



## Safe Plate (SP) 80-500

### Flue gas and process heat

The high-temperature heat recovery units in the Safe Series from **exodraft** recover unused energy from flue gases and process air. The units are designed to operate in flue gas temperatures up to 400 °C on air side.

The housing of the Safe Series units consists of stainless steel 1.4404 (internal) and 1.4301 (external) and is protected against radiation losses with a highly effective insulation while a built-in drain ensures disposal of condensation.

The highly efficient plate heat exchangers, which consists of stainless steel (copper brazed joints) is distinguished by its robustness and its efficient heat transmission, courtesy of its unique design.

The plate heat exchangers are quick and easy to remove for cleaning and maintenance, thereby reducing the maintenance work to a minimum of time.

When no heat is required the hot flue gases or process air are passed through an integrated bypass. This bypass protects the system from overheating and is also activated if heat consumption no longer occurs. Additionally, the bypass prevents critical pressure loss.

The **exodraft** heat exchangers have a minimal space requirement due to their compact design.

Not suitable for solid fuel units (wood, coal, biomass, etc.).

The Safe Plate units come with four lifting eyes which can be repositioned, allowing for both horizontal and vertical mouting orientations.

As an alternative to the standard copper brazed heat exchanger, the Safe Series also offers a nickel brazed option that is more suited for installation in corrosive environments.

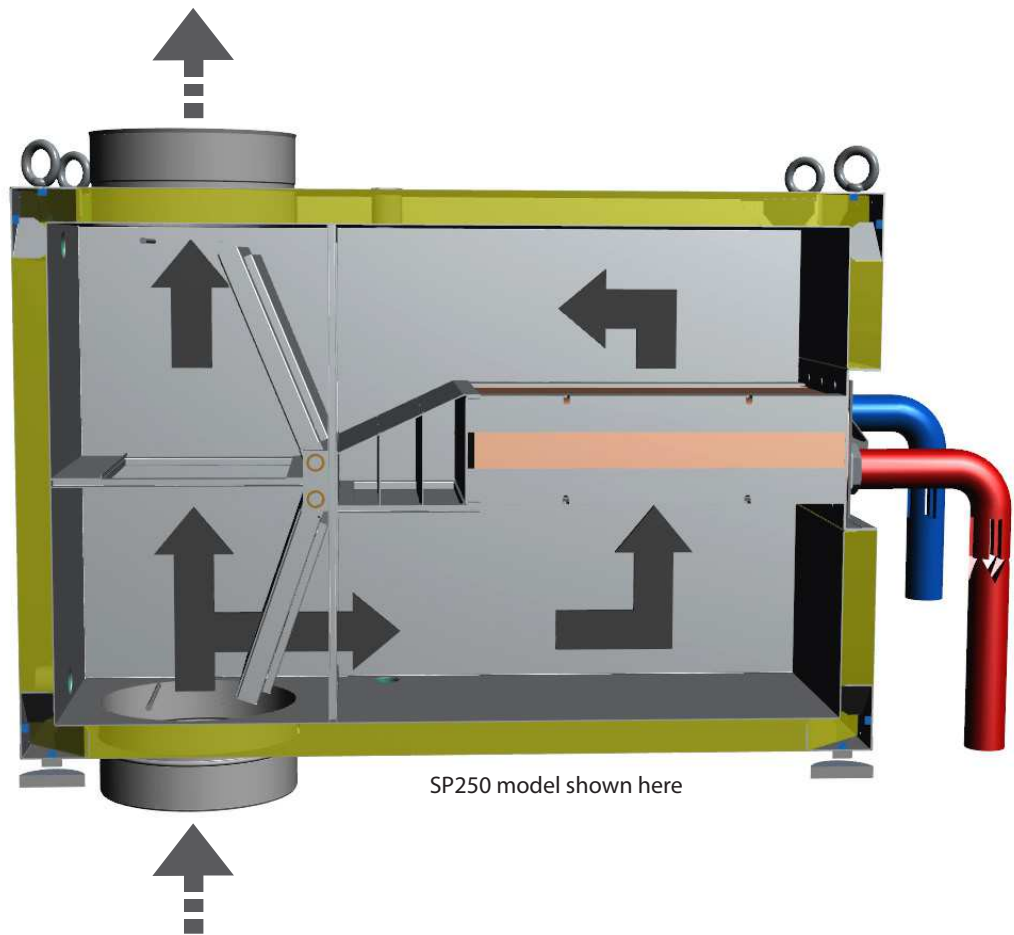
The Safe Series units are intended for indoor installation, but can be installed outdoors if the unit is covered/ encapsulated properly.

