Hexonic | HEAT EXCHANGERS

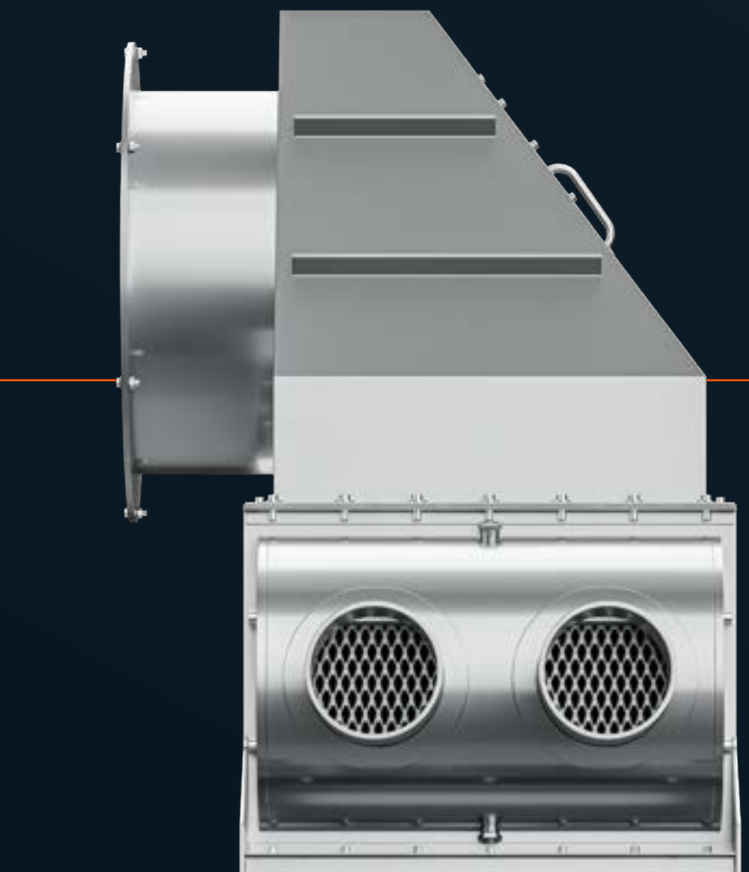
CONDENSING

ECONOMIZERS

CONDENSING ECONOMIZERS

A METHOD FOR EFFICIENT HEAT RECOVERY

The continuous rise in energy and fuel prices encourages the use of energy-efficient technologies and the enhancement of production process efficiency, mainly through energy recovery from installations. The application of condensing economizers is a way to reduce costs for many companies. They allow for an increase in the efficiency of gas boilers by about 7%, and the average return on investment is 3 years.



WHAT MAKES HEXONIC ECONOMIZERS THE RIGHT CHOICE?

ADVANTAGES

- INCREASED HEATING SYSTEM EFFICIENCY BY 20%
- SIGNIFICANT SAVINGS IN THERMAL ENERGY
- ABILITY TO CONVERT CONVENTIONAL BOILERS INTO CONDENSING BOILERS
- BOILER POWER RANGE FROM 150 KW TO 6000 KW
- POSSIBILITY TO CUSTOMIZE CONNECTION LOCATIONS
- EASY INSTALLATION
- CORROSION RESISTANCE
- RETURN ON INVESTMENT IN UNDER 3 YEARS
- MINIMAL PRESSURE DROPS
- OPTIMAL THERMAL EFFICIENCY
- LOW OPERATING COSTS

