RHF FANS LTD

Better thinking, better solutions

CENTRIFUGAL SOLUTIONS

One of the UK's leading manufacturers and suppliers of industrial Centrifugal Fans

CENTRIFUGAL FANS, DESIGNED AND BUILT TO DELIVER BETTER PERFORMANCE

RHF AIM TO PRODUCE THE BEST IN CLASS CENTRIFUGAL FANS

To deliver better centrifugal solutions we have designed our products from first engineering principles, which makes sure that all the fundamentals are taken care of.

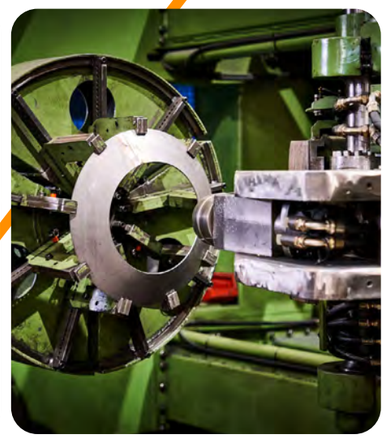
We have complemented this with innovative thinking in several areas, which gives our products a clear competitive edge and gives our customers superior performance.

TAKING CARE OF ENGINEERING FUNDAMENTALS MEANS THAT RHF:

Engineer all impellors to be capable of withstanding imposed stresses and to be sufficiently stiff to ensure that they run in perfect balance, by using finite element analysis to predict stresses and deflection on blades, shrouds, back plate, hubs and welds. Precisely engineered impellors, giving mass, centre of gravity and inertia to enable accurate shaft, bearing and drive design.

Check shafts for deflection and combined critical speed, taking account of loads imposed by impellor and drive. Check bearings for combined loads, life calculation and lubrication intervals. Including motor bearing and shaft, not simply fan bearing and shaft.

Deliver all of the above with absolute consistency through the application of bespoke software, providing an optimum engineering solution for each and every fan.



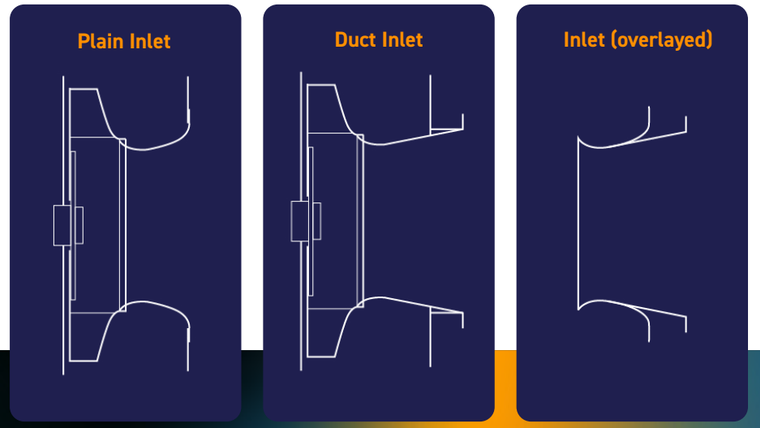
TAKING CARE OF SUPERIOR PERFORMANCE MEANS THAT RHF:

Has created a more advanced configuration for its air inlets and impellors. We call it “Smoothflow” because that is exactly what it does. Smoothflow ensures that there is less turbulence, less noise and a lower absorbed power, reducing capital cost.

Our centrifugal fans span a wide duty range of volume and pressure combinations, enabling RHF to deliver fans that operate at, or close to maximum efficiency.

Across this range our production process ensures that a smooth, elliptical profile is achieved on all fan sizes, impellor and inlet configurations.

This is achieved through strategic investment in the most advanced CNC spin forming equipment allied to proprietary software system development, which effortlessly drives the machinery.



Blending the required elliptical end profile to any inlet cone irrespective of inlet angle ensures a smoother, tangential transition and more constant and consistent entry.

