

robust[®] furnace of type A

with fuel feeder

Forced air furnace



Robust furnace of type A with fuel feeder

CHARACTERISTICS

- Bottom combustion chamber. Furnace chamber and burner are lined with a ceramic lining,
- Fuel – wood in pieces and sawdust as well other waste material. Dust and really small sawdust is to be soaked to the humidity of approx. 30% and mixed with wood in pieces in the ratio 2 to 1,
- Air for heating the room is taken from the hall's bottom part, pressed by a furnace exchanger and then distributed with air transporting channels – **ITP**,
- There is a possibility to install the furnace within a set of dust collector filters and to heat up the air which returns to the hall.

VERSION OF A ROBUST FURNACE OF TYPE A WITH FUEL FEEDER

The furnaces are manufactured in the following sizes: 50 kW, 100 kW, 150 kW, 200 kW, 250 kW, 350 kW, 500 kW and marked as furnaces of the following types:

A-51Z, A-101Z, A-151Z, A-201Z, A-251Z, A-351Z, A-501Z

ADVANTAGES

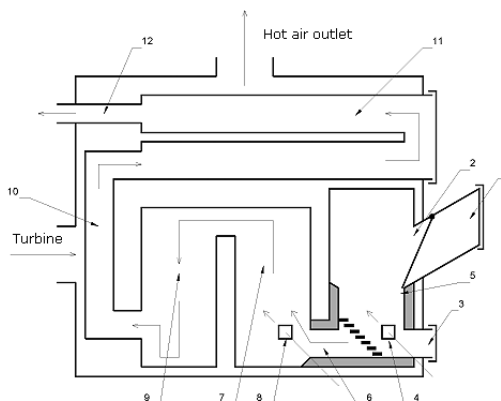
- Heat felt from the moment of furnace activation,
- Great economy of heating costs in comparison with other solutions,
- No central heating installation or losses in conveying of hot air,
- Compact, module, modern construction,
- Simple operation and high efficiency,
- Long life cycle of the device,
- No corroding factor within the exchanger and installation,
- Chimney draught forced by the turbine allows for locating the furnace in any part of the hall without the need to build a high chimney,
- In summer period the furnace may serve as an **air-conditioner**,
- The furnace does not require a specialist room (**boiler room**),
- No obligation of carrying out of specialist tests – **UDT**

OPERATION

The furnace operation is fully automatic. It is limited only to the process of fuel loading. This operation is carried out manually but the device is constructed so that it could make use of the production waste material as the fuel (mixture of wet sawdust, wood in pieces, edgings or bark).

STRUCTURE OF ROBUST FURNACE

- 1 – nozzle, fuel loading
- 2 – fuel chamber
- 3 – washout hole
- 4 – original air inlet
- 5 – ceramic lining
- 6 – burner
- 7 – fire chamber
- 8 – secondary air inlet
- 9 – cyclone, ash pit
- 10, 11 – pipe exchanger
- 12 – smoke conduit



TECHNICAL DATA

Robust furnace	Type	A-51Z	A-101Z	A-151Z	A-201Z	A-251Z	A-351Z	A-501Z
Device power	KW	50	100	150	200	250	350	500
Maximum temperature of air supply*	°C	90	90	90	90	90	90	90
Smoke conduit	mm × mm	150 × 150	170 × 170	200 × 200	220 × 220	250 × 250	260 × 260	300 × 300
Chimney diameter	mm	160	180	180	200	200	250	300
Capacity of the fuel chamber	l	170	230	275	315	400	540	800
Capacity of the container of constant fuel (sawdust, wood chips, pellets)	m ³	2.65/5.30	2.65/5.30	2.65/5.30	2.65/5.30	2.65/5.30	2.65/5.30	2.65/5.30
Amount of heated air	m ³ /h	3000	6000	8500	11000	12500	16500	23000
Diameter of pipes transporting hot air	mm	2 × Ø280	2 × Ø300	2 × Ø350	2 × Ø350	2 × Ø400	2 × Ø500	2 × Ø600
Size	width mm	900	900	1220	1220	1370	1520	1680
	height mm	1800	2000	2260	2460	2550	2550	2600
	length mm	2100	2500	2750	2750	3120	3600	3800
Mass	kg	1200	1740	2240	2720	3200	3450	4100
Sheet thickness	mm	4-8	4-8	4-8	4-8	4-8	4-8	4-8
Motor of the combustion gas fan								
Power	kW	0.25	0.55	0.55	0.75	0.75	0.75	1
Supply voltage	V	230	230	230	230	230	230	230
Motor of the main fan								
Power**	kW	3.0	4.5	5.5	5.5	7.5	7.5	10
Supply voltage	V	400	400	400	400	400	400	400
Supply								
Protection degree		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Supply system		TNC-S, 3X400 V, 50 Hz						
Blower power		dependent upon distributing channels						
Control		TNC-S, 230 V, 50 Hz						

* The temperature of air supply depends on calorific value of fuel and applied heat exchanger. The table contains maximum temperature of air supply.

** Motor power depends upon the diameter and length of the air transporting channels. The table contains maximal motor power.

DEVICE EFFICIENCY

Size of the surface intended for heating

Robust furnace	Type	A-51	A-101	A-151	A-201	A-251	A-351	A-501
Surface	m ²	300–400	550–700	800–1100	1100–1400	1300–1700	1700–2400	2500–3300
Cubature	m ³	1200	2200	3200	4200	5200	7000	10000
Energy requirement	W/m ³	50	50	50	50	50	50	50

EMISSION PARAMETERS

Combustion gas temperature	205 °C	NO _x content	34 ppm
CO ₂ content	6.5 %	effectiveness	90.5 %
O ₂ content	15.9 %	lambda	3,2
CO content	102 ppm		

FUEL CONSUMPTION

Estimated fuel consumption depends upon the following:

- External temperature,
- Thermal permeability of the building walls,
- Frequency of gate opening,
- Amount of air pumped out of the hall via pneumatic transport,
- Fuel calorific value.

WARRANTY

- We hereby grant a 5-year guarantee on subassemblies manufactured by our company.
- The contractor undertakes to fulfil its obligations under the guarantee within:
 - 7 working days form the date it is confirmed (via electronic mail or fax) that the relevant spare part necessary to remove the defect is available on the territory of the Republic of Poland,
 - 14 working days form the date it is confirmed (via electronic mail or fax) that the relevant spare part necessary to remove the defect is available on the territory of the European Union,
 - 28 working days form the date it is confirmed (via electronic mail or fax) that the relevant spare part necessary to remove the defect is available outside the territory of the European Union.

PRICE LIST

**In order to obtain information about the prices, please contact us at the following phone number:
+48 604 47 62 14**

- Upon a client's demand, we prepare a project design and a specification of the air distributing installation (**ITP**) against payment.
- We provide assistance in the purchase of fittings (**ITP**) as well as in the installation assembly.