Installation, Operation & Maintenance Manual

For Modentic Needle Valves with Threaded Ends

Caution:

Please read these instructions carefully and completely before installation. With the correct installation and maintenance, Modentic valves offer you a long, trouble-free service. The most important thing is to keep off the injury to the personnel and the damage to the equipment.

Safety Precautions:

1. Needle valves are pressure equipment; therefore the appropriate safety measures have to taken into account.
2. Any alterations on the valves and the documents without prior approval from Modentic with formal documentation are not permitted and might result in the huge danger.
3. All valves are designed for use within the limits specified herein and described on the valve body. Exceeding these specified limits is to be considered misuse and can lead to serious injuries and/or damage to the installation and environment.
4. When personnel are maintaining a valve, proper eye, head and whole body protection, and protective clothing should always be utilized. The most important thing is to keep off the injury to the personnel and the damage to the equipment.
5. All of the valves should arrive in the open position at the installation site.
6. There is the possibility that the (dangerous) pressurized fluid or gas could be trapped in the cavity of the valve, make sure this is released safely by partly opening the valve.
7. When the valves are operated on low or elevated temperature, operating personnel must take special care to avoid injuries.
8. The valve body rating can be higher than the seat rating. Valve surface temperature may be come extremely hot or cold due to the ambient or operating conditions. Prevent any type of direct contact with the valve that may harm the workers.
9. Valves and accessories must not be used as a sole support of piping or human weight.
10. Safety accessories such as safety relief (overpressure) valves are the responsibility of the system designer.
11. It is the user/system designer’s responsibility to use insulation in high temperature applications.
12. System should always be depressurized and drained prior to installing or maintaining.

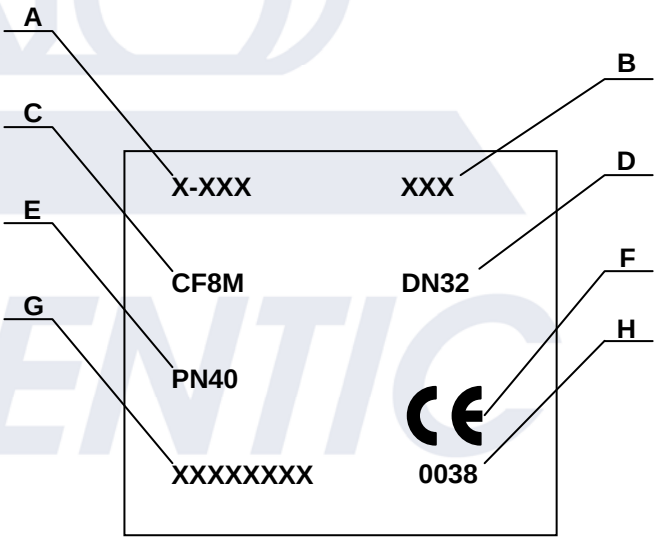
General:

1. Valve pressure varies under different models, sizes, working temperatures, and the materials of the main parts. Please verify the application within the limits specified herein and as described on the valve body or name plate from Modentic.
2. Any needle valve is a pressure containing part of the installation with an operational function, maintenance personnel must take this into consideration, therefore the appropriate safety measures have to be taken into account, it is necessary to wear the protective equipments and take appropriate precautions to safeguard against possible injury.
3. Always use Modentic recommended spare parts for maintenance and replacement.
4. Valve Marking:

All the marking information should be cast on the body, or on a metal plate which is spot-welded to the body.

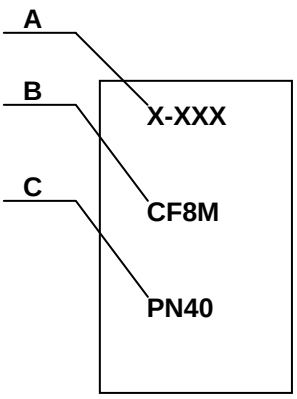
PED VALVES MARKING

MARK	DESCRIPTION
A	TYPE NO.
B	YEAR OF MANUFACTURE
C	MATERIAL
D	SIZE
E	PRESSURE
F	CE. MARK
G	TEMPERATURE
H	TUV RHEINLAND / BERLIN-BRANDENBURG
HEAT NO. CAST ON THE BODY AND CAP MD LOGO CAST ON THE BODY OR ON THE NAMEPLATE	