## Overview

- Maximum flue gas temperature of 400 °C on air side
- Integrated bypass protects the system from overheating
- All parts in connection with flue gas made in stainless steel 316 (EN 1.4404)
- All external parts made in stainless steel 304 (EN 1.4301)
- 40 mm insulation
- Maximum pressure water side of heat exchangers 12 bar
- Designed for indoor use, but can be used outside if the product is covered/encapsulated
- Option for nickel brazed heat exchangers in corrosive environments

## Approval

<p><b>In conformance with:</b>          Pressure Equipment Directive 2014/68/EU – EN 13445          Fluid Group: 1 &amp; 2</p>	<p><b>In conformance with:</b>          Machine Directive 2006/42/EF</p>
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## Accessories

- Mounting feet
- Temperature transmitter
- Pressure connector
- Cover plate for – single
- Cover plate for – double

## Spare Parts

- Heat exchanger gasket
- Heat exchanger Cross30-C-80
- Heat exchanger Cross30-C-100
- Heat exchanger Cross30-C-140
- Damper motor 10-20-30 Nm

## Models

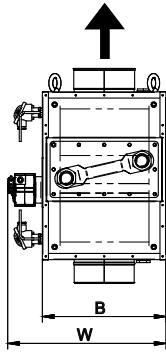
Model	Item no.	Description	Approx. burner output [kW]	Natural gas Nominal flow 250 °C [m <sup>3</sup> ] λ 1.2	Max. temp [°C]	Inlet [Nipple] [mm]	Outlet [Sleeve] [mm]	Weight incl. heat exchanger [kg]
SP80	8001100	Integrated bypass AIREC heat exchanger (plate) Copper brazed Standard connections Max 400 °C	80	200	400	180.5	181.2	(60)
SP120	8001200	Integrated bypass AIREC heat exchanger (plate) Copper brazed Standard connections Max 400 °C	120	300	400	200.5	201.2	(75)
SP250	8001300	Integrated bypass AIREC heat exchanger (plate) Copper brazed Standard connections Max 400 °C	250	600	400	250.5	251.2	(81)
SP375	8001400	Integrated bypass AIREC heat exchanger (plate) Copper brazed Standard connections Max 400 °C	375	900	400	300.5	301.2	(113)
SP500	8001500	Integrated bypass AIREC heat exchanger (plate) Copper brazed Standard connections Max 400 °C	500	1200	400	350.5	351.2	(122)

## Heat Exchangers

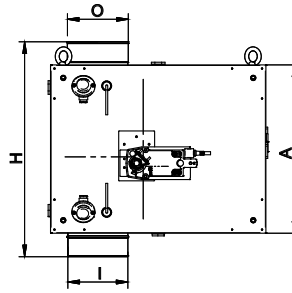
Compatibility	Model	Item no.	Joint material	Plates	Water connection ["]	Max pressure [bar] 190 °C plate temp	Number of heat exchangers
For SP80	Cross30-C-80	3200986	Copper brazed	79	G 1 1/4	12	1
For SP120	Cross30-C-100	3200987	Copper brazed	99	G 1 1/4	12	1
For SP250	Cross30-C-140	3200989	Copper brazed	139	G 1 1/4	12	1
For SP375	Cross30-C-100	3200987	Copper brazed	99	G 1 1/4	12	2
For SP500	Cross30-C-140	3200989	Copper brazed	139	G 1 1/4	12	2