SMOOTHFLOW™

Smoothflow technology ensures that there is less turbulence experienced as the fan operates, which in turn means that there will be less noise and more efficient operation

GOOD PRODUCTS BACKED UP WITH A GOOD CUSTOMER SUPPORT SERVICE.

All customer enquiries are supported with fully detailed technical documentation.

2D and 3D scale drawings are available for all of our solutions at the push of a button, providing comprehensive details and saving
customers’ time.

AutoCAD documentation shows all required product angles and views. Complemented by performance, noise curve and energy consumption data.

Order verification and production process management are fully automated, and detailed programmes are provided for all materials preparation and assembly aspects.

TEST, TEST AND TEST AGAIN

A commitment to providing the effect of our design thinking and production quality means that RHF test all solutions. Our process involves changing inlet and impellor profiles, blade numbers, cut-off geometries and impellor clearance.

This approach has delivered significant improvements in operating efficiency for all our fans. Additionally, whilst measuring flow performance, in duct sound is also established.

RHF supply full noise spectrum figures over each product’s entire operating range.

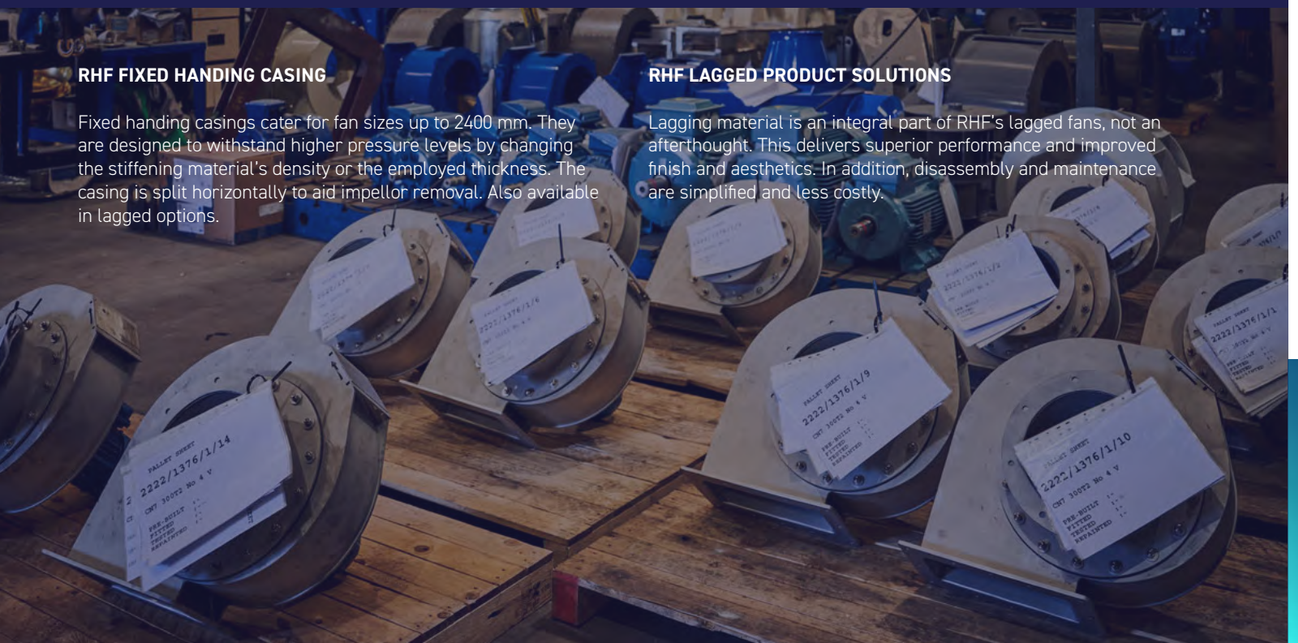
RHF CENTRIFUGAL FAN CONSTRUCTION OPTIONS

RHF centrifugal fans are available in a number of formats.

RHF UNIVERSAL CASINGS

Universal casings cater for fan sizes of up to 900 mm diameter. They can be rotated to accommodate any standard discharge angle across four main variants, as detailed below.