PED(SEP) VALVES MARKING UNDER DN25

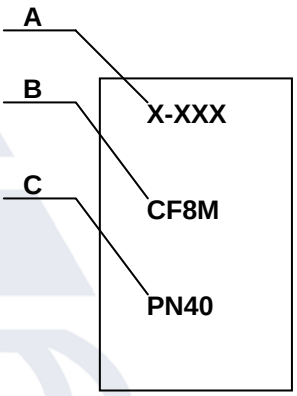
MARK	DESCRIPTION
A	SIZE
B	MATERIAL
C	PRESSURE
HEAT NO. CAST ON THE BODY AND CAP MD LOGO CAST ON THE BODY OR ON THE NAMEPLATE	



OUTSIDE THE EU COUNTRIES

NON-PED VALVES MARKING

MARK	DESCRIPTION
A	SIZE
B	MATERIAL
C	PRESSURE
HEAT NO. CAST ON THE BODY AND CAP MD LOGO CAST ON THE BODY OR ON THE NAMEPLATE	



Limitation:

1. Valves are not to be used in safely functions such as safety loops or separating incompatible fluids.
2. In-line service only, not recommended for end of line service.
3. On-off service only (not to be used for throttling).
4. Do not use for slurries or fluids containing solids that can build up in valve cavities.

Storage:

All valves are packed in strong cardboards (plastic bags for smaller sizes) in such a way to avoid any possible damage during transport and storage. If the items are not for immediate use, the following precautions should be taken:

1. Keep the valves in complete open position. Never leave the valve in the partially open position.
2. The valves should be appropriately protected and stored against dust, dirt, mud, wet and sea water.
3. It is advisable to store the valves in waterproof conditions. Valves should be protected to safeguard against humidity, moisture, dust, dirt, sand, mud, salt spray and seawater.

Installation:

1. Valve pressure varies under different valve series, sizes, application temperatures and the material of the main parts. Please verify the application within the limits and as described on the valve body or nameplate from Modentic.
2. Prior to the installation, check the valve as well as the connecting parts to make sure they are free from dirt and burrs, etc. which would damage stem tip and seat.
3. Do not disassemble or modify a MODENTIC valve in any way prior to installation. This will void the factory warranty if it occurs.
4. Remove protective end caps, and inspect the valve ends for damages to avoid leakage before installation.
5. Keep the valve in full open position during installation.
6. Needle valves are unidirectional; make sure the valves are installed in accordance with the flow indicator arrow on the valve body.
7. Check specification of threads on mating pipe.
8. Use suitable sealing material.
9. Apply joint compound to the male end of joint only.
10. Use wrench and apply force on the hexagon end of the valve only. Apply force to other area of valve may seriously damage the valve.
11. Following installation, carry out leak and operating tests.
12. Install the valve in such a way that extensive stresses in any direction on the valve are avoided.

Operation

1. Operation of the Modentic NV series needle valve is achieved by clockwise rotation of the thumbwheel to decrease flow, or fully close the valve, and counterclockwise rotation of the thumbwheel to increase flow, or fully open the valve.
2. When valves are used at elevated temperatures, precautions must be taken during operation to prevent burns to hands etc.
3. Use hand force only. Do not over-tighten and never use spanners or bar extensions. Needle valves have a built in stem torque break.

Maintenance:

1. Before making the maintenance, always advise the maintenance personnel that the proper eye, head and whole body protection always be utilized.
2. Prior to the maintenance, flush the valves and the pipe lines attached and make sure that no (dangerous) residues are left. Ensure that the installation, together with pressure containing parts is depressurized and secured.
3. All maintenance should be carried out with the valve isolated at zero pressure. Never attempt to remove or repair a valve with pressure in the system.
4. Needle Valves Gland Packing Adjustment:

    a. Open valve to mid-position
    b. Loosen gland lock nut.
    c. Tighten gland sufficiently to prevent leakage with the handle being unacceptably tight to turn up to maximum torque of 10 Nm.
    d. Tighten lock nut
    e. Re-pressurise and check for leakage and operation.

    To ensure valves not regularly used are kept functional, a check of their operation should periodically be made.
5. There is a possibility that a dangerous pressurized fluid or gas is trapped in the valve cavity.
6. It is impossible to predict the frequency of the maintenance interval. The maintenance interval is dependant upon several factors which are not foreseeable by the manufacturer.

User's note:

1. End-users have the responsibility to check the wall thickness in regular intervals due to wear/ tear/ corrosion of the fluid in order to ensure the wall thickness is not below the minimum safety thickness allowed in the standard.
2. The most important thing is to keep off the injury to the personal and the damage to the equipment.