



EKONOMIZER 120 / 140

**ADDITIONAL HEAT EXCHANGER FOR
MTM ECO WARM HEATERS**



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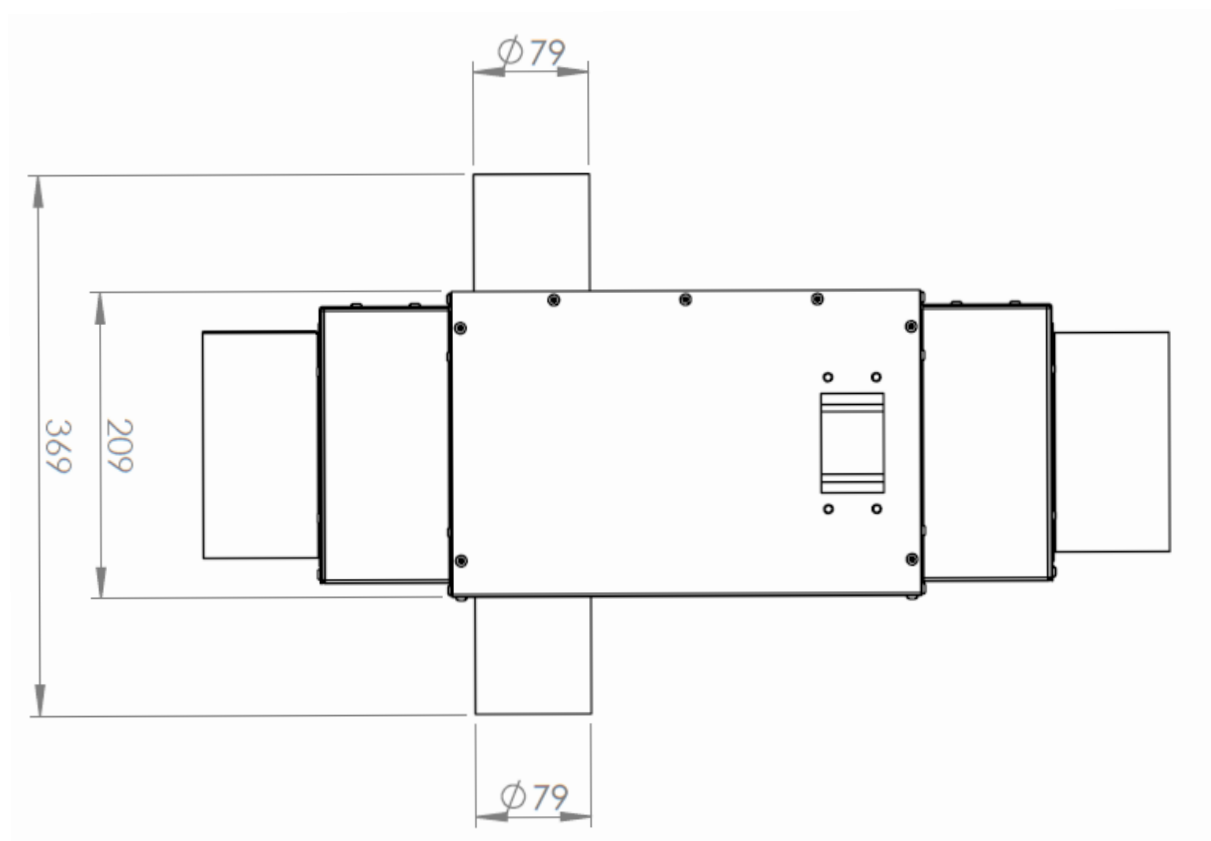
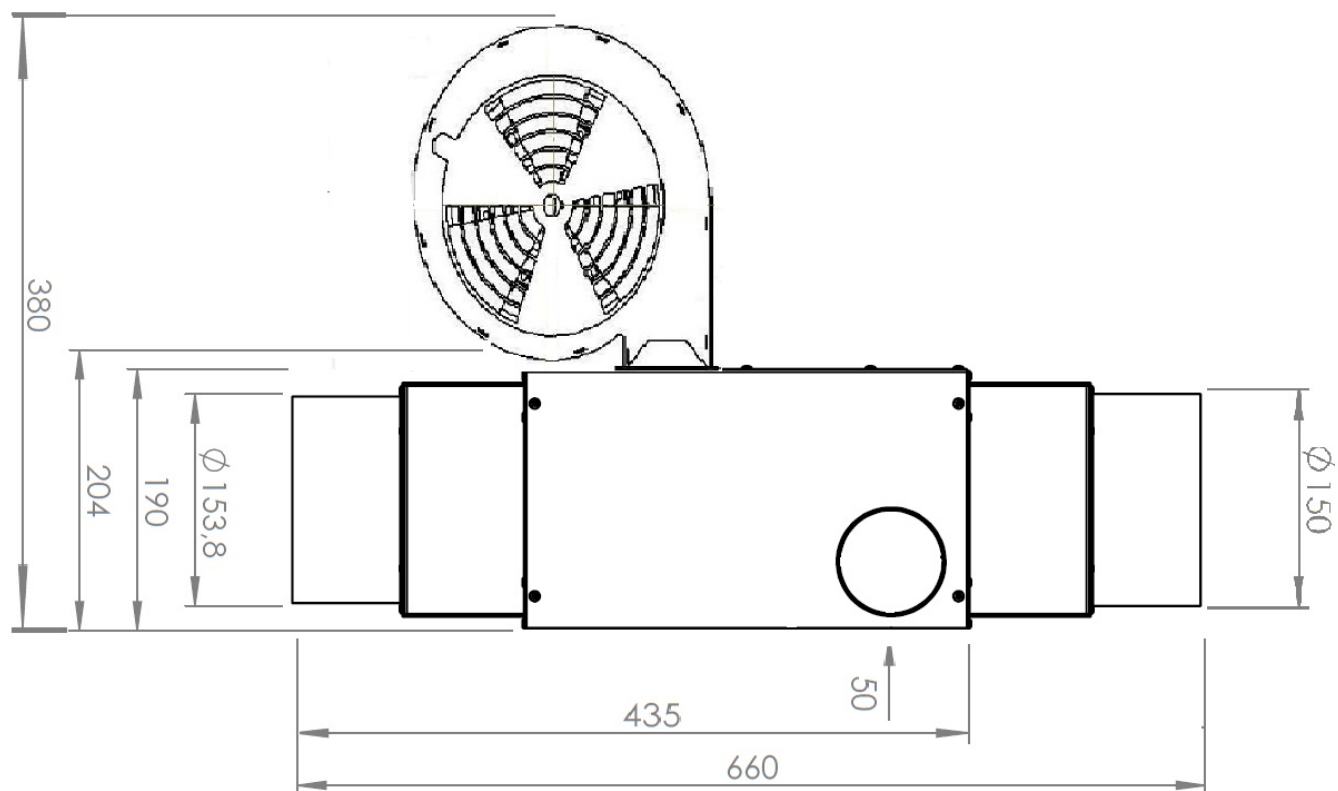
1. PURPOSE AND TECHNICAL DATA