UNIVERSAL CASINGS, KEY FEATURES AND BENEFITS	
STANDARD	IMPELLOR CAN BE REMOVED FROM INLET OR DRIVE SIDE
STAINLESS STEEL AIRSTREAM	IMPELLOR CAN BE REMOVED FROM INLET OR DRIVE SIDE
LAGGED WITH EXTENDING INLET/ OUTLET FLANGES	IMPELLOR CAN BE REMOVED FROM INLET OR DRIVE SIDE
LAGGED CUT-BACK AT DISCHARGE AND INLET	IMPELLOR CAN BE REMOVED FROM INLET OR DRIVE SIDE
BUNG CASINGS	IMPELLOR CAN BE REMOVED FROM INLET OR DRIVE SIDE



RHF FIXED HANDING CASING

Fixed handing casings cater for fan sizes up to 2400 mm. They are designed to withstand higher pressure levels by changing the stiffening material's density or the employed thickness. The casing is split horizontally to aid impellor removal. Also available in lagged options.

RHF LAGGED PRODUCT SOLUTIONS

Lagging material is an integral part of RHF's lagged fans, not an afterthought. This delivers superior performance and improved finish and aesthetics. In addition, disassembly and maintenance are simplified and less costly.

RHF IMPELLER CONFIGURATIONS

Optimising Airflow with Tailored Impeller Designs.

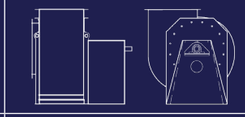
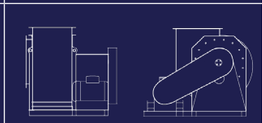
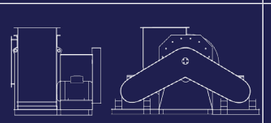
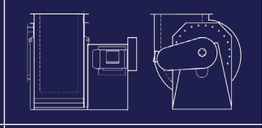
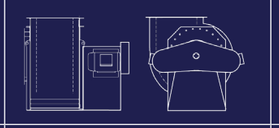
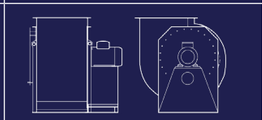
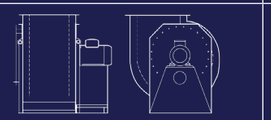
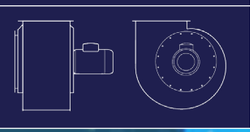
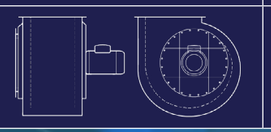
FORMAT	EFFICIENCY	REFERENCE CODES & CONFIGURATION						OPERATING CONDITIONS
Backward curved blade, or aerofoil section	Very high efficency	CW	CM	CN	CE			Clean air and light dry dust
Backward straight blade	Very high efficiency	BW	BM	BN				Clean air and light dry dust
Backward curved blade	High efficiency	HFW	HFM					Clean air and light dry dust
Backward straight blade	Medium to high efficiency	HPCB6	HPCB5	HPCB4	HPCB3	HPCB2	HPCB1	Clean air and light dry dust
Forward curved blade	Medium efficiency	MBCW	MBCM	MBCN				Clean air and light dry dust
Open radial blade	Medium efficiency	RDCW	RDCM	RDCN	RDCEN			Heavy dust loading / materials

SMOOTHFLOW™

Smoothflow" technology ensures that there is less turbulence experienced as the fan operates, which in turn means that there will be less noise and more efficient operation