APPLICATION

GREENHOUSES

HOSPITALS

FOOD
PROCESSING
PLANTS

PULP
AND PAPER
MILLS

TEXTILE
PLANTS

NON-CONDENSING
BOILERS

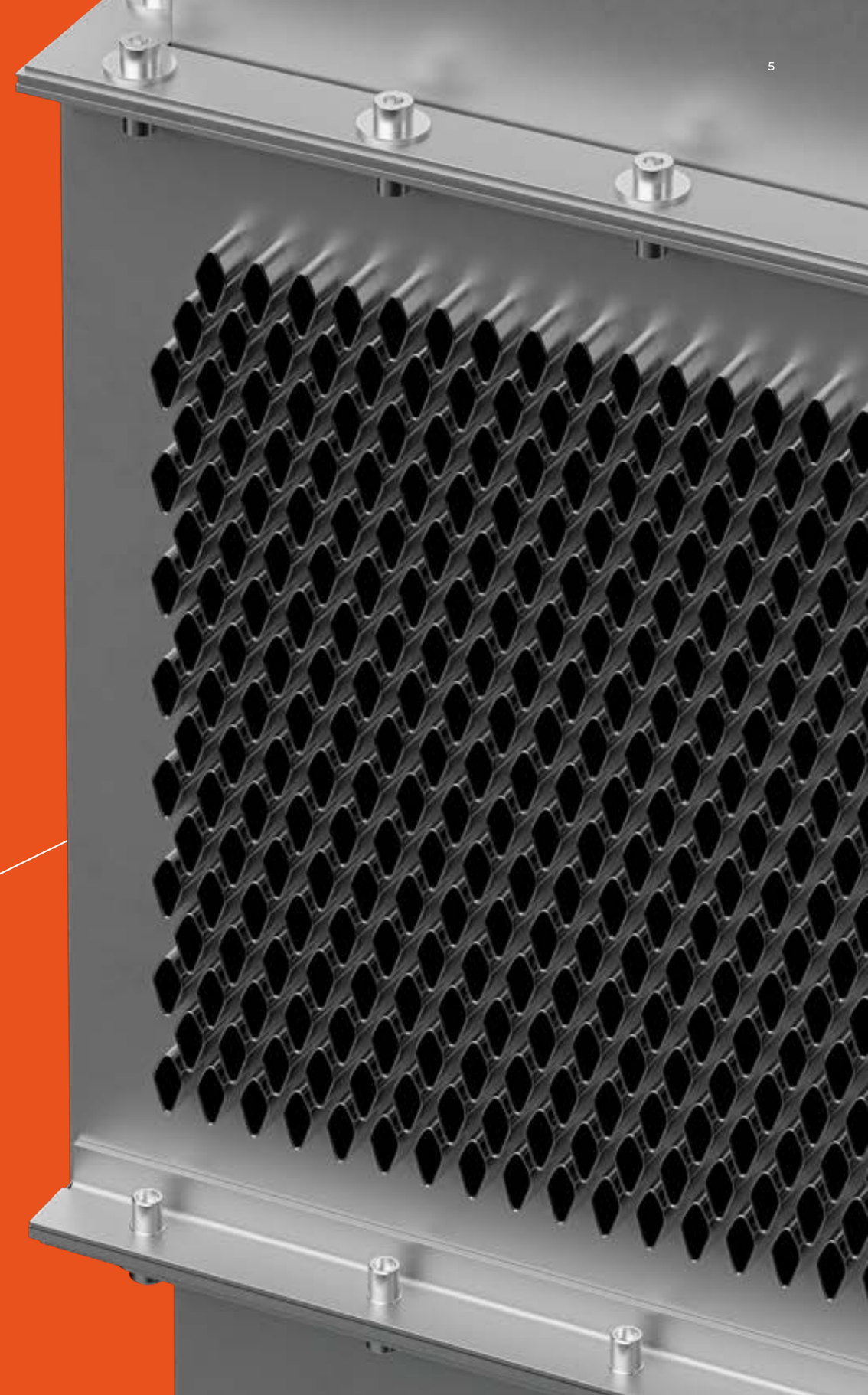
COMMERCIAL
PROJECT
MODERNIZATION

ENERGY
SAVINGS
IN INDUSTRY

PHARMACEUTICAL
/ CHEMICAL
PROCESSES

DAIRY
PROCESSING
PLANTS

DISTRICT
HEATING SYSTEMS



HOW DOES AN ECONOMIZER WORK?