The flue gas economizer is an additional heat exchanger installed directly at the flue gas outlet of the heater. It is used to recover heat from exhaust gases through a closed set of flame tubes housed in a casing and a fan that distributes warm air. The device is intended exclusively for use with MTM ECO WARM series heaters.

SPECIFICATION	120	140
MAXIMUM HEAT OUTPUT	6,5 kW	12,7 kW
MAXIMUM FAN OUTPUT	270 m ³ /h	450 m ³ /h
POWER CONSUMPTION	80 W	140 W
FLUE CONNECTION DIAMETER	150 mm	
HOT AIR CONNECTION DIAMETER	80 mm	
MAXIMUM TEMPERATURE INCREASE	Up to 100 °C	
POWER SUPPLY	230 V 50 Hz	
WEIGHT	12 kg	

The economizer is not intended to be used as a standalone component of a chimney system.

2. DEVICE DIMENSIONS





3. ENVIROMENTAL CONDITIONS OF STORAGE

The flue gas economizer should be stored in the following conditions:

- Temperature -20 --- 85°C
- Relative humidity 5 --- 85%
- Pressure 800 --- 1200 hPa
- Dust-free conditions
- Conditions free from chemical contaminants.

4. ENVIROMENTAL CONDITIONS OF OPERATION

The flue gas economizer should be operated under the following conditions:

- Temperature 0 --- 50°C
- Relative humidity 5 --- 85%
- Pressure 800 --- 1200 hPa
- Enviromental protection rating : IP54
- The heated room must have good ventilation

This equipment must not be operated by children. Children should not play with the equipment or perform cleaning or maintenance, even under supervision. The equipment is intended exclusively for adults who have appropriate experience and knowledge, or who have been properly instructed in its safe use. This equipment may be operated by persons with reduced physical capabilities.