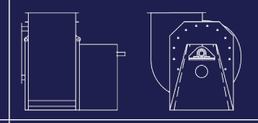
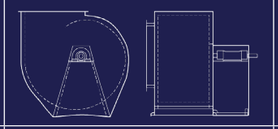
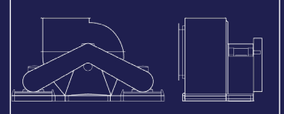
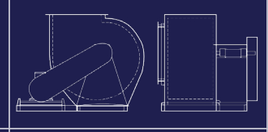
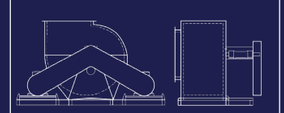
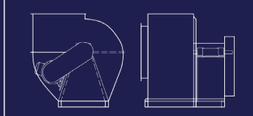
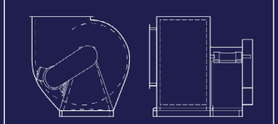
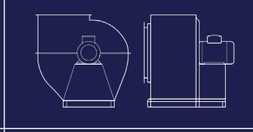
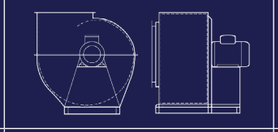
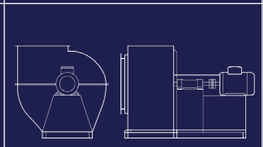
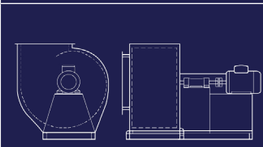
RHF CENTRIFUGAL ARRANGEMENTS

Universal casing up to 900mm.

FORMAT	CONFIGURATION	Maximum Operating Temperature	CONFIGURATION	Maximum Operating Temperature	FEATURES
No1 Pedestal, standard and lagged casing		250°		450° with 100 mm lagging	Shaft and bearings, outside of air stream, support overhung impellor. Higher temperature options are available.
No1 Channel base, single and dual drives		250°		250°	Motor mounted on an integral frame with guard and support, slide rail and belt drive. Available with and without outriggers
No1 Channel base lagged, single and dual drives		450° with 100 mm lagging		450° with 100 mm lagging	Motor mounted on an integral frame with guard and support, slide rail and belt drive. Available with and without outriggers. Full integral lagging.
No9 Monoblock, single and dual drives		250°		250°	Motor mounted on an adjustable plate featuring screwed rods. Guard and belt drive. Available with channel base frame, with and without outriggers.
No9 Monoblock lagged casing, single and dual drives		450° with 100 mm lagging		450° with 100 mm lagging	Motor mounted on an adjustable plate featuring screwed rods. Guard and belt drive. Available with channel base frame, with and without outriggers. Full integral lagging
No4 Pedestal standard and lagged casing		200°		300° with 100 mm lagging	Impellor directly mounted to motor, supporting overhung impellor. Higher temperature options available.
No4 V, standard and lagged casing		200°		300° with 100 mm lagging	Inlet mounted fan, with motor directly coupled to impellor. Higher temperature options are available.

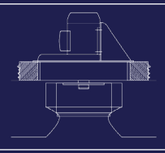
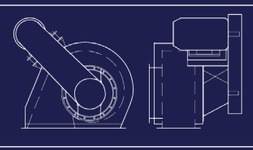
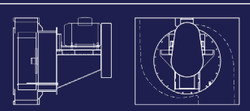
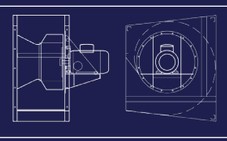
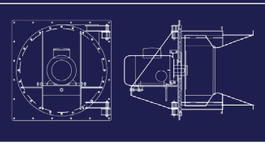
RHF CENTRIFUGAL ARRANGEMENTS

Fixed handing casings up to 2400mm.

FORMAT	CONFIGURATION	Maximum Operating Temperature	CONFIGURATION	Maximum Operating Temperature	FEATURES
No1 Pedestal, standard and lagged casing		250°		450° with 100 mm lagging	Shaft and bearings, outside of air stream, support overhung impellor. Higher temperature options are available.
No1 Channel base, single and dual drives		250°		250°	Motor mounted on an integral frame with guard and support, slide rail and belt drive. Available with and without outriggers
No1 Channel base lagged, single and dual drives		450° with 100 mm lagging		450° with 100 mm lagging	Motor mounted on an integral frame with guard and support, slide rail and belt drive. Available with and without outriggers. Full integral lagging.
No9 Monob-lock, with and without lagged casing		250°		450°	Motor mounted on an adjustable plate featuring screwed rods. Guard and belt drive. Available with channel base frame, with and without outriggers.
No4 Pedestal with and without lagged casing		200°		300° with 100 mm lagging	Impellor directly mounted to motor, supporting overhung impellor. Higher temperature options available. Available with channel base frame, with and without outriggers.
No7 Pedestal with and without lagged casing		250°		450° with 100 mm lagging	Shaft and bearings, outside of air stream, support overhung impellor. Higher temperature options are available. Shaft directly coupled to motor by flexible coupling. Available with channel base frame, with and without outriggers.

