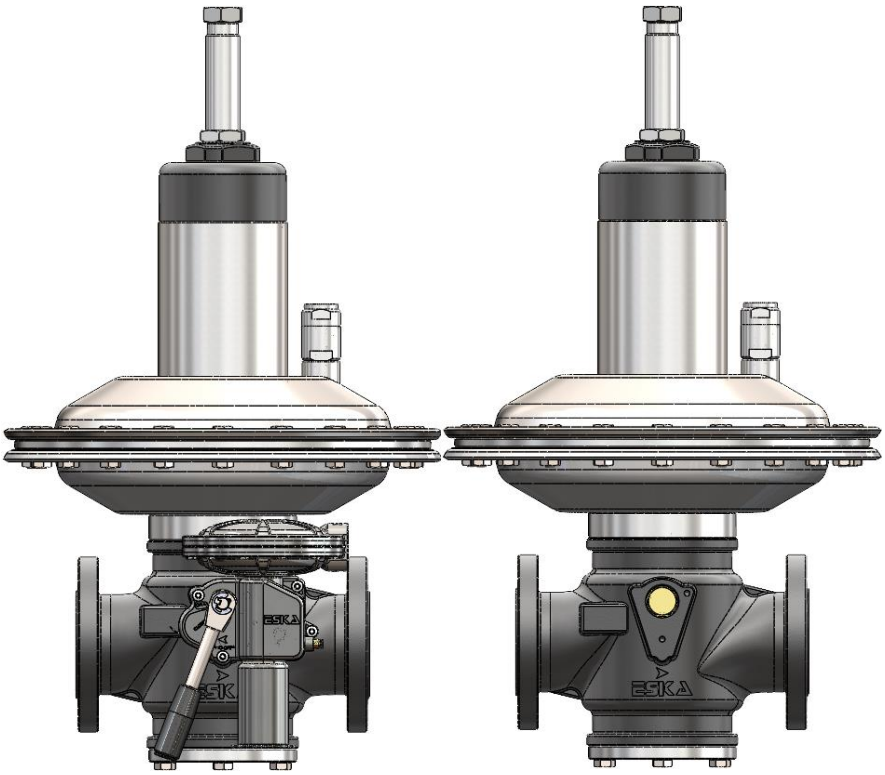
ESKA



ERG-H7 and ERG-HZ7 SERIES

GAS PRESSURE REGULATORS

INSTALLATON, USAGE and MAINTENANCE MANUAL

“Read Carefully Before All Procedures and Follow the Instructions. Do not Take Any Actions Those are not Specified.”

“Keep it for Future Necessities.”

“Products Should Only Be Installed by Authorized People.”

“This Product Must Be Installed in Accordance with the Applicable Rules and the Manual.”

Rev.3 – 03.02.2025

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The right to make changes in this manual according to technical developments is reserved. The 2014/68/EU Pressure Equipment Directive has been implemented and the manual was prepared accordingly.

1. GENERAL WARNINGS

All procedures written in this manual should only be carried out by expert personnel who have been approved by the competent authorities. Unauthorized persons should never interfere with the product. Our company is not responsible for malfunctions, damages, accidents etc. caused by applications made without complying with the rules and information in this manual.

End users and unauthorized persons should read this instruction, must comply with all safety rules that may concern them, under no circumstances should they interfere with, tamper with, try to change settings or make physical access to the product or even to the line, in case of detection of malfunction or gas leakage in use, smelling gas and similar cases, they should close the inlet valve in front of the product and inform the relevant gas distribution company and/or the relevant experts who have been approved by the competent authorities. At this time, the environment should be ventilated.

Do not work under any circumstances if there are electrical voltages or gas pressure around the product. Necessary interventions should be made taking official regulations into account. Do not smoke or come close with fire within 2 meters of the product. The product should be kept from chemicals, rain, and water as far as possible. Considering that the product may be exposed to natural events (earthquake, flood, landslide, fire, etc.), all necessary procedures and precautions should be taken.

Read this manual and the label on the product carefully before each procedure, keep this manual and the label for future necessities, use the product according to the information on the label and in accordance with this manual. If the guide and/or label is lost, do not start any procedure, and firstly request it from the authorities. Improper operation, malfunction, loss of property, injury and loss of life may occur with a procedure that is not specified in this manual or that is contrary to it. If there is any doubt before, during and after the procedures, please contact the authorities. Keep this manual, the label on the product, and the box of the product in and near the product and in the facility where the product is located. After all procedures; keep this manual, label and box in a protected area. If you cannot access this manual and label, if there are issues that are not understood, unknown or unsure before starting any procedure, or if you cannot perform the procedures and have problems even though the information written in the manual is followed during the procedures, contact the authorities. Do not exceed the technical limits in this manual and on the product label. Do not start the procedures before obtaining and reading this instruction.

The product is designed for conditions and loads suitable for its intended use and other reasonably foreseeable operating conditions. The product should only be used under the conditions for which it was designed and for the purpose for which it was produced. The operating limits specified in the technical specifications section should not be exceeded and the product should not be pressurized more than its maximum pressure. No fluids other than specified and suitable fluids should be used. Make the right product selection by specifying all the conditions. The manufacturer is not responsible for defects arising from otherwise. Compare its accuracy with the label information in the manual and on the product. If everything is appropriate, proceed to the assembly stage of the product. If the guide and label information are different, please contact the authorities before using the product. Do not use the product if it is not suitable for site conditions. When sending defective products, exchange products and wrong products to back to the manufacturer: make sure that the box, related apparatus, accessories, connection, gasket and etc. belonging to the product, user manual and label are in the content of the cargo. Otherwise, the manufacturer reserves the right to refuse to accept cargo.

Use appropriate tools and methods, for all procedures in this manual and throughout the use of the product. All our products are placed in special cardboard-boxes-parcels to prevent damages that may occur during transportation and shipment. During transportation and shipment, during all procedures and during use, ensure that the products or boxes are not dropped, thrown, shaken, exposed to excessive load, force, and impact and not to be crushed, not to be put any weight on it, external parts and external protrusions must not be damaged, dampened or overturned. Product, additional parts, and spare parts; should be kept in their own packages until assembly. After the package is opened, it should be checked whether there is any damage to the products and additional parts, if there is any damage, no action should be taken, the supplier should be informed, and the product should be left in its original package for inspection.

Before, during, and after any procedure and throughout the entire use of the product; obtaining the necessary legal permissions, informing and warning all parties that may be involved in the procedures, taking all necessary safety measures, including personal protection (glasses, helmets, etc.), please ensure that taking actions about processes in accordance with the current legislations, regulations, technical standards and rules accepted by gas companies, to review the safety of the conditions, to take all necessary precautions against the risk of fire, not to inhale the gas, to take precautions against the combination of dangers, to take adequate precautions against the possible splashing of liquids in the line, not to insert foreign objects into the relief vent, if any, not to approach the product with electrical materials, and make sure in the operation area that the product complies with the general

protection plan and necessary safety signs, and that substances that can cause explosion and fire, such as fire, sparks and cigarettes, are not in the site or near the product, and that they are not used because the product contains flammable gas.

Except for the parts supplied with the product and its box, non-original parts, and parts those do not belong to our company should not be used. If it is necessary, the manufacturer should be contacted to obtain spare parts. Tampering with the product, non-original parts and/or use of different parts will void the product warranty and also compromise the correct operation of the product. At the end of its physical life, the products should be replaced with new ones. Comply with laws and regulations in procedures such as sorting and recycling-destruction-disposal of products removed from the line at the end of their physical life, spare parts, other parts that will not be used again and the packages (box-parcel-stretch, etc.).

After the gas supply of the product is cut off, only the authorized person should determine whether there is a gas leak and after making sure that there is no gas leak, the product should be adjusted and started up. When appropriate, it is recommended to use our product in gas lines for safety reasons. The product can only be used when it is in perfect condition. Misoperations and malfunctions must be rectified immediately.

End user and/or authorized expert personnel; is responsible for applying the right systems to protect the product. Protective measures should be taken and systems should be acquired considering factors such as ensuring gas leakage is understood, to prevent the product from such factors by considering the circumstances such that; the product should not be tampered with, the covers of the product should not be opened, wire, water, dirt and etc. should not be inserted through the holes of the product, not to be damaged by earthquake, fire, flood and similar hazards etc., keeping the product away from these effects so that it should not to be damaged by corrosion and chemical effects, environmental effects (traffic, external sources, electrical reasons) and bad weather conditions (rain-snow-icing-humidity (e.g. as a result of condensation), mildew, UV rays, harmful insects, poisonous and irritating solvents/fluids (e.g. cutting and cooling fluids), direct sunlight and corrosive atmospheric effects, understanding the gas leakage and etc. keeping the product away for preventing the access of unauthorized persons. Do not damage the corrosion protection (paint, surface coatings, etc.) of the product. Otherwise, the service life of the product will be reduced, and it will be out of warranty.

In the product, in the associated parts that work with the product, or in any part used with the product; static load should be prevented, and protective measures should be taken. It is recommended to measure this value at regular intervals. Personnel who will check and control the static load should work with antistatic protective equipment. It is recommended to ground the product.

Do not try to remove the product “Shut-Off Assembly Lever (28)” (only for ERG-H7 series products) at any stage mentioned in this manual, and during use, do not allow it to be subject to any mechanical damage, do not move it to sides unnecessarily, and do not force it excessively.

Since there is no safety Shut-Off mechanism that turns off the gas passage at high and low outlet pressure in products without safety device (ERG-HZ7 series products), additional precautions should be taken regarding unwanted excessive pressure increases and decreases that may occur at the line outlet.

The manufacturer cannot make a general statement about the noise emission as it depends on the regulator variations, the facilities where the product will be used, the working environment and operating conditions. There may be a risk of hearing loss or deafness due to loud noise. Therefore, hearing protection should be worn when working near the product.

Depending on the environment of the procedures, product components and pipelines can become very hot or cold and cause burn injuries.

Take the necessary precautions.

2. DEFINITIONS and ABBREVIATIONS

Device or Product : ESKA Model Gas Pressure Regulator.
SSD – Shutoff Valve : Automatic Safety Shut Off Device-Valve.
Authorized Institution : Gas distribution company responsible for gas distribution in the province or region.
Authorized Plumber : A person who knows, is experienced in all necessary measures, and is authorized by official authorities, to work in accordance with the laws, regulations and standards, and responsible for the installation, assembly, operation, periodical maintenance and inspection of the product, experienced, trained, have a good command of the processes, qualified, with high technical knowledge, and issues of laws, regulations, standards and similar issues related to safety.
Breather Plug Line : Line connecting the atmospheric side of the pressure sensing element to the atmosphere. In the event of a fault in the pressure detecting element, this line may become an exhaust line.
Exhaust Line : The line connecting the regulator or its auxiliary devices to the atmosphere for safe release of the gas in case of a malfunction of any part.

PS: Maximum Allowable Pressure
PSD: Specific Maximum Allowable Pressure
Pumax: Maximum Inlet Pressure
Bpu: Inlet Pressure Range
TS: Maximum/Minimum Allowable Temperature
S.N: Serial No
Wd: Set Range
Wds: Specific Set Range
Pds: Set Point
Wdo: Set range for Over-Pressure Monitoring
Wdso: Specific Set Range for Over-Pressure Monitoring
Pdso: Set Point for Over-Pressure Monitoring
Wdu: Set Range for Under-Pressure Monitoring
Wdsu: Specific Set Range for Under-Pressure Monitoring
Pdsu: Set Point for Under-Pressure Monitoring
AC: Accuracy Class
SG: Lock-Up Pressure Class
AG: Safety Shut-Off Accuracy Group
SZ: Class of Lock-Up Pressure Zone
DN: Nominal Diameter
Pdo-DVRf: Trip Pressure for Over-Pressure Monitoring
Qmax: Maximum Flow
Qmin: Minimum Flow
IS: Integral Strength
DS: Differential Strength
Qvl Maximum flow rate of relief limiter (L/h air)

3. WORKING PRINCIPLE, INTRODUCTORY and BASIC INFORMATION

The technical specification ranges of the products are as follows. These values may vary from product to product, depending on the output flow, output pressure, inlet pressure range and similar factors. The final technical information of the product is indicated on the label on the product.

A. GENERAL:

Type-Model-Series: ERG-H7 and ERG-HZ7 Series
Product Name:
ERG-H7: Gas Pressure Regulator with Safety Shut-Off
ERG-HZ7: Gas-pressure Regulator Without Safety Shut Off
Brand: ESKA VALVE / ESKA
Operating Temperature Range "TS": Class 1 (-10°C ; 60°C) or class 2 (-20°C ; 60°C) or -30°C on request; 60°C or -40°C ; 60°C
Usage Area: It is used in transmission and distribution lines, commercial and industrial facilities, pressure control stations. They should not be used in; connections with an inlet from above/over/through gas consumption devices located after gas meters used in domestic and similar places, in combination with gas-burning devices or in uses that are an equipment of gas-burning devices, service lines with a volume flow rate below < 200 m3/h and inlet pressure < 5 bar and in the areas specified in the EN 88-1 and EN 88-2 standards.

These regulators are suitable for use with pre-filtered, non-corrosive and non-aggressive dry gases.

Maximum Allowable Pressure-Design Pressure: PS4, PS6, PS10, PS16, PS20 bar
Regulator Withstand Type: Regulators with combined strength "IS"
Test Pressure: PT=PSx1,5 bar
Regulator Type: Single stage spring loaded direct acting gas pressure regulator
Can the Controller Be Used as a Regulator?: Yes. On request, the inline monitor can be used as a product in front of a main regulator. Regulators to be purchased as monitor products should be specified in the order specification.
Regulator Malfunction Type: Regulator that opens in case of malfunction (Fail to Open)
Sound Pressure Level "Lpa": ≤35 dB(A)
It varies according to product variations, provided that it does not exceed the values required by the standards.
Inlet Pressure Range "bpu": 0.5;4 bar, 0.5;6 bar, 0.5;10 bar, 0.5;16 bar, 0.5;20 bar. In the values that are in the range of 0.1;20 bar on request.
Output Pressure General Adjustment Range "Wd": 10;4400 mbar (LP=10;80 MP=80-340 HP=340;4400)
Output Pressure Accuracy Class "AC": ±%5 AC5, ±%10 AC10
Hysteresis Band: +%5, +%10,
Locking Pressure Class "SG": +%10 SG10, +%20 SG20, +%30 SG30
Locking Pressure Zone Class "SZ":, +%2,5 SZ2,5, +%5 SZ5, +%10 SZ10, +%20 SZ20
Maximum Flow "Qmax": Up to 22500 m^3/h (natural gas) (standard conditions)

Relief Opening Pressure Adjustment Range "Pdo": There is no relief.
Relief Pressure Tolerance: There is no relief.
Nominal Diameter - End Connection: DN50-DN80 flanged connection, PN16/PN20 or Class 150
Line Connection Directions: Straight transtion (180 degrees)
Product Weight: max. approximately 65 kg
Product Volume:
ERG-H7 -ERG-HZ7 - DN50 Ø500 (LP) model hollow case volume max: 17 L
ERG-H7 -ERG-HZ7 - DN50 Ø380 (MP-HP) model hollow case volume max: 9,5 L
ERG-H7 -ERG-HZ7 - DN80 Ø500 (MP) model hollow case volume max: 19,5 L
ERG-H7 -ERG-HZ7 - DN80 Ø380 (HP) model hollow case volume max: 12 L
Gas Type: 1. 2. and 3. Family (EN 437)
Fluid Type: Group 1 and 2 (2014/68/EU PED)
Fluid: Air Gas, Natural Gas, LPG (gas phase) and non-corrosive gases
Welding Procedure: Exists. There are 2 welding operations existing on the top covers. The welded materials are steel. The method is manual tig welding.
Available Devices: Upon request; relief system, muffler, inline monitor feature upon request, internal sense, high and/or low pressure safety Shut-Off system integrated with the regulator, external sense and relief limiter upon request.
Material Standards:

Regulator Body : Graphite Nodular Cast Iron	EN GJS 400-15	EN 1563
Regulation Cover : Rolled and Forged Steel	S355J2G3 + N	EN10025-2
Regulation Intermediate Cover: Rolled and Forged Steel	S355J2G3 + N	EN10025-2
SSD Body: Aluminum Casting Alloy	EN AC 43500	EN 1706
SSD Cover: Aluminum Casting Alloy	EN AC 43500	EN 1706
Seat: Stainless Steel		
Seat: Brass Material (optional)	CuZn40Pb2/CuZn39Pb3 (EN 12164/ 12165 / 12168)	
Diaphragms: Elastomer, Cloth Added and No Additives	NBR	EN 549
O-ring:	NBR	EN 549

NOTE: Different materials can be provided for different requests.

B. FOR DEVICES WITH SHUT-OFF:

High Pressure Safety Shut-Off Adjustment Range "Wdo": 30;5500 mbar
Low Pressure Safety Shut-Off Adjustment Range "Wdu": 10;3100 mbar
Safety Device Accuracy Class "AG": ±%5 AG5, ±%10 AG10, ±%20 AG20, ±%30 AG30
Safety Device Shut-Off Type: Rapid Shut-Off
Response Time: ≤ 2 seconds
Safety Device Type: Direct acting Shut-Off device (spring loaded)
Safety Device Functional Type: Class A
Safety Mechanism Type: Combined safety mechanism
Can it even be used individually?: Yes. It can be used as integrated with the regulator or if requested before order, it can be used individually.
Relief Opening Pressure Adjustment Range "Pdo": SSD does not have a relief valve. Only in case of malfunction (e.g., Shut Off diaphragm malfunction) there is a relief vent that allows direct release to the air.
Relief Limiter: There is a relief limiter according to the manufacturer's request.
Devices that Exist: External sense, OPSO-UPSO, safety vent in SSD

C. CERTIFICATION:

Applied Regulations: Pressure Vessels Regulation; 2014/68/EU PED
Conformity Assessment Method: Category 4, Module B+D
Applied Technical Infrastructure: Pressure Vessels Regulation; 2014/68/EU PED Annex I Basic Safety Requirements
Reference Standards Used: EN 334:2019 and EN 14382:2019
Will it carry the CE Mark?:
ERG-H7 and ERG-HZ7 Series DN50-DN80 -> There must be CE Mark.
CE Mark Example:

CE
NB: ****

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D. SUMMARY

Gas Pressure Regulator Summary: As a function, the regulator keeps the value of the controlled variable (output pressure-Pds) within the tolerance range by decreasing it to the desired/set value, without being affected by disturbance variables (such as flow rate and inlet pressure). The gas pressure regulator helps the devices following it, to work safely in the gas line.

The product is of the type that opens in case of malfunction. Therefore, it means that the regulator valve will open completely in case of failure due to breakage-tear-puncture of the main diaphragm or decrease in the output pressure in the sensor. For the regulator and safety Shut-Off device, it is necessary to connect an external sense line. The product has a simplified maintenance feature “maintenance without dismantling from the top inlet-pipeline”. There are two different adjustment head systems in order to adjust the pressure more accurately. The gas pressure regulator is not pilot operated.

The accuracy and precision of the outlet pressure is ensured by the regulating pressure spring, the balanced regulation structure, and the external sensor connection. The working pressure arises from the strength of the adjustment spring in the product and the weight force of the moving parts. It is possible to adjust different outlet pressures by changing the outlet pressure spring. The adjusting spring moves independently of the weight force of the moving parts. The output pressure is adjusted depending on the pre-tension of the adjusting spring.

On the ERG-H7 series gas pressure regulators there is a safety Shut-Off device integrated on the same body, that is, additionally mounted on.

Combined Gas Safety Shut-Off Device (SSD) Summary: It is a device that automatically shuts off the gas flow completely (overpressure monitoring and/or under pressure monitoring) when, under normal operating conditions, the open and controlled and monitored pressure exceeds the preset values (overpressure and/or under pressure). If the outlet pressure rises or falls to an undesirable level above the safety set pressure, it automatically detects this situation and automatically cuts off the gas in the line and remains closed until it is manually set up again. It is integrated into the gas pressure regulator. This mechanism is functionally independent of the regulator.

High pressure safety and low-pressure safety depend on the strength of the regulating spring in the product. The high-pressure safety value can be changed with the outer spring (large diameter spring) of the adjusting unit, and the low-pressure safety value can be changed with the inner spring (low diameter spring). It is possible to adjust to different pressures by changing these springs.

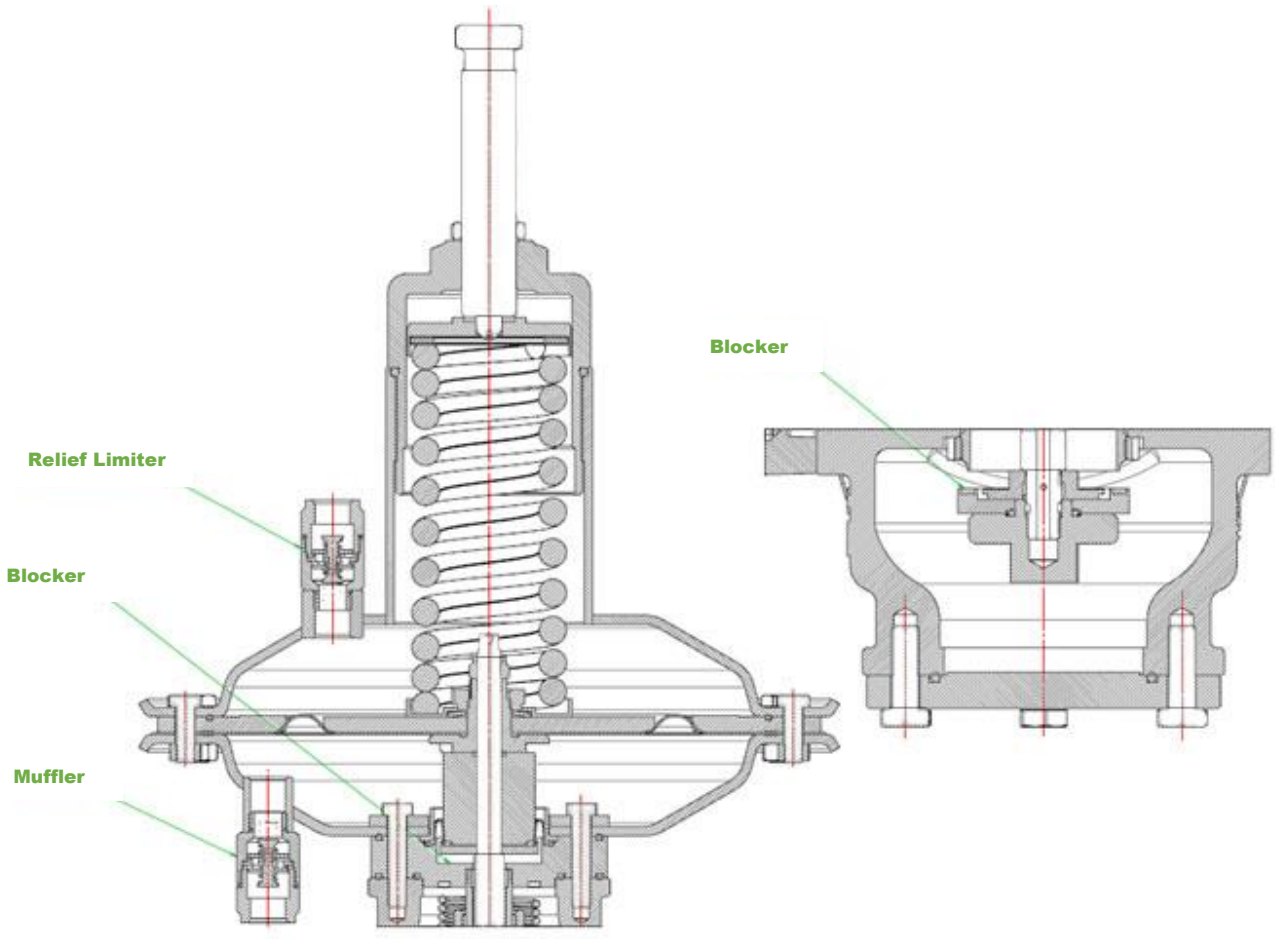


Figure 1

Muffler: It is the apparatus that slows the inlet or outlet of gas or air at the upper part of the regulation diaphragm. It reduces vibration and sound in the product.

Blocker: There are blockers at the bottom and at the top to eliminate the damaging effects that may be caused from excessive pressures (low or high) below the diaphragm or overloading of the spring. This limits the diaphragm movement. Thus, the valve movement is limited.

Monitor Regulator: It is an emergency regulator that is put into service instead of the main regulator, and failure of the latter will cause the outlet pressure to reach the set point for monitor intervention. The monitor regulator is usually mounted before the active regulator. Although the function of the monitor regulator is different, all the component parts are almost the same as the active regulator. The only difference on the system is that the output pressure of the monitor regulator is set to a higher pressure than the active regulator. Monitor regulator flow is lower than active regulator flow.

Relief Limiter: Its function is to limit the flow of fuel gas delivered from the chamber to the environment around the regulator to the specified values in case of failure of the pressure sensing element.

HEAD TYPES

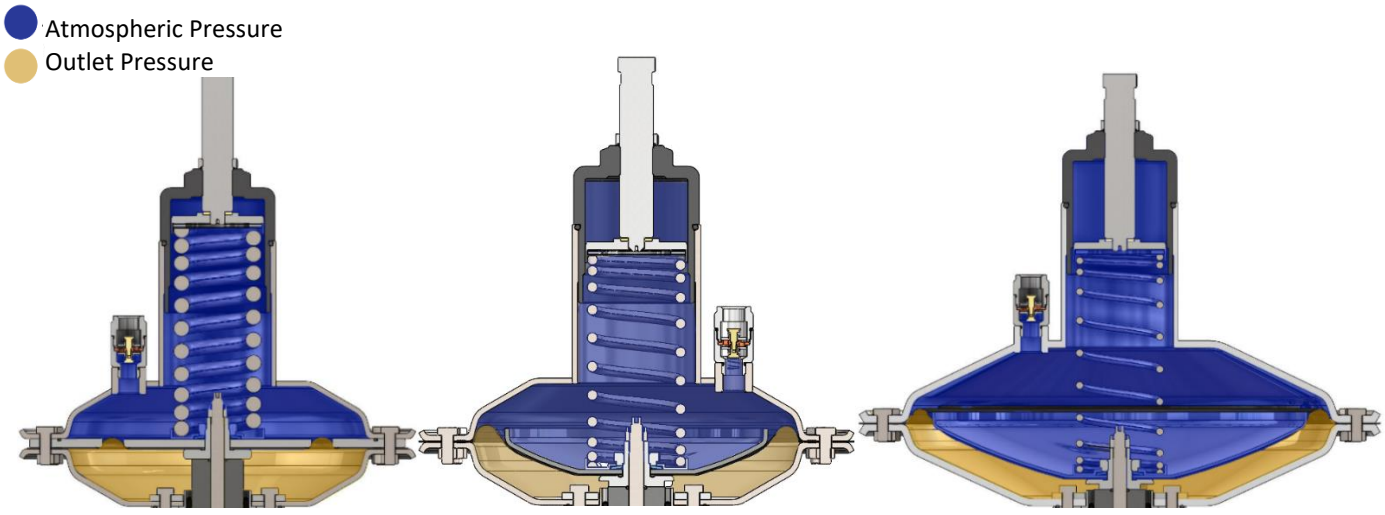
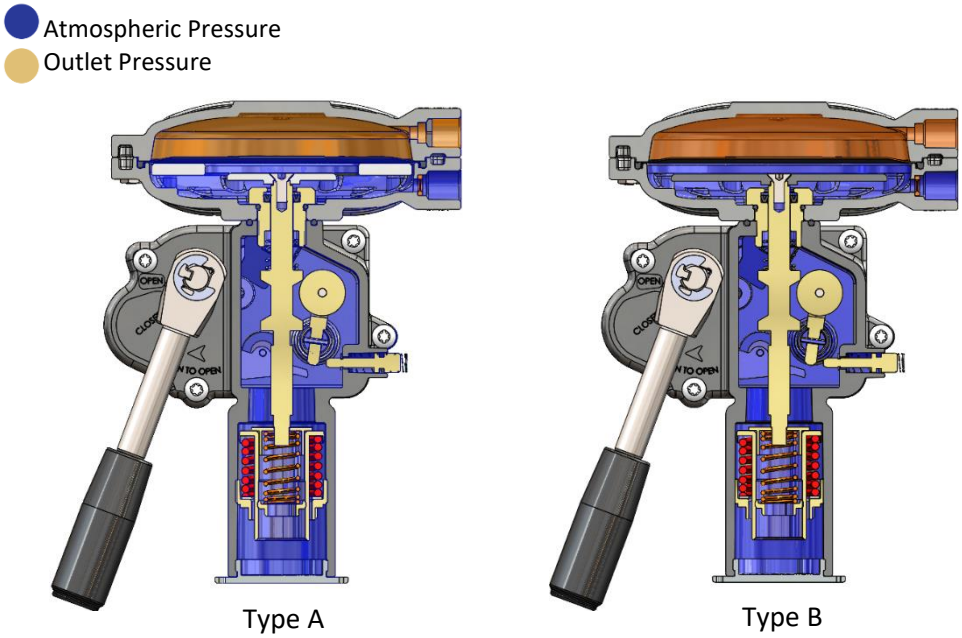


Figure 2.