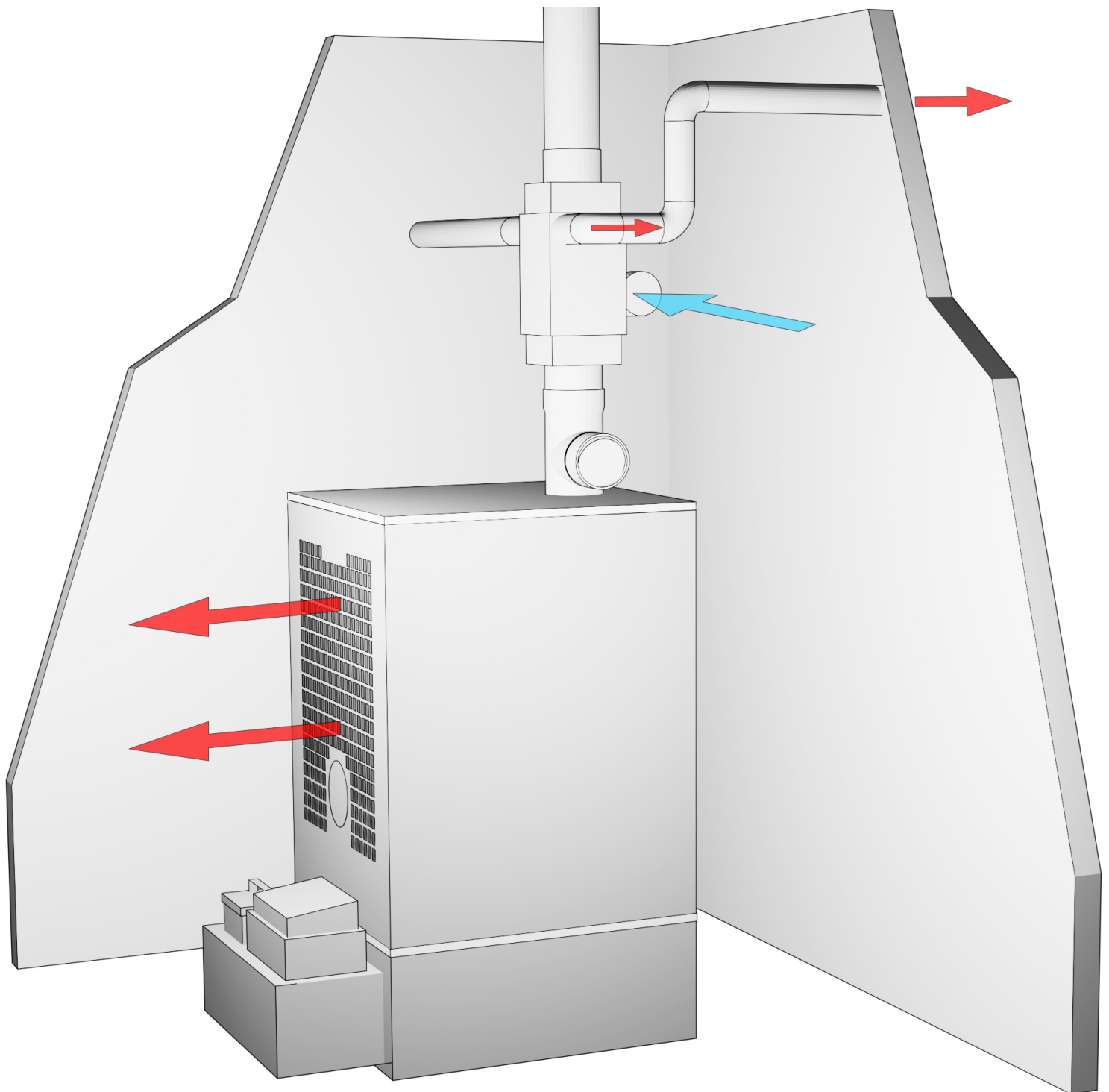
5. SAFETY ISSUES

- The economizer must not be used with any devices other than MTM ECO WARM series heaters.
- All operations involving the device should be performed with protective gloves by a person trained in operating the machine.
- It is strictly forbidden to insert hands into the fan guard or around the operating fan.
- Effective ventilation of the heated room must be ensured.
- Before cleaning the device or performing any maintenance, disconnect the device from the electrical supply by unplugging it from the socket.
- When connecting the device to the electrical network, make sure the electrical installation is in good condition and equipped with a residual current device and grounding.
- Flue gas economizer models 120 and 140 are powered by an AC supply of 230V/50Hz.
- During installation, ensure that the power cord does not come into contact with the economizer housing or the hot air distribution ducts.



6. DEVICE INSTALATION

- Attach the supplied blower fan to the economizer housing using the included washers and nuts. Tighten the connection with a 10 mm wrench.
- Install the additional heat exchanger (the flue gas economizer) as the first section of the chimney pipe, immediately after the chimney draft regulator.
- Mount the economizer so that the fan is positioned at the bottom and the hot air distribution outlets are at the top.
- The economizer must be installed in a vertical position. Installation at an angle or horizontally is prohibited.
- The economizer fan must not be located above the heater or above the draft adjustment opening in the draft regulator.
- Hot air distribution ducts should be made of materials resistant to high temperatures, ensuring the safety and durability of the installation. Recommended options include: aluminum ducts, galvanized ducts, or flexible ducts.
- Hot air distribution ducts must not be narrower than 80 mm.
- Every section of the hot air distribution duct passing through a wall or ceiling must be insulated.
- Maintain a safe distance between combustible materials and the economizer, hot air ducts, and hot air outlets.
- Check the tightness of all chimney connections. If necessary, seal them with dedicated sealing tape.
- Check the mains voltage (230V / 50Hz) and connect the economizer to the power supply. The fan should start operating.
- It is possible to block off one of the two hot air distribution outlets to effectively transport warm air to more distant areas.
- Installation should be carried out in a way that allows for easy removal of the device for maintenance purposes.



7. CHIMNEY INSTALLATION

