenance must be documented and saved after the process has been completed.



- Pressurized gas has a high energy content! Interventions in a medical gas pipeline system, such as tightening or loosening components, must not be carried out when the system is pressurized.
- Work on a medical gas pipeline system and its installed components may only be carried out by a person with the required knowledge.
- The medical gases can be fire promoting, suffocating and dissociative.
- The use of shielding gas in a medical gas pipeline systems must be carefully planned and separated from the rest of the system. After brazing / welding and testing are completed, the system shall be flushed with the medical gas (pharmaceutical) that shall be used in the system, to prevent personal injury.
- The pressure regulator must not, neither during installation or operation to be exposed to temperatures exceeding 100°C. Should this happen or suspect that it has happened, the pressure regulator must be replaced and the system decontaminated.
- In the event of a fire or after a fire, the system must be decontaminated in the affected areas.
- Do not install the device if the sealing plugs are removed, as it may be contaminated and unsafe to install in medical gas pipeline systems.



- Work on a medical gas pipeline system and its installed components must be carried out by a person with the required knowledge.
- Results from service, maintenance, renovation and tests must be documented and saved after the process has been completed.



- Read the entire instruction for use so that you are well acquainted with the product before installation, use, service and maintenance.

Article number	Designation	Number
Q216934	Outlet gauge 0-10 bar, connection 1/4 NPT downward	1
Q215226N	Connection pipe dim. 15 mm, max working pressure 16 bar	1
Q205544	Assault nut dim. 15, max working pressure 16 bar	1
Q215214	O-ring dim. 15, max working pressure 16 bar	1
QMT7160RG1NPT	Terminal unit O ₂ , connection 1/4 NPT	1
QMT7160RG2NPT	Terminal unit N ₂ O, connection 1/4 NPT	1
QMT7160RG3NPT	Terminal unit AIR, connection 1/4 NPT	1
QMT7160RG4NPT	Terminal unit Instrument AIR, connection 1/4 NPT	1
QMT7160RG5NPT	Terminal unit CO ₂ , connection 1/4 NPT	1
QMT7160RG8NPT	Terminal unit N ₂ , connection 1/4 NPT	1
QMT7160RG9NPT	Terminal unit Argon, connection 1/4 NPT	1

Manufacturer: QMT-Tech ab
Amerikavägen 6
39354 Kalmar

Basic UDI-DI: 734020610ME

UDI-DI: 7340206100009

Product Name: Pressure regulator 483

Part number: QMT7483XYZ (Part number key on next page)

Inlet pressure: Max 210 bar NOTE! depending on inlet connector

Outlet pressure: 0-10 bar

Flow: CV 1,0 (see also flow chart below)