Şekil 3. Opso and Upso Presentation

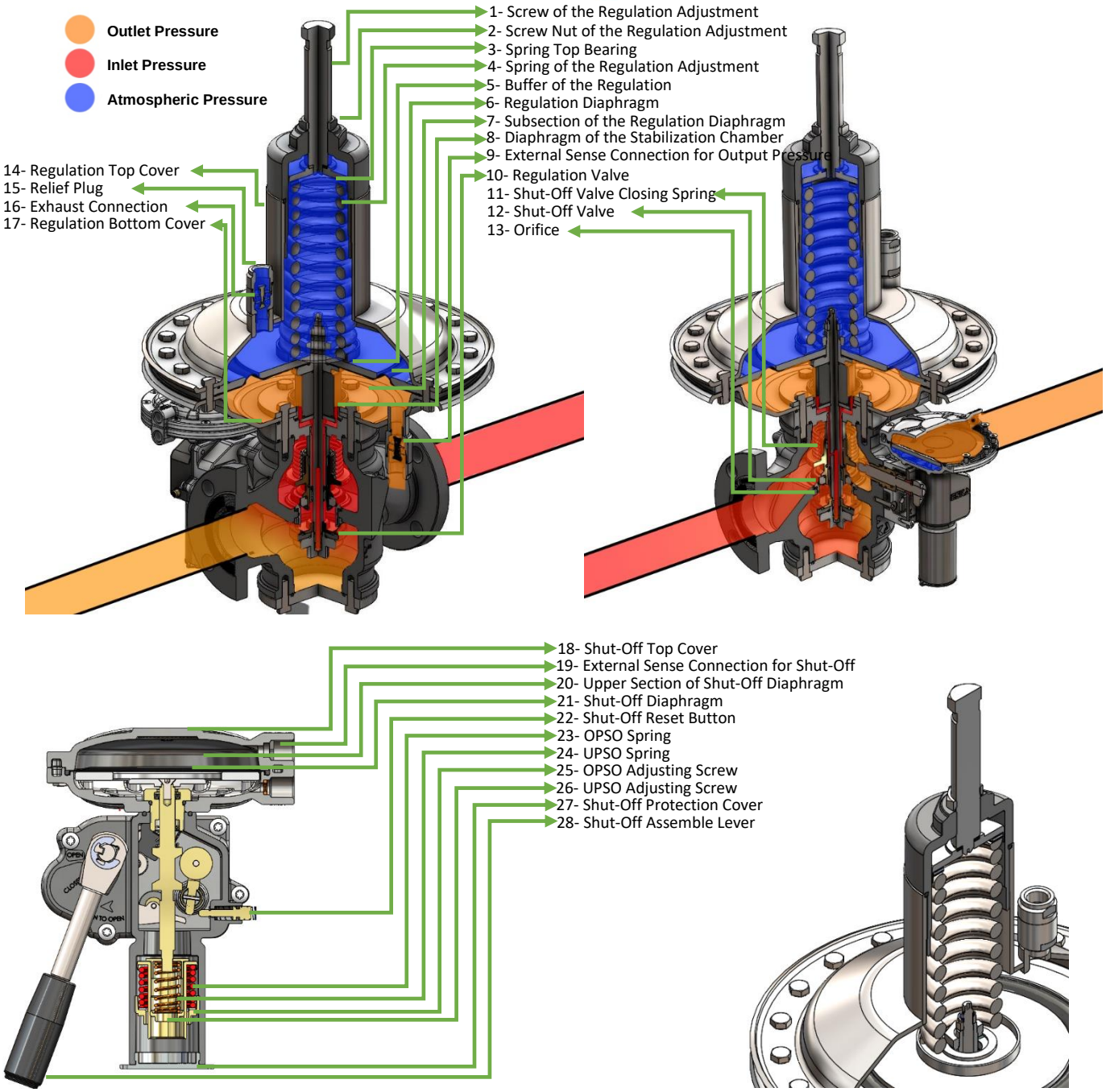


Figure 4.

According to the balance of forces principle, the forces acting on the manner of work are: The strength of the pressure regulating spring is the outlet pressure under the regulating diaphragm, the weight force of the moving parts.

Unpressurized State: “The strenght of the “Regulation Adjustment Spring (4)” acts on the “Regulation Diaphragm (6)”. In the situation of the unpressurized state, no force acts on the "Regulation Diaphragm Subsection (7)" from the outlet side and the spring force on the "Regulation Diaphragm (6)" presses the "Regulation Valve (10)" down, thus opening the gas passage port. The regulator is in the turned on position.

Adjusted State: When the outlet pressure increases, the force acting on the "Regulation Diaphragm (6)" in the "Regulation Diaphragm Subsection (7)" increases. The “Regulation Diaphragm (6)” moves upwards until the balance between the force of the “Regulation Adjustment Spring (4)” and the outlet pressure is achieved. This movement enables the “Regulation Valve (10)” to approach the “Orifice (13)” and narrows the gas transmission noozle. The flow, which decreases in this way, decreases the outlet pressure until the outlet pressure set value is reached and the force balance is restored in the “Regulation Diaphragm (6)”. When the outlet pressure decreases, the force acting on the "Regulation Diaphragm (6)" in the "Regulation Diaphragm Subsection (7)" decreases. The “Regulation Diaphragm (6)” moves down until the balance between the force of the “Regulation Adjustment Spring (4)” and the outlet pressure is achieved. This movement ensures that the “Regulation Valve (10)” to move away from the “Orifice (13)” and causes the gas transmission nozzle to open. In this way, the increased flow increases the outlet pressure until the set value of the outlet pressure is reached again and the force balance is restored in the “Regulation Diaphragm (6)”.

The regulation valve is in the fully open position with the orifice when the capacity is zero.

Initial Pressure Equalization: Changes in inlet pressure have no effect on the balance of forces. The inlet pressure is balanced with the “Stabilization Chamber Diaphragm (8)”. The inlet pressure is transmitted through a gap in the “Regulation Valve (10)” to the chamber below the “Stabilization Chamber Diaphragm (8)”. While the inlet pressure applies force in the opening direction on the “Regulation Valve (10)”, it applies force in the closing direction under the “Stabilization Chamber Diaphragm (8)”. Since the surface areas on which both forces act are equal, the opposite forces cancel each other and the inlet pressure balance of the regulator is provided.

Safety Mechanism: “Upper Section of Shut-Off Diaphragm (20)” is connected to the outlet pressure via the sense line in the Shut-Off device. The outlet pressure exerts a force on the “Shut-Off Diaphragm (21)”. This pressure is also the controlled pressure. The force of the “OPSO Spring (23)” and “UPSO Spring (24)” acts in the opposite direction to this force. In case of deterioration of the balance of forces with the changes in the outlet pressure, Shut-Off is activated and cuts the gas passage.

4. ASSEMBLY

NOTE: Before starting the assembly steps below, carefully read all the information below and fulfill the requirements.

1- Make sure that all valves used prior to and following the product and providing gas flow to the product are closed and there is no gas passage,

2- Take the product out of the box properly and remove the input-output connection protection plugs, if there is any, and the protection plugs of the sense line on the regulation side and the Shut-Off safety device, if there is any,

3- Adjust the flow direction of the product so that the arrow on the product body points to the outlet side (ie, the gas flow direction),

4- The product should be placed on the line in horizontal or vertical position with a tolerance of ±5 o C, in suitable mounting positions as an example is indicated in Figure 6,

5- Manually place the inlet and outlet gasket between the inlet and outlet line connection flanges and the body flanges of the product,

6- Tighten the nuts or bolts in a "cross" pattern with gradually increasing torques using suitable wrenches without applying excessive load, force, or impact (Figure 7).

7- Connect the sense pipes to a suitable distance in the line pipe so that they do not get blocked, warped or deformed. Connecting the Sense Line: For the Regulation Sense and the Safety Device (SSD) Sense, use stainless steel or copper tubing with a minimum internal diameter of 8mm. These connections must be at least 5xDN away from the product. Lay the sense lines with a slight slope to prevent condensation from accumulating. The point of measurements on the sense lines must be at the same point on the line. Regulator, Monitor Regulator, Separate SSD or Combined SSD are included in this rule.

8- After the assembly procedure is finished, check and make sure that you have not reverse assembled the product, that you comply with the applicable legislations and local regulations, and the procedures are carried out according to all the information in this manual.

Before The Procedure

Assembly (regulator, ventilation-exhaust line, sense line, etc.) must be carried out in accordance with the provisions (laws or standards) in force at the installation site. Approvals should be obtained If it is necessary. What is explained in this procedure should be done by certified, authorized and expert technicians and authorized companies-services-installers who have been approved by gas approval institutions. Under no circumstances, the end user should carry out these procedures. If it is not installed properly, it can cause the product not to work correctly or at all, also damage to property, injury and loss of life can occur. Our company is not responsible for applications made without following the manual.

Before assembly, determine and be sure the what kind of product with what features should be used. Check and compare the technical and general information written on the label on the product and in this manual, and make sure that the right choice is made, especially because it symbolizes the product, carefully examine the label information. If there is any incompatibility between the information, please contact the authorities without taking any action.

Check the auxiliary parts and accessories that may be on the product and in the box. (connection protection plugs, connection gaskets, vent plastic cap, sense plastic caps, shutoff protection cap (for ERG-H7 Series), pressure adjustment seals, if any) and

check the required documents (guide, warning card if available, label, certificate if available etc.). If there is an incomplete or incorrect circumstance, please contact the authorities without taking any action.

Examine the line to be installed, as well as the compatibility of the line and the product features and make the necessary verifications and ensure that it is appropriate. (Operating pressure range, fluid, flow, environmental conditions, line, and fluid being clean, mutual connection type and diameter selections, no axial misalignment, line alignment, line and product dimensions suitability, appropriate gas velocity in the line, etc.). In particular, the label on the product should be carefully checked and confirmed whether it is suitable for the application. The inlet and outlet pipes must be at the same level and be able to support the weight of the product. If it is necessary, use braces in the pipeline near the connecting flanges. Do not attach the brackets directly to the product. If there is an incomplete, incorrect, or suspicious circumstance, please contact the authorities without taking any action. It should be checked and ensured that there is no damage to the product, the product to be installed is suitable for the system to be used, the pressure does not exceed the maximum pressure level on the label on the product, the dimensional measurements of the product and the line compatibility are correct, the mounting location is adequately far and protected so that it is not affected by sparks and electric currents that may arise from flammable materials and devices. Install manual gas Shut-Off devices (e.g., ball valves, etc.) at the front and rear of the product to avoid any piping leaks.

Check and make sure that the inlet and outlet pipelines are aligned and that there is no misalignment in the line to which the product will be connected. Confirm that the assembly has started in accordance with the applicable technical rules and laws. When mounting with adjacent elements, care must be taken not to create a pressing force on the body, and the mounting elements (bolts, O-rings, sliders) must be suitable for the geometry and operating conditions of the equipment. No modifications should be made to the product (drilling, grinding, soldering, etc.). If it is necessary, make sure that the input side is protected with a suitable device to avoid exceeding the limits of usage (PS, TS).

The product should not be exposed to fire and lightning strikes. It should be installed in a non-seismic area or in a place where necessary precautions are taken for seismic situations. For outdoor installations, the product should be away from vehicle traffic and external elements and should be positioned so that it is not affected by water, ice and other foreign materials and does not enter the spring case through the vent. Avoid placing the regulator under eaves or under the downpipes. Control the risk of explosive mixture in the pipeline. Make sure the product is above the possible snow level.

Ensure that the joining components to be used during assembly, comply with the legislations. Only install the product in accordance with applicable legislations and local regulations, obtaining necessary approvals If it is necessary. Install the product in an incasement, do not install in the outdoor environment without taking the necessary protective measures. The lifting equipment used must be suitable for the loads to be lifted. Necessary gaps and spaces should be left around the product, taking into account the external dimensions of the product, so that its components can be accessed, necessary procedures can be performed and tested.

Before assembly, sufficient buffer volumes should be left at the line outlet at the rear of the product. Confirm the accuracy of the buffer volume on the outlet side. The product outlet line (buffer volume) should be straight, in the diameter to provide the desired gas velocity on the outlet side and without reduction. A buffer volume of 1/500 of the nominal flow is recommended for products with outlet pressures up to 300 mbar, and 1/1000 of the nominal flow for outlet pressures above 300 mbar. The maximum flow velocity in the pipeline on the product outlet side should be <25 m/s.

The gas velocity on the outlet side should not exceed the following values. When choosing the nominal diameter of the outlet pipe, the relevant velocity calculation should be made.
Vmax for 1.5 < Pd < 4 bar = 25 m/s
Vmax for 0.5 < Pd < 1.5 bar = 20 m/s
Vmax for Pd < 0.5 bar = 15 m/s

Necessary measures should be taken to ensure that the sense lines through which the gas passes are resistant to thermal, chemical, and mechanical stress, long-lasting and resistant to deformation and rupture. Sense lines should not be closeable. Condensation agents formed in the lines should not reach the product. "Regulation Adjustment Spring (4)" and "OPSO Spring (23)" and "UPSO Spring (24)" in ERG-H7 products should not be filled with flammable gas or combustible gas-air mixtures in the mounting compartments. Necessary precautions should be taken. Regulation Sense Line and Shutoff Sense line should be installed from the manometer at a distance of at least "5xDN" from the product outlet. Ball on-off valves, filters, mechanical valves, solenoid valves, flange connections and all similar valves in the line should be adjusted considering the required gas velocity. The line should be chosen to ensure the velocity of the fluid under all operating conditions. Always install a safety device (e.g. safety pressure valve and/or safety relief valve) on the line. The product is not a safety valve. If it is necessary, a suitable overpressure protection must be installed on site in the plant section. To prevent condensation, it is recommended to connect the sense line with a slant in the flow direction. Sense connections between the product and the main pipe must be made using a stainless steel or copper pipe. The point of measurements on the sense lines on the product must be at the same point on the line. Regulator, Monitor Regulator, Separate SSD or Combined SSD are included in this rule.

The line to be installed must have an inlet and outlet shutoff valve front and rear the product. Before and during installation, ensure that there is no compressed gas trapped between the line and the product, the gas supply is shut off and the possibility of opening is completely avoided. Before assembly, it should be checked that the line pressure is within the inlet pressure range specified on the product label and that the product capacity will not be exceeded during use. Necessary precautions should be taken to prevent noise and vibration from the line. There should be no axial misalignment on the line that is to be mounted. Necessary precautions should be taken to prevent water ingress and possible subsequent freezing in humid gases. Before assembly, take appropriate measures by means of clamping on the line side and similar ways to reduce the bending and torsional loads caused by pipes and vibration at the line input and output. Relevant limitations on counter forces and moments originating from pipes and connections must be taken into consideration. In fact, ensure that there are no diameter shrinkage and expansions in short distances at the product point of entry and point of exit. At the area where the product will be assembled; make sure that the necessary dimensions and spaces are provided by taking the external dimensions of the product as a reference, considering the test, maintenance, dismantling etc., choose an installation location that will allow you to access the product freely even after the entire installation is completed. In any case, check that the inlet pressure of the product is and will be higher than the outlet pressure of the product. While the product is not yet attached to the line, clean the inside of the pipe with compressed air, remove dust, dirt, sawdust, welding particles, dirt, and similar foreign objects, and take measures to ensure that these lines are not contaminated again. In order to filter the gas, ensure that an external filter is installed prior to the product. Select it so that the pore opening dimension in this filter does not cause pressure and flow loss. In general, make pressure and impermeability checks of the line and system. The regulator and SSD should be away from direct sunlight and corrosive atmospheric effects. Proceed to the assembly procedure by taking the necessary precautions so that the products are not directly exposed to external environment, external corrosion and wearing conditions (sun, rain, snow, humidity, water, external chemicals, etc.) and possible external damage and impact (inside the protection box, etc.). To prevent uncontrolled overpressure, ensure that an appropriate protection against overpressure is installed in the plant section. Do not install the product outdoors without taking the necessary protective measures considering every risk variation. Vents and relief lines that may be required must be constructed in accordance with applicable rules and laws. The sealing surface must be clean, a new gasket must be used at all times. Make sure that there are no particles left in any part of the line (dust, dirt, sawdust, and similar foreign particles).

Ensure that the joining components (gasket, screw, etc.) to be used during assembly comply with the legislations. Avoid the possibility of explosive gas-air mixture in the pipe installation (continuous checking of the room atmosphere with gas concentration measuring devices, etc.). For maintenance or control operations, In order to relief the pressure and fluid contained in the facility, pressure limiting systems should be installed suitable for the assembly and appropriate relief or drainage systems should be provided for the facility. Take precautions to avoid contact voltage and flammable sparks in the product. Provide electrically conductive bridging.

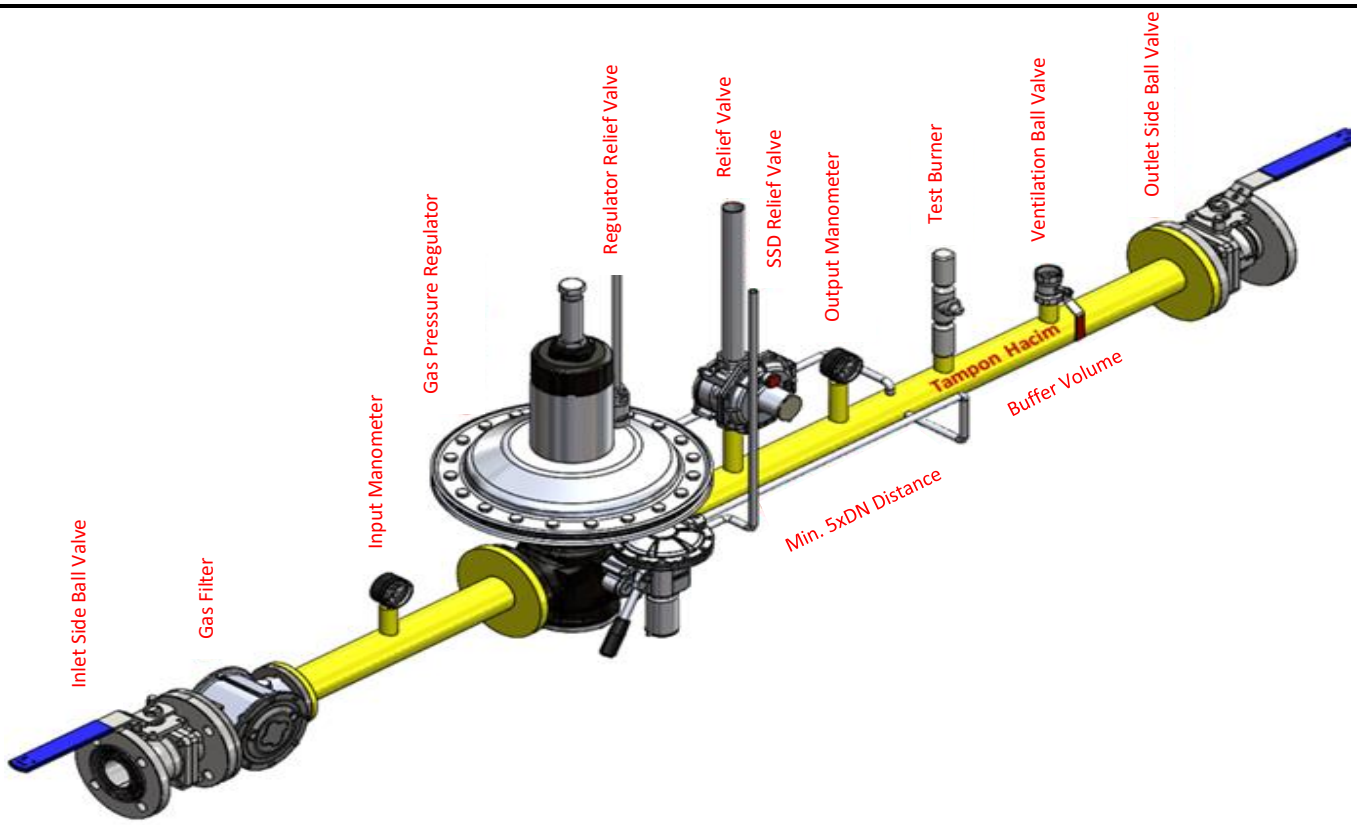
These products cannot be used in ground type applications. Products with a properly coated outer surface should be used for the line and appropriate measures should be taken to prevent the entry of dirt, dust, filth, liquid, and similar materials into the ventilation/exhaust part of the product, if any, and it should also be ensured that the products are not used completely or partially buried in water, soil or liquids. When necessary, an exhaust line should be connected to the breather plug console of the product. This connection must be at least DN10 threaded. A threaded adapter that may be required for this connection should be requested and used. In products with a relief system, it should not be installed and used in closed areas without taking the necessary precautions for the transmission of the gas to be released to the safe area (for example, the transmission and mixing etc. of the gas to be released to the external atmosphere conditions with a pipe of at least DN10).

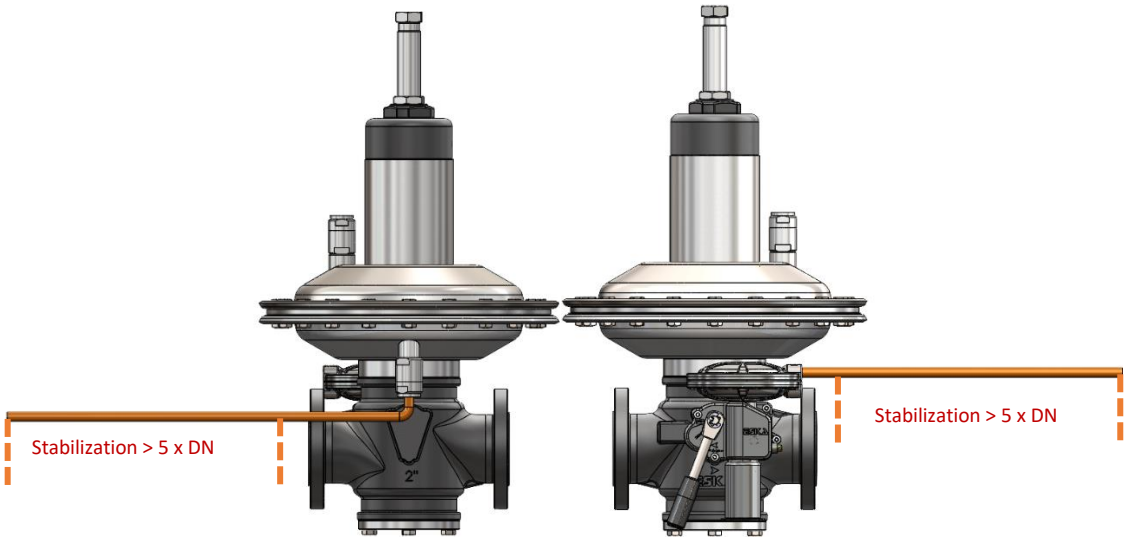
Damage to the product may occur due to incorrectly installed lifting equipment. Do not attach the lifting equipment to product mountings (e.g., to the regulation cover).

Install any pipe junction piece that may connection that may cause turbulence in the flow to an appropriate distance from the control line. In applications where the gas can liquefy, condensation may occur in the control line and damage the product. Therefore, take the necessary precautions.

<u>During the Procedure</u>

Do not use pastes, special liquids, and similar substances to seal the connections. Gaskets to be used in assembly must be suitable and approved gaskets, clean and of suitable hardness, and new gaskets should be used at all times. It should be ensured that there are no defects in the gaskets that will impair the sealing feature. Provide precautions (e.g., storage in a box, etc.) to prevent the product from being tampered with by unauthorized persons and to protect it from impact or accidental contact. Make sure that there is no liquid in the line and in the product (for example, condensed water in the product). If it is necessary, clear away the fittings with clean compressed air. The sealing surfaces of the flanges must be undamaged and clean. The vent/exhaust lines of the regulator, the associated safety device and the relief valve should be vented separately to the outdoor environment.





Check the product for shipping damage, Make sure there is no flammable gas in the line, If it is necessary, evacuate the explosive air/gas mixture in the line and product and take precautions, it should be placed on the line in mounting positions and without applying excessive load, force, impact manually, in a way that the front of the product output sense line is not blocked and it is not exposed to mechanical stress. In flanged connections, observe that the product body inlet and outlet flanges are the same as the line connection flanges, make sure they are perfectly coaxial and parallel, to avoid unnecessary mechanical stress on the product body. Tighten the nuts or bolts so that they do not leak externally.

NOTE: Tighten each nut individually and retighten at least once clockwise until maximum torque is achieved. Also calculate the space required to insert the sealing gasket and properly center the gaskets in the joint. If there is a gap between the line and the product, do not try to reduce the gap by tightening the bolts more than necessary. In flanged products, follow Figure 7 for mounting torques for bolts, do not use any part of the product as an apparatus to assist the connection during assembly. After the tightening, check that the connections are fully seated in their sockets, that there are no cracks or similar mechanical problems in the connections and the product, that there is no mechanical stress on the product due to the line, pipe, and connection, make sure that the load of the pipeline does not affect the product. Leakage and damage to the product may occur due to excessive or low tightening torques. Over tightened torques cause parts to wear faster. Parts tightened with very loose torques can cause leakage. Follow the specified torques when tightening the product components. Ask the manufacturer about the unfamiliar torques.

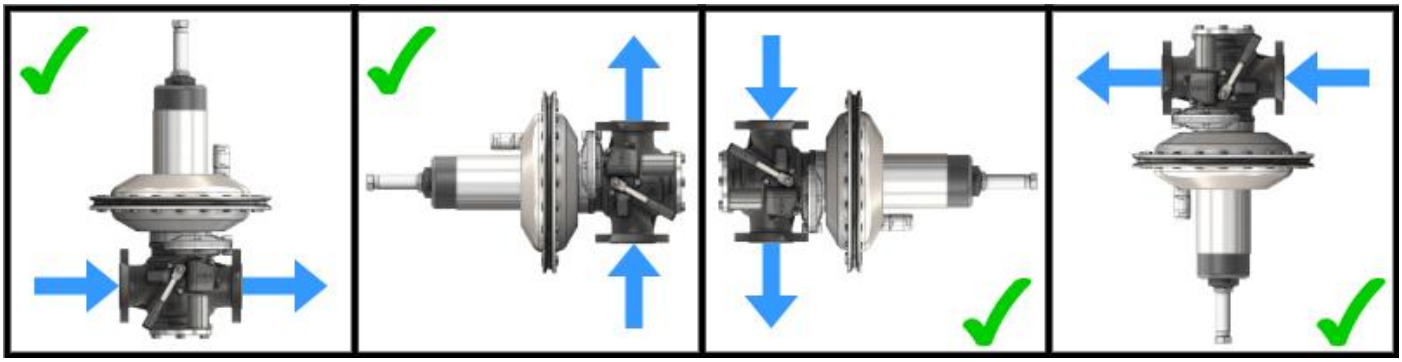


Figure 6.

Table 2 – Tightening Torque for Flange Bolts (EN 13611)

DN	6	8	10	15	20	25	32	40	50	65	80	100	125	≥ 150
Torque Nm	20	20	30	30	30	30	50	50	50	50	50	80	160	160

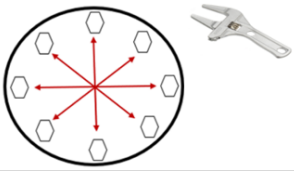


Figure 7.

After the Procedure

Confirm that the installation is done in accordance with the applicable technical rules and laws. After the assembly procedure is finished, check, and make sure that you do not reverse assemble the product.

5. INSTALLATION, START-UP, OPERATION

NOTE: Before starting the installation steps below, carefully read all the information below and fulfill the requirements.

In ERG-H7 Series Products;

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies, and make sure that the Shut-Off safety valve is closed.

2- Open the inlet valve (gas supply) a fair amount on the line, very slowly and gradually, check that there is an inlet pressure on the inlet manometer in accordance with the product label, The product may be damaged due to very hasty actions,

3- Open the Ventilation Ball Valve a fair amount. This will give us an artificial flow rate,

4- Pull the “Shut-Off Assembly Lever (28)” shown in Figure 8. manually, slowly, clockwise and a fair amount. In this way, gas passage occurs to the outlet side in the form of a leakage. Maintain this state for a few seconds (at least 6 seconds). Then, very slowly, gradually lift the “Shut-Off Assembly Lever (28)” all the way up and again, wait for a few seconds and then pull your hand away. Verify that the lever remains retracted and observe that there is gas transmission to the outlet. (Fig. 8) (pull without applying excessive load, force, and impact)

5- Check that there is an outlet pressure (within tolerances) on the outlet manometer in accordance with the product label,

6- Open the outlet valve in the line a fair amount and very slowly and then gradually close the Ventilation Ball Valve gradually and completely,

7- Wait for a while for all the pipes in the line to be completely filled with gas,

8- Open the inlet valve (gas supply) a fair amount on the line, very slowly and gradually, check that there is an inlet pressure on the inlet manometer in accordance with the product label,

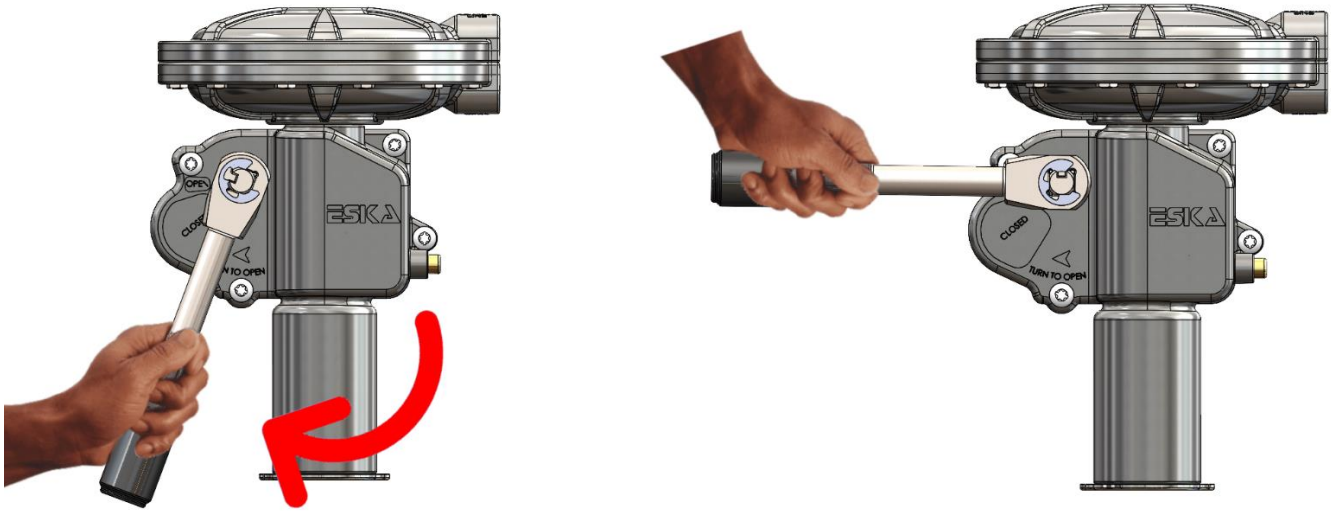
9- Open the outlet valve on the line very slowly and gradually, and check that there is an outlet pressure (within tolerances) in the outlet manometer in accordance with the product label,

10- Make sure that the product is working accurately by performing the necessary tests, these tests are external leakage, outlet pressure, capacity value, closing pressure, internal leakage, if any, discharge pressure, high safety pressure (Opso), low safety pressure (Upso) and mixing of the outgoing gas into the atmosphere etc.

11- When the product and line are ready for use, inform the gas users about the gas usage.

NOTE: If the operation does not occur, repeat the procedure, During these operations, if a situation such as difficulty in pulling the "Shut-Off Assembly Lever (28)" or closing the "Shut-Off Assembly Lever (28)" is encountered because the outlet pressure has reached the safety setting pressure; Firstly; Open the Ventilation Ball Valve a little more, if it has not improved, and following that if you are sure that the inlet pressure value is at the desired values, check the sense line and make the necessary corrections, if there is still no improvement, then there is a high probability that there is a problem with the product. Therefore, please contact the authorities without taking any action.

NOTE: If you suddenly fully pull the assembly lever, high outlet pressure values will appear.