STAINLESS STEEL
FLUE GAS INLET

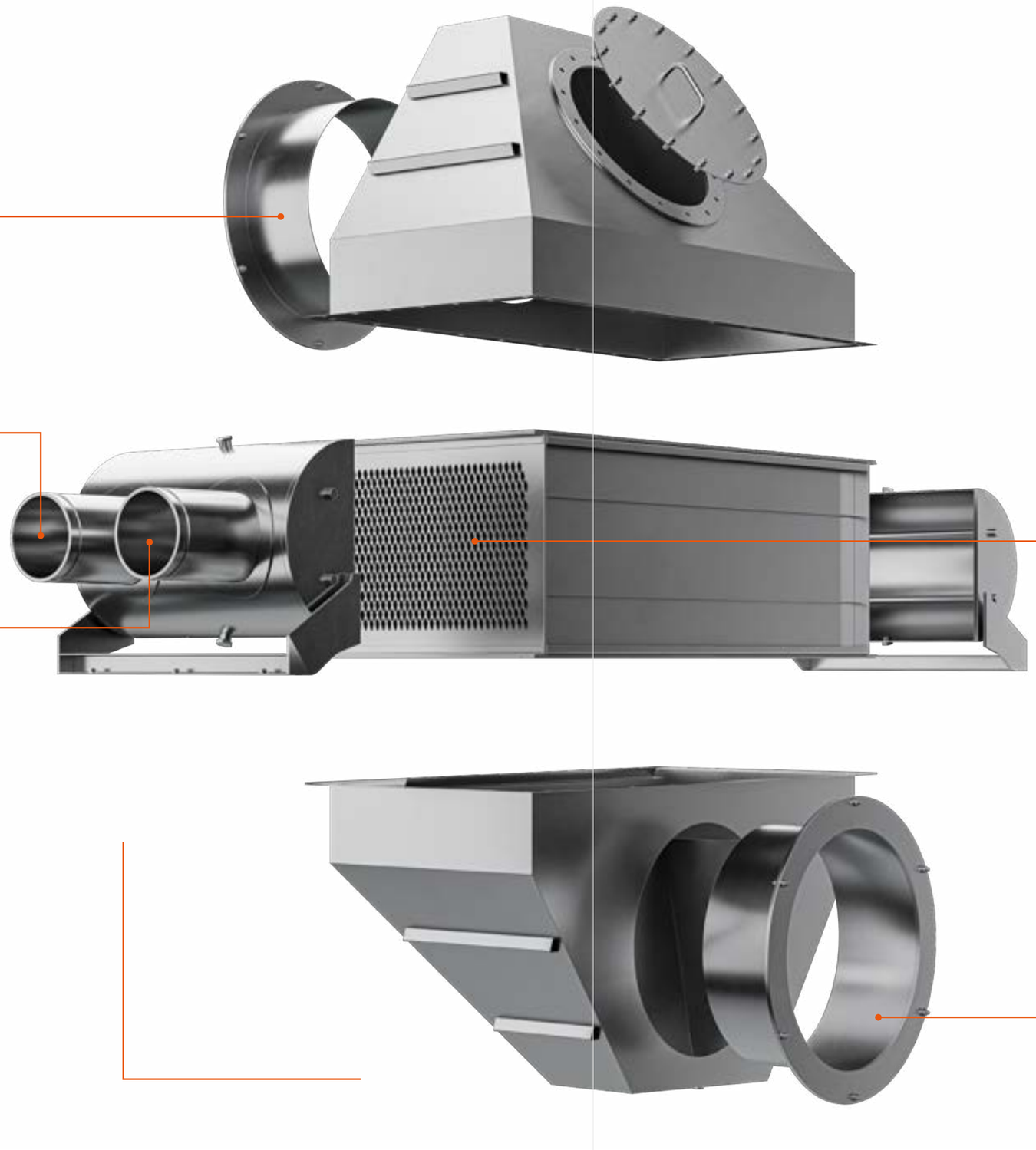
FLUE GAS
OUTLET

STAINLESS STEEL
CONDENSATE TRAY

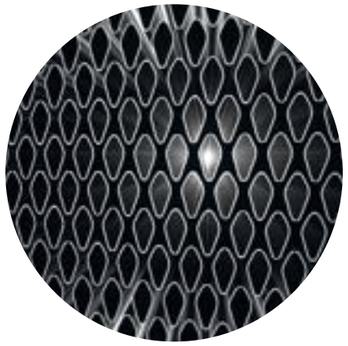
Installing economizers in boiler rooms enables the cooling of flue gases down to the condensation of water vapor contained in them. The heat recovered in this way increases the efficiency of the boiler.

The extensive choice within the E-LINE series allows for the adaptation of boilers with power ranges from 250 kW to 6000 kW. The third generation of the E-LINE series includes ten different device models.

CONSTRUCTION OF THE ECONOMIZER



THE ECONOMIZER HAS BEEN DESIGNED WITH HIGH-QUALITY STAINLESS STEEL TO WITHSTAND THE CORROSIVE EFFECTS OF CONDENSING FLUE GASES.

