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PIROX-D

Industrial Ventilation

SDT AIR

The power of air

REACTION-TYPE CENTRIFUGAL FAN
FOR HOT GAS RECIRCULATION



www.sdtair.com

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INDUSTRIAL EXECUTION: BELT-DRIVEN DRIVE – PLUG FAN TYPE

The **PIROX** series by SDT Air has been designed for industrial applications involving the recirculation of hot gases in thermal processes that require continuous, reliable, and safe operation under severe temperature conditions.

Its configuration as a reaction-type centrifugal fan with belt-driven transmission (plug fan type), combined with its reinforced construction and thermally insulated casing, makes it an ideal solution for installations subject to high thermal and mechanical demands. The unit is engineered to deliver high performance, minimize vibrations and noise, and ensure a long service life even in continuous industrial processes.

ARCHITECTURE, INTEGRITY AND OPERATING CONDITIONS

Design and Materials
The PIROX fan is manufactured with a robust construction in rolled carbon steel, designed to ensure structural strength and durability in demanding industrial environments.

The unit incorporates an insulated casing protected against corrosion by a heat-resistant paint coating, with a C3 finish, suitable for non-aggressive industrial applications.

Thermal Insulation
To ensure thermal stability of the unit and optimize performance in high-temperature applications, the system incorporates:

- High-density rock wool thermal insulation
- Density: 145 kg/m³
- Standard wall thickness: 150 mm

Reaction Impeller
The PIROX features a self-cleaning turbine and a reinforced backward-curved blade impeller (reaction type) with high efficiency, manufactured in rolled carbon steel and dynamically balanced to minimize noise and vibrations.

Main features:
- High-efficiency impeller
- Self-cleaning design
- Dynamic balancing
- Black heat-resistant paint coating
- Heavy-duty airtight monoblock construction

Transmission System
The transmission system is designed for continuous industrial service, ensuring safety, reliability, and low maintenance:

- Transmission assembly with guards compliant with ISO 13857
- High-efficiency, maintenance-free belt

Operating Conditions – Thermal Execution
The PIROX series has been specifically designed for hot gas recirculation and is suitable for continuous operation under the following conditions:

- Conveyed gas temperature: from -40 °C up to 350 °C (continuous operation)
- Enhanced by the incorporation of a cooling impeller
- Maximum motor ambient operating temperature: 60 °C

Upon request, special versions can be manufactured for continuous operation up to 450 °C through the selection of specific materials and configurations.



MOTORIZATION AND EFFICIENCY

The PIROX series is equipped with motors designed for continuous operation in severe industrial applications.

TEFC Motors

- Standard IEC asynchronous squirrel cage motor
- IP55 protection
- Class F electrical insulation
- Foot-mounted motor (B3), installed on base frame

Standard Voltages

- 230/400V 50Hz for three-phase motors up to 4 kW
- 400/690V 50Hz for higher power ratings

ErP Compliance

- IE3 (Premium Efficiency): standard from 0.75 kW to 55 kW
- IE4 (Super Premium Efficiency): from 75 kW
- IE2 (High Efficiency): for power ratings below 0.75 kW

STANDARD FINISH

- Rolled carbon steel construction
- Heat-resistant paint coating
- C3 finish
- Impeller with black heat-resistant paint finish

CUSTOMIZATION OPTIONS

Special Materials

Upon request, the PIROX series can be supplied in:
- Stainless steel 304
- Stainless steel 316
- Special steels for high-temperature applications

Special Executions
- Construction for continuous operation up to 450 °C
- Alternative thermal insulation thicknesses
- Spark-resistant construction
- Special casings according to application

INDUSTRIAL APPLICATIONS

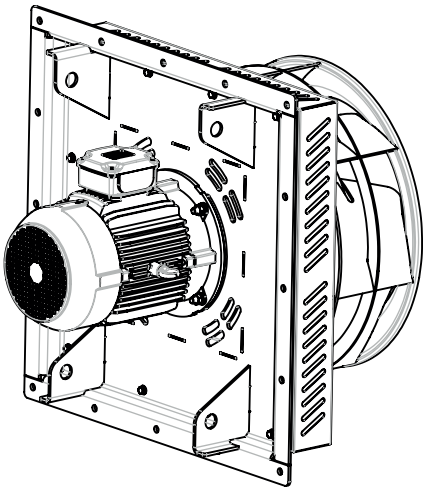
Its robust design and plug fan configuration make it particularly suitable for gas recirculation installations in industrial thermal processes such as:

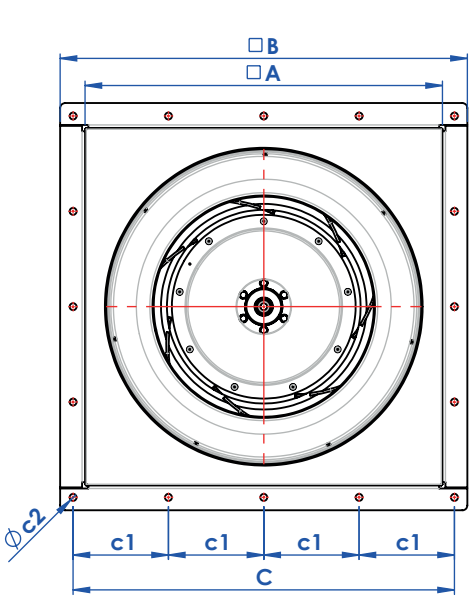
- Furnaces
- Boilers
- Paint booths
- Dryers for tobacco leaves, barley, ceramics, glass, and wood
- Insulated thermal chambers under temperature control
- Burners and incinerators
- Melting furnaces

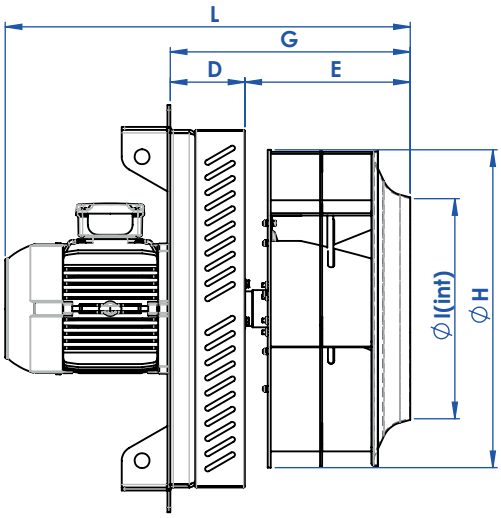


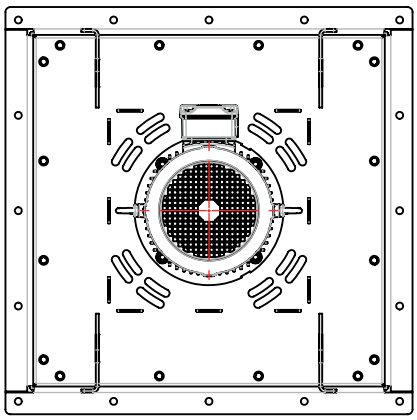
PRODUCT DIMENSIONS

Model	Motor			A	B	C	c1	c2	D	E	G	I	H	L
PIROX-D 402	50HZ	T4	1,1KW	590	690	635	211,7	14	150	218,5	368,5	283	408	585
		T2	4KW											665
	60Hz	T4	1,1KW											585
PIROX-D 452	50HZ	T4	1,5KW	590	690	635	211,7	14	150	239	389	318	458	630,5
		T2	7,5KW											722
	60Hz	T4	1,5KW											630,5
PIROX-D 502	50HZ	T4	1,5KW	590	690	635	211,7	14	150	271,5	421,5	355	508	663
		T2	15KW											918
	60Hz	T4	3KW											700
PIROX-D 562	50HZ	T4	3KW	720	820	768	192	14	150	299,5	449,5	394	568	728
	60Hz	T4	5,5KW											782,5
PIROX-D 632	50HZ	T4	5,5KW	720	820	768	192	14	150	333	483	443	635	816
	60Hz	T4	7,5KW											855
PIROX-D 712	50HZ	T4	11KW	890	990	930	232,5	14	150	379	529	500	720	973,5
	60Hz	T4	15KW											1028
PIROX-D 802	50HZ	T4	18,5KW	890	990	930	232,5	14	150	414	564	566	810	1084
		T4	30KW											1185









Images are for illustrative purposes only; the actual product may vary depending on size, specifications, and configuration

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