SSD Un-Installed State

SSD Installed State

Figure 8. Safety Mechanism

<u>In ERG-HZ7 Series Products;</u>

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Open the Ventilation Ball Valve a fair amount. This will give us an artificial flow rate,

3- Open the inlet valve (gas supply) a fair amount on the line, very slowly and gradually, check that there is an inlet pressure on the inlet manometer in accordance with the product label, The product may be damaged due to very hasty actions,

4- When the inlet valve that will feed the product is opened, gas flow to the outlet will start automatically, wait for a few seconds (at least 5 seconds), verify that there is gas passage on the outlet side, thus, the product installation will be completed. If the installation procedure if the product installation does not occur, contact the authorities,

5- Check that there is an outlet pressure (within tolerances) on the outlet manometer in accordance with the product label,

6- Open the outlet valve in the line a fair amount and very slowly and then gradually close the Ventilation Ball Valve gradually and completely,

7- Wait for a while for all the pipes in the line to be completely filled with gas,

8- Open the inlet valve (gas supply) a fair amount on the line, very slowly and gradually, check that there is an inlet pressure on the inlet manometer in accordance with the product label,

9- Open the outlet valve on the line very slowly and gradually, and check that there is an outlet pressure (within tolerances) in the outlet manometer in accordance with the product label,

10- Make sure that the product is working accurately by performing the necessary tests, these tests are external leakage, outlet pressure, capacity value, closing pressure, internal leakage, if any, discharge pressure, gas can be mixed into the atmosphere. And mixing of the outgoing gas into the atmosphere etc.

11- When the product and line are ready for use, inform the gas users about the gas usage.

Before the Procedure

Before installation, carefully review the instructions in this manual and the information on the label on the product, have always it with you, and follow it completely. If you think that there is incomplete, incorrect, or suspicious information, do not take any action and contact the authorities. Make sure that all the end users and the people on the exit side do not make any use and ensure this. Do not change the factory settings. Factory settings have been adjusted according to the desired values in the order specification and are indicated on the label. Adjustment devices are sealed if required in the specifications of the order. Sealing is recommended by the manufacturer. Make sure that the product is mounted accurately on the line. Unauthorized personnel should absolutely be kept away, and the restricted access area should be properly marked (signs, barriers, etc.). Risk variations that may be experienced during start-up should be evaluated (for example, release of flammable or harmful gases to the atmosphere, formation of explosive air/gas mixture etc.) and precautions should be taken. Make sure that all vent and/or exhaust lines on the product are not blocked. Then take the necessary measures to prevent these lines from being blocked. Do not attach lids like blind caps to these lines, that would prevent gas escape. Take permanent measures to prevent dirt, rust, dust, and similar particles from entering the product, which may occur during start-up. Failure to remove the residue will result in product damage or inaccurate performance. If there is a filter in the line, make sure it is clean and is not deformed. Before starting the gas flow, check the pipeline for leaks and make sure it is sealed tight. Do not install the product in a location where excessive water accumulation or ice formation may occur. In some installations, such as in areas with heavy snowfall, a cap or a casing may be required to protect the product from the snow load and to prevent the air vent from freezing. Necessary precautions should be taken considering these situations. Examine the pressure values with a calibrated manometer mounted at least 5xDN in the pipeline on the outlet side of the product.

During the Procedure

Only start the product when all protective mechanisms, if any, are fully functional. If there is a line with an angle and/or the pipeline supports are insufficient, never and for no reason, put the weight of the line solely on the product. Take the necessary precautions for this situation.

After the Procedure

If the product could not be installed or it has closed due to various reasons during operation, the inlet and outlet valves should be closed, the problem should be identified, and the product should be re-installed according to the rules stated above. If the product has been exposed to effects greater than the limits specified on the label, it should be checked whether the product works accurately. Make sure that the product does not have excessive noise and vibration problems.

In confined conditions or enclosed areas, leaking gas can accumulate and present an explosion hazard. For this reason, connection should be made by piping the ventilation hole (in the product and the safety mechanism) from the product to the outside (atmosphere).

In ERG-H7 series products, during operation, due to the fact that the gas is not clean and internal leakage due to foreign objects in the line, etc., the outlet pressure may increase, and the gas may be cut off by closing the high pressure safety Shut-Off device of the product. The position of the safety Shut-Off can be observed from the “Shutoff Assembly Lever (28)” in Figure 8. In this case, it is necessary to redo the installation procedure. If the output pressure of the product drops excessively due to various reasons and reaches the set safety pressure during operation, the low-pressure safety Shut-Off system is activated and the gas transmission may be closed. In this case, it is necessary to redo the installation procedure.

After the product is installed, there should be no gas escape from the ventilation hole, if there is such a case, it can be considered that there is a malfunction in the product. In such a case, the product should not be continued to be used and the authorities should be contacted immediately.

Do not try to remove the product “Shut-Off Assembly Lever (28)” (only for ERG-H7 series products) at any stage mentioned in this manual, and during use, do not allow it to be subject to any mechanical damage, do not move it to sides unnecessarily, and do not force it excessively. If the product is subjected to an extreme pressure condition, it should be checked for any damage that may have occurred. Some form of external overpressure protection must be provided if the overpressure is to be high enough to damage the product.

If the installation process does not take place or if you encounter different problems afterwards; please contact the authorities without taking any action.

TESTS / PERIODIC INSPECTION

After installation, the outlet pressure, capacity, Shut-Off pressure and internal leakage, high and/or low-pressure Shut-Off pressures, and internal and external impermeability must be checked. While performing these procedures, take all necessary precautions to prevent external leakage from the product to create a dangerous atmosphere and do not operate the product in enclosed areas.

Note: Under no circumstances should any procedures that will cause a pressure rise or pass of more than 20 bar to the inlet connection port and body of the product, to the PS bar on the label, and to the enclosures where the outlet pressure settings of the product are made, and this situation should not be allowed to occur.

Examine the pressure values with a calibrated manometer mounted at least 5xDN in the pipeline on the outlet side of the product.

- OUTPUT PRESSURE, CAPACITY, LOCKING PRESSURE, INTERNAL IMPERMEABILITY, OPSO, UPSO, EXTERNAL LEAKAGE TEST

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Connect the artificial pressure generation device to a suitable distance on the side of the outlet pipe as fully sealed,

3- Adjust the determined test pressure (Pumax) by opening the inlet valve fair amount gradually and very slowly. Observe the Pumax value on the inlet manometer,

4- Partially open the Ventilation Ball Valve on the outlet side, adjust this opening to receive approximately 0.5xQmax flow,

5- Install the regulators as described in this manual,

6- Check that there is an outlet pressure (within tolerances) on the outlet manometer in accordance with the product label,

7- Close the Ventilation Ball Valve completely (Q=0 m3/h) wait for 5 minutes and check that the outlet pressure (Shut-Off pressure-SG) is stable and the value is within the tolerances, observe that the fluctuations in the outlet pressure are minimal, if these conditions are met, it means that there is no internal leakage in the product,

8- Keep the status of the Ventilation Ball Valve fully closed, gradually increase the pressure from the outlet side using the pressure builder, so that the outlet pressure of the product will increase to the discharge pressure. Verify the declared pressure value (within tolerances) on the product by observing the value on the pressure gauge, the outflow of gas is an indication that the relief valve has been activated,

9- Continue to increase the outlet pressure gradually. In this way, slowly increase it to the high pressure safety Shut-Off setting value (including tolerances). Check that the "Shut-Off Assembly Lever (28)" is closed at the OPSO value declared on the product and that the OPSO value is within the tolerances (AG), Check that the outlet pressure value does not change for 5 minutes after the OPSO mechanism is closed, If the outlet pressure does not increase in this way, means there is no internal leakage in the product,

10- Then gradually open the Ventilation Ball Valve a fair amount, install the product again, gradually close the Ventilation Ball Valve completely. Close the inlet valve completely. Then gradually reduce the pressure by opening the Venting Ball Valve. In this way, the low pressure is slowly reduced to the safety Shut-Off set value (including tolerances). Check that the "Shut-Off Assembly Lever (28)" is closed at the OPSO value declared on the product and that the OPSO value is within the tolerances (AG), Check that the outlet pressure value does not change for 5 minutes after the OPSO mechanism is closed, If the outlet pressure does not increase in this way, means there is no internal leakage in the product,

11- Open the inlet valve gradually so that Pumax x 1.1 bar can be seen, Open the Ventilation Ball Valve a fair amount, Install the products according to this manual, Spray the appropriate leak detection spray all over the product, if there is foam formation anywhere in the product, it means that there is an external leak.

12- Disassemble the pressure builder, close the test valves, check that there is no external leakage in the line and the product, Reinstall the product by following the rules in this instruction,

6. ADJUSTMENT

The regulator and other devices (relief limiter, safety device and monitor regulator) are normally supplied by the manufacturer pre-adjusted to the desired output set pressure. Within the values permitted by the springs used, it is possible for the set values to deteriorate for various reasons (e.g., vibration during transport). In such cases, adjustment can be made within the framework of the information in the manual. The settings should not be changed more than ± 10% and should not be changed beyond the

limitations on the label. If you observe any inconvenience in the springs (wrong spring, corrosion, etc.), contact the authorities without taking any action.

The springs included in the product are regulation spring, high pressure closing spring (for ERG-H7 series), low pressure closing spring (for ERG-H7 series). The spring used in the products is designed to provide the desired outlet pressure at the desired pressure ranges. For values outside the specified range, a spring replacement will be required. These springs must be obtained from the manufacturer.

Before the Procedure

First of all, make sure that the existing springs are the ones that can provide the desired values. If you are unsure, contact the manufacturer.

During the Procedure

Adjustment mechanisms and springs should not be over-compressed, bent or forced while making pressure adjustments.

OUTPUT PRESSURE ADJUSTMENT – FOR LP HEAD

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

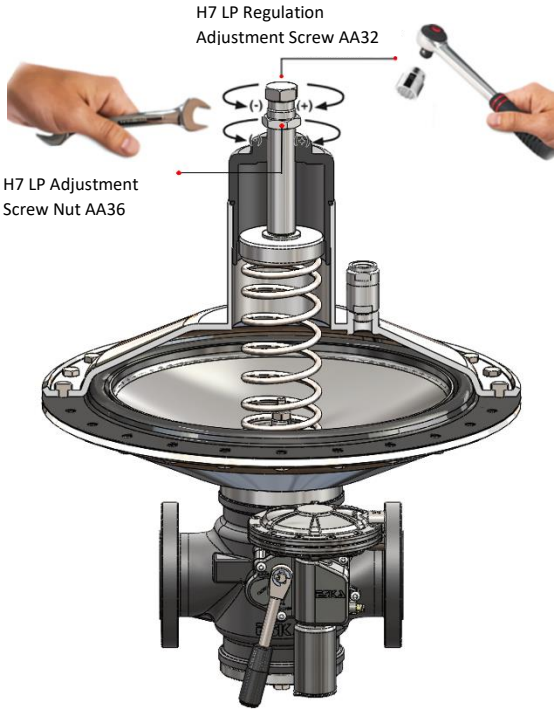
2- Remove the seals, if any, on the relevant adjustment parts of the product,

3- Loosen the “Regulation Adjusting Screw Nut (2)” by turning it in minus (-) direction using AA36 wrench,

4- Adjust the “Regulation Adjustment Screw (1)” to the desired value using AA32 wrench,
(Turn it in the plus (+) direction to increase the outlet pressure, and in the minus (-) direction to decrease it)

5- When the desired outlet pressure is set, tighten the “Regulation Adjustment Screw Nut (2)” by turning it in the minus (-) direction using an AA36 wrench until the last point.
(Please pay attention to this situation, as the product will be out of proper adjustment if it is rotated too much.)

6- After the adjustment, make sure that the settings are correct by performing the “periodic inspection tests” described in the installation section of this manual.



LP HEAD

OUTPUT PRESSURE ADJUSTMENT – FOR MP HEAD

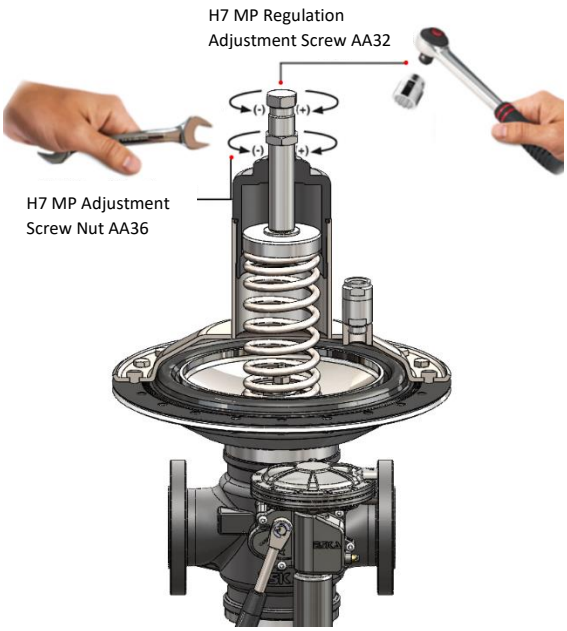
1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Remove the seals, if any, on the relevant adjustment parts of the product,

3- Loosen the “Regulation Adjusting Screw Nut (2)” by turning it in minus (-) direction using AA36 wrench,

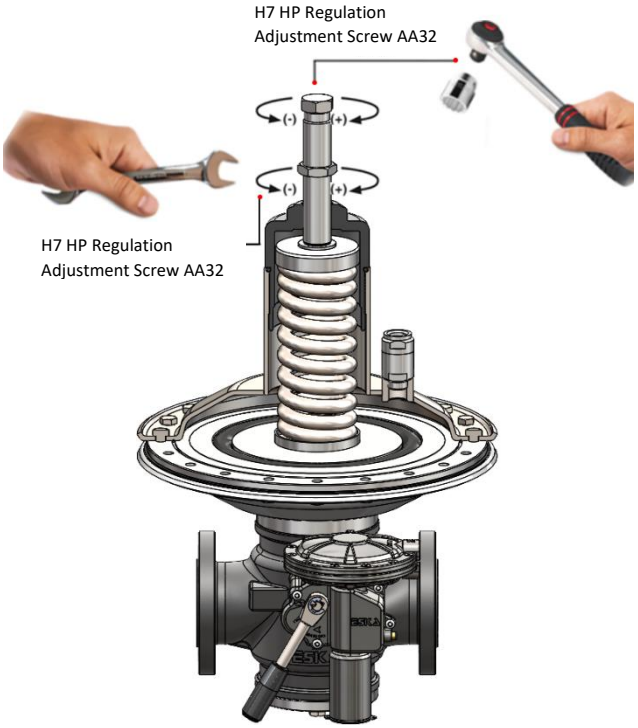
4- “Adjust the “Regulation Adjustment Screw (1)” to the desired value using AA32 wrench,
(Turn it in the plus (+) direction to increase the outlet pressure, and in the minus (-) direction to decrease it)

5- When the desired outlet pressure is set, tighten the “Regulation Adjustment Screw Nut (2)” by turning it in the minus (-) direction using an AA36 wrench until the last point.
(Please pay attention to this situation, as the product will be out of proper adjustment if it is rotated too much.)



6- After the adjustment, make sure that the settings are correct by performing the “periodic inspection tests” described in the installation section of this manual.

MP HEAD



<u>OUTPUT PRESSURE ADJUSTMENT – FOR HP HEAD</u>

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Remove the seals, if any, on the relevant adjustment parts of the product,

3- Loosen the “Regulation Adjusting Screw Nut (2)” by turning it in minus (-) direction using AA36 wrench,

4- Adjust the “Regulation Adjustment Screw (1)” to the desired value using AA32 wrench,
(Turn it in the plus (+) direction to increase the outlet pressure, and in the minus (-) direction to decrease it)

5- When the desired outlet pressure is set, tighten the “Regulation Adjustment Screw Nut (2)” by turning it in the minus (-) direction using an AA36 wrench until the last point. (Please pay attention to this situation, as the product will be out of proper adjustment if it is rotated too much.)

6- After the adjustment, make sure that the settings are correct by performing the “periodic inspection tests” described in the installation section of this manual.

HP HEAD

NOTE: When the outlet pressures (Pds) are increased, the safety pressures should also increase. When the outlet pressures are reduced, the safety pressures should also be decreased.

<u>HIGH SAFETY PRESSURE ADJUSTMENT:</u>

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Remove the seals, if any, on the relevant adjustment parts of the product,

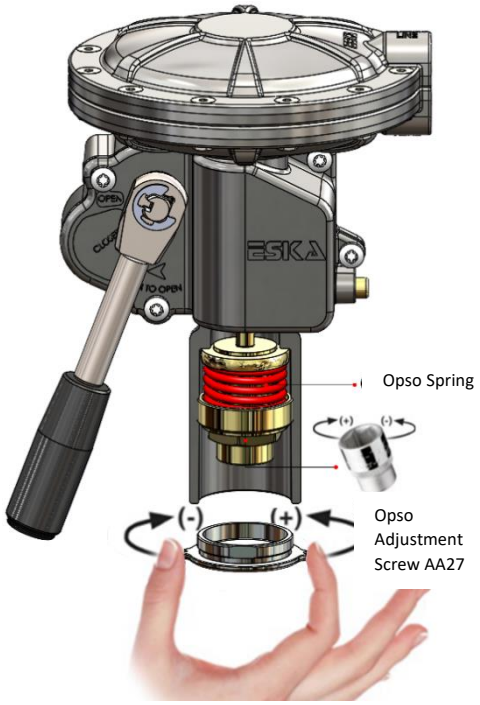
3- Remove the "Shut-Off Protection Cover (27)" by turning it manually in the minus (-) direction,

4- Adjust the “OPSO Adjusting Screw (25)” to the desired value using the AA27 wrench (turn it in the plus (+) direction to increase the Opso pressure, in the minus (-) direction to decrease it, please pay attention to this situation, as the product will be out of adjustment if it is rotated too much.),

5- Make the marking of the adjusted pressure,

6- After the procedures; Reinstall the “Shut-Off Protection Cover (27)” by turning it manually in the plus (+) direction,

7- After setting; Make sure that the settings are correct by performing the “periodic inspection tests” described in the installation section of this manual.



LOW SAFETY PRESSURE ADJUSTMENT:

1- Before starting the installation, close the inlet and outlet valves, which are the main gas supplies,

2- Remove the seals, if any, on the relevant adjustment parts of the product,

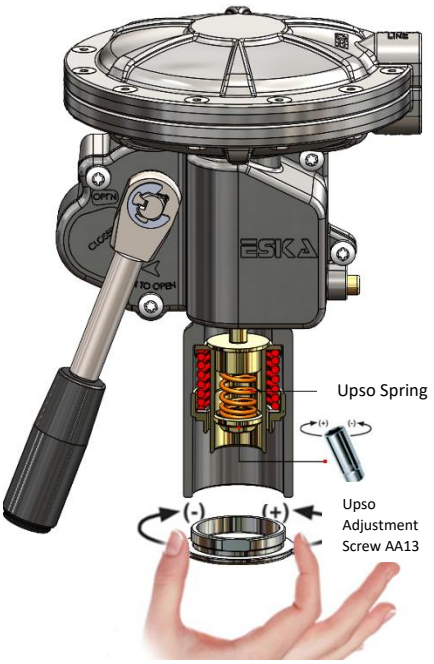
3- Remove the "Shut-Off Protection Cover (27)" by turning it manually in the minus (-) direction,

4- Adjust the “UPSO Adjusting Screw (25)” to the desired value using the AA13 wrench (turn it in the plus (+) direction to increase the Upso pressure, in the minus (-) direction to decrease it, please pay attention to this situation, as the product will be out of adjustment if it is rotated too much.),

5- Make the marking of the adjusted pressure,

6- After the procedures; Reinstall the “Shut-Off Protection Cover (27)” by turning it manually in the plus (+) direction,

7- After the adjustment, make sure that the settings are correct by performing the “periodic inspection tests” described in the installation section of this manual.



After the Procedure

All the above-mentioned periodic inspection tests should be repeated, and it should be ensured that the results are appropriate. After the adjustment changes, check with appropriate methods that the technical specifications and limits on this manual and on the product are not exceeded. It is recommended that the adjustment devices be sealed after the relevant pressure settings are made or for the products that are put into use in the field, so that the settings are not changed. The seal inside the box, if any, can be used for this process. If a new setpoint has been adjusted, indicate it on the product in an indelible and clear way.

7. PERIODIC MAINTENANCE and INSPECTION

All procedures must be fully complied with the rules in this manual. Keep this manual should always be always with you, before, during and after the periodical maintenance-inspection and all that is written must be followed. If you think that there is incomplete, incorrect, or suspicious information, do not take any action and contact the authorities. Periodic maintenance and inspection are recommended for the healthy and safe operation of the product. The maintenance intervals depend on the system-specific operating and ambient and operating conditions, the quality of the gas transport, the cleanliness and protection of the pipelines, the degree of safety required by the product and the system, etc. Periodic maintenance should not exceed the time intervals in the provisions in force and/or the time intervals determined by the gas company. No maintenance on the product should be performed by the end user. For the parts related to the product, perform the maintenance process with the logic of "EITHER CLEAN OR REPLACE".

Periodic maintenance and inspection operations can be performed after the product is removed from the line or while the product is on the line. Parts of the product that may need to be disassembled for repair are shaped so that they can be disassembled and reassembled with normal hand tools and cannot be mounted incorrectly. If the product needs to be removed from the line for periodic maintenance and inspection, remove it from the line in accordance with the dismantling rules in this manual.

All maintenance and inspection procedures must be carried out by authorized personnel. The user or unauthorized persons should never interfere with the line and the product. In any case, before performing any maintenance on the product, make sure that it is free of pressurized gas.

Before the Procedure

Under no circumstances should you discharge abruptly to clean the line after the product. Do not perform any maintenance until you have safely relieved any internal pressure that may be left in the product. Use the Venting Ball Valve to evacuate the gas in the line. Make sure there is no explosive air/gas mixture. Before proceeding with any inspection and maintenance activities, equip the plant with appropriate relief or discharge systems to relieve the pressure and fluid in the plant. If a problem is observed during periodic maintenance and inspection, necessary actions can be taken according to the rules described in the malfunction section.

To keep the system in good working order, we recommend a monthly functional check and a yearly maintenance. In the worst case, once a year function check, once every 2 years maintenance could be preferred. The pressure equipment directive (PED) and the regulations on the total energy efficiency of buildings require regular control of heat generators in order to ensure high efficiency and therefore low emissions to the environment in the long term. Maintenance intervals must be determined by the system operator in a system-specific manner. Frequency of inspection/check and replacement depends on, severity of service conditions and applicable national laws, regulations, standards, and regulations/recommendations.

Make sure that the connection components (screws and/or bolts-nuts) on the product are removed and installed with the specified torques. Use a calibrated device for this and always keep it with you. Using the same screws, reassemble the covers in the same places by tightening them mutually without applying excessive force, so that there is no contraction and force on the screws, and the holes are overlapping, make sure that they are not loose and not mechanically damaged. If there is a paint-lacquer etc. seal on the fasteners, do not take any action and please contact the manufacturer first. If it is necessary, do not disassemble the parts inside the removed casings separately, keep the casings as a group in their parts and clean them slowly with a clean cloth. Non-original parts, other than those provided by the manufacturer, should not be used as spare parts. If it is necessary, the contact the manufacturer to obtain spare parts. It is necessary to have the essential spare parts kits with you during the maintenance operations. It is necessary to have the appropriate key set for disassembly and assembly operations.

Do not clean with cleaners containing alcohol or solvents. Always use new joint gaskets after replacement or conversion of the parts. Review the precautions taken for dangers related to the release of flammable or harmful gases into the atmosphere. Before operating, turn off the gas in the front and rear of the product and be sure. Make sure the safety mechanism is closed. Especially orifice, valve, diaphragm become exposed to natural wear over time. It is recommended to keep the fluid velocity less than 5 m/sec to avoid the risk of sparking due to impingement particles in the relief lines. It should be noted that O-rings and mechanical sliding parts must be lubricated with a thin layer of silicone grease before reassembly.

During the Procedure

1		- Remove the Regulator Sense Connection.	**2**		- Remove the Shut-Off Sense Connection.

3		- Loosen the Adjustment Pin Nut with AA36 Wrench.	**4**		- Loosen the Adjustment Pin with AA32 Wrench.
5		- Loosen the Spring sleeve with a 2"pipe wrench.	**6**		- Remove the Spring Sleeve.
7		- Remove the spring adjusting screw from the Spring Sleeve.	**8**		- Remove the O-Ring on the Spring Sleeve.
9		- Remove the O-Ring on the Spring Adjusting Screw Nut.	**10**		- Get the Spring Top Brackets, Off The Top of the Spring.

11		- Get The Thrust Bearing Off The Top of the Spring.	**12**		- Remove the Regulation Spring.
13		- Remove the Cover Bolts with AA17 Wrench or Socket.	**14**		- Remove Top Cover.
15		- Unscrew the Breathing Regulator Set with the AA28 Wrench.	**16**		- Remove the Small O-Ring of the Breather Plug Regulator Kit.
17		- Separate the Two Bodies of the Breather Plug Kit using AA30 and AA28 wrenches.	**18**		- Remove the O-Ring between the Two Pieces.

19		- Remove the Breathing Plug Plastic Kit Between Two Pieces.	**20**		- Unscrew the Breather Plug Plastic Kit and Separate The Pieces.
21		- Remove Bottom Flange Bolts with AA17 Wrench or Socket.	**22**		- Remove the Bottom Flange.
23		- Remove O-Ring of the Lower Flange's.	**24**		- Remove the nut with AA19 wrench, while holding the regulation Adjustment Pin with AA8 wrench.
25		- Remove the Regulation Adjustment Pin without damaging the Orifice.	**26**		- Remove O-Ring of the Diaphragm Ring.

27		- Remove the Diaphragm Support Ring.	**28**		- Remove the Diaphragm Kit.
29		- Remove the Spring Bottom Bearing Nut Using AA36 Wrench.	**30**		- Remove the Spring Bottom Bearing.
31		- Remove Spring Lock Washer.	**32**		- Remove the Diaphragm Support Plate and Remove the Diaphragm Screw.
33		- Remove the Stabilization Diaphragm Buffer O-Ring.	**34**		- Remove the Stabilization Diaphragm Buffer.

35		- Remove Bottom Cover Connection Bolts with AA17 Wrench or Socket.	**36**		- Remove the Bottom Cover support plate.
37		- Remove the Bottom Cover.	**38**		- Remove the Connection Flange O-Ring.
39		- Remove the Stabilization Diaphragm Ring.	**40**		- Remove the Stabilization Diaphragm.
41		- Remove the Balancing Diaphragm Plate.	**42**		- Remove the Connection Flange.

43		- Remove the Large O-Ring on the Connection Flange.	**44**		- Remove the Small O-Ring on the Connection Flange.
45		- Remove the Regulation Pin Bearing from the Connection Flange. Do Not Damage the Regulation Pin Bearing. There may be a leak in case of scratches.	**46**		- Remove the Felt and Plastic Bearings in the Regulation Pin Bearing. Pay Attention to the Direction of the Felt During Assembly.
47		- For Products with Shut-Off; Remove the Shutoff Disc Closure Spring.	**48**		-For Products with Shut-Off; Remove the Shut-Off Plug Set.
49		- For Products with Shut-Off; Remove the Shutoff Clapper Piston Ring with Outer Piston Ring Pliers.	**50**		- For Products with Shut-Off; Remove the Shut-Off Clapper Piston Ring. Pay attention to its direction during assembly.

51		- For Shutoff Products; Remove the Plastic Bearing of the Regulation Pin Bearing.	**52**		- For Products with Shut-Off; Remove the Shut-Off Sleeve O-Ring.
53		- Loosen the Orifice Screw Without Damaging the Orifice.	**54**		- Remove the Orifice and the Orifice Screw. Preserve the Orifice so that, It Will Not Be Damaged.
55		- Remove the Orifice O-Ring.			

<u>FOR SAFETY DEVICE;</u>

1. Make sure Shut-Off is in the off position,
2. Remove the sense connection, which provides the connection between the Shut-Off and the outlet pressure,
3. Remove the crescent piston ring to which the assembly lever is attached,
4. Remove the assembly lever,
5. Remove the crescent piston ring protruding from the back of the assembly lever,
6. Remove the blue colored Shut-Off indicator coming out from behind the crescent piston ring,
7. Unscrew the Shut-Off cover plug to access the springs,
8. Unscrew the Upso adjusting screw with the AA13 socket,
9. Remove the Upso spring,
10. Unscrew the Opso adjustment screw with the AA27 socket,
11. Remove the spring top plate and the Opso spring,

12. Remove the Opso spring,
13. Remove the Opso spring buffer,
14. Remove the Upso spring buffer,
15. Open the Shut-Off by removing the 4 bolts on the front cover,
16. Remove the wheelset and the wheel propeller spring from the part you have removed,
17. Unscrew the 12 bolts on the top cover of the part you have removed,
18. Remove the Shut-Off Top Cover,
19. Remove the Shut-Off Diaphragm,
20. Remove the bolt on the Shut-Off diaphragm support plate,
21. Remove the Shut-Off diaphragm support plate,
22. Remove the Shut-Off Pin and the thrust spring of the Shut-Off Pin,
23. Unscrew the Shut-Off pin bearing with AA24 wrench,
24. Remove the felt inside the Shut-Off pin bearing,
25. Remove the O-Ring on the Shut-Off pin bearing,
26. Remove the Shut-Off bottom cover,
27. Remove the O-Ring between the Shut-Off front cover and the Shut-Off bottom cover,
28. Remove the Shut-Off trigger lever from the Shut-Off charging pin,
29. Remove the crescent piston ring behind the Shut-Off trigger lever,
30. Remove the Shut-Off motion limiter,
31. Remove the trigger thrust spring from the Shut-Off trigger,
32. Remove the crescent piston ring on the Shut-Off trigger,
33. Remove the Shut-Off trigger,
34. Remove the 2 bolts connecting the Shut-Off rear cover to the body,
35. Remove the Shut-Off rear cover,
36. Remove the Shut-Off charging pin bearing,
37. Remove the O-Rings inside and outside the Shut-Off charging pin bearing,
38. To reach the Shut-Off valve, follow the procedures shown in the regulator maintenance section, that is, in the 47-52nd image.

After the Procedure

Assemble and install the serviced product in accordance with this manual, then retest it according to the periodic inspection tests in this manual to make sure that it works accurately. Make sure that particles such as dirt, rust, dust, sawdust, etc. do not enter the clean gas area during and after the periodic maintenance and inspection procedures. Make sure that the threaded or flanged connection between the product and the line is made correctly and is tight. Check and make sure that all accessories and apparatus are attached to the product. Check that there is no sound or vibration in the product. In any case, for the conditions where gas may be released from the product or the line to the atmosphere, make sure that the product is not in an enclosed area, that there is not and will not form a dangerous atmosphere, and that the necessary lines are opened to the atmosphere. After the accomplishing the procedures, check with appropriate methods that the technical specifications and limits in this manual and on the product are not exceeded.