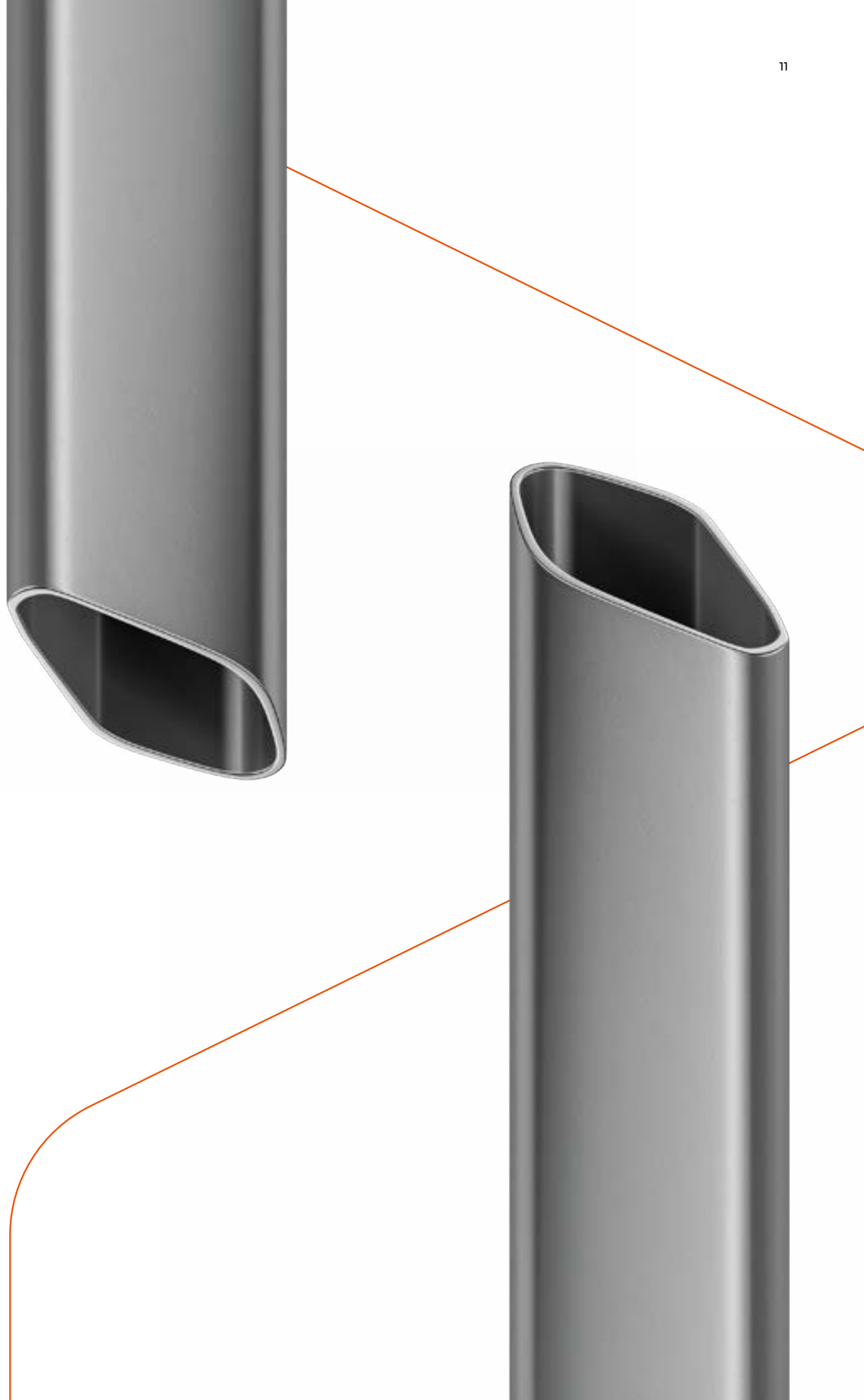


TUBES

The design of the heat exchanger tubes maximizes the use of the heat exchange surface in contact with the flue gases. At the same time, it limits the formation of low-turbulence flow zones. A special method of tube placement increases the turbulence of the flue gas flow while simultaneously reducing the pressure drop of the gas.

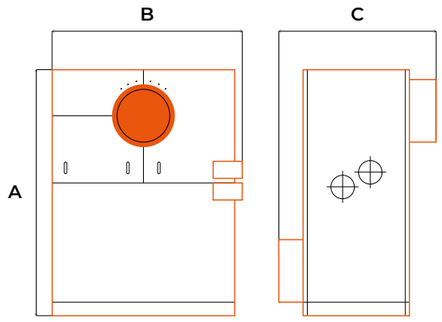
HOUSING

The housing of the economizers consists of metal panels insulated with mineral wool. The wool aims to minimize heat loss, and the easily detachable panels are designed to facilitate the inspection and cleaning of internal surfaces.

