FULLER®