We recommend that you separate the inert parts after maintenance in accordance with the laws and regulations, according to disposal or recycling methods. If a problem is observed after periodic maintenance and inspection, necessary actions can be taken according to the rules described in the malfunction section.

8. ISABLING, DISASSEMBLY, and REPLACEMENT

Before, during and after all removal, disassembly and replacement operations, follow all the rules specified in this manual and take the necessary actions.

Before and during the disassembly and replacement operations, ensure that there is no compressed gas trapped between the line and the product in the line where the product is located, that the gas supply is closed and that the possibility of opening is completely avoided.

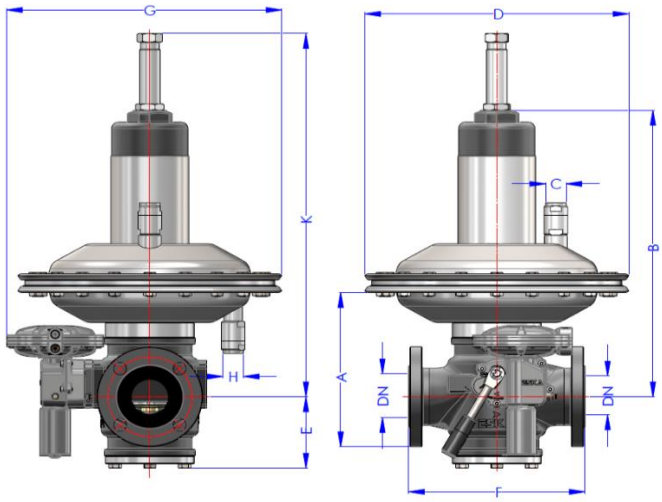
1- Close the ball on/off valves on the inlet and outlet sides,

2- Release the trapped gas between the line and the product safely gradually, from the part between the product and the outlet ball valve (Ventilation Ball Valve) and in accordance with the legislation. On the outlet manometer, see that the outlet pressure is at zero,
3- If it is necessary, allow the pipeline and regulator components to cool or warm up,
4- Deactivate the product,
5- Unscrew the inlet and outlet flange connections of the product from the line by using a suitable wrench without applying excessive load and force,
6- If a new product is to be replaced, assemble, and install the new product in accordance with this manual.

9. DIMENSIONS and CONNECTIONS

Dimensions are in mm.

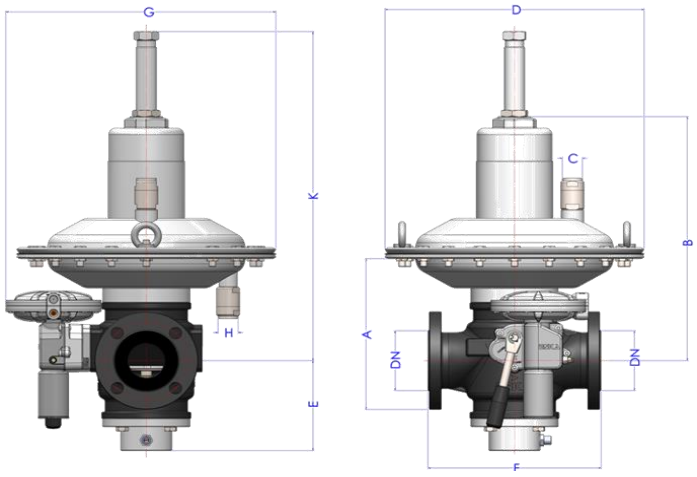
For ERG-H7;



Type	DN	A	B	C	D	E	F	G	K_{min}	K_{max}	H
LP	50	260	471.2	G 1/4"	500	108.6	254	456.2	508	605.7	G 1/4"
MP	50	234.5	427.5	G 1/4"	380	108.6	254	396.2	462.3	560	G 1/4"
	80	304.2	497.4	G 1/4"	500	131.5	298	474.2	534.2	631.9	G 1/4"
HP	50	234.5	436	G 1/4"	380	108.6	254	396.2	470.8	568.5	G 1/4"
	80	278.7	460.2	G 1/4"	380	131.5	298	414.2	495.1	592.7	G 1/4"

Figure 9.

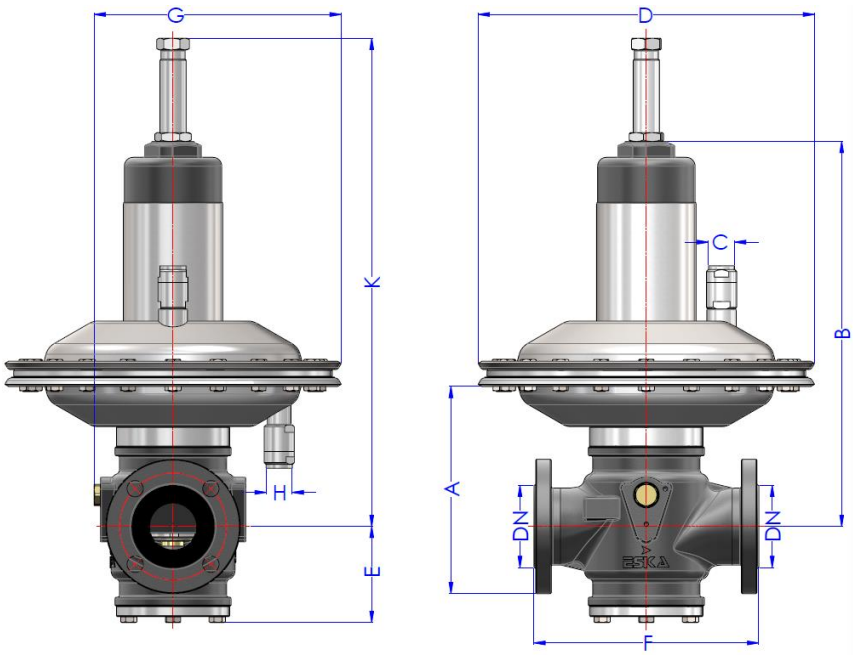
For ERG-H7 Monitor;



Type	DN	A	B	C	D	E	F	G	K_{min}	K_{max}	H
MP	50	234.5	427.5	G 1/4"	380	140	254	396.2	462.3	560	G 1/4"
HP	80	278.7	460.2	G 1/4"	380	167.4	298	414.2	495.1	592.7	G 1/4"

Figure 10.

For ERG-HZ7;



Type	DN	A	B	C	D	E	F	G	K_{min}	K_{max}	H
LP	50	260	471.2	G 1/4''	500	108.6	254	339.1	508	605.7	G 1/4''
MP	50	234.5	427.5	G 1/4''	380	108.6	254	279.1	462.3	560	G 1/4''
	80	304.2	497.4	G 1/4''	500	131.5	298	474.2	534.2	631.9	G 1/4''
HP	50	234.5	436	G 1/4''	380	108.6	254	279.1	470.8	568.5	G 1/4''
	80	278.7	460.2	G 1/4''	380	131.5	298	297.1	495.1	592.7	G 1/4''

Figure 11.

10. CAPACITY TABLE

While selecting the regulator, a sufficient safety factor should always be left in terms of capacity, and a regulator with a capacity at least 10% higher than the maximum capacity of the line should be selected. As the density of the gas increases, the gas velocity, that is, the flow rate, decreases because the gas becomes heavier.

Standard Conditions for Sakarya/Turkey: 25°C and 1,01325 bar.

Normal Conditions in General: 273,15 K (0°C) and 1,01325 bar.

The conversion from standard conditions to normal conditions is calculated approximately by the formula on the side; N m^3/h = 0,94795 x St m^3/h

Specific weight of air: 1,293 kg/m^3
Specific weight of natural gas according to EN 334: 0,8275 kg/m^3
Specific weight of natural gas according to Turkey: 0,78 kg/m^3

Capacity Change Formula According to Gas Type;

For conversion from X gas → Y gas

$$\textit{Flow rate of Y gas m3/h} = \textit{Flow rate of X gas m3/h} \times \sqrt{\frac{Specific\ Weight\ of\ X\ Gas\ kg/m^3}{Specific\ Weight\ of\ Y\ Gas\ kg/m^3}}$$

Cg / Kg Formula;

KG; fully opened valve, t=15°C gas inlet temperature, 0.83 kg/m³ special weight natural gas (natural gas with d = 0.64 density ratio), inlet pressure: Inlet pressure (Pu + 1.013) and outlet pressure as absolute pressure: As absolute pressure, it is calculated with the phase of inlet pressure (Pd + 1.013).

When calculation is required for flow rate and diameter selection of a regulator, the following calculations based on the regulator's Cg and KG coefficients are used. These calculations are valid for fully open position and for different operating conditions.

Qn = Flow Rate (S m^3/h)
P_u = Inlet pressure bar abs (atmospheric pressure added)
P_d = Outlet pressure bar abs (atmospheric pressure added)
K1 = Body form factor (unitless)
Cg = Flow coefficient
KG = Flow coefficient
NOTE: Sin value should be taken in degrees.

1. CONDITION: If the Cg and KG values and Pu and Pd are known, the flow rate is calculated as:

subcritical conditions: (Pu<2xPd) => $Q = K_G \times \sqrt{Pd \times (Pu-Pd)}$ $Q = 0.526 \times Cg \times Pu \times \text{sen}\left(K1 \times \sqrt{\frac{Pu-Pd}{Pu}}\right)$

critical conditions: (Pu≥2xPd) => $Q = \frac{K_G}{2} \times Pu$ $Q = 0.526 \times Cg \times Pu$

2. CONDITION: Once the Pu, Pd and Q values are known, the Cg and KG and the regulator diameter are calculated by the formula:

subcritical conditions: (Pu<2xPd) => $K_G = \frac{Q}{\sqrt{Pd \times (Pu-Pd)}}$ $Cg = \frac{Q}{0.526 \times Pu \times \text{sen} \times \left(K1 \times \sqrt{\frac{Pu-Pd}{Pu}}\right)}$

critical conditions: (Pu≥2xPd) => $K_G = \frac{2 \times Q}{Pu}$ $Cg = \frac{Q}{0,526 \times Pu}$

Nominal Diameter	DN50	DN80
	2”	3”
Cg Coefficient	1300	3360
KG Coefficient	1400	3540
K1 Coefficient	105	105

The following equation should be used to convert the natural gas flow rate to different gas flow rates.

Q natural gas m^3/h x K = Qxgas m^3/h
In this equation;
Q natural gas m^3/h: Natural Gas Flow Rate (Taken from the capacity given in this manual for different inlet and outlet pressures)
K: Correction Factor (Taken from the table below)
Qxgas m^3/h : X Gas Flow Rate Desired
Example: In order to convert the natural gas flow rate to air flow rate, it is taken as K:0.78 (from the table below). To find the equivalent of 128m3/h natural gas flow in air flow
Qnaturalgas m^3/h x 0,78 = Qair m^3/h
128 x 0,78 : 100 m^3/h air

Name of Gas	Correction factor K at 15°C	Relative Density
Butane	0,55	2,01
Propane	0,63	1,53
Oxygen	0,73	1,14
Air	0,78	1
Nitrogen	0,79	0,97
City Gas	1,17	0,44
Hydrogen	2,93	0,07
Carbon dioxide	0,63	1,52

Formula for Finding Gas Velocity at the Outlet:

In order to get the best performance from the product, to avoid premature wear and to limit sound emission, it is recommended that the gas velocity at the outlet flange does not exceed 150 m/s.

$V = 345{,}92 \text{ x } \frac{Q}{DN^2} \text{x } \frac{1-0{,}002xPd}{1+Pd} V$: Gas Velocity (m/sn)

Q : Flow Rate (Stm^3/h)

DN : Nominal Diameter of Regulator (mm)

Pds : Output pressure (barg)

Capacity Tables

ERG-H7 DN50 and ERG-HZ7 DN50 (Values are for Natural Gas)														
		OUTPUT PRESSURE (Bar)												
Head Type		LP			MP		HP							
		0,02	0,05	0,08	0,1	0,3	0,5	0,75	1	1,5	2	3	4	
INLET PRESSURE (Bar)	0,2	520 SCMH	480 SCMH	430 SCMH	410 SCMH	-	-	-	-	-	-	-	-	
	0,3	650 SCMH	630 SCMH	580 SCMH	580 SCMH	-	-	-	-	-	-	-	-	
	0,5	880 SCMH	860 SCMH	830 SCMH	830 SCMH	580 SCMH	-	-	-	-	-	-	-	
	0,75	930 SCMH	1080 SCMH	1080 SCMH	1030 SCMH	880 SCMH	680 SCMH	-	-	-	-	-	-	
	1	980 SCMH	1280 SCMH	1280 SCMH	1280 SCMH	1180 SCMH	1030 SCMH	730 SCMH	-	-	-	-	-	
	1,5	1130 SCMH	1680 SCMH	1680 SCMH	1680 SCMH	1630 SCMH	1530 SCMH	1430 SCMH	1130 SCMH	-	-	-	-	
	2	1180 SCMH	1860 SCMH	1980 SCMH	1830 SCMH	1980 SCMH	1980 SCMH	1880 SCMH	1680 SCMH	1380 SCMH	-	-	-	
	4	1180 SCMH	1950 SCMH	2480 SCMH	1830 SCMH	3180 SCMH	3280 SCMH	3380 SCMH	3380 SCMH	3380 SCMH	3180 SCMH	2380 SCMH	-	
	6	1300 SCMH	1980 SCMH	2480 SCMH	1730 SCMH	3380 SCMH	4280 SCMH	4780 SCMH	4680 SCMH	4680 SCMH	4780 SCMH	4480 SCMH	3680 SCMH	
	8	1460 SCMH	2030 SCMH	2480 SCMH	1760 SCMH	3580 SCMH	4280 SCMH	4980 SCMH	5980 SCMH	6080 SCMH	6180 SCMH	6080 SCMH	5780 SCMH	
	10	1580 SCMH	2180 SCMH	2780 SCMH	1760 SCMH	3680 SCMH	4280 SCMH	4980 SCMH	5980 SCMH	6980 SCMH	7480 SCMH	7480 SCMH	7480 SCMH	
	12	1730 SCMH	2330 SCMH	2930 SCMH	1910 SCMH	3830 SCMH	4430 SCMH	5130 SCMH	6130 SCMH	7130 SCMH	7630 SCMH	7630 SCMH	7630 SCMH	
	19	2250 SCMH	2730 SCMH	2980 SCMH	2330 SCMH	3680 SCMH	4280 SCMH	4980 SCMH	5980 SCMH	6980 SCMH	8480 SCMH	10480 SCMH	12000 SCMH	

ERG-H7 DN80 and ERG-HZ7 DN80 (Values are for Natural Gas)														
		OUTPUT PRESSURE (Bar)												
Head Type		LP			MP		HP							
		0,02	0,05	0,08	0,1	0,3	0,5	0,75	1	1,5	2	3	4	
INLET PRESSURE (Bar)	0,2	1360 SCMH	1220 SCMH	1160 SCMH	1100 SCMH	-	-	-	-	-	-	-	-	
	0,3	1750 SCMH	1650 SCMH	1550 SCMH	1450 SCMH	-	-	-	-	-	-	-	-	
	0,5	2250 SCMH	2200 SCMH	2200 SCMH	2100 SCMH	1550 SCMH	-	-	-	-	-	-	-	
	0,75	2550 SCMH	2850 SCMH	2750 SCMH	2750 SCMH	2430 SCMH	1800 SCMH	-	-	-	-	-	-	
	1	2950 SCMH	3320 SCMH	3050 SCMH	2850 SCMH	2650 SCMH	2550 SCMH	1950 SCMH	-	-	-	-	-	
	1,5	3750 SCMH	4300 SCMH	3950 SCMH	3950 SCMH	3600 SCMH	3550 SCMH	3500 SCMH	2950 SCMH	-	-	-	-	
	2	5050 SCMH	5050 SCMH	5100 SCMH	4650 SCMH	5150 SCMH	5050 SCMH	4550 SCMH	4360 SCMH	3650 SCMH	-	-	-	
	4	5000 SCMH	6050 SCMH	5550 SCMH	5450 SCMH	7450 SCMH	8750 SCMH	7550 SCMH	8000 SCMH	8250 SCMH	8000 SCMH	6100 SCMH	-	
	6	5030 SCMH	6550 SCMH	5700 SCMH	5600 SCMH	8200 SCMH	11000 SCMH	10000 SCMH	10500 SCMH	12000 SCMH	12000 SCMH	10000 SCMH	9500 SCMH	
	8	3000 SCMH	6500 SCMH	6000 SCMH	5100 SCMH	9400 SCMH	11000 SCMH	11000 SCMH	13000 SCMH	14000 SCMH	15000 SCMH	15000 SCMH	14500 SCMH	
	10	3000 SCMH	6500 SCMH	6100 SCMH	5300 SCMH	9400 SCMH	11000 SCMH	12000 SCMH	15200 SCMH	16000 SCMH	19000 SCMH	18000 SCMH	19000 SCMH	
	12	3000 SCMH	6500 SCMH	6250 SCMH	5550 SCMH	9500 SCMH	11700 SCMH	13000 SCMH	15200 SCMH	16000 SCMH	19000 SCMH	20000 SCMH	20000 SCMH	
	19	3100 SCMH	6600 SCMH	6350 SCMH	5650 SCMH	9600 SCMH	11800 SCMH	13100 SCMH	15300 SCMH	16100 SCMH	20000 SCMH	22000 SCMH	22000 SCMH	

11. PACKAGING, HANDLING, TRANSPORT and STORAGE

Our company delivers its products to the customer by putting them in single special boxes in order to prevent damages that may occur to the product during shipping and transportation. The following conditions must be taken into consideration for all products and spare parts:

- Storage temperature should be between 5°C and 20°C.
- Relative humidity should be below 55%.
- The effect of UV rays and ozone must be eliminated (especially in elastomeric parts).
- Situations such as throwing, excessive shaking, overturning, falling, impact, exposure to excessive load, force and impact, crushing, putting weight on it, damaging, getting wet and overturning of external parts and external protrusions, etc. should not occur.
- You should not exceed storage periods for more than 3 years. We recommend that you regularly check the device and current storage conditions during long storage periods.
- The product should not be exposed to direct sunlight.
- Store in enclosed, ventilated, shaded, dry and clean conditions.
- Ensure that the products are protected from rain, water, snow, extreme heat and cold, etc. conditions.
- There should be no direct heat sources in the storage area.
- Ensure that the surfaces where the procedures are carried out are flat and clean and not wet and slippery.
- Do not overload or lift during transport.
- Pay special attention to external protrusions and external parts.
- Electrical voltage-free storage should be provided.
- If the product has any surface treatment (sandblasting, coating, painting, etc.), it should not be damaged during transportation-storage-shipping.
- In repackaging, there should not be any internal residue, moisture or wetness in the product.
- All flanges and nozzles must be protected against impact, entry of foreign matter and oxidation.
- The product should be stored in environments isolated from forces such as falling, tipping, shock, impact, vibration and the like, in such a way that it will not be affected by earthquakes, floods, fire and similar disasters, in environments protected from corrosion and abrasion conditions (sun, atmosphere, rain, snow, humidity, water, external chemicals, etc.), not affected by weather conditions, and protected from dirt, mud, and contamination.
- Equipment and spare parts must be kept in their respective original packaging until installation at the final destination.
- If a tool is to be used to transport the product, it should be carried with the help of an apparatus, not by connecting directly to the product.

12. LABEL INFORMATION

Any information contained in the labels can be added or removed at the request of the manufacturer. Apart from this information, a new addition can be made. The labels below are the examples.

The requirements of the EN 334:2019 Standard

ESKA — **GAS PRESSURE REGULATOR** — CE

Model / Series / Type:	ERG-H7	PS / PSD:	20 / - bar
Company Name:	ESKA VALVE A.Ş.	Pumax:	..... bar
Trademark:	ESKA or ESKA VALVE	bpu:	..... - ..... bar
Fluid Type:	Natural Gas	DNexDNo:	DNe.....xDNo.....
Wd:	..... - ..... bar	End Connector Type:	Flanged / Threaded
Standard:	EN 334:2019	Flange / Thread Type:	PN / ANSI / BSPP-T / NPT
Serial Number:	******	TS:	-20;+60 °C (class 2)
Manufacturing Date (H/Y):	**/20**		
Regulator Type:	IS type	Sealing Class:	..... (EN 1349)
Malfunction Mode Type:	Opening in Case of Malfunction	Wds:	..... - ..... bar
Orifice Diameter:	Ø... mm	Pds:	..... bar
Qvl:	..... L/h air	AC / SG / SZ:	..... / ..... / .....
Wdscontroller:	..... - ..... bar	Qmax:	..... Sm3/h
Pdscontroller:	..... - ..... bar	KG / Cg / K1	..... / ..... / .....
PT:	PSx1,5 bar	Pdo:	..... bar
Volume:	≤35 dB(A)	Product Orientation:	Straight / Angle / Utype
Mass / Volume:	..... Kg / L	Installation:	Manual / Automatic

Flow Direction within the Body	EN ..... (EN .....) Material	ESKA Trademark	Input DN: ..... Output DN: .... DN Dimensions
Warning .... Appropriate Label	**Ventilation Line** DN: .... gear Thread Type : ..... Ventilation Line	**Relief Line** DN: .... gear Thread Type : ..... Relief Line	**Exhaust Line** DN: .... gear Thread Type : ..... Exhaust Line
Sense Line DN: .... gear Thread type: ..... Sense Line			

The requirements of the EN 14382:2019 Standard

ESKA — **SAFETY DISCONNECTING DEVICE** — CE

Model / Series / Type:	ERG-H7 SSD	PS / PSD:	20 / - bar
Company Name:	ESKA VALVE A.Ş.	Pumax:	..... bar
Trademark:	ESKA or ESKA VALVE	bpu:	..... - ..... bar
Serial Number:	******	Wdso:	..... - ..... bar
Manufacturing Date (H/Y):	**/20**	Pdso:	..... bar
TS:	-20;+60 °C (class 2)	AGo:	.....
Fluid Type:	Natural Gas	Wdsu:	..... - ..... bar
DNexDNo:	DNe.....xDNo.....	Pdsu:	..... bar
End Connector Type:	Flanged / Threaded	AGu:	.....
Flange / Thread Type:	PN / ANSI / BSPP-T / NPT	PT:	PSx1,5 bar
SSD Type:	IS type	ta:	≤2 seconds
SSD Function Class:	Class A	Shut-Off Type	Rapid Shut-Off Type
Standard:	EN 14382:2019	Volume:	≤35 dB(A)
Wdo:	..... - ..... bar	Product Orientation:	Straight / Angle / Utype
Wdu:	..... - ..... bar	Installation:	Manual / Automatic
Qmax:	..... Sm³/h	Orifice Diameter:	Ø... mm
KG / Cg / K1	..... / ..... /	Qvl:	..... L/h air
Mass / Volume:	..... Kg / L	Sealing Class:	..... (EN 1349)

Flow Direction within the Body	EN ..... (EN .....) Material	ESKA Trademark	Input DN: ..... Output DN: .... DN Dimensions
Warning .... Warning Label	**Ventilation Line** DN: .... gear Ventilation Line: ..... Ventilation Line	**Relief Line** DN: .... gear Thread Type : ..... Relief Line	**Exhaust Line** DN: .... gear Thread Type: ..... Exhaust Line
Sense Line DN: .... gear Thread Type : ..... Sense Line	**SSD ON/OFF INDICATOR LABEL** On/Off Indicator		

Requirements of 2014/68/EU PED Regulation

ESKA — **GAS PRESSURE REGULATOR WITH SAFETY SHUT-OFF DEVICE** — CE

Model / Series / Type:	ERG-H7	V:	.... Liter
Manufacturing Date (H/Y):	**/20**	DNexDNo:	DNe.....xDNo.....
Serial Number:	******	PT:	PSx1,5 bar
PS:	20 bar	Pds:	..... bar
TS:	-20;+60 °C	Pdso:	..... bar
Mass:	.... Kg	Pdsu:	..... bar
Qmax:	..... Sm³/h	Company Name:	ESKA VALVE A.Ş.
Fluid Type:	Natural Gas	Trademark:	ESKA or ESKA VALVE

GENERAL EXPLANATION:

Any information contained in the labels can be added or removed at the request of the manufacturer.
New information that is not available on the label can be added later at the request of the manufacturer.
The label above is exemplary.

NOTE:

1- If there are different dimensions of the orifice diameter, they should be written.
2- PSD pressure should only be used in products with different strength (DS).
3- If there is PSD pressure in the products, the Product Type of the related products are: DSType, otherwise ISType.
4- If it is necessary, a Warning Label that draws attention to dangerous misuse should be placed.
5- After the label information is provided, customer requests can also be added to the labels.
6- If Cg / KG / KI is given, Qmax is not added to the label.
7- If the product has a relief valve, "Pdo" information should be written.
8- Qvl should be written if there is a relief limiter in the regulator. These Qvls: can be one of the 30/70/ 150/319 L/H air options.

13. POSSIBLE MALFUNCTIONS, CAUSES and SOLUTIONS

Repair work on the product should only be carried out by authorized, technically qualified personnel. Before, during and after all malfunction procedures, fully comply with this manual, take the necessary actions, especially inform the end users, and take the necessary precautions against the pressured gas hazards. In case of suspected malfunction, it is recommended to perform the actions indicated in the table below, depending on the type of problem, if you don't want to do these operations, or if you haven't been able to solve the problem even though you have done so, or you could not eliminate the suspicion of the problem; remove the product from the line and send it to the manufacturer by following the disassembly rules without making any additional procedures on the product (without making any additional interventions to the product and trying to open or repair it, etc.), install a new product on the line. Under no circumstances should any repairment, maintenance or replacement process be made that interferes with the internal parts of the product. Use only original spare parts.

MALFUNCTION TYPE	POSSIBLE CAUSE	SOLUTION
There is internal leakage in the regulator at Q=0 or The regulator does not close completely or The outlet pressure in the regulator is constantly increasing.	Replaceable Orifice mouth may be damaged.	Replace the orifice.
	The Regulation Valve may be damaged, worn, pitted, etc.	Replace the valve.
	The stabilization diaphragm may be damaged.	Replace the Stabilization Diaphragm.
	One of the O-rings in the Regulation Valve mechanism-kit may be damaged.	Replace the O-rings.
	There may be dirt, burrs, etc. between the regulation valve and the orifice.	Clean it up.
	Moving parts may be contaminated with foreign materials.	Clean the moving parts.
As the flow rate increases in the regulator, the outlet pressure also increases.	The regulation diaphragm may be broken.	Replace the regulation diaphragm.
	The stabilization diaphragm may be broken.	Replace the Stabilization Diaphragm.
There is no gas in the regulator.	Gas may not be flowing into the product.	Check the gas installation prior to the regulator.
	Shut-Off may be turned off.	Install Shut-Off.
	There may be no inlet pressure.	Check the inlet pressure.
	There may be icing due to humidity.	Check if there is freezing in the line or of the water that has possibility entered the product.
	The filter may be clogged.	Check the filter, replace the filter cartridge if necessary.
Regulator is giving incorrect outlet pressure.	It could be the incorrect regulation spring.	Replace it with the appropriate spring.
	The desired outlet pressure may be outside the product's outlet pressure range.	Change the regulator model.
	Inlet pressure may be low.	Check the gas installation or choose the correct regulator.
	The usage on the line may differ from what is desired.	Measure the usage (flow rate) in the line correctly, compare it with the product, replace the regulator if necessary.
When there is no flow in the regulator; outlet pressure is equal to inlet pressure or While there is flow in the regulator; outlet pressure is equal to inlet pressure or Gas is coming out from the air bleeding connection in the regulator.	The signal line is not connected.	Connect the signal line.
	Signal line pipe is bent too much to let the gas pass.	Change the signal line.
	The regulation diaphragm may be damaged.	Replace the regulation diaphragm.
	The stabilization diaphragm may be damaged.	Replace the Stabilization Diaphragm.
	Shut-Off's O-Rings may be damaged.	Replace the Shut-Off's O-Rings.
	O-Rings on the regulator may be damaged.	Replace the regulators O-rings.
	Replaceable Orifice mouth may be damaged.	Replace the orifice.
	The Regulation Valve may be damaged, worn, pitted, etc.	Replace the valve.
When the flow rate is increased in the regulator, the outlet pressure is out of the accuracy class tolerance or The regulator has low outlet pressure outside of its tolerances.	The desired flow rate may exceed the performance of the regulator.	Check that the incorrect product is not selected for the flow rate and outlet pressure, change the regulator model if necessary.
	The dimensions of the gas line may be incorrect.	Check the nominal width of the pipeline. If it is incorrect, replace it.
	Gas filter prior to the regulator may be dirty.	Maintain the gas filter, replace the filter.
	The signal line may be closed.	Check the signal line.
	The Shut-Off may be damaged.	Check out the Shut-Off.
	Inlet pressure may be incorrect.	Check the inlet pressure.
	Output adjustment pressure may be calibrated incorrectly.	Measure outlet set pressure, make corrections, if necessary.
Shut-Off cannot be opened, activated, or Shut-Off does not engage, does not work.	In the Product-The Line-Signal Pipe: It could be that the signal lines are not installed correctly, they are clogged, bent, leaking or in turbulent area.	Change the signal line.
	Signal pressure may be out of adjustment range.	Adjust the Shut-Off pressure or the outlet pressure of the Shut-Off.
	The signal line is not installed.	Install the signal line.
	Adjustment springs may be improper.	Replace the adjustment spring.
	Shut-Off's adjustment range is outside the outlet pressure.	Replace Shut-Off.