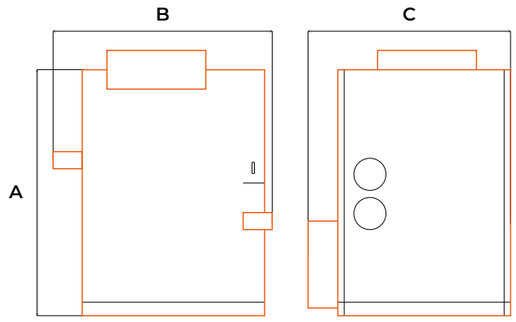


TECHNICAL PARAMETERS

E-LINE 8–20



E-LINE 28–35



Model	Economizer Dimensions			Mass
	A	B	C	
	mm	mm	mm	kg
E 8.3 – 16.5	1257	1139	580	171
E 12.3 – 16.5	1457	1139	755	243
E 15.3 – 16.5	1697	1419	956	410
E 16.3 – 16.5	1697	1419	956	437
E 20.3 – 20	1997	1874	963	640
E 20.3 – 16.5	1997	1874	1083	600
E 28.3 – 20	2166	1862	2318	1506
E 28.3 – 16.5	2166	1632	2318	1416
E 35.3 – 20	2286	2764	2254	2274
E 35.3 – 16.5	2286	2354	2254	2147

Model	Connection dimensions					
	Nominal Load	Exhaust Inlet	Exhaust outlet	Water inlet (INLET)	Water outlet (OUTLET)	Drain nozzle
	kW	Ø mm	Ø mm	mm	mm	mm
E 8.3–16.5	150–250	200	200	DN65	DN65	DN20
E 12.3–16.5	200–500	300	300	DN65	DN65	DN20
E 15.3–16.5	450–1200	400	400	DN100	DN100	DN20
E 16.3–16.5	1100–1500	400	400	DN125	DN125	DN20
E 20.3–20	1200–1700	500	500	DN150	DN150	DN20
E 20.3–16.5	1400–2000	500	500	DN150	DN150	DN20
E 28.3–20	2550–3400	700	700	DN150	DN150	DN50
E 28.3–16.5	3000–4000	700	700	DN150	DN150	DN50
E 35.3–20	3825–5100	900	700	DN150	DN150	DN50
E 35.3–16.5	4500–6000	900	700	DN150	DN150	DN50

OPERATING PARAMETERS

TUBE SIDE

MAX. PRESSURE — 11 BAR
MAX. TEMPERATURE — 110°C
MIN. TEMPERATURE — -20°C

SHELL SIDE

MAX. TEMPERATURE — 350°C
MIN. TEMPERATURE — -20°C

TYPICAL WORKING MEDIA

- WATER
- FLUE GASES FROM NATURAL GAS COMBUSTION
- HOT AIR
- FLUE GAS FROM A BIOMASS BOILER

CONSTRUCTION MATERIALS OF THE ECONOMIZER

- ECONOMIZERS COMPATIBLE WITH GAS-FIRED BOILERS – STAINLESS STEEL 316L (1.4404)

PRODUCT LINE

E 35.3–20

E 35.3–16.5

E 28.3–16.5

E 28.3–20

E 20.3–20

E 20.3–16.5

E 16.3–16.5

E 15.3–16.5

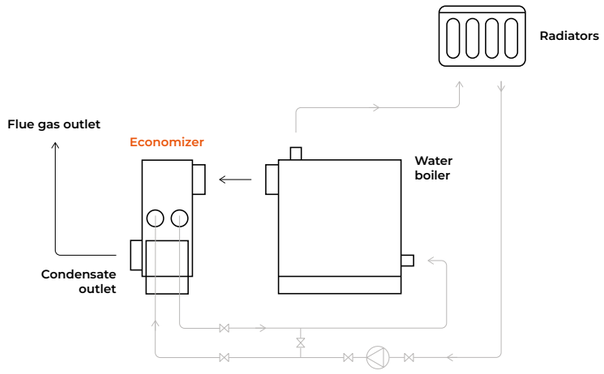
E 12.3–16.5

E 8.3–16.5

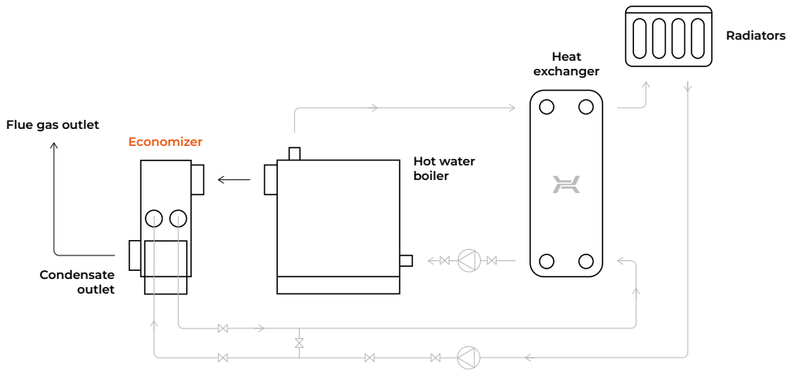
TYPICAL APPLICATIONS

ECONOMIZER INSTALLATION DIAGRAMS IN VARIOUS CONFIGURATIONS

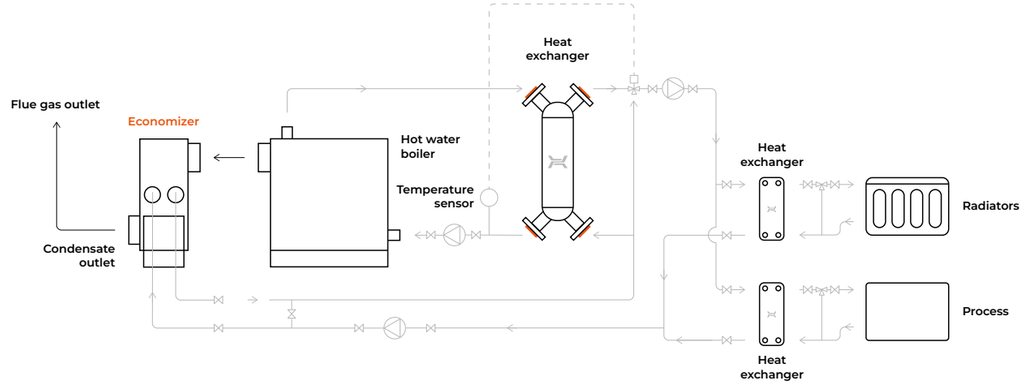
— DIAGRAM OF AN ECONOMIZER AND BOILER IN A SERIES CONFIGURATION



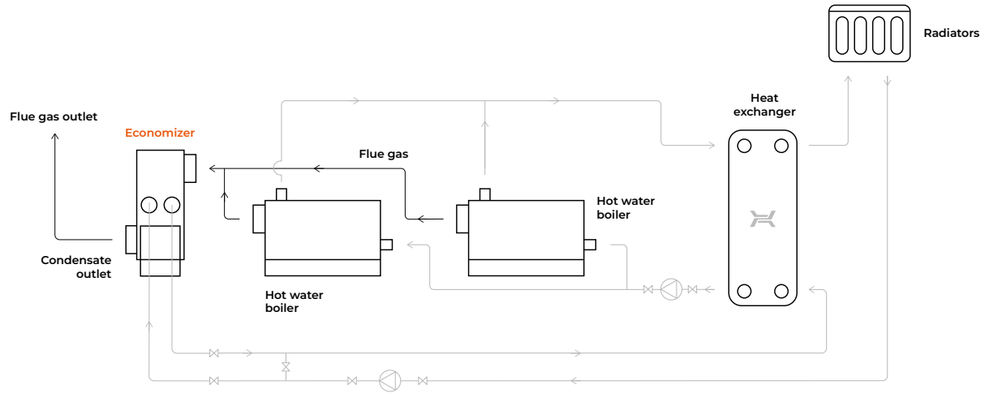
— DIAGRAM OF AN ECONOMIZER AND BOILER IN SERIES CONFIGURATION WITH AN ADDITIONAL HEAT EXCHANGER



— DIAGRAM OF AN ECONOMIZER AND BOILER WITH THREE ADDITIONAL HEAT EXCHANGERS AND A THREE-WAY VALVE



— DIAGRAM OF AN ECONOMIZER AND TWO BOILERS WITH A HEAT EXCHANGER



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