# Dimensions

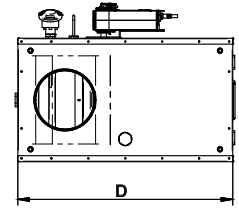
front view



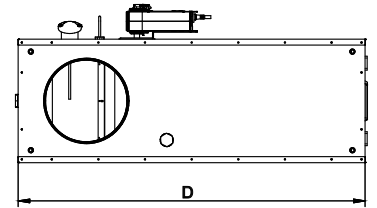
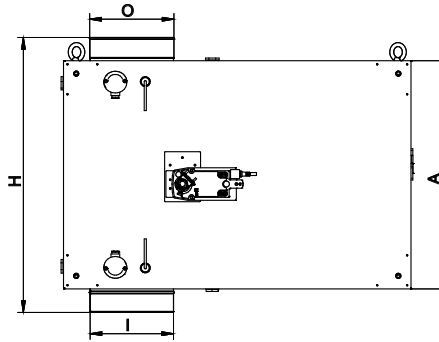
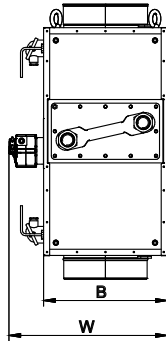
side view



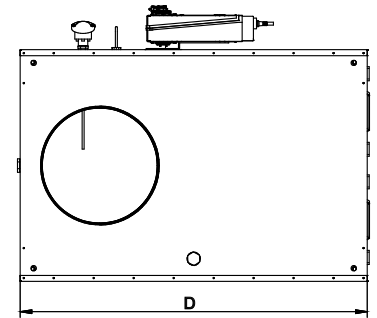
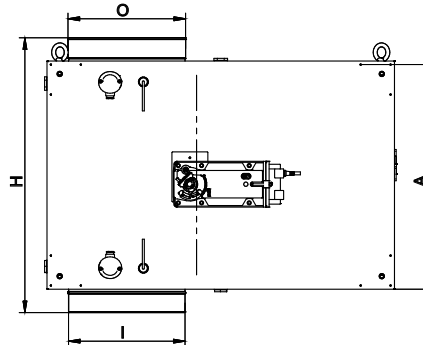
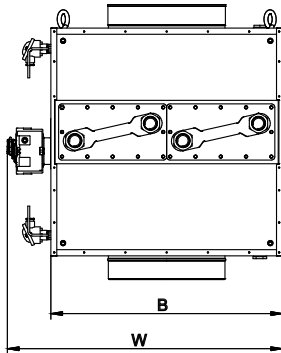
top view



SP80



SP120-250



SP375-500

Model/Dimension	W	H	D	A	B	I*	O*
SP80	475.6 mm	646.1 mm	647.2 mm	505.8 mm	371.4 mm	180.5 mm	181.2 mm
SP120	475.6 mm	826.1 mm	1044.2 mm	685.8 mm	371.4 mm	200.5 mm	201.2 mm
SP250	475.6 mm	826.1 mm	1044.2 mm	685.8 mm	371.4 mm	250.5 mm	251.2 mm
SP375	800.6 mm	826.1 mm	1044.2 mm	685.8 mm	696.4 mm	300.5 mm	301.2 mm
SP500	807.1 mm	826.1 mm	1044.2 mm	685.8 mm	696.4 mm	350.5 mm	351.2 mm

\* I = Inlet with nipple coupling (outer measure)  
 O = Outlet with sleeve coupling (inner measure)

## Damper motors

Compatibility	Model	Item no.	Nomial voltage	In operation [W]	At rest [W]	Wire sizing [VA]
For SP80	NF230A 10 Nm	3200688	AC 230 V, 50/60 Hz	6	2.5	9.5
For SP120	SF230A 20 Nm	3201063	AC 230 V, 50/60 Hz	6.5	3.5	18
For SP250	SF230A 20 Nm	3201063	AC 230 V, 50/60 Hz	6.5	3.5	18
For SP375	EF230A - 30 Nm	3201064	AC 230 V, 50/60 Hz	9	4.5	21
For SP500	EF230A - 30 Nm	3201064	AC 230 V, 50/60 Hz	9	4.5	21