Shut-Off valve does not close.	The signal line may not be installed or not applied accurately.	Connect the signal line, install it.
	The signal line may be clogged.	Clean up the signal line.
	Signal line may be leaking.	Bring the signal line to a impermeable status.
	The signal line may be bent.	Change the signal line.
	Signal pressure may be out of adjustment range.	Adjust the closing pressure of the Shut-Off.
	Adjustment springs may be improper.	Replace the adjustment springs.
	It may be due to jams in the mechanism.	Replace the Shut-Off or have it repaired by Eska.
	Shutoff Diaphragm may be defective.	Replace the Shut-Off Diaphragm.
Shut-Off shuts down but leaks internally or The Shut-Off does not close completely.	Replaceable Orifice mouth may be damaged.	Replace the orifice.
	The Shut-Off Valve may be damaged or abraded.	Replace the Shut-Off Valve.
	Shutoff Diaphragm may be defective.	Replace the Shut-Off Diaphragm.
	One of the O-rings in the Shut-Off Valve mechanism-kit may be damaged.	Replace the O-rings.
	Moving parts may be contaminated with foreign materials.	Clean the moving parts.
There is fluctuation in outlet pressure at the regulator.	There may be traction below the minimum capacity.	Increase flow rate or change Regulator model.
	The regulation top cover tap may not be plugged.	Attach the cover.
The outlet pressure is constantly dropping.	There may be an external leak.	Find and seal the leak. Replace the relevant part or contact Eska.
External leakage with the product.	Connections may not be fully tightened.	Check if there are any loose connections or screws and tighten them according to the rules. (Do not apply this if there is a seal on the screws)
	The product-line connection may be incomplete.	If there is a leak at the outlet connection port, remove the product from the line, remove the outlet gasket manually, if there is no visual problem, put it back, reassemble the product on the line.
	The regulation diaphragm may be damaged.	Replace the regulation diaphragm.
Insufficient flow rate in the regulator.	The product choice may be wrong.	Check that the wrong product is not selected in case of flow rate and outlet pressure.
	Line and filter may be dirty.	Take precautions for line cleaning. Replace the filter.
	Inlet pressure may be lower than necessary.	Measure the inlet pressure and check that it is not below the minimum inlet pressure.
	Output adjustment pressure may be calibrated incorrectly.	Measure the outlet adjustment pressure and adjust it if it is incorrect.

What to Do in Case of Gas Smell:

If you smell gas on the line where the product is installed, or if the gas alarm devices in the environment where the product is installed give signals and alarms, stay calm and take the following actions.

- Turn off the gas supply from the main gas valve,
- Close the gas valves starting from the one closest to you,
- Ventilate the environment, to increase the air conditioning in the environment,
- Do not use substances that may cause combustion (cigarettes, lighters, matches, etc.), extinguish all open fires and smoky substances, sources that may cause sparks and fire, do not have them working again,
- Do not touch, open or close any electrical equipment, do not interfere with the plugs,
- Do not use mobile phones and radios against the risk of sparks,

Detect gas leaks with the necessary authorized units and take security measures and take other necessary actions. After necessary repairs, before regassing, prior to and end of the line, take all necessary precautions to ensure safe gas use by devices and users.

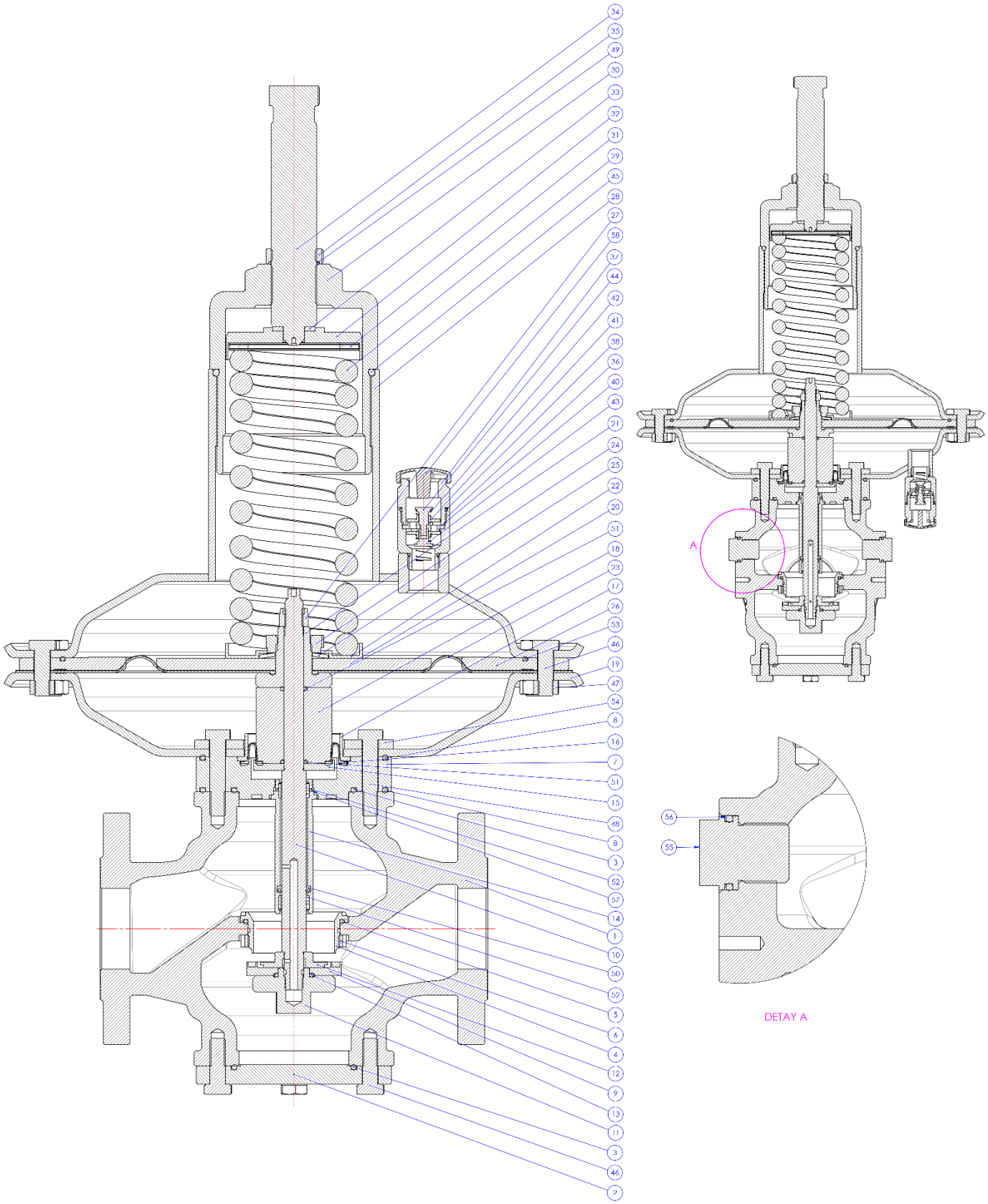
14. EXPECTED LIFE OF the ITEM

The service life of the product is 5 years.
The service life is valid if every operation and situation performed on the product is carried out in accordance with this manual.
Replace when the product's service life is expired.

15. LIST OF PARTS

The parts lists and related codes specified here should only be used when requesting spare parts from the manufacturer. For other operations (assembly, initial setup, tests, spring replacement, adjustment, periodic maintenance, etc.) The operations are explained using the codes indicated in Figure 4.

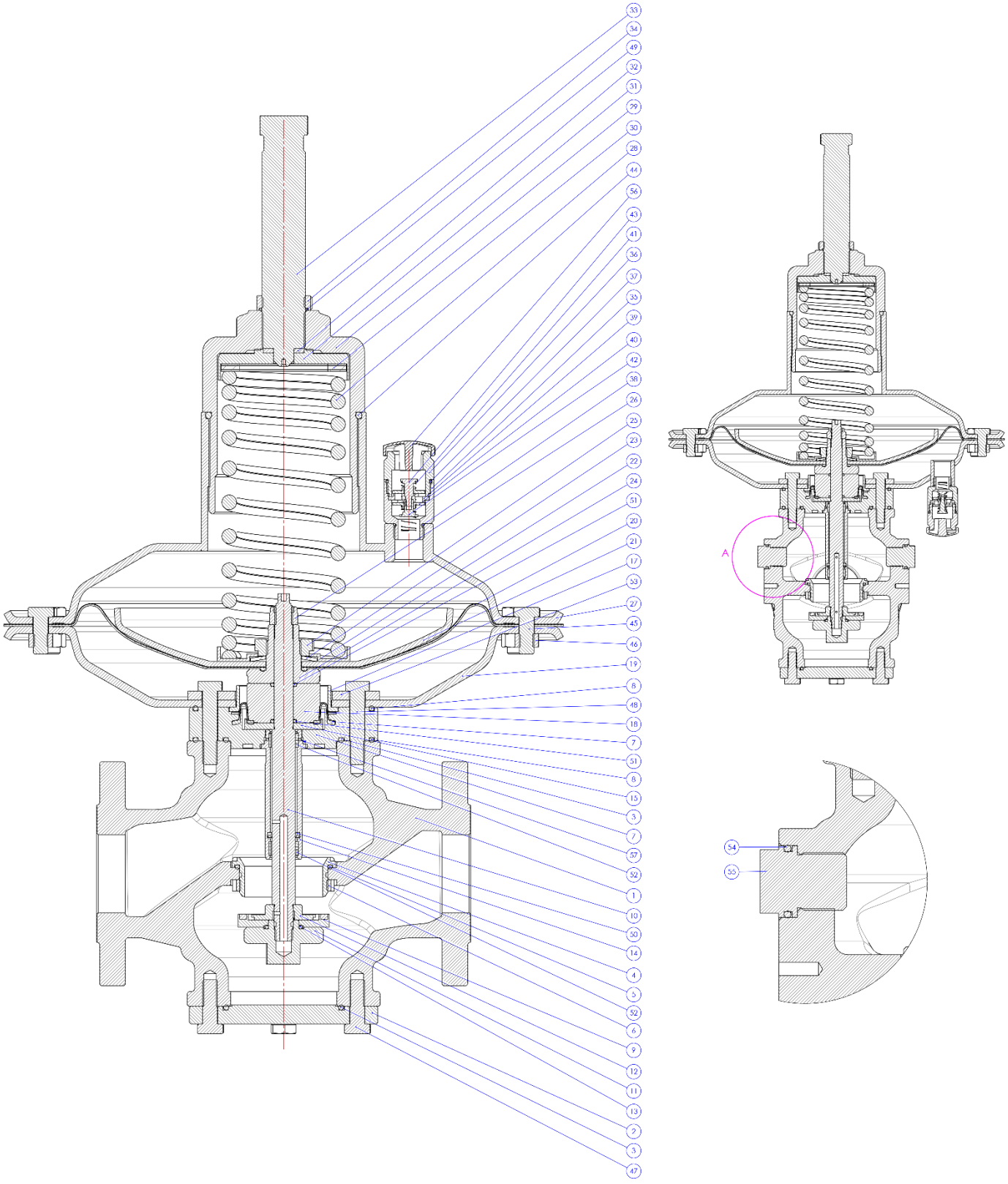
DN50 HP:



Rev.3 – 03.02.2025

ITEM NO.	PART NO.	PART NAME
1	PDM00005697	15K H7 Gövde DN50 ANSI 150
2	PDM00000066	5 H7 Alt Flanş DN50
3	PDM00000105	4 O-Ring Ø74,6xØ3,53
4	PDM00000043	5 H7 Orifis DN50
5	PDM00000109	4 O-Ring Ø60xØ3
6	PDM00000044	5 H7 Orifis Vidası DN50
7	PDM00000065	5 H7 Bağlantı Flanşı DN50
8	PDM00000106	4 O-Ring Ø116xØ3,5
9	PDM00005700	4 İnsert H7 Regülasyon Klape DN50
10	PDM00007998	15K H7 Regülasyon Ayar Mili DN50
11	PDM00000087	5 H7 Klape Vidası DN50
12	PDM00000089	5 H7 Klape Ayar Plakası DN50
13	PDM00000107	4 O-Ring Ø20,29xØ2,62
14	PDM00007996	15K H7 Regülasyon Mili Yatağı DN50
15	PDM00007592	15K H7 Dengeleme Odası Plakası DN50
16	PDM00000090	4 H7 Dengeleme Diyaframı DN50
17	PDM00007594	15K H7 Dengeleme Odası Halkası DN50
18	PDM00000084	5 H7 Dengeleme Diyafram Tamponu DN50
19	PDM00005701	15B H7 Alt Kapak Takımı DN50
20	PDM00000640	5 H7 Diyafram Destek Plakası HP
21	PDM00000085	5 H7 Diyafram Vidası DN50
22	PDM00000054	5 H7 Yay Alt Yatağı
23	PDM00000639	4 H7 Diyafram HP
24	PDM00007600	15K H7 Yay Altı Yatağı Somunu
25	PDM00000056	10 Yaylı Rondela M24
26	PDM00000641	5 H7 Diyafram Halkası
27	PDM00000099	8 M12x1,5 Fiberli Somun
28	PDM00005704	15B H7 Üst Kapak Takımı HP
29	PDM00001758	6 H7 Regülasyon Yayı 7400N-12930N
30	PDM00005705	15B H7 Yay Üst Kovanı
31	PDM00000637	10 AXK 6085 Eksenel Makaralı Rulman
32	PDM00007599	15K H7 Yay Üstü Yatağı
33	PDM00000050	5 H7 Yay Üstü Yatağı Desteği
34	PDM00000052	5 H7 Yay Ayar Vidası
35	PDM00007601	15K H7 Yay Ayar Vidası Somunu
36	PDM00007596	15K H7 Alt Tahliye
37	PDM00007597	15K H7 Üst Tahliye
38	PDM00000323	4 O-Ring Ø27xØ2
39	PDM00003400	4 O-Ring Ø17xØ2
40	PDM00004634	2 H6 Nefeslik Düzenleyici Gövdesi
41	PDM00004633	2 H6 Nefeslik Düzenleyici Klapesi
42	PDM00007622	6 H7 Nefeslik Düzenleyici Yayı
43	PDM00006911	5 H6 Nefeslik Düzenleyici Delikli Pimi
44	PDM00006912	5 H6 Nefeslik Düzenleyici Pimi
45	PDM00001940	4 O-Ring Ø97,5xØ4,5
46	PDM00006321	8 M10x1,5x30 8.8 Civata
47	PDM00006323	8 M10x1,5 8 Somun
48	PDM00006906	8 M10x1,5x50 8.8 Yarım Diş Civata
49	PDM00001939	4 O-Ring Ø29,87xØ1,78
50	PDM00000108	4 16x22x3,5 Nutring Keçe
51	PDM00000103	4 O-Ring Ø12,7xØ2,62
52	PDM00000114	2 H7 Regülasyon Ayar Mili Plastik Yatağı
53	PDM00000849	4 O-Ring Ø300xØ3
54	PDM00006905	5 H7 Alt Kapak Tamponu DN50
55	PDM00006930	5 H7 Opso Kör Tapa
56	PDM00006400	4 O-Ring Ø22,23xØ2,62
57	PDM00003363	4 O-Ring Ø20,35xØ1,78
58	PDM00004631	2 H6 Tahliye Tapası

DN50 MP: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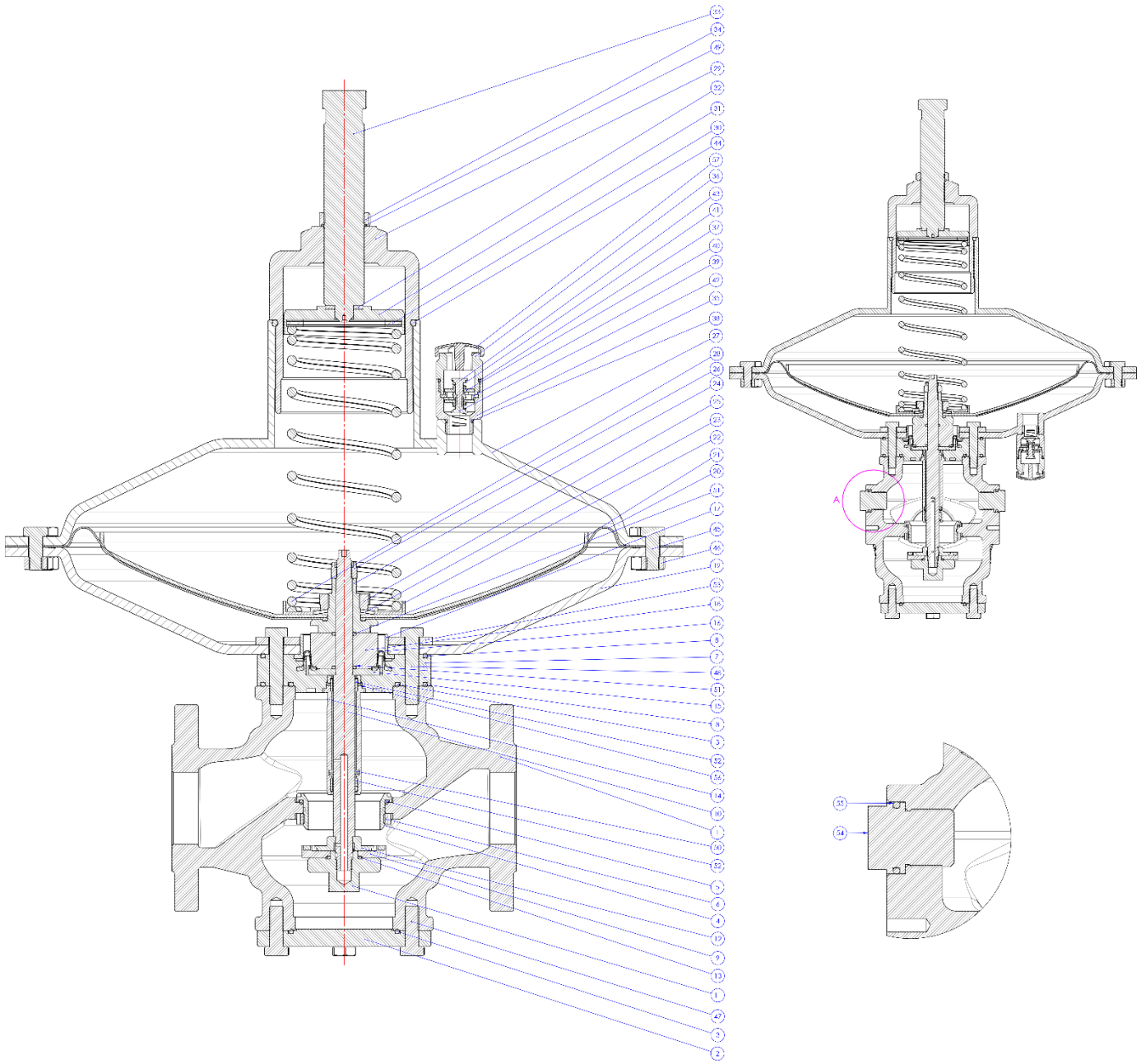
ITEM NO.	PART NO.	PART NAME
1	PDM00005697	15K H7 Gövde DN50 ANSI 150
2	PDM00000066	5 H7 Alt Flanş DN50
3	PDM00000105	4 O-Ring Ø74,6xØ3,53
4	PDM00006934	5 H7 Orifis DN50 LP
5	PDM00000109	4 O-Ring Ø60xØ3
6	PDM00000044	5 H7 Orifis Vidası DN50
7	PDM00000065	5 H7 Bağlantı Flanşı DN50
8	PDM00000106	4 O-Ring Ø116xØ3,5
9	PDM00007623	4 İnsert H7 Regülasyon Klape DN50 LP
10	PDM00007999	15K H7 Regülasyon Ayar Mili DN50 LP
11	PDM00000087	5 H7 Klape Vidası DN50
12	PDM00000089	5 H7 Klape Ayar Plakası DN50
13	PDM00000107	4 O-Ring Ø20,29xØ2,62
14	PDM00007996	15K H7 Regülasyon Mili Yatağı DN50
15	PDM00007592	15K H7 Dengeleme Odası Plakası DN50
16	PDM00000090	4 H7 Dengeleme Diyaframı DN50
17	PDM00007594	15K H7 Dengeleme Odası Halkası DN50
18	PDM00006632	5 H7 Dengeleme Diyafram Tamponu DN50 LP
19	PDM00005701	15B H7 Alt Kapak Takımı DN50
20	PDM00000045	4 H7 Diyafram DN50 MP
21	PDM00007654	7 H7 Diyafram Destek Plakası DN50 MP
22	PDM00000054	5 H7 Yay Alt Yatağı
23	PDM00000056	10 Yaylı Rondela M24
24	PDM00000085	5 H7 Diyafram Vidası DN50
25	PDM00007600	15K H7 Yay Altı Yatağı Somunu
26	PDM00000099	8 M12x1,5 Fiberli Somun
27	PDM00008204	15B H7 Üst Kapak Takımı MP
28	PDM00006917	6 H7 Regülasyon Yayı 1320N-2250N
29	PDM00005705	15B H7 Yay Üst Kovanı
30	PDM00000637	10 AXK 6085 Eksenel Makaralı Rulman
31	PDM00007599	15K H7 Yay Üstü Yatağı
32	PDM00000050	5 H7 Yay Üstü Yatağı Desteği
33	PDM00000052	5 H7 Yay Ayar Vidası
34	PDM00007601	15K H7 Yay Ayar Vidası Somunu
35	PDM00007596	15K H7 Alt Tahliye
36	PDM00007597	15K H7 Üst Tahliye
37	PDM00000323	4 O-Ring Ø27xØ2
38	PDM00003400	4 O-Ring Ø17xØ2
39	PDM00004634	2 H6 Nefeslik Düzenleyici Gövdesi
40	PDM00004633	2 H6 Nefeslik Düzenleyici Klapesi
41	PDM00007622	6 H7 Nefeslik Düzenleyici Yayı
42	PDM00006911	5 H6 Nefeslik Düzenleyici Delikli Pimi
43	PDM00006912	5 H6 Nefeslik Düzenleyici Pimi
44	PDM00001940	4 O-Ring Ø97,5xØ4,5
45	PDM00006320	8 M10x1,5x25 8.8 Civata
46	PDM00006323	8 M10x1,5 8 Somun
47	PDM00006321	8 M10x1,5x30 8.8 Civata
48	PDM00006906	8 M10x1,5x50 8.8 Yarım Diş Civata
49	PDM00001939	4 O-Ring Ø29,87xØ1,78
50	PDM00000108	4 16x22x3,5 Nutring Keçe
51	PDM00000103	4 O-Ring Ø12,7xØ2,62
52	PDM00000114	2 H7 Regülasyon Ayar Mili Plastik Yatağı
53	PDM00006905	5 H7 Alt Kapak Tamponu DN50
54	PDM00006400	4 O-Ring Ø22,23xØ2,62
55	PDM00006930	5 H7 Opso Kör Tapa
56	PDM00004631	2 H6 Tahliye Tapası
57	PDM00003363	4 O-Ring Ø20,35xØ1,78

DN50 LP:



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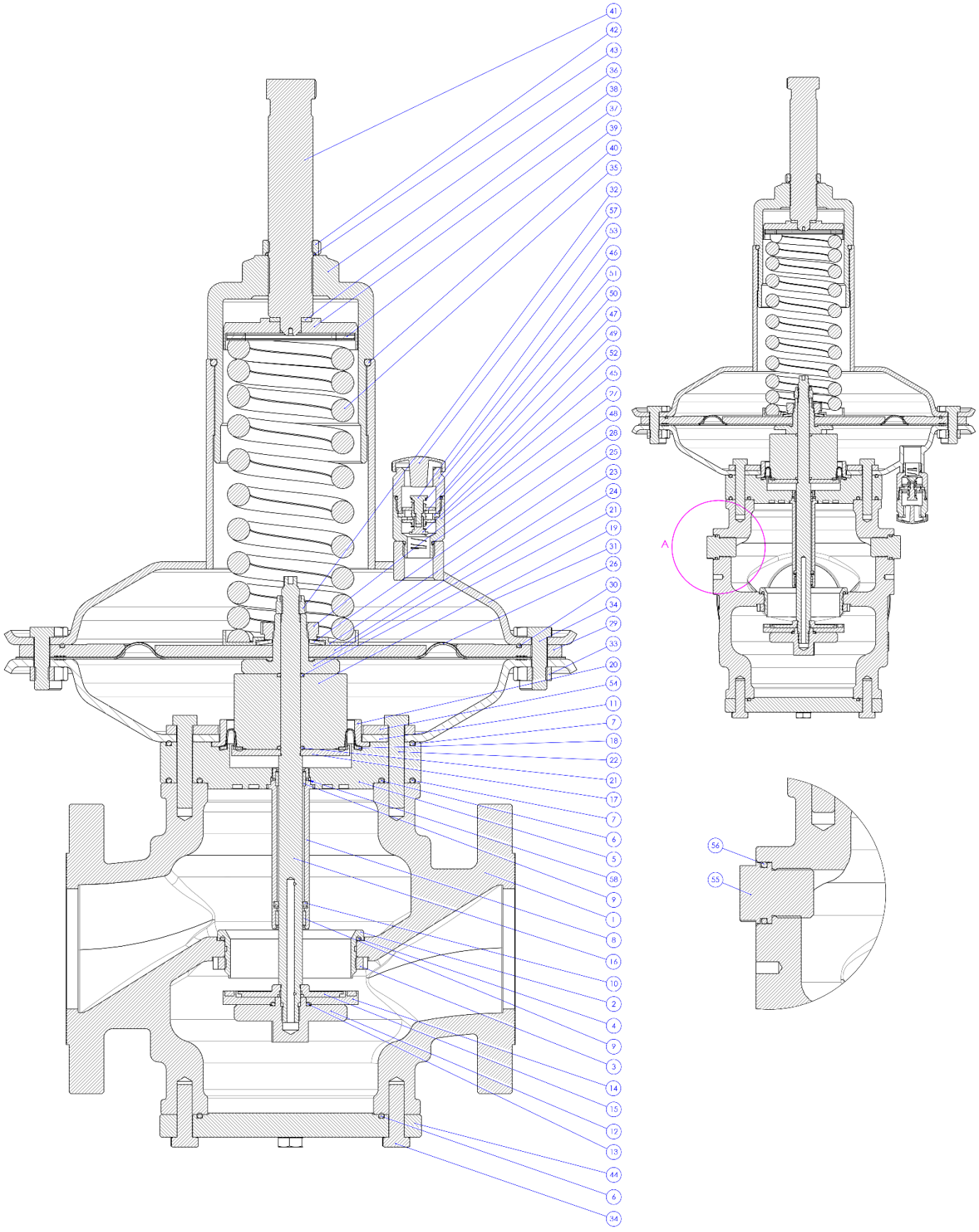
1	PDM00005697	15K H7 Gövde DN50 ANSI 150
2	PDM00000066	5 H7 Alt Flanş DN50
3	PDM00000105	4 O-Ring Ø74,6xØ3,53
4	PDM00006934	5 H7 Orifis DN50 LP
5	PDM00000109	4 O-Ring Ø60xØ3
6	PDM00000044	5 H7 Orifis Vidası DN50
7	PDM00000065	5 H7 Bağlantı Flanşı DN50
8	PDM00000106	4 O-Ring Ø116xØ3,5
9	PDM00007623	4 İnsert H7 Regülasyon Klape DN50 LP
10	PDM00007999	15K H7 Regülasyon Ayar Mili DN50 LP
11	PDM00000087	5 H7 Klape Vidası DN50
12	PDM00000089	5 H7 Klape Ayar Plakası DN50
13	PDM00000107	4 O-Ring Ø20,29xØ2,62
14	PDM00007996	15K H7 Regülasyon Mili Yatağı DN50
15	PDM00007592	15K H7 Dengeleme Odası Plakası DN50
16	PDM00000090	4 H7 Dengeleme Diyaframı DN50
17	PDM00007594	15K H7 Dengeleme Odası Halkası DN50
18	PDM00006632	5 H7 Dengeleme Diyafram Tamponu DN50 LP
19	PDM00006926	15B H7 Alt Kapak Takımı DN50 LP
20	PDM00006586	4 H7 Diyafram DN50 LP
21	PDM00006585	7 H7 Diyafram Destek Plakası DN50 LP
22	PDM00000054	5 H7 Yay Alt Yatağı
23	PDM00000056	10 Yaylı Rondela M24
24	PDM00000085	5 H7 Diyafram Vidası DN50
25	PDM00007600	15K H7 Yay Altı Yatağı Somunu
26	PDM00000099	8 M12x1,5 Fiberli Somun
27	PDM00006928	15B H7 Üst Kapak Takımı LP
28	PDM00006699	6 H7 Regülasyon Yayı 198N-705N
29	PDM00005705	15B H7 Yay Üst Kovanı
30	PDM00000637	10 AXK 6085 Eksenel Makaralı Rulman
31	PDM00007599	15K H7 Yay Üstü Yatağı
32	PDM00000050	5 H7 Yay Üstü Yatağı Desteği
33	PDM00000052	5 H7 Yay Ayar Vidası
34	PDM00007601	15K H7 Yay Ayar Vidası Somunu
35	PDM00007596	15K H7 Alt Tahliye
36	PDM00007597	15K H7 Üst Tahliye
37	PDM00000323	4 O-Ring Ø27xØ2
38	PDM00003400	4 O-Ring Ø17xØ2
39	PDM00004634	2 H6 Nefeslik Düzenleyici Gövdesi
40	PDM00004633	2 H6 Nefeslik Düzenleyici Klapesi
41	PDM00007622	6 H7 Nefeslik Düzenleyici Yayı
42	PDM00006911	5 H6 Nefeslik Düzenleyici Delikli Pimi
43	PDM00006912	5 H6 Nefeslik Düzenleyici Pimi
44	PDM00001940	4 O-Ring Ø97,5xØ4,5
45	PDM00006320	8 M10x1,5x25 8.8 Civata
46	PDM00006323	8 M10x1,5 8 Somun
47	PDM00006321	8 M10x1,5x30 8.8 Civata
48	PDM00006906	8 M10x1,5x50 8.8 Yarım Diş Civata
49	PDM00001939	4 O-Ring Ø29,87xØ1,78
50	PDM00000108	4 16x22x3,5 Nutring Keçe
51	PDM00000103	4 O-Ring Ø12,7xØ2,62
52	PDM00000114	2 H7 Regülasyon Ayar Mili Plastik Yatağı
53	PDM00006905	5 H7 Alt Kapak Tamponu DN50
54	PDM00006930	5 H7 Opso Kör Tapa
55	PDM00006400	4 O-Ring Ø22,23xØ2,62
56	PDM00003363	4 O-Ring Ø20,35xØ1,78
57	PDM00004631	2 H6 Tahliye Tapası

DN80 HP:



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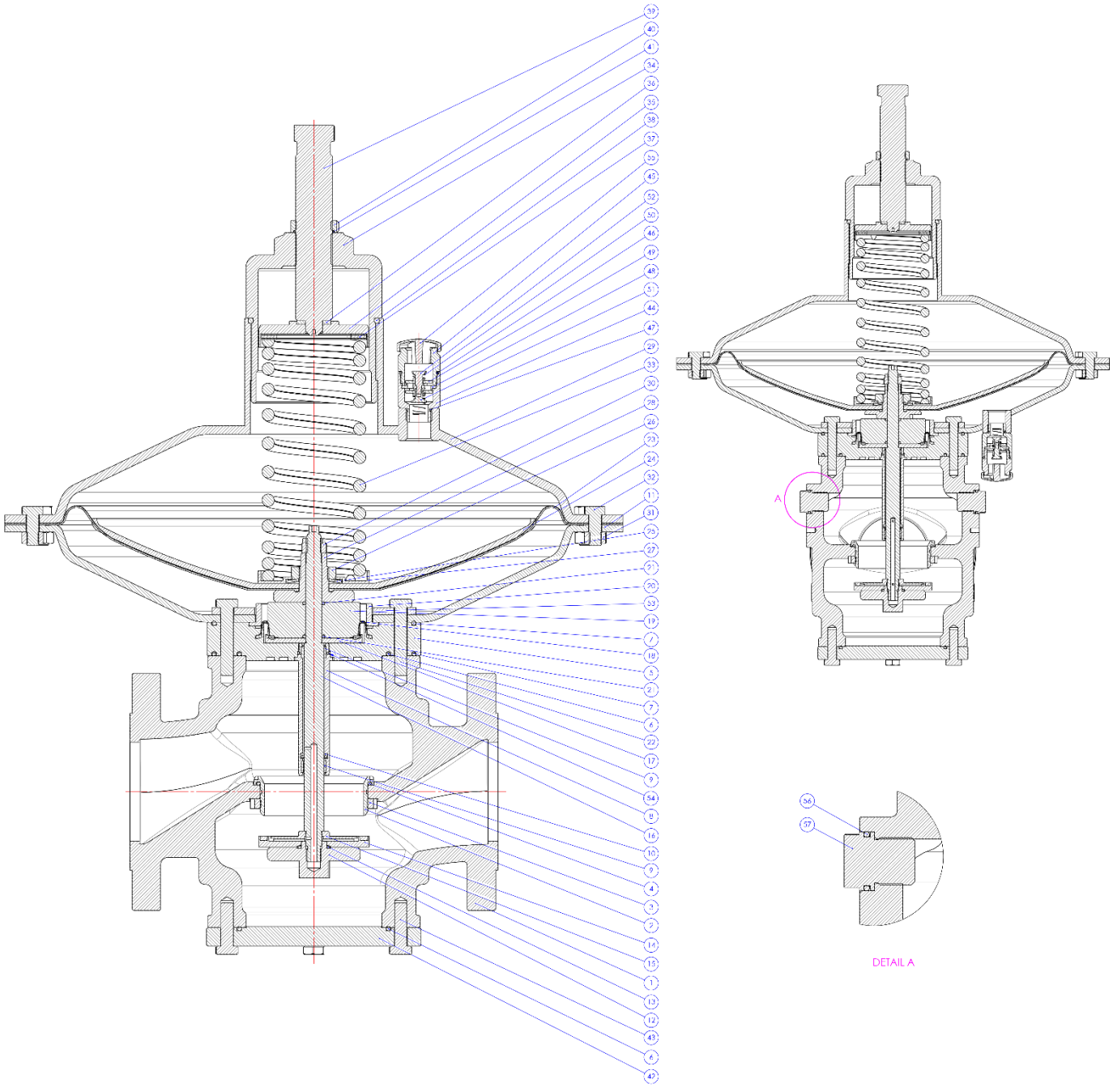
ITEM NO.	PART NO.	PART NAME
1	PDM00006327	15K H7 Gövde DN80 ANSI 150
2	PDM00000656	5 H7 Orifis DN80
3	PDM00000657	5 H7 Orifis Vidası DN80
4	PDM00001819	4 O-Ring Ø87xØ3
5	PDM00000652	5 H7 Bağlantı Flanşı DN80
6	PDM00000665	4 O-Ring Ø117xØ3,5
7	PDM00001821	4 O-Ring Ø158,34xØ3,53
8	PDM00007997	15K H7 Regülasyon Mili Yatağı DN80
9	PDM00000114	2 H7 Regülasyon Ayar Mili Plastik Yatağı
10	PDM00000108	4 16x22x3,5 Nutring Keçe
11	PDM00006331	15B H7 Alt Kapak Takımı DN80
12	PDM00000655	5 H7 Klape Vidası DN80
13	PDM00000107	4 O-Ring Ø20,29xØ2,62
14	PDM00006334	4 İnsert H7 Regülasyon Klape DN80
15	PDM00000658	5 H7 Klape Ayar Plakası DN80
16	PDM00008000	15K H7 Regülasyon Ayar Mili DN80
17	PDM00007593	15K H7 Dengeleme Odası Plakası DN80
18	PDM00000647	4 H7 Dengeleme Diyaframı DN80
19	PDM00000646	5 H7 Dengeleme Diyafram Tamponu DN80
20	PDM00007595	15K H7 Dengeleme Odası Halkası DN80
21	PDM00000103	4 O-Ring Ø12,7xØ2,62
22	PDM00006920	8 M10x1,5x55 8.8 Yarım Diş Civata
23	PDM00000640	5 H7 Diyafram Destek Plakası HP
24	PDM00008202	5 H7 Diyafram Vidası DN80
25	PDM00000054	5 H7 Yay Alt Yatağı
26	PDM00000639	4 H7 Diyafram HP
27	PDM00007600	15K H7 Yay Altı Yatağı Somunu
28	PDM00000056	10 Yaylı Rondela M24
29	PDM00000641	5 H7 Diyafram Halkası
30	PDM00000849	4 O-Ring Ø300xØ3
31	PDM00005704	15B H7 Üst Kapak Takımı HP
32	PDM00000099	8 M12x1,5 Fiberli Somun
33	PDM00006323	8 M10x1,5 8 Somun
34	PDM00006324	8 M10x1,5x35 8.8 Civata
35	PDM00001758	6 H7 Regülasyon Yayı 7400N-12930N
36	PDM00005705	15B H7 Yay Üst Kovanı
37	PDM00007599	15K H7 Yay Üstü Yatağı
38	PDM00000050	5 H7 Yay Üstü Yatağı Desteği
39	PDM00000637	10 AXK 6085 Eksenel Makaralı Rulman
40	PDM00001940	4 O-Ring Ø97,5xØ4,5
41	PDM00000052	5 H7 Yay Ayar Vidası
42	PDM00007601	15K H7 Yay Ayar Vidası Somunu
43	PDM00001939	4 O-Ring Ø29,87xØ1,78
44	PDM00000651	5 H7 Alt Flanş DN80
45	PDM00007596	15K H7 Alt Tahliye
46	PDM00007597	15K H7 Üst Tahliye
47	PDM00000323	4 O-Ring Ø27xØ2
48	PDM00003400	4 O-Ring Ø17xØ2
49	PDM00004634	2 H6 Nefeslik Düzenleyici Gövdesi
50	PDM00004633	2 H6 Nefeslik Düzenleyici Klapesi
51	PDM00007622	6 H7 Nefeslik Düzenleyici Yayı
52	PDM00006911	5 H6 Nefeslik Düzenleyici Delikli Pimi
53	PDM00006912	5 H6 Nefeslik Düzenleyici Pimi
54	PDM00006904	5 H7 Alt Kapak Tamponu DN80
55	PDM00006930	5 H7 Opso Kör Tapa
56	PDM00006400	4 O-Ring Ø22,23xØ2,62
57	PDM00004631	2 H6 Tahliye Tapası
58	PDM00003363	4 O-Ring Ø20,35xØ1,78

DN80 MP:



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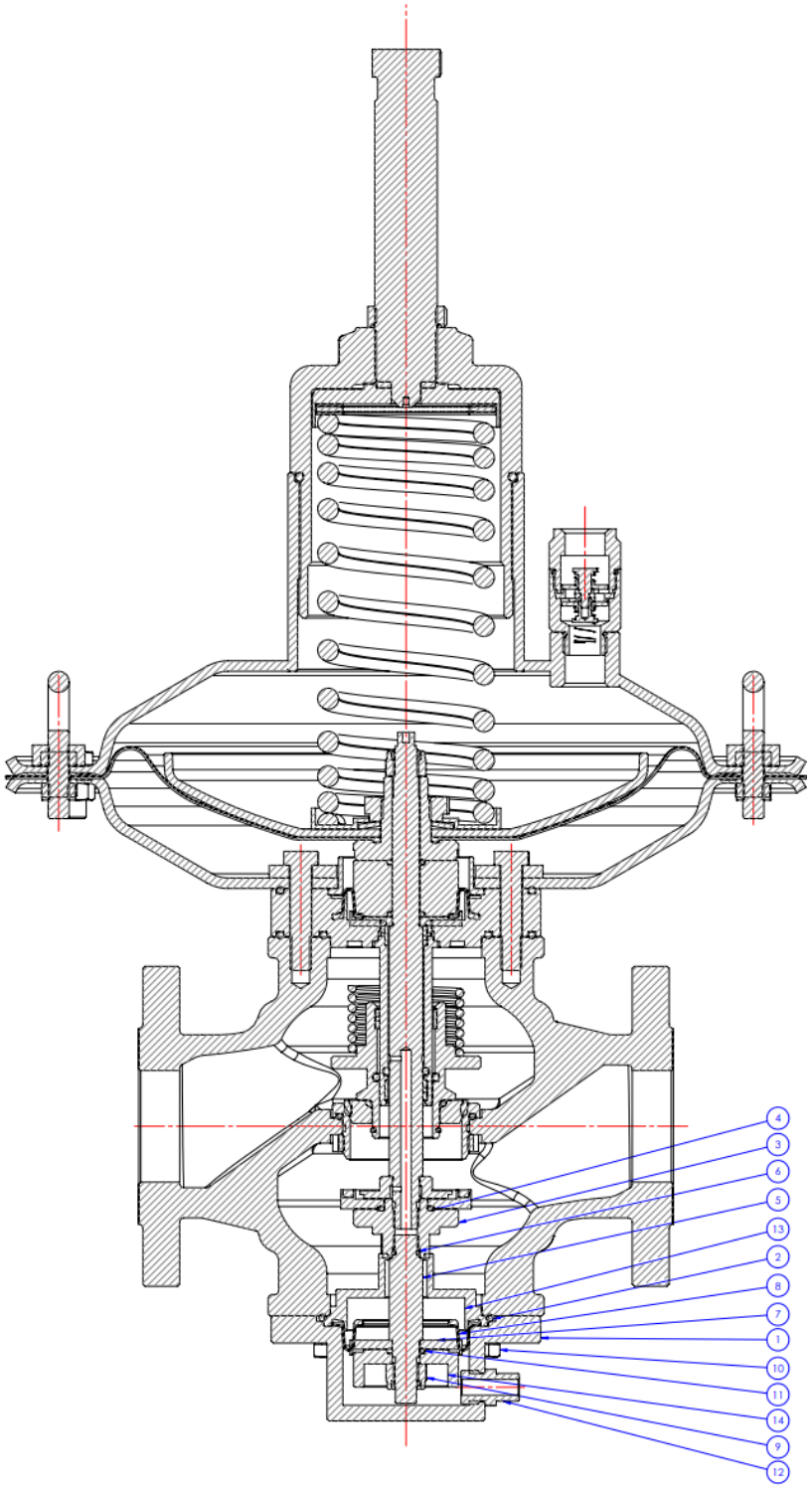
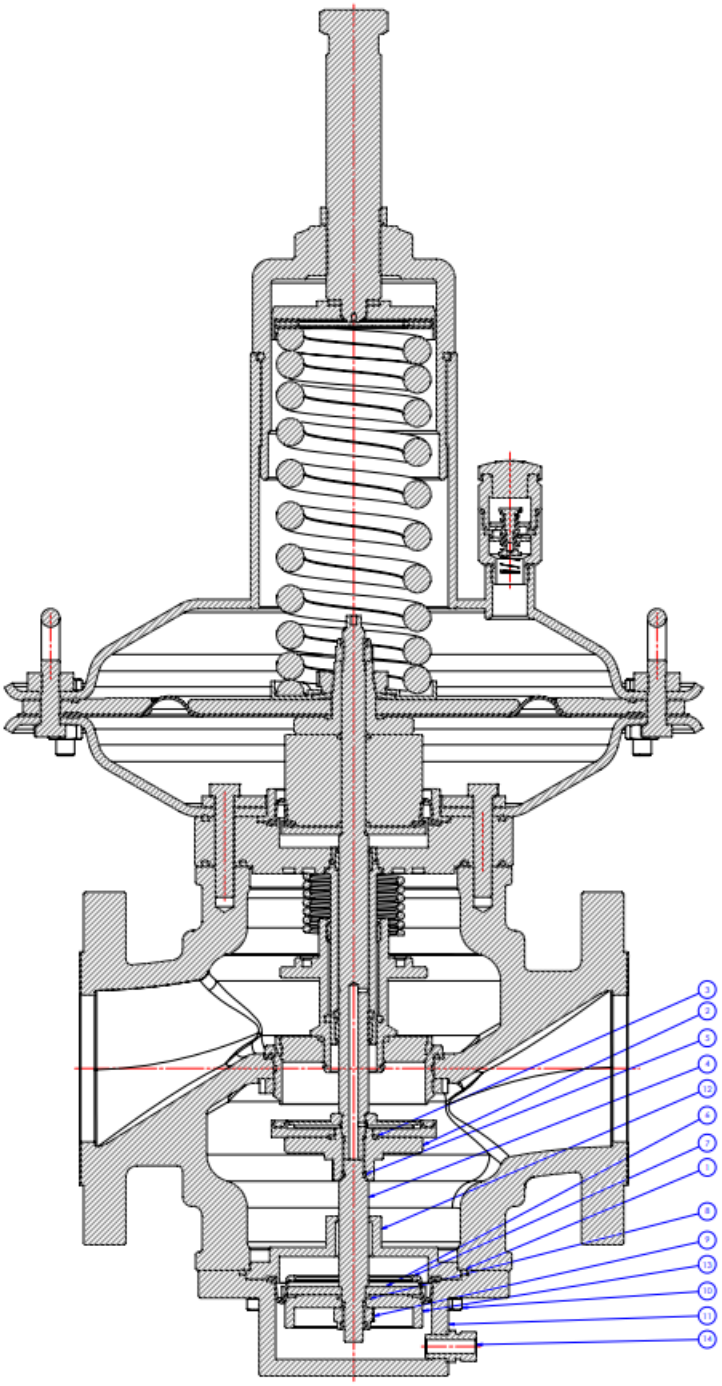
ITEM NO.	PART NO.	PART NAME
1	PDM00006327	15K H7 Gövde DN80 ANSI 150
2	PDM00008059	5 H7 Orifis DN80 MP
3	PDM00000657	5 H7 Orifis Vidası DN80
4	PDM00001819	4 O-Ring Ø87xØ3
5	PDM00000652	5 H7 Bağlantı Flanşı DN80
6	PDM00000665	4 O-Ring Ø117xØ3,5
7	PDM00001821	4 O-Ring Ø158,34xØ3,53
8	PDM00007997	15K H7 Regülasyon Mili Yatağı DN80
9	PDM00000114	2 H7 Regülasyon Ayar Mili Plastik Yatağı
10	PDM00000108	4 16x22x3,5 Nutring Keçe
11	PDM00007662	15B H7 Alt Kapak Takımı DN80 MP
12	PDM00000655	5 H7 Klape Vidası DN80
13	PDM00000107	4 O-Ring Ø20,29xØ2,62
14	PDM00008086	4 İnsert H7 Regülasyon Klape DN80 MP
15	PDM00000658	5 H7 Klape Ayar Plakası DN80
16	PDM00008001	15K H7 Regülasyon Ayar Mili DN80 MP
17	PDM00007593	15K H7 Dengeleme Odası Plakası DN80
18	PDM00000647	4 H7 Dengeleme Diyaframı DN80
19	PDM00007677	5 H7 Dengeleme Diyafram Tamponu DN80 MP
20	PDM00007595	15K H7 Dengeleme Odası Halkası DN80
21	PDM00000103	4 O-Ring Ø12,7xØ2,62
22	PDM00006920	8 M10x1,5x55 8.8 Yarım Diş Civata
23	PDM00008111	4 H7 Diyafram DN80 MP
24	PDM00008110	7 H7 Diyafram Destek Plakası DN80 MP
25	PDM00000056	10 Yaylı Rondela M24
26	PDM00007600	15K H7 Yay Altı Yatağı Somunu
27	PDM00000054	5 H7 Yay Alt Yatağı
28	PDM00008202	5 H7 Diyafram Vidası DN80
29	PDM00006928	15B H7 Üst Kapak Takımı LP
30	PDM00000099	8 M12x1,5 Fiberli Somun
31	PDM00006323	8 M10x1,5 8 Somun
32	PDM00006320	8 M10x1,5x25 8.8 Civata
33	PDM00006917	6 H7 Regülasyon Yayı 1320N-2250N
34	PDM00005705	15B H7 Yay Üst Kovanı
35	PDM00007599	15K H7 Yay Üstü Yatağı
36	PDM00000050	5 H7 Yay Üstü Yatağı Desteği
37	PDM00000637	10 AXK 6085 Eksenel Makaralı Rulman
38	PDM00001940	4 O-Ring Ø97,5xØ4,5
39	PDM00000052	5 H7 Yay Ayar Vidası
40	PDM00007601	15K H7 Yay Ayar Vidası Somunu
41	PDM00001939	4 O-Ring Ø29,87xØ1,78
42	PDM00000651	5 H7 Alt Flanş DN80
43	PDM00006324	8 M10x1,5x35 8.8 Civata
44	PDM00007596	15K H7 Alt Tahliye
45	PDM00007597	15K H7 Üst Tahliye
46	PDM00000323	4 O-Ring Ø27xØ2
47	PDM00003400	4 O-Ring Ø17xØ2
48	PDM00004634	2 H6 Nefeslik Düzenleyici Gövdesi
49	PDM00004633	2 H6 Nefeslik Düzenleyici Klapesi
50	PDM00007622	6 H7 Nefeslik Düzenleyici Yayı
51	PDM00006911	5 H6 Nefeslik Düzenleyici Delikli Pimi
52	PDM00006912	5 H6 Nefeslik Düzenleyici Pimi
53	PDM00006904	5 H7 Alt Kapak Tamponu DN80
54	PDM00003363	4 O-Ring Ø20,35xØ1,78
55	PDM00004631	2 H6 Tahliye Tapası
56	PDM00006400	4 O-Ring Ø22,23xØ2,62
57	PDM00006930	5 H7 Opso Kör Tapa

DN50 MP Monitor:



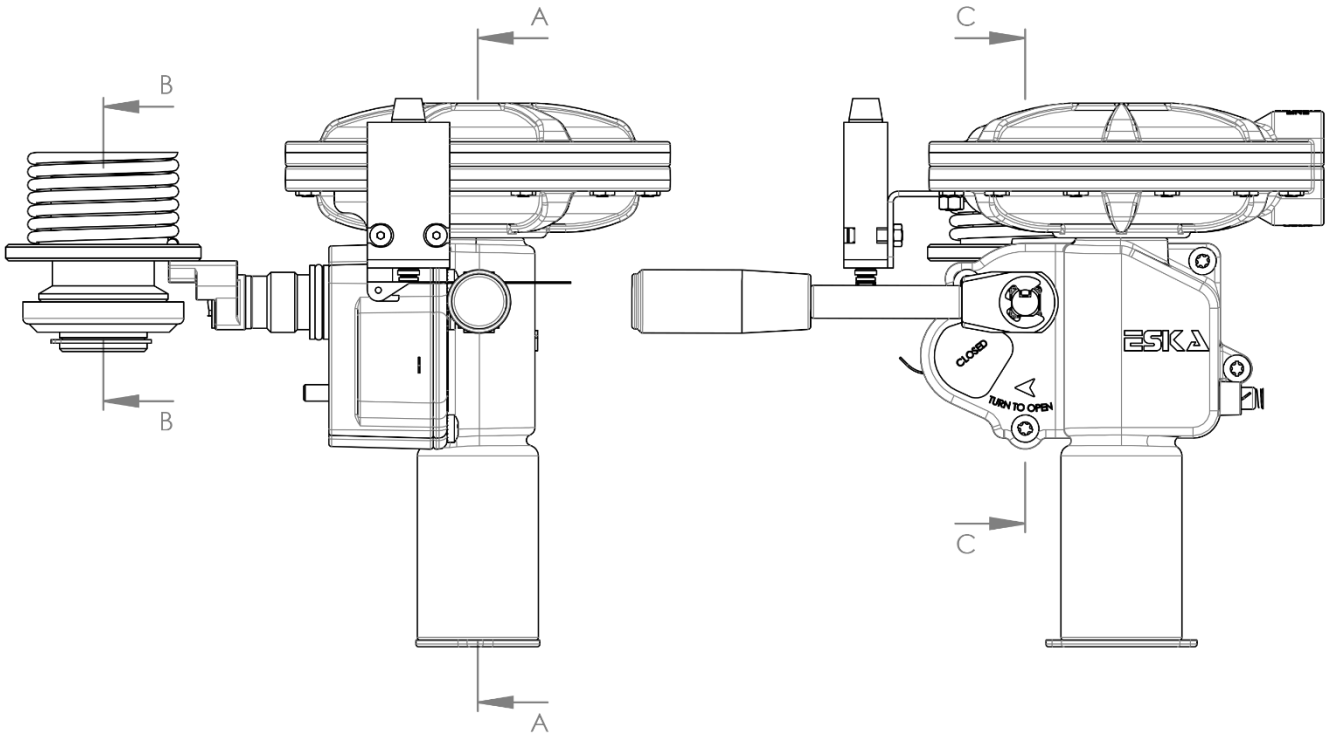
ITEM NO	PDM NO.	NAME OF PART
1	PDM00008778	5 H7 Bottom Flange DN50 Monitor
2	PDM00008844	4 O-Ring Ø75,8xØ3,53
3	PDM00008781	5 H7 Valve Screw DN50 Monitor
4	PDM00000107	4 O-Ring Ø20,29xØ2,62
5	PDM00008777	5 H7 Monitor Pin DN50
6	PDM00003480	4 O-Ring Ø9,75xØ1,78
7	PDM00007592	15K H7 Stabilization Chamber Plate DN50
8	PDM00000090	4 H7 Stabilization Diaphragm DN50
9	PDM00000099	8 M12x1,5 Fibered Nuts
10	PDM00006321	8 M10x1,5x30 8.8 Bolts
11	PDM00000103	4 O-Ring Ø12,7xØ2,62
12	PDM00008803	5 Nipple 1-4" BSPP-M16x1,5
13	PDM00008776	5 H7 Monitor Pin Bearing DN50
14	PDM00008780	5 H7 Monitor Diaphragm Buffer DN50

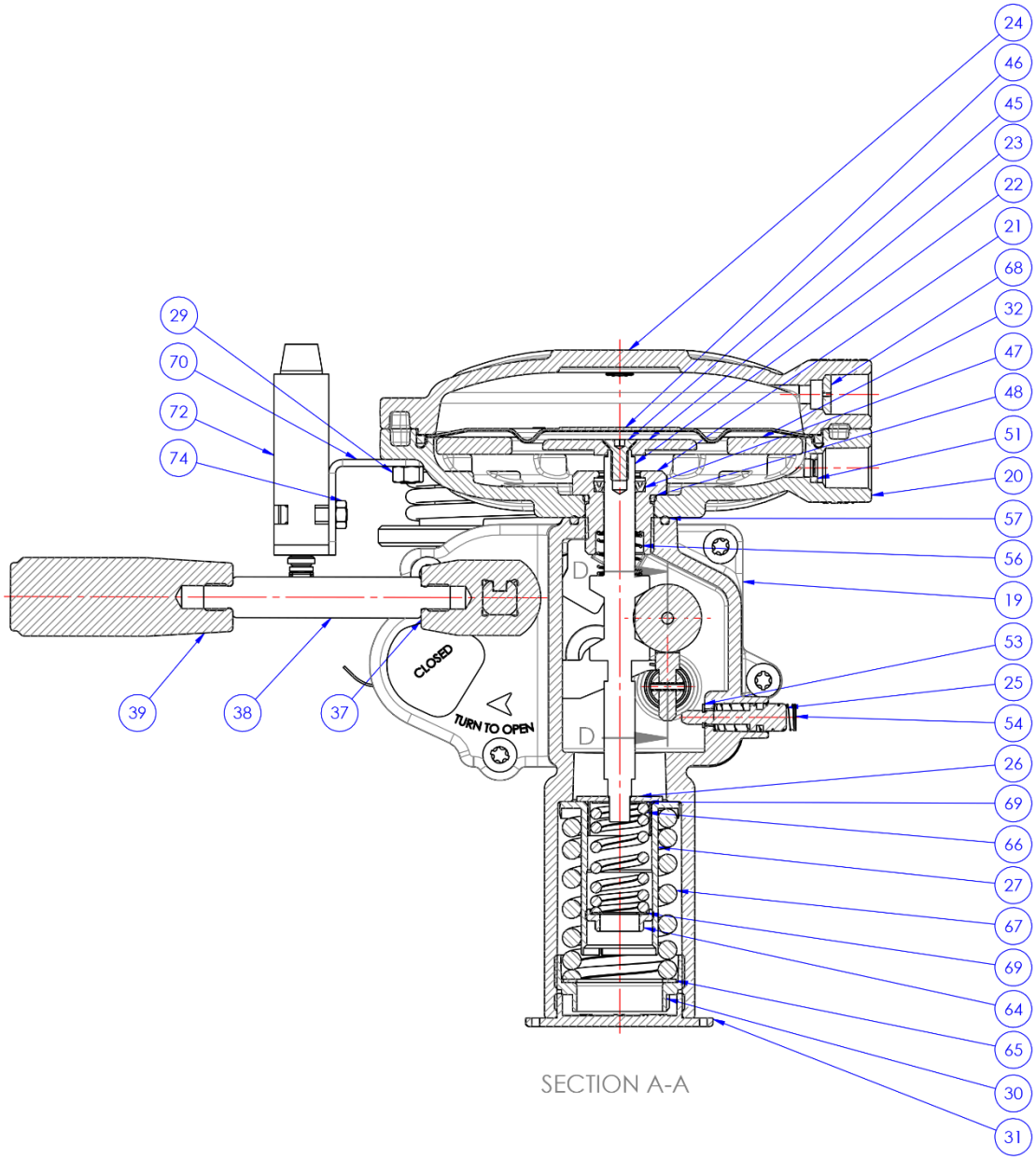
DN80 HP Monitor:



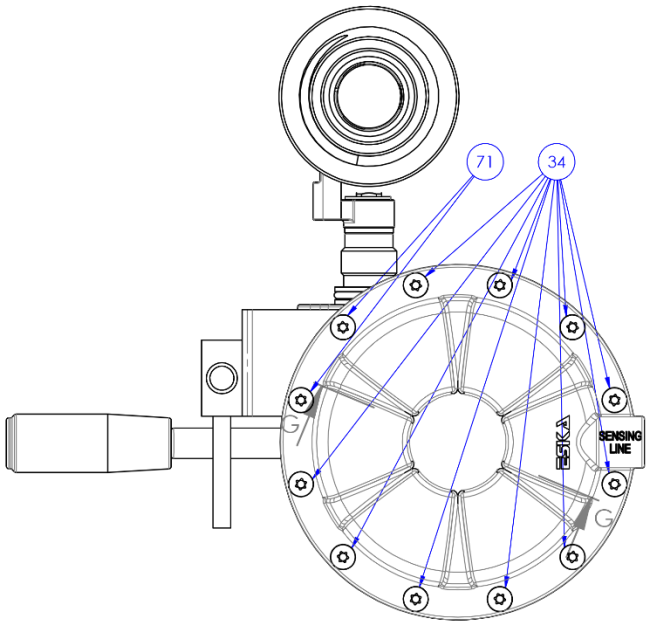
ITEM NO	PDM NO.	NAME OF PART
1	PDM00000665	4 O-Ring Ø117xØ3,5
2	PDM00008864	5 H7 Valve Screw DN80 Monitor
3	PDM00000107	4 O-Ring Ø20,29xØ2,62
4	PDM00008868	5 H7 Monitor Pin DN80
5	PDM00003480	4 O-Ring Ø9,75xØ1,78
6	PDM00007593	15K H7 Stabilization Chamber Plate DN80
7	PDM00000647	4 H7 Stabilization Diaphragm DN80
8	PDM00000103	4 O-Ring Ø12,7xØ2,62
9	PDM00000099	8 M12x1,5 Fibered Nuts
10	PDM00006324	8 M10x1,5x35 8.8 Bolts
11	PDM00008866	5 H7 Bottom Flange DN80 Monitor
12	PDM00008865	5 H7 Monitor Pin Bearing DN80
13	PDM00008867	5 H7 Monitor Diaphragm Buffer DN80
14	PDM00008803	5 Nipple 1-4" BSPP-M16x1,5

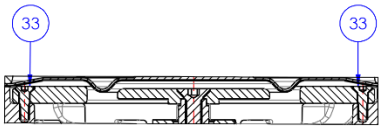
Shut-Off Group:



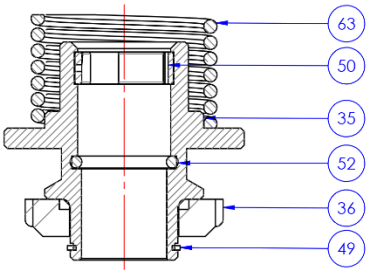


SECTION A-A

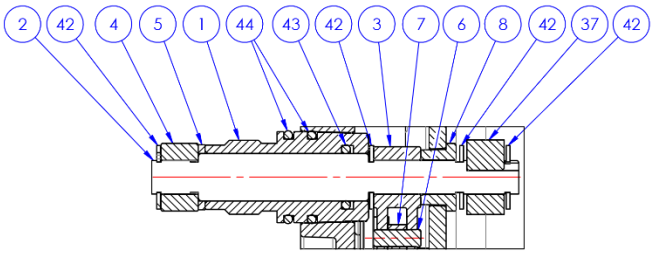




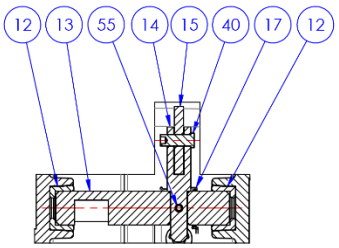
SECTION G-G



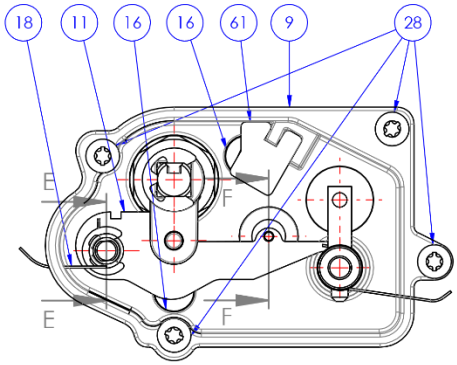
SECTION B-B

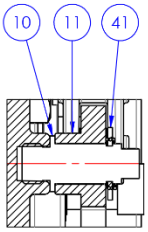


SECTION C-C

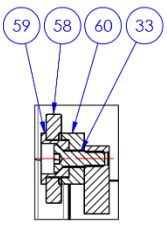


SECTION D-D

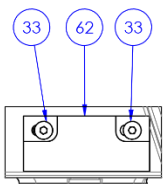


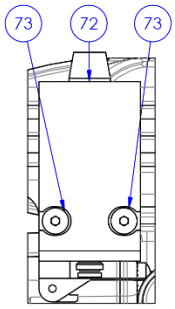


SECTION E-E



SECTION F-F





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DN50 HP		
ITEM NO.	PART NO.	PART NAME
1	PDM00006370	5 H7 Opso Kurma Mili Yatağı DN50
2	PDM00006369	5 H7 Opso Kurma Mili DN50
3	PDM00006375	5 H7 Opso Tetik Kaldıracı
4	PDM00007994	15K H7 Opso Kovan Kaldıracı
5	PDM00006381	5 H7 Opso Ara Plastik
6	PDM00006373	5 H7 Opso Tetik Bileziği Mili
7	PDM00006372	5 H7 Opso Tetik Bileziği
8	PDM00006371	2 H7 Opso Gösterge
9	PDM00006901	15B H7 Opso Arka Kapak
10	PDM00006374	5 H7 Opso Tetik Yatağı
11	PDM00006368	5 H7 Opso Tetiği
12	PDM00006364	5 H7 Opso Yarıklı Mil Yatağı
13	PDM00007993	15K H7 Opso Yarıklı Mil
14	PDM00006362	5 H7 Opso Tekerlek Yatağı
15	PDM00006361	5 H7 Opso Tekerleği
16	PDM00006452	8 M6x25 Havşa Başlı Alyan Civata
17	PDM00006378	6 H7 Opso Tekerleği İtki Yayı
18	PDM00006377	6 H7 Opso Tetik İtki Yayı
19	PDM00006900	15B H7 Opso Ön Kapak
20	PDM00006902	15B H7 Opso Alt Kapak
21	PDM00006359	5 H7 Opso Mili Yatağı
22	PDM00006358	5 H7 Opso Mili
23	PDM00006385	5 H7 Opso Diyafram Destek Plakası HP
24	PDM00006903	15B H7 Opso Üst Kapak
25	PDM00006363	5 H7 Opso Reset Butonu
26	PDM00006360	5 H7 Opso Min. Yay Tamponu
27	PDM00003189	5 H1 Max. Yay Tamponu
28	PDM00002579	8 M5x14 TSB Akıllı Vida Form K
29	PDM00004329	8 M5 İnox Somun
30	PDM00003003	5 SR Regülasyon Ayar Vidası
31	PDM00006328	15K SR Üst Kapak Tapası Mühürlü
32	PDM00006387	5 H7 Opso Diyafram Destek Halkası
33	PDM00006391	8 M3x10 Havşa Başlı Alyan Civata
34	PDM00006392	8 M5x20 Havşa Başlı Torx Civata
35	PDM00006393	5 H7 Opso Kovan Yatağı DN50
36	PDM00006395	4 İnsert H7 Opso Klape DN50
37	PDM00006398	5 H7 Opso Kurma Kolu Bağlantısı
38	PDM00006396	5 H7 Opso Kurma Kolu
39	PDM00006397	10 H7 Opso Kurma Kolu Topuzu
40	PDM00003200	5 H5 Tahrik Pimi
41	PDM00006399	10 Ay Segman Ø7
42	PDM00004398	10 Ay Segman Ø9
43	PDM00003479	4 O-Ring Ø13,94xØ2,62
44	PDM00006400	4 O-Ring Ø22,23xØ2,62
45	PDM00006401	8 M5x12 Havşa Başlı Alyan Civata
46	PDM00006949	4 H7 Opso Diyafram HP
47	PDM00006402	4 H7 Opso Nutring Keçe Ø9
48	PDM00006403	4 O-Ring Ø17,5xØ2
49	PDM00006404	10 Dış Segman Ø30
50	PDM00000113	2 H7 Opso Kovan Yatağı Plastik Yatağı
51	PDM00002058	2 SR Nefeslik Süzgeci
52	PDM00003368	4 O-Ring Ø24,99xØ3,53
53	PDM00006471	10 Ay Segman Ø3,2
54	PDM00006475	6 H7 Opso Reset Butonu Yayı
55	PDM00006476	10 Yarıklı Pim Ø2x10
56	PDM00006477	6 H7 Opso Mili İtki Yayı
57	PDM00006499	4 O-Ring Ø24xØ2,5
58	PDM00004687	10 Mıknatıs Ø17,5xØ7,5x3
59	PDM00006549	5 H7 Opso Mıknatıs Yatağı
60	PDM00006550	5 H7 Opso Mıknatıs Uzaklık Parçası
61	PDM00006572	4 H7 Opso Hareket Sınırlayıcı DN50
62	PDM00006580	17 H7 Opso Manyetik Sensör
63	PDM00006419	6 H7 Opso Klape Kapatma Yayı
64	PDM00003190	5 H1 Min. Ayar Vidası
65	PDM00002968	2 H1 Yay Üstü Pulu
66	Variable	Variable Upso Spring
67	Variable	Variable Opso Spring
68	PDM00007310	5 H7 Opso Üst Kapak Sens Çapı Düşürücü
69	PDM00008216	10 Layner Pul Ø10xØ16x0,5
70	PDM00007039	7 H7 Switch Sabitleme Plakası
71	PDM00007041	8 M5x25 Havşa Başlı Torx Civata
72	PDM00007356	17 H7 Opso Mekanik Sensör
73	PDM00007121	8 M4x20 Havşa Başlı Alyan Civata
74	PDM00007122	8 M4 Somun

DN50 MP		
ITEM NO.	PART NO.	PART NAME
1	PDM00006370	5 H7 Opso Kurma Mili Yatağı DN50
2	PDM00006369	5 H7 Opso Kurma Mili DN50
3	PDM00006375	5 H7 Opso Tetik Kaldıracı
4	PDM00007994	15K H7 Opso Kovan Kaldıracı
5	PDM00006381	5 H7 Opso Ara Plastik
6	PDM00006373	5 H7 Opso Tetik Bileziği Mili
7	PDM00006372	5 H7 Opso Tetik Bileziği
8	PDM00006371	2 H7 Opso Gösterge
9	PDM00006901	15B H7 Opso Arka Kapak
10	PDM00006374	5 H7 Opso Tetik Yatağı
11	PDM00006368	5 H7 Opso Tetiği
12	PDM00006364	5 H7 Opso Yarıklı Mil Yatağı
13	PDM00007993	15K H7 Opso Yarıklı Mil
14	PDM00006362	5 H7 Opso Tekerlek Yatağı
15	PDM00006361	5 H7 Opso Tekerleği
16	PDM00006452	8 M6x25 Havşa Başlı Alyan Civata
17	PDM00006378	6 H7 Opso Tekerleği İtki Yayı
18	PDM00006377	6 H7 Opso Tetik İtki Yayı
19	PDM00006900	15B H7 Opso Ön Kapak
20	PDM00006902	15B H7 Opso Alt Kapak
21	PDM00006359	5 H7 Opso Mili Yatağı
22	PDM00006358	5 H7 Opso Mili
23	PDM00006366	5 H7 Opso Diyafram Destek Plakası LP
24	PDM00006903	15B H7 Opso Üst Kapak
25	PDM00006363	5 H7 Opso Reset Butonu
26	PDM00006360	5 H7 Opso Min. Yay Tamponu
27	PDM00003189	5 H1 Max. Yay Tamponu
28	PDM00002579	8 M5x14 TSB Akıllı Vida Form K
29	PDM00004329	8 M5 İnox Somun
30	PDM00003003	5 SR Regülasyon Ayar Vidası
31	PDM00006328	15K SR Üst Kapak Tapası Mühürlü
32	Not Be Used	Not Be Used
33	PDM00006391	8 M3x10 Havşa Başlı Alyan Civata
34	PDM00006392	8 M5x20 Havşa Başlı Torx Civata
35	PDM00006393	5 H7 Opso Kovan Yatağı DN50
36	PDM00006395	4 İnsert H7 Opso Klape DN50
37	PDM00006398	5 H7 Opso Kurma Kolu Bağlantısı
38	PDM00006396	5 H7 Opso Kurma Kolu
39	PDM00006397	10 H7 Opso Kurma Kolu Topuzu
40	PDM00003200	5 H5 Tahrik Pimi
41	PDM00006399	10 Ay Segman Ø7
42	PDM00004398	10 Ay Segman Ø9
43	PDM00003479	4 O-Ring Ø13,94xØ2,62
44	PDM00006400	4 O-Ring Ø22,23xØ2,62
45	PDM00006401	8 M5x12 Havşa Başlı Alyan Civata
46	PDM00008114	4 H7 Opso Diyafram MP
47	PDM00006402	4 H7 Opso Nutring Keçe Ø9
48	PDM00006403	4 O-Ring Ø17,5xØ2
49	PDM00006404	10 Dış Segman Ø30
50	PDM00000113	2 H7 Opso Kovan Yatağı Plastik Yatağı
51	PDM00002058	2 SR Nefeslik Süzgeci
52	PDM00003368	4 O-Ring Ø24,99xØ3,53
53	PDM00006471	10 Ay Segman Ø3,2
54	PDM00006475	6 H7 Opso Reset Butonu Yayı
55	PDM00006476	10 Yarıklı Pim Ø2x10
56	PDM00006477	6 H7 Opso Mili İtki Yayı
57	PDM00006499	4 O-Ring Ø24xØ2,5
58	PDM00004687	10 Mıknatıs Ø17,5xØ7,5x3
59	PDM00006549	5 H7 Opso Mıknatıs Yatağı
60	PDM00006550	5 H7 Opso Mıknatıs Uzaklık Parçası
61	PDM00006572	4 H7 Opso Hareket Sınırlayıcı DN50
62	PDM00006580	17 H7 Opso Manyetik Sensör
63	PDM00006419	6 H7 Opso Klape Kapatma Yayı
64	PDM00003190	5 H1 Min. Ayar Vidası
65	PDM00002968	2 H1 Yay Üstü Pulu
66	Variable	Variable Upso Spring
67	Variable	Variable Opso Spring
68	PDM00007310	5 H7 Opso Üst Kapak Sens Çapı Düşürücü
69	PDM00008216	10 Layner Pul Ø10xØ16x0,5
70	PDM00007039	7 H7 Switch Sabitleme Plakası
71	PDM00007041	8 M5x25 Havşa Başlı Torx Civata
72	PDM00007356	17 H7 Opso Mekanik Sensör
73	PDM00007121	8 M4x20 Havşa Başlı Alyan Civata
74	PDM00007122	8 M4 Somun

DN50 LP		
ITEM NO.	PART NO.	PART NAME
1	PDM00006370	5 H7 Opso Kurma Mili Yatağı DN50
2	PDM00006369	5 H7 Opso Kurma Mili DN50
3	PDM00006375	5 H7 Opso Tetik Kaldıracı
4	PDM00007994	15K H7 Opso Kovan Kaldıracı
5	PDM00006381	5 H7 Opso Ara Plastik
6	PDM00006373	5 H7 Opso Tetik Bileziği Mili
7	PDM00006372	5 H7 Opso Tetik Bileziği
8	PDM00006371	2 H7 Opso Gösterge
9	PDM00006901	15B H7 Opso Arka Kapak
10	PDM00006374	5 H7 Opso Tetik Yatağı
11	PDM00006368	5 H7 Opso Tetiği
12	PDM00006364	5 H7 Opso Yarıklı Mil Yatağı
13	PDM00007993	15K H7 Opso Yarıklı Mil
14	PDM00006362	5 H7 Opso Tekerlek Yatağı
15	PDM00006361	5 H7 Opso Tekerleği
16	PDM00006452	8 M6x25 Havşa Başlı Alyan Civata
17	PDM00006378	6 H7 Opso Tekerleği İtki Yayı
18	PDM00006377	6 H7 Opso Tetik İtki Yayı
19	PDM00006900	15B H7 Opso Ön Kapak
20	PDM00006902	15B H7 Opso Alt Kapak
21	PDM00006359	5 H7 Opso Mili Yatağı
22	PDM00006358	5 H7 Opso Mili
23	PDM00006366	5 H7 Opso Diyafram Destek Plakası LP
24	PDM00006903	15B H7 Opso Üst Kapak
25	PDM00006363	5 H7 Opso Reset Butonu
26	PDM00006360	5 H7 Opso Min. Yay Tamponu
27	PDM00003189	5 H1 Max. Yay Tamponu
28	PDM00002579	8 M5x14 TSB Akıllı Vida Form K
29	PDM00004329	8 M5 İnox Somun
30	PDM00003003	5 SR Regülasyon Ayar Vidası
31	PDM00006328	15K SR Üst Kapak Tapası Mühürlü
32	Not Be Used	Not Be Used
33	PDM00006391	8 M3x10 Havşa Başlı Alyan Civata
34	PDM00006392	8 M5x20 Havşa Başlı Torx Civata
35	PDM00006393	5 H7 Opso Kovan Yatağı DN50
36	PDM00006395	4 İnsert H7 Opso Klape DN50
37	PDM00006398	5 H7 Opso Kurma Kolu Bağlantısı
38	PDM00006396	5 H7 Opso Kurma Kolu
39	PDM00006397	10 H7 Opso Kurma Kolu Topuzu
40	PDM00003200	5 H5 Tahrik Pimi
41	PDM00006399	10 Ay Segman Ø7
42	PDM00004398	10 Ay Segman Ø9
43	PDM00003479	4 O-Ring Ø13,94xØ2,62
44	PDM00006400	4 O-Ring Ø22,23xØ2,62
45	PDM00006401	8 M5x12 Havşa Başlı Alyan Civata
46	PDM00006367	4 H7 Opso Diyafram LP
47	PDM00006402	4 H7 Opso Nutring Keçe Ø9
48	PDM00006403	4 O-Ring Ø17,5xØ2
49	PDM00006404	10 Dış Segman Ø30
50	PDM00000113	2 H7 Opso Kovan Yatağı Plastik Yatağı
51	PDM00002058	2 SR Nefeslik Süzgeci
52	PDM00003368	4 O-Ring Ø24,99xØ3,53
53	PDM00006471	10 Ay Segman Ø3,2
54	PDM00006475	6 H7 Opso Reset Butonu Yayı
55	PDM00006476	10 Yarıklı Pim Ø2x10
56	PDM00006477	6 H7 Opso Mili İtki Yayı
57	PDM00006499	4 O-Ring Ø24xØ2,5
58	PDM00004687	10 Mıknatıs Ø17,5xØ7,5x3
59	PDM00006549	5 H7 Opso Mıknatıs Yatağı
60	PDM00006550	5 H7 Opso Mıknatıs Uzaklık Parçası
61	PDM00006572	4 H7 Opso Hareket Sınırlayıcı DN50
62	PDM00006580	17 H7 Opso Manyetik Sensör
63	PDM00006419	6 H7 Opso Klape Kapatma Yayı
64	PDM00003190	5 H1 Min. Ayar Vidası
65	PDM00002968	2 H1 Yay Üstü Pulu
66	Variable	Variable Upso Spring
67	Variable	Variable Opso Spring
68	Not Be Used	Not Be Used
69	PDM00008216	10 Layner Pul Ø10xØ16x0,5
70	PDM00007039	7 H7 Switch Sabitleme Plakası
71	PDM00007041	8 M5x25 Havşa Başlı Torx Civata
72	PDM00007356	17 H7 Opso Mekanik Sensör
73	PDM00007121	8 M4x20 Havşa Başlı Alyan Civata
74	PDM00007122	8 M4 Somun

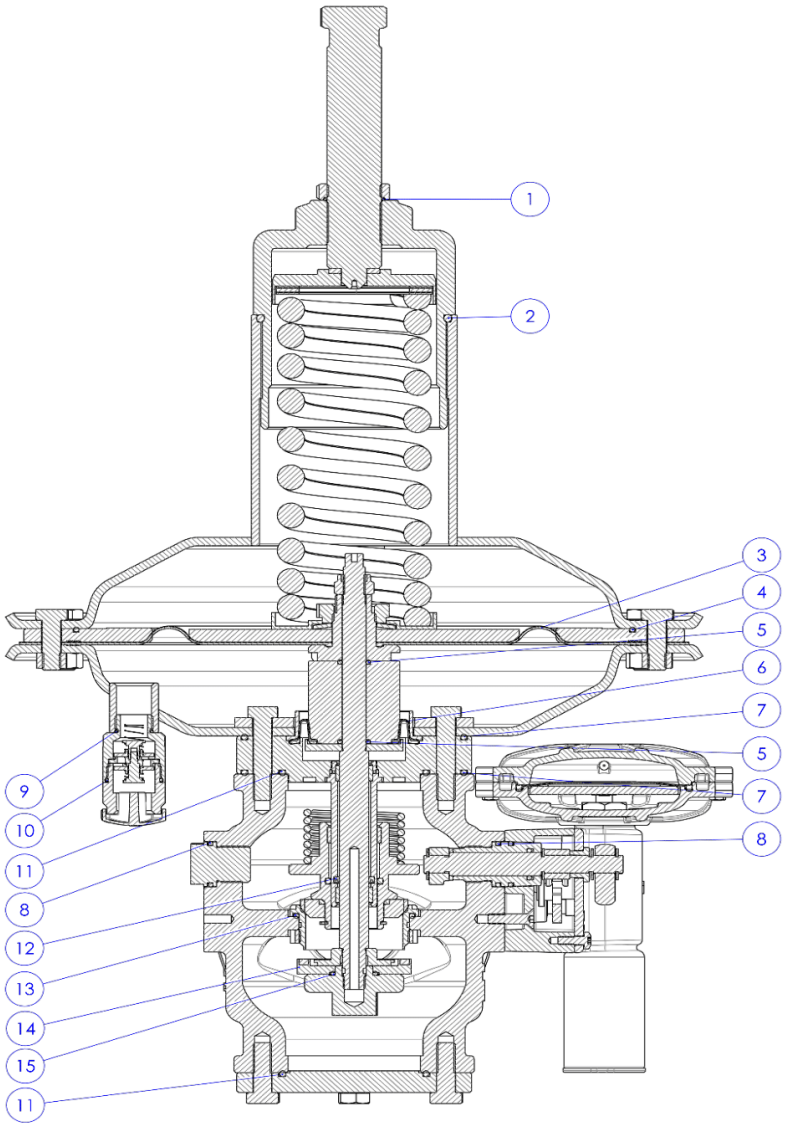
DN80 HP		
ITEM NO.	PART NO.	PART NAME
1	PDM00006410	5 H7 Opso Kurma Mili Yatağı DN80
2	PDM00006416	5 H7 Opso Kurma Mili DN80
3	PDM00006375	5 H7 Opso Tetik Kaldıracı
4	PDM00007994	15K H7 Opso Kovan Kaldıracı
5	PDM00006381	5 H7 Opso Ara Plastik
6	PDM00006373	5 H7 Opso Tetik Bileziği Mili
7	PDM00006372	5 H7 Opso Tetik Bileziği
8	PDM00006371	2 H7 Opso Gösterge
9	PDM00006901	15B H7 Opso Arka Kapak
10	PDM00006374	5 H7 Opso Tetik Yatağı
11	PDM00006368	5 H7 Opso Tetiği
12	PDM00006364	5 H7 Opso Yarıklı Mil Yatağı
13	PDM00007993	15K H7 Opso Yarıklı Mil
14	PDM00006362	5 H7 Opso Tekerlek Yatağı
15	PDM00006361	5 H7 Opso Tekerleği
16	PDM00006452	8 M6x25 Havşa Başlı Alyan Civata
17	PDM00006378	6 H7 Opso Tekerleği İtki Yayı
18	PDM00006377	6 H7 Opso Tetik İtki Yayı
19	PDM00006900	15B H7 Opso Ön Kapak
20	PDM00006902	15B H7 Opso Alt Kapak
21	PDM00006359	5 H7 Opso Mili Yatağı
22	PDM00006358	5 H7 Opso Mili
23	PDM00006385	5 H7 Opso Diyafram Destek Plakası HP
24	PDM00006903	15B H7 Opso Üst Kapak
25	PDM00006363	5 H7 Opso Reset Butonu
26	PDM00006360	5 H7 Opso Min. Yay Tamponu
27	PDM00003189	5 H1 Max. Yay Tamponu
28	PDM00002579	8 M5x14 TSB Akıllı Vida Form K
29	PDM00004329	8 M5 İnox Somun
30	PDM00003003	5 SR Regülasyon Ayar Vidası
31	PDM00006328	15K SR Üst Kapak Tapası Mühürlü
32	PDM00006387	5 H7 Opso Diyafram Destek Halkası
33	PDM00006391	8 M3x10 Havşa Başlı Alyan Civata
34	PDM00006392	8 M5x20 Havşa Başlı Torx Civata
35	PDM00006411	5 H7 Opso Kovan Yatağı DN80
36	PDM00006414	4 İnsert H7 Opso Klape DN80
37	PDM00006398	5 H7 Opso Kurma Kolu Bağlantısı
38	PDM00006396	5 H7 Opso Kurma Kolu
39	PDM00006397	10 H7 Opso Kurma Kolu Topuzu
40	PDM00003200	5 H5 Tahrik Pimi
41	PDM00006399	10 Ay Segman Ø7
42	PDM00004398	10 Ay Segman Ø9
43	PDM00003479	4 O-Ring Ø13,94xØ2,62
44	PDM00006400	4 O-Ring Ø22,23xØ2,62
45	PDM00006401	8 M5x12 Havşa Başlı Alyan Civata
46	PDM00006949	4 H7 Opso Diyafram HP
47	PDM00006402	4 H7 Opso Nutring Keçe Ø9
48	PDM00006403	4 O-Ring Ø17,5xØ2
49	PDM00006404	10 Dış Segman Ø30
50	PDM00000113	2 H7 Opso Kovan Yatağı Plastik Yatağı
51	PDM00002058	2 SR Nefeslik Süzgeci
52	PDM00003368	4 O-Ring Ø24,99xØ3,53
53	PDM00006471	10 Ay Segman Ø3,2
54	PDM00006475	6 H7 Opso Reset Butonu Yayı
55	PDM00006476	10 Yarıklı Pim Ø2x10
56	PDM00006477	6 H7 Opso Mili İtki Yayı
57	PDM00006499	4 O-Ring Ø24xØ2,5
58	PDM00004687	10 Mıknatıs Ø17,5xØ7,5x3
59	PDM00006549	5 H7 Opso Mıknatıs Yatağı
60	PDM00006550	5 H7 Opso Mıknatıs Uzaklık Parçası
61	PDM00006572	4 H7 Opso Hareket Sınırlayıcı DN50
62	PDM00006580	17 H7 Opso Manyetik Sensör
63	PDM00006419	6 H7 Opso Klape Kapatma Yayı
64	PDM00003190	5 H1 Min. Ayar Vidası
65	PDM00002968	2 H1 Yay Üstü Pulu
66	Variable	Variable Upso Spring
67	Variable	Variable Opso Spring
68	PDM00007310	5 H7 Opso Üst Kapak Sens Çapı Düşürücü
69	PDM00008216	10 Layner Pul Ø10xØ16x0,5
70	PDM00007039	7 H7 Switch Sabitleme Plakası
71	PDM00007041	8 M5x25 Havşa Başlı Torx Civata
72	PDM00007356	17 H7 Opso Mekanik Sensör
73	PDM00007121	8 M4x20 Havşa Başlı Alyan Civata
74	PDM00007122	8 M4 Somun

DN80 MP		
ITEM NO.	PART NO.	PART NAME
1	PDM00006410	5 H7 Opso Kurma Mili Yatağı DN80
2	PDM00006416	5 H7 Opso Kurma Mili DN80
3	PDM00006375	5 H7 Opso Tetik Kaldıracı
4	PDM00007994	15K H7 Opso Kovan Kaldıracı
5	PDM00006381	5 H7 Opso Ara Plastik
6	PDM00006373	5 H7 Opso Tetik Bileziği Mili
7	PDM00006372	5 H7 Opso Tetik Bileziği
8	PDM00006371	2 H7 Opso Gösterge
9	PDM00006901	15B H7 Opso Arka Kapak
10	PDM00006374	5 H7 Opso Tetik Yatağı
11	PDM00006368	5 H7 Opso Tetiği
12	PDM00006364	5 H7 Opso Yarıklı Mil Yatağı
13	PDM00007993	15K H7 Opso Yarıklı Mil
14	PDM00006362	5 H7 Opso Tekerlek Yatağı
15	PDM00006361	5 H7 Opso Tekerleği
16	PDM00006452	8 M6x25 Havşa Başlı Alyan Civata
17	PDM00006378	6 H7 Opso Tekerleği İtki Yayı
18	PDM00006377	6 H7 Opso Tetik İtki Yayı
19	PDM00006900	15B H7 Opso Ön Kapak
20	PDM00006902	15B H7 Opso Alt Kapak
21	PDM00006359	5 H7 Opso Mili Yatağı
22	PDM00006358	5 H7 Opso Mili
23	PDM00006366	5 H7 Opso Diyafram Destek Plakası LP
24	PDM00006903	15B H7 Opso Üst Kapak
25	PDM00006363	5 H7 Opso Reset Butonu
26	PDM00006360	5 H7 Opso Min. Yay Tamponu
27	PDM00003189	5 H1 Max. Yay Tamponu
28	PDM00002579	8 M5x14 TSB Akıllı Vida Form K
29	PDM00004329	8 M5 İnox Somun
30	PDM00003003	5 SR Regülasyon Ayar Vidası
31	PDM00006328	15K SR Üst Kapak Tapası Mühürlü
32	Not Be Used	Not Be Used
33	PDM00006391	8 M3x10 Havşa Başlı Alyan Civata
34	PDM00006392	8 M5x20 Havşa Başlı Torx Civata
35	PDM00006411	5 H7 Opso Kovan Yatağı DN80
36	PDM00006414	4 İnsert H7 Opso Klape DN80
37	PDM00006398	5 H7 Opso Kurma Kolu Bağlantısı
38	PDM00006396	5 H7 Opso Kurma Kolu
39	PDM00006397	10 H7 Opso Kurma Kolu Topuzu
40	PDM00003200	5 H5 Tahrik Pimi
41	PDM00006399	10 Ay Segman Ø7
42	PDM00004398	10 Ay Segman Ø9
43	PDM00003479	4 O-Ring Ø13,94xØ2,62
44	PDM00006400	4 O-Ring Ø22,23xØ2,62
45	PDM00006401	8 M5x12 Havşa Başlı Alyan Civata
46	PDM00008114	4 H7 Opso Diyafram MP
47	PDM00006402	4 H7 Opso Nutring Keçe Ø9
48	PDM00006403	4 O-Ring Ø17,5xØ2
49	PDM00006404	10 Dış Segman Ø30
50	PDM00000113	2 H7 Opso Kovan Yatağı Plastik Yatağı
51	PDM00002058	2 SR Nefeslik Süzgeci
52	PDM00003368	4 O-Ring Ø24,99xØ3,53
53	PDM00006471	10 Ay Segman Ø3,2
54	PDM00006475	6 H7 Opso Reset Butonu Yayı
55	PDM00006476	10 Yarıklı Pim Ø2x10
56	PDM00006477	6 H7 Opso Mili İtki Yayı
57	PDM00006499	4 O-Ring Ø24xØ2,5
58	PDM00004687	10 Mıknatıs Ø17,5xØ7,5x3
59	PDM00006549	5 H7 Opso Mıknatıs Yatağı
60	PDM00006550	5 H7 Opso Mıknatıs Uzaklık Parçası
61	PDM00006572	4 H7 Opso Hareket Sınırlayıcı DN50
62	PDM00006580	17 H7 Opso Manyetik Sensör
63	PDM00006419	6 H7 Opso Klape Kapatma Yayı
64	PDM00003190	5 H1 Min. Ayar Vidası
65	PDM00002968	2 H1 Yay Üstü Pulu
66	Variable	Variable Upso Spring
67	Variable	Variable Opso Spring
68	PDM00007310	5 H7 Opso Üst Kapak Sens Çapı Düşürücü
69	PDM00008216	10 Layner Pul Ø10xØ16x0,5
70	PDM00007039	7 H7 Switch Sabitleme Plakası
71	PDM00007041	8 M5x25 Havşa Başlı Torx Civata
72	PDM00007356	17 H7 Opso Mekanik Sensör
73	PDM00007121	8 M4x20 Havşa Başlı Alyan Civata
74	PDM00007122	8 M4 Somun

Maintenance Kit

ESKA

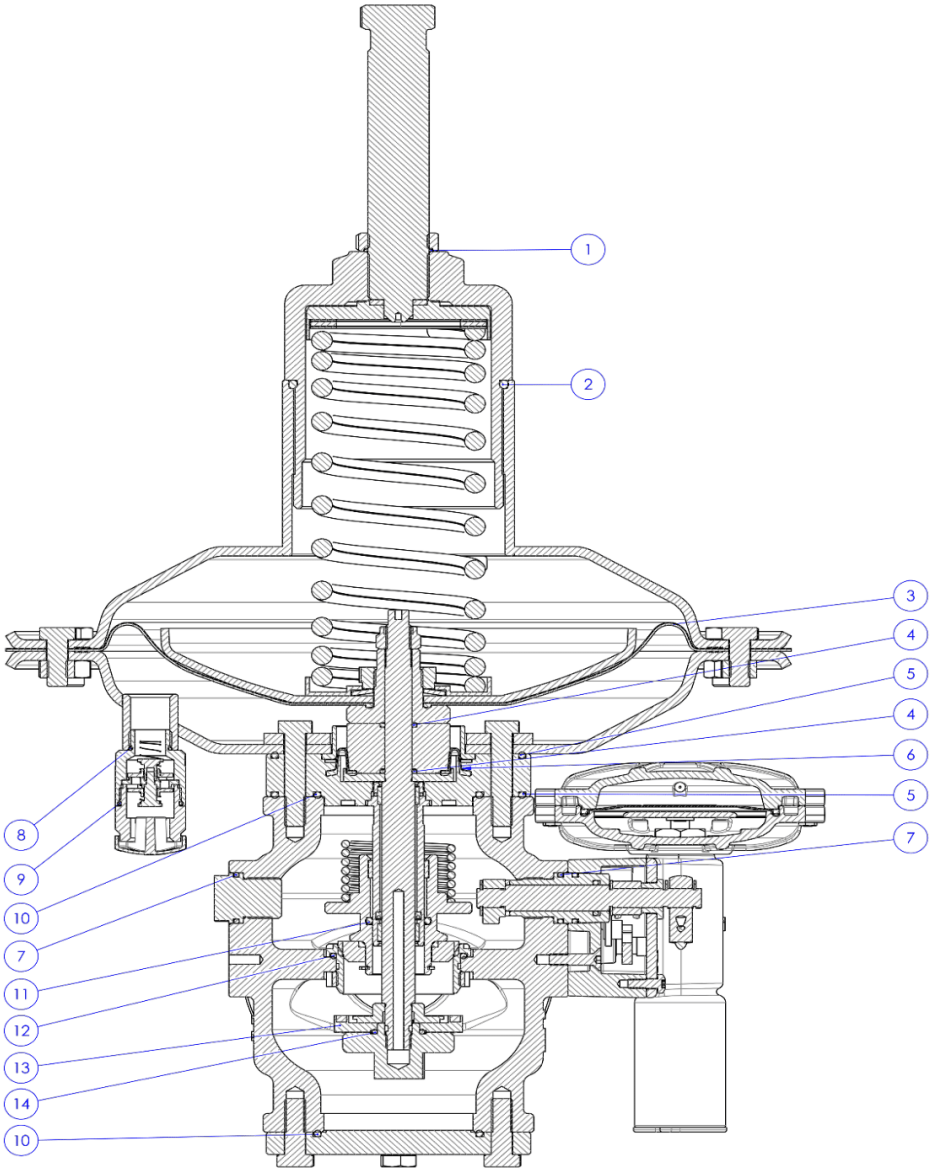
16-728 / PDM00008149 / H7 DN50 HP Maintenance Kit