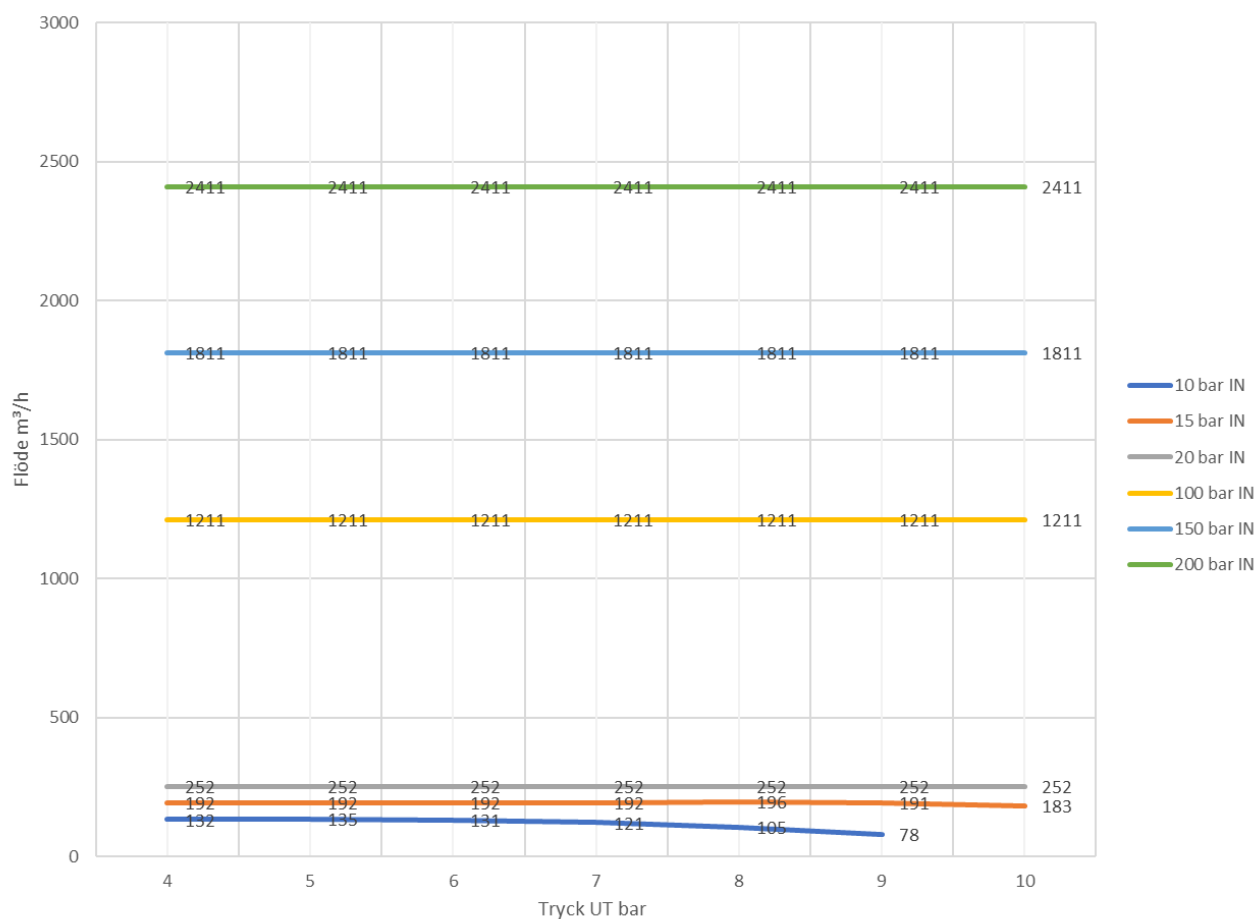
Storage: -40 to 60 °C dry indoors

Operating conditions: -40 to 60 °C dry indoors

Technical lifespan: 20 years provided maintenance is carried out in accordance with this instruction manual



Flödeskapacitet



QMT7483XYZ**X = Gas type:**

- 1 - Oxygen [O₂]
- 2 - Nitrous oxide [N₂O]
- 3 - AIR
- 4 - AIR for surgical tools
- 5 - Carbon dioxide [CO₂]

Y = Options:

- G - Terminal unit [mounted in the lower connection]
- M - Pressure gauge [mounted in the upper connection]

Z = Type of connection:

- C - Classic Connection dimension 15 mm NOTE! max 16,0 bar working pressure
- G - Threaded connection [1/2" NPT female thread] up to 210 bar inlet pressure
- W - Welded connection dimension 15 mm NOTE! max 16,0 bar working pressure

Manufacturer: QMT-Tech ab
Amerikavägen 6
39354 Kalmar

SRN: SE-MF-000007550

Basic UDI-DI: 734020610ME

UDI-DI: 7340206100009

Product name: Pressure regulator 483

Article number: QMT7205XYZ

EMDN code Z120309

Meets the requirements of:

MDR 2017/745 Class IIb

EN ISO 7396-1 2016

EN ISO 10524-2 2019



- All metals in the unit can be recycled, shall be handed over to an authorized recycling company.
- Rubber gaskets are handed in to an authorized recycling company.
- Teflon gaskets are handed in to an authorized recycling company.
- In normal use, the product is not contaminated by residues that are hazardous to health or the environment.

All text, all images and instructions in the instruction for use are based on information at the time of publication. Except for errors or omissions, the information contained in the instruction for use is valid from the date of publication.

Reprint, copying or translation of all or part of the instruction for use is only permitted with the written consent of QMT-Tech ab.

All rights under the Copyright Act are reserved by QMT-Tech ab.

The right to change is reserved.

© QMT-Tech ab - 2024-09-11 - PG1-All.2.b.483.Ed1.EN