RHF CENTRIFUGAL ARRANGEMENTS

Plug fans & special arrangements up to 2400mm.

FORMAT	CONFIGURATION	MAXIMUM OPERATING TEMPERATURE	FEATURES
No4 V Plug		350°	Recirculation of air within oven applications. Plug and impellor drop in to opening within oven, casing and inlet mounted from inside. Impellor mounted directly to motor, outside of air stream, which protrudes through plug section. Higher temperatures available.
No9 Plug		550°	Recirculation of air within oven applications. Shaft and bearings, outside of air stream, support overhung impellor which protrudes from casing. Driven by vee let drive. Higher temperatures available.
No7 Plug		450°	Recirculation of air within oven applications. Shaft and bearings, outside of air stream, support overhung impellor which protrudes from casing. Shaft directly coupled to motor by flexible coupling. Higher temperatures available.
No2 Mono Lagged – Size 550		350° with 100 mm lagging	Special build, suitable for bakery ovens. Lagging integrated in to design delivering better finish an improved performance.
No9 Plug – Size 900		450°	Special build, suitable for bakery ovens. Special dual discharge casing required, designed and supplied in shorter lead time.
No4 Plug – size 800, available in sizes 450 – 1225 mm		450°	Special build, suitable for grain drying ovens. Fully integrated unit, featuring square casing which acts as panelling for ductwork. Reduced fabrication for customer and improved airflow.
No4 Plug Swing Out – Size 725		250°	Special build, suitable for carpet drying. Special unit with integral pivot arms and optimal inlet cone positioning. Impellor can be wound back before pivoting. Improved heat isolation.

ABOUT RHF FANS

RHF Fans is a technology-led manufacturer of centrifugal and axial industrial fans with over 40 years of experience.

RHF Fans is a family-owned and operated business. Founded in 1981, our passion for fan manufacturing has been passed down through generations. Our pride in our heritage, dedication, and unwavering commitment to excellence have helped us maintain our ISO9001 certification.

We have been at the forefront of energy efficiency in fan manufacturing, consistently delivering precision-engineered solutions that have set industry standards. But our success wouldn't be possible without our highly skilled workshop and office staff. With decades of experience, our team ensures that every fan we produce meets the highest quality and performance standards.

Over the years, we have developed a library of over 20,000 fan designs, with sizes ranging from 250mm to 2500mm and power capacities from 0.37kW to 500kW. This variety of fan systems ensures we can create a bespoke solution for your specific needs.

Our commitment to excellence extends beyond just the quality of our products. We are proud to offer industry-leading manufacturing times, ensuring you get your fans when needed. Contact our friendly sales team today to learn more about how RHF can support your projects.

THE UK'S LEADING EXPERTS & MANUFACTURERS OF CENTRIFUGAL & AXIAL FANS

AXIAL FANS

Our wide range of axial fans includes both cased, belt drive and bifurcated variants.

SPECIAL DESIGN FANS

Our special design fans have more advanced configurations to suit specific customer applications.

SERVICE & MAINTENANCE

At RHF Fans, we believe in removing the hassle of fan maintenance.

A SALES TEAM WITH A PERSONAL TOUCH

For over 20 years I have directly been involved in providing centrifugal solutions for applications worldwide. I estimate I have been directly involved with well over 50,000 RHF Fans and remain today as determined to demonstrate our excellence. If we can help, please contact me or a team member with your own specifications and let us provide the detailed fan package you need.

Mark Higgins, Sales Director

Better thinking, better solutions

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