ERG-H7 DN50 HP Maintenance Kit Parts List			
Part No.	**Part Name**	**Order Code**	**Quanty**
1	4 O-Ring Ø29,87xØ1,78	PDM00001939	1
2	4 O-Ring Ø97xØ4	PDM00001940	1
3	4 H7 Diyafram HP	PDM00000639	1
4	4 O-Ring Ø300xØ3	PDM00000849	1
5	4 O-Ring Ø12,7xØ2,62	PDM00000103	2
6	4 H7 Dengeleme Diyaframı DN50	PDM00000090	1
7	4 O-Ring Ø116xØ3,5	PDM00000106	2
8	4 O-Ring Ø22,23xØ2,62	PDM00006400	2
9	4 O-Ring Ø17xØ2	PDM00003400	2
10	4 O-Ring Ø27xØ2	PDM00000323	2
11	4 O-Ring Ø74,6xØ3,53	PDM00000105	2
12	4 16x22x3,5 Nutring Keçe	PDM00000108	1
13	4 O-Ring Ø60xØ3	PDM00000109	1
14	4 İnsert H7 Regülasyon Klape DN50	PDM00005700	1
15	4 O-Ring Ø20,29xØ2,62	PDM00000107	1

ESKA

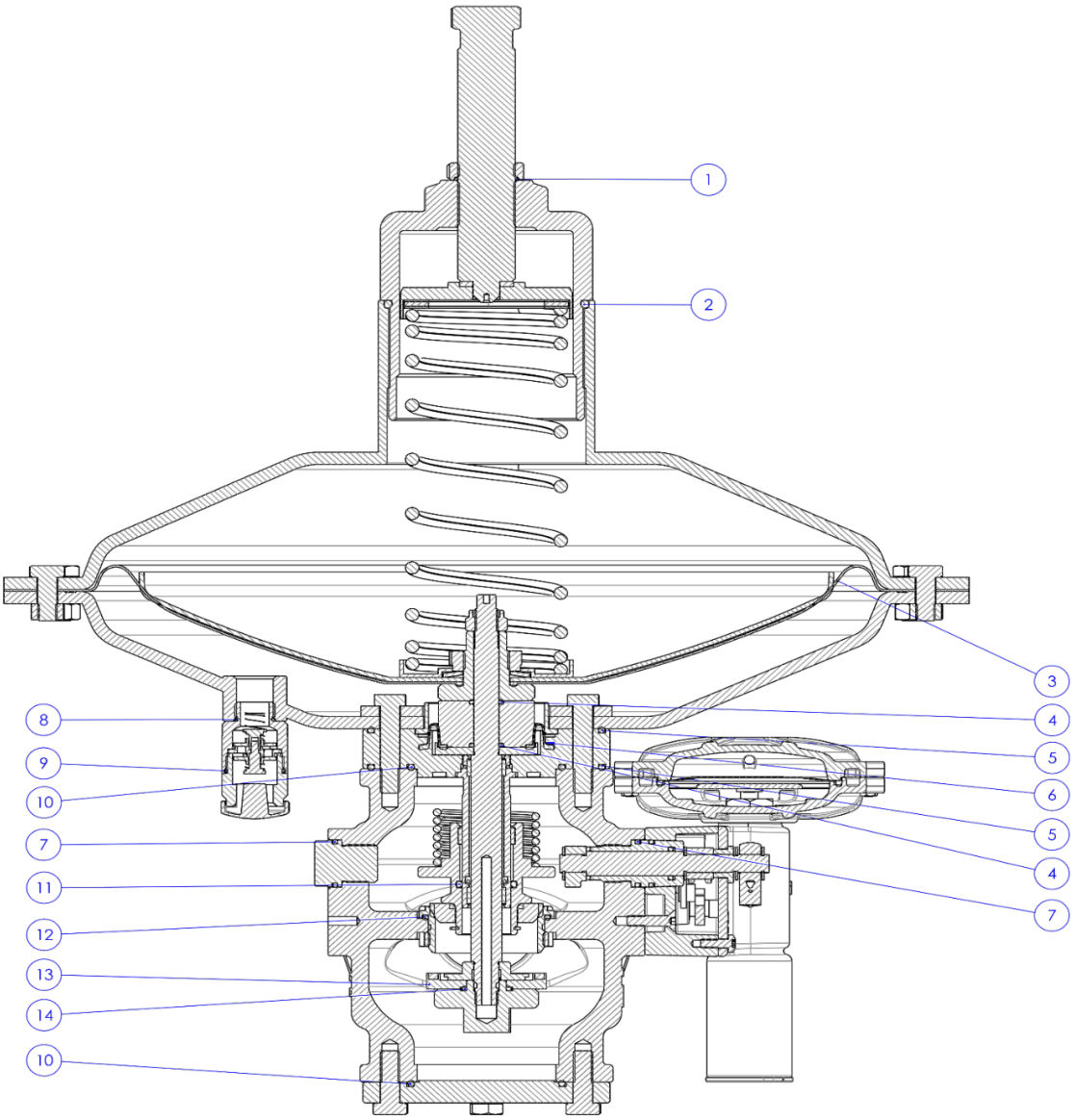
16-729 / PDM00008150 / H7 DN50 MP Maintenance Kit



ERG-H7 DN50 MP Maintenance Kit Parts List			
Part No.	**Part Name**	**Order Code**	**Quanty**
1	4 O-Ring Ø29,87xØ1,78	PDM00001939	1
2	4 O-Ring Ø97xØ4	PDM00001940	1
3	4 H7 Diyafram DN50 MP	PDM00000045	1
4	4 O-Ring Ø12,7xØ2,62	PDM00000103	2
5	4 H7 Dengeleme Diyaframı DN50	PDM00000090	1
6	4 O-Ring Ø116xØ3,5	PDM00000106	2
7	4 O-Ring Ø22,23xØ2,62	PDM00006400	2
8	4 O-Ring Ø17xØ2	PDM00003400	2
9	4 O-Ring Ø27xØ2	PDM00000323	2
10	4 O-Ring Ø74,6xØ3,53	PDM00000105	2
11	4 16x22x3,5 Nutring Keçe	PDM00000108	1
12	4 O-Ring Ø60xØ3	PDM00000109	1
13	4 İnsert H7 Regülasyon Klape DN50 LP	PDM00007623	1
14	4 O-Ring Ø20,29xØ2,62	PDM00000107	1

ESKA

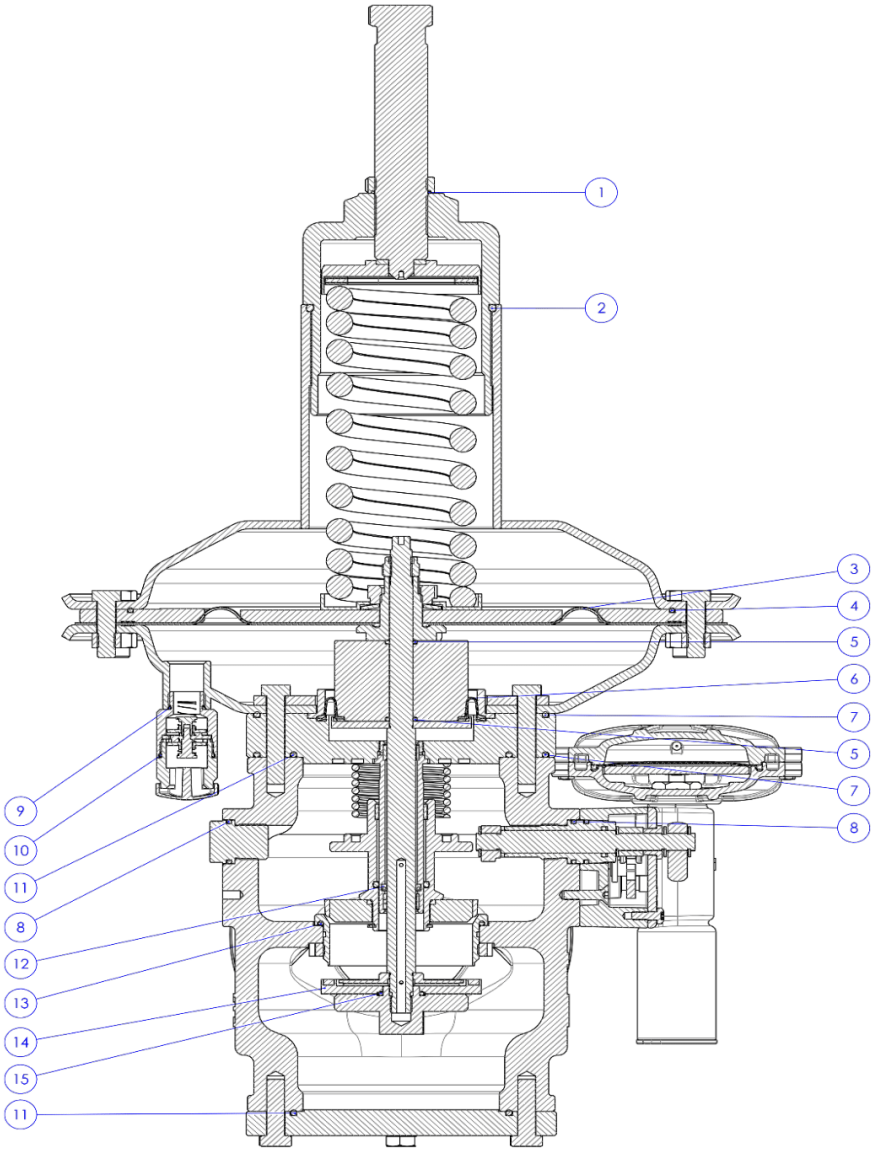
16-730 / PDM00008151 / H7 DN50 LP Maintenance Kit



ERG-H7 DN50 LP Maintenance Kit Parts List			
Part No.	**Part Name**	**Order Code**	**Quanty**
1	4 O-Ring Ø29,87xØ1,78	PDM00001939	1
2	4 O-Ring Ø97xØ4	PDM00001940	1
3	4 H7 Diyafram DN50 LP	PDM00006586	1
4	4 O-Ring Ø12,7xØ2,62	PDM00000103	2
5	4 O-Ring Ø116xØ3,5	PDM00000106	2
6	4 H7 Dengeleme Diyaframı DN50	PDM00000090	1
7	4 O-Ring Ø22,23xØ2,62	PDM00006400	2
8	4 O-Ring Ø17xØ2	PDM00003400	2
9	4 O-Ring Ø27xØ2	PDM00000323	2
10	4 O-Ring Ø74,6xØ3,53	PDM00000105	2
11	4 16x22x3,5 Nutring Keçe	PDM00000108	1
12	4 O-Ring Ø60xØ3	PDM00000109	1
13	4 İnsert H7 Regülasyon Klape DN50 LP	PDM00007623	1
14	4 O-Ring Ø20,29xØ2,62	PDM00000107	1

ESKA

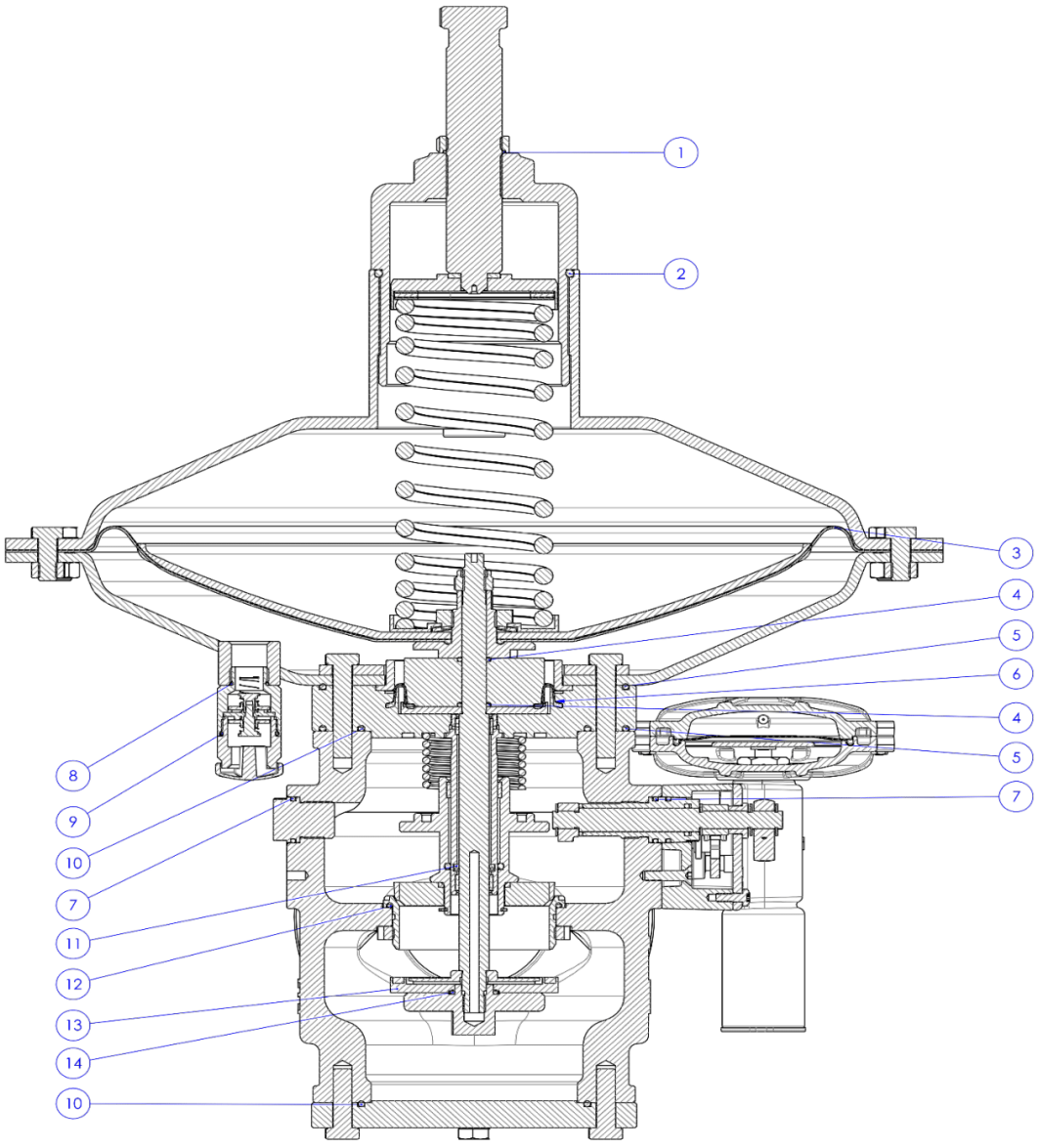
16-731 / PDM00008154 / H7 DN80 HP Maintenance Kit



ERG-H7 DN80 HP Maintenance Kit Parts List			
Part No.	**Part Name**	**Order Code**	**Quanty**
1	4 O-Ring Ø29,87xØ1,78	PDM00001939	1
2	4 O-Ring Ø97xØ4	PDM00001940	1
3	4 H7 Diyafram HP	PDM00000639	1
4	4 O-Ring Ø300xØ3	PDM00000849	1
5	4 O-Ring Ø12,7xØ2,62	PDM00000103	2
6	4 H7 Dengeleme Diyaframı DN80	PDM00000647	1
7	4 O-Ring Ø158,34xØ3,53	PDM00001821	2
8	4 O-Ring Ø22,23xØ2,62	PDM00006400	2
9	4 O-Ring Ø17xØ2	PDM00003400	2
10	4 O-Ring Ø27xØ2	PDM00000323	2
11	4 O-Ring Ø117xØ3,5	PDM00000665	2
12	4 16x22x3,5 Nutring Keçe	PDM00000108	1
13	4 O-Ring Ø87xØ3	PDM00001819	1
14	4 İnsert H7 Regülasyon Klape DN80	PDM00006334	1
15	4 O-Ring Ø20,29xØ2,62	PDM00000107	1

ESKA

16-732 / PDM00008155 / H7 DN80 MP Maintenance Kit



ERG-H7 DN80 MP Maintenance Kit Parts List			
Part No.	**Part Name**	**Order Code**	**Quanty**
1	4 O-Ring Ø29,87xØ1,78	PDM00001939	1
2	4 O-Ring Ø97xØ4	PDM00001940	1
3	4 H7 Diyafram DN80 MP	PDM00008111	1
4	4 O-Ring Ø12,7xØ2,62	PDM00000103	2
5	4 H7 Dengeleme Diyaframı DN80	PDM00000647	1
6	4 O-Ring Ø158,34xØ3,53	PDM00001821	2
7	4 O-Ring Ø22,23xØ2,62	PDM00006400	2
8	4 O-Ring Ø17xØ2	PDM00003400	2
9	4 O-Ring Ø27xØ2	PDM00000323	2
10	4 O-Ring Ø117xØ3,5	PDM00000665	2
11	4 16x22x3,5 Nutring Keçe	PDM00000108	1
12	4 O-Ring Ø87xØ3	PDM00001819	1
13	4 İnsert H7 Regülasyon Klape DN80 MP	PDM00008086	1
14	4 O-Ring Ø20,29xØ2,62	PDM00000107	1

EU DECLARATION OF CONFORMITY

AB UYGUNLUK BEYANI

According to Pressure Equipment Directive (2014/68/EU)

Basınçlı Ekipmanlar Yönetmeliği'ne Göre (2014/68/AB)

Declaration Number *(Deklarasyon No)*	DEC_H7_01_R00
Manufacturer and Owner of Certificate *(Üretici ve Sertifika Sahibi Adı)*	ESKA VALVE A.Ş.
Trade Mark (*Ticari Marka)*	ESKA VALVE / ESKA
Manufacturer Adress and Place *(Üretici Adresi ve Üretici Yeri)*	Sakarya 1. Organize Sanayi Bölgesi Mahallesi, 11. Cadde, No:6-8, Arifiye/Sakarya/Türkiye
Product Description (*Ürün Tanımı)*	Gas Pressure Regulator with Safety Shutoff Valve *Emniyet Kapatmalı Gaz Basınç Regülatörü* Versions: (*Versiyonlar:)* - Shut-Off device and regulator (*Kapatma cihazı ve regülatör)* - Monitor regulator and active regulator (*Monitör regülatör ve aktif regülatör)* Note: Monitor regulator is a safety accesorie.*(Monitör regülatörü bir güvenlik aksesuarıdır.)*
Product Model / Type / Serie *(Ürün Modeli / Tipi / Seri)*	ERG-H7 Series and Versions (LP, MP, HP) *ERG-H7 Serisi ve Versiyonları (LP, MP, HP)*
Product Information *(Ürün Bilgileri)*	PS4, PS6, PS10, PS16, PS20, TS: -10;60°C (Class 1) or -20;60°C (Class 2) on request with -30;60°C or -40;60°C, DN50-DN80 Flanged Connection PN16/PN20 or Class150, AC 5/10, SG 10/20/30, AG 5/10/20/30, IS Type, Fail to Open, 1.,2.,3. Family Gases *PS4, PS6, PS10, PS16, PS20, TS: -10;60°C (Sınıf 1) yada -20;60°C (Sınıf 2) istek üzerine -30;60°C yada -40;60°C, DN50-DN80 Flanşlı Bağlantı PN16/PN20 yada Class 150,AC 5/10, SG 10/20/30, AG 5/10/20/30, IS Tip, Arıza Durumunda Açan, 1.,2.,3. Aile Gazlar*
Serial Number of the Product *(Ürünün Seri Numarası)*	…….
Referance Standards *(Referans Standartlar)*	EN 334 and EN 14382
Declaration Issue Date *(Deklarasyon Yayın Tarihi)*	22.12.2022
The name of the Notified Body and No *(Onaylanmış Kuruluşun Adı ve Numarası)*	TÜV NORD Turkey Teknik Kontrol ve Belgelendirme Anonim Şirketi – NB 2354 *Kozyatağı Mahallesi, Şehit Mehmet Fatih Öngül Sokak, Odak Plaza, Blok No:5, Kat: 4, İç Kapı No:6 Kadıköy / Istanbul / TURKIYE*
EU Conformity Assessment Method *(AB Uygunluk Değerlendirme Yöntemi)*	2014/68/EU PED Category IV, Modul B+D
Modul B Certificate No / Valid Until **Modul D Certificate No / Valid Until**	…….. / ……. …….. / …….
Declaration *(Deklarasyon)*	Up defined in our products, we declare that meets the essential safety requirements of the directives to in this document. This declaration of conformity has been published under the responsibility of Eska Valve A.Ş. *Yukarı da tanımlanan üzerinde seri no olan ürünlerimizin, bu belgede belirtilen yönetmeliklerin temel güvenlik gerekliliklerini karşıladığını beyan ederiz. Bu uygunluk beyanı Eska Valve A.Ş. nin sorumluluğu altında yayınlanmıştır.*
Note *(Not)*	The compliance with Directives applies only to the product if the product is integrated in a system or combined with other units .The system manufacturer is responsible for the compliance of the complete system with Directives. By altering the device without approval the declaration would invalidate. *Ürünün bir sistemle entegre olarak ya da diğer bir birimle birleştirilerek kullanıldığı durumlarda direktiflerle uyumluluk yalnızca ürünü kapsar. Sistem üreticisi sistemin tamamının direktiflere uyumluluğundan sorumludur. Onayımız alınmadan cihaz üzerinde değişiklik yapıldığında bu beyan geçerli değildir.*

Manufacturers Authorized Signature
(Üretici İmza Yetkilisi)
Erhan SARDAL
General Manager *(Genel Müdür)*
Sakarya/Türkiye, 22.12.2022

ESKA
VALVE ANONİM ŞİRKETİ
Sakarya 1. Organize San. Bölg. Mah.
11. Cad. No: 6/8 Arifiye-SAKARYA
Alifuat Cebesoy V.D. 380 110 2771
Mersis No: 0380-1102-7710-0001

EU DECLARATION OF CONFORMITY

AB UYGUNLUK BEYANI

According to Pressure Equipment Directive (2014/68/EU)

Basınçlı Ekipmanlar Yönetmeliği'ne Göre (2014/68/AB)

Declaration Number *(Deklarasyon No)*	DEC_HZ7_01_R00
Manufacturer and Owner of Certificate *(Üretici ve Sertifika Sahibi Adı)*	ESKA VALVE A.Ş.
Trade Mark (*Ticari Marka)*	ESKA VALVE / ESKA
Manufacturer Adress and Place *(Üretici Adresi ve Üretici Yeri)*	Sakarya 1. Organize Sanayi Bölgesi Mahallesi, 11. Cadde, No:6-8, Arifiye/Sakarya/Türkiye
Product Description (*Ürün Tanımı)*	Gas Pressure Regulator Without Safety Shutoff Valve *Emniyet Kapatmasız Gaz Basınç Regülatörü* Versions: (*Versiyonlar:)* - Monitor regulator and active regulator (*Monitör regülatör ve aktif regülatör)* Note: Monitor regulator is a safety accesorie. *(Monitör regülatörü bir güvenlik aksesuarıdır.)*
Product Model / Type / Serie *(Ürün Modeli / Tipi / Seri)*	ERG-HZ7 Series and Versions (LP, MP, HP) *ERG-HZ7 Serisi ve Versiyonları (LP, MP, HP)*
Product Information *(Ürün Bilgileri)*	PS4, PS6, PS10, PS16, PS20, TS: -10;60°C (Class 1) or -20;60°C (Class 2) on request with -30;60°C or -40;60°C, DN50-DN80 Flanged Connection PN16/PN20 or Class150, AC 5/10, SG 10/20/30, IS Type, Fail to Open, 1.,2.,3. Family Gases *PS4, PS6, PS10, PS16, PS20, TS: -10;60°C (Sınıf 1) yada -20;60°C (Sınıf 2) istek üzerine -30;60°C yada -40;60°C, DN50-DN80 Flanşlı Bağlantı PN16/PN20 yada Class 150,AC 5/10, SG 10/20/30, IS Tip, Arıza Durumunda Açan, 1.,2.,3. Aile Gazlar*
Serial Number of the Product *(Ürünün Seri Numarası)*	…….
Referance Standards *(Referans Standartlar)*	EN 334
Declaration Issue Date *(Deklarasyon Yayın Tarihi)*	22.12.2022
The name of the Notified Body and No *(Onaylanmış Kuruluşun Adı ve Numarası)*	TÜV NORD Turkey Teknik Kontrol ve Belgelendirme Anonim Şirketi – NB 2354 *Kozyatağı Mahallesi, Şehit Mehmet Fatih Öngül Sokak, Odak Plaza, Blok No:5, Kat: 4, İç Kapı No:6 Kadıköy / Istanbul / TURKIYE*
EU Conformity Assessment Method *(AB Uygunluk Değerlendirme Yöntemi)*	2014/68/EU PED Category III, Modul B+D
Modul B Certificate No / Valid Until **Modul D Certificate No / Valid Until**	…….. / ……. …….. / …….
Declaration *(Deklarasyon)*	Up defined in our products, we declare that meets the essential safety requirements of the directives to in this document. This declaration of conformity has been published under the responsibility of Eska Valve A.Ş. *Yukarı da tanımlanan üzerinde seri no olan ürünlerimizin, bu belgede belirtilen yönetmeliklerin temel güvenlik gerekliliklerini karşıladığını beyan ederiz. Bu uygunluk beyanı Eska Valve A.Ş. nin sorumluluğu altında yayınlanmıştır.*
Note *(Not)*	The compliance with Directives applies only to the product if the product is integrated in a system or combined with other units. The system manufacturer is responsible for the compliance of the complete system with Directives. By altering the device without approval, the declaration would invalidate. *Ürünün bir sistemle entegre olarak ya da diğer bir birimle birleştirilerek kullanıldığı durumlarda direktiflerle uyumluluk yalnızca ürünü kapsar. Sistem üreticisi sistemin tamamının direktiflere uyumluluğundan sorumludur. Onayımız alınmadan cihaz üzerinde değişiklik yapıldığında bu beyan geçerli değildir.*

Manufacturers Authorized Signature
(Üretici İmza Yetkilisi)
Erhan SARDAL
General Manager *(Genel Müdür)*
Sakarya/Türkiye, 22.12.2022

ESKA
VALVE ANONİM ŞİRKETİ
Sakarya 1. Organize San. Bölg. Mah.
11. Cad. No: 6/8 Arifiye-SAKARYA
Alifuat Cebesoy V.D. 380 110 2771
Mersis No: 0380-1102-7710-0001

WARRANTY CERTIFICATE

MANUFACTURER or IMPORTER COMPANY'S;

Title: ESKA VALVE A.Ş.
Address: Sakarya 1. Organize Sanayi Bölgesi Mahallesi, 11. Cadde, No:6-8, Arifiye/Sakarya/Türkiye
Telephone: +90 (264) 502 54 34-35-83
Fax: +90 (264) 502 54 84
E-mail: info@eskavalve.com
Authorized Official's Signature:
Authorized Official's Stamp:

SELLER COMPANY'S;

Title:
Address:
Phone:
Fax:
E-mail:
Authorized Official's Signature:
Authorized Official's Stamp:

PRODUCT'S;

Type: Gas Pressure Regulator
Brand: ESKA / ESKA VALVE
Model: ERG-H7 or ERG-HZ7 Series
Bandrole Number:
Serial Number:
Warranty Period: 2 Years
Maximum Repair Time: 20 working days
Delivery Date to Consumer:
Place of Delivery to Consumer:
Invoice Date:
Number of Invoices:

WARRANTY CONDITIONS

1) The warranty period starts from the delivery date of the goods, and it is 2 years.

2) The entire product, including all parts, is under warranty.

3) In case of the situation that the replacement of the good with a non-defective one will bring disproportionate difficulties for the seller, the consumer may use one of the rights to withdraw from the contract or to make a discount at the rate of the defect. In the determination of the disproportion, the value of the goods without a fault, the importance of the defect, and whether the application for other optional rights will pose a problem for the consumer shall be taken into account. In cases where the consumer chooses the right to withdraw from the contract or to discount the defect rate, the seller must immediately return the entire price of the goods, or the amount of discount made from the price to the consumer. If the consumer chooses the right to replace the product with a non-defective product, the seller, manufacturer or importer must fulfill this request within a maximum of thirty working days from the notification of the request to replace the product with a non-defective product.

4) In the event that the consumer chooses the right to free repair from amongst these rights, the seller is obliged to repair or have the goods repaired without demanding any labor cost, replacement part cost or any other fee. The consumer can also use the right of free repair against the manufacturer or importer. The seller, the manufacturer and the importer are jointly responsible for the use of this right requested by the consumer.

5) If the consumer uses the right to free repair, the goods; If the product fails again within the warranty period, - The maximum time required for its repair is exceeded, - It is determined by a report by the authorized service station, the seller, the manufacturer or the importer that the repair is not possible; the consumer may request from the seller a refund of the price of the goods, a reduction in the amount of the defect or, if possible, replacement of the goods with a non-defective one. The seller cannot refuse the consumer's request. If this request is not fulfilled, the seller, the manufacturer and the importer are jointly and severally liable.

6) The repair period of the goods is maximum 20 working days. This period, if it is within the warranty period, starts from the date of notification of the defect related to the goods to the service station or the seller, and if it is out of warranty period, it starts from the date of delivery of the goods to the service station. Under the circumstances that the product fails within the warranty period, the time spent in the repair is added to the warranty period. In case of malfunctions, it is obligatory to determine whether there is a usage error in the service stations, or if there is no service station, it should be reported by the seller, importer, or manufacturer of the product, respectively, within the maximum repair period for the product, and a copy of this report must be given to the consumer. The warranty period of the goods replaced during the warranty application is limited to the remaining warranty period of the purchased goods.

7) The use of the product contrary to the points in the user manual or the malfunctions caused by usage errors are not covered by the warranty.

8) The consumer may apply to the Consumer Arbitration Committee or the Consumer Court in the place of residence or the consumer transaction, in case of disputes that may arise regarding the use of the rights arising from the warranty.