To ensure the correct and safe operation of the economizer as an additional heat exchanger used with MTM ECO WARM heaters, a properly executed chimney installation is essential. The installation must comply with the heater's user manual. Please observe the following recommendations:

The first section of the chimney duct should be the angled draft regulator included with the heater set.

The diameter of the flue gas outlet from the draft regulator (the first section of the chimney pipe) is 150 mm.

The recommended diameter for the chimney pipe is 150 mm or larger.

The minimum chimney height for a 150 mm diameter is 6 meters.

Check the tightness of connections between chimney elements.

The wind should be able to freely flow around the chimney outlet from all directions.

The end of the chimney pipe should be approximately 1 meter above the roof ridge.

Whenever possible, all sections of the chimney should be vertical. Avoid horizontal sections and bends in the chimney pipe. If bends are necessary (e.g., two bends when running the pipe through a wall or window), the maximum bend angle must not exceed 45°, and the minimum chimney height should be increased to 6 meters.

Chimney elements located outside the building should be insulated (have double walls).

The chimney duct should be finished with a type C roof outlet (standard cap).

The chimney installation must comply with applicable local building codes.

It is recommended to have the chimney installation checked for correctness by a certified local authority.

Seasonal chimney inspections are recommended.

Following these guidelines will help ensure the economizer and heating system operate safely, efficiently, and in compliance with regulations.

WARNING

When installing the flue gas exhaust system, it is recommended to avoid horizontal sections of the chimney pipe. To ensure unobstructed gas flow, any bends in the pipe should not exceed an angle of 45°. The chimney outlet must be higher than the roof ridge, preferably about 1 meter above it.

Areas where the chimney passes through ceilings, walls, or the roof must be insulated to prevent fire hazards. It is advisable to use double-walled insulated chimney pipes wherever there is a possibility of contact and on the exterior of the building to ensure a constant, strong draft and to prevent condensation. Do not place any materials near the heater, even non-combustible ones. Continuous access to air must be ensured, as it is necessary for the proper combustion process.



8. UNIT OPERATION

- Turn on the device by plugging the economizer fan's power cord into a 230V / 50 Hz mains socket.
- It is not necessary to keep the device on while the heater is operating. If not needed, the device may remain switched off.
- To turn off the device, disconnect the power cord from the mains.
- To adjust the flow of hot air, use the damper installed on the fan housing.

9. MAINTENANCE

The economizer requires regular maintenance. Following the manufacturer's recommendations in this regard will ensure reliable and safe operation of the device:

At least once every 3 months, or when a noticeable decrease in chimney draft occurs, the economizer should be dismantled and the flame tubes inside the device should be cleaned using a wire brush or cleaning rod.

At least once every 3 months, or when a noticeable decrease in warm air flow occurs, the economizer should be dismantled and the fan blades should be cleaned of accumulated dust.

If the economizer will not be used for an extended period, its interior should be protected against corrosion.

It is recommended to perform seasonal inspections at an authorized service center.

CE CONFORMITY CERTIFICATE



CE CONFORMITY CERTIFICATE - DICHIARAZIONE DI CONFORMITÀ CE - EG-KONFORMITÄT SERKLÄRUNG - DECLARACIÓN DE CONFORMIDAD CE - DECLARATION DE CONFORMITÉ CE - EG-CONFORMITEIT VERKLARING - DECLARAÇÃO DE CONFORMIDADE CE - EU-OVERENSSTEMMELSE SERKLÆRING - EY-VAATIMUSTEN MUKAISUUSVAKUUTUS - CE-SAMSVAR SERKLÆRING - EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE - DEKLARACJA ZGODNOŚCI WE - ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ CE - PROHLÁŠENÍ O SHODĚ CE - EKMEGFELELŐSÉG NYILATKOZAT - IZJAVA O SKLADNOSTI IN OZNAKA CE - CE UYGUNLUK BEYANI - IZJAVA CE O SUKLADNOSTI - ESATTIKTIES DEKLARACJA - EKATBILSTĪBAS - DEKLARĀCIJA - EŪ VASTAVUSDEKLARĀCIJAS - DECLARAȚIE DE CONFORMITATE CE - PREHLÁSENIE O ZHODE CE - ДЕКЛАРАЦИЯ ЗА СЪВМЕСТИМОСТ CE - ДЕКЛАРАЦИЯ ВІДПОВІДНОСТІ CE - IZJAVA CE O PRIKLADNOSTI ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ CE - CE 符合性声明



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Product: - Prodotto: - Produkt: - Producto: - Produit: - Product: - Produto: - Produkt: - Tuote: - Produkt: - Produkt: - Produkt: - Изделие: - Výrobek: - Termék: - Izdelek: - Ürün: - Proizvod: - Gaminys: - Ierīce: - Toode: - Produsul: - Výrobok: - Продукт: - Виріб: - Proizvod: - Προϊόν: - 产品:

EKONOMIZER 120 ; EKONOMIZER 140

We declare that it is compliant with: - Si dichiara che è conforme a: - Es wird als konform mit den folgenden Normen erklärt: - Se declara que está en conformidad con: - Nous déclarons sa conformité à: - Hierbij wordt verklaard dat het product conform is met: - Declara-se que está em conformidade com: - Vi erklærer at produktet er i overensstemmelse med: - Vakuutetaan olevan yhdenmukainen: - Man erklærer at apparatet er i overensstemmelse med: - Härmed intygas det att produkten är förenlig med följande: - Oświadczam, że jest zgodny z: - Заявляємо відповідності вимогам: - Prohlašuje se, že je v souladu s: - Kijelentjük, hogy a termék megfelel az alábbiaknak: - Izpolnjuje zahteve: - Aşağıdakı standartlara uygun olduğunu beyan ederiz: - Izjavljuje se da je u skladu s: - Pareiškiame, kad atitinka: - Tiek deklarēts, ka atbilst: - Käesolevaga deklareeritakse, et toode vastab: - Declarăm că este conform următoarelor: - Prehlasuje sa, že je v súlade s: - Декларира се че отговаря на: - Відповідає вимогам: - Izjavljuje se da je u skladu s: - Δηλώνουμε ότι είναι σύμφωνο με: - 兹证明符合:

2014/35/UE ; 2014/30/UE ; 2006/42/WE

PN-EN ISO 12100:2011 ; PN-EN 60204-1:2018 ;
PN-EN IEC 61000-6-3:2021 ; PN-EN IEC 61000-6-1:2019

Dariusz Seferyński

(Owner of the company MTM)

Kobylka, 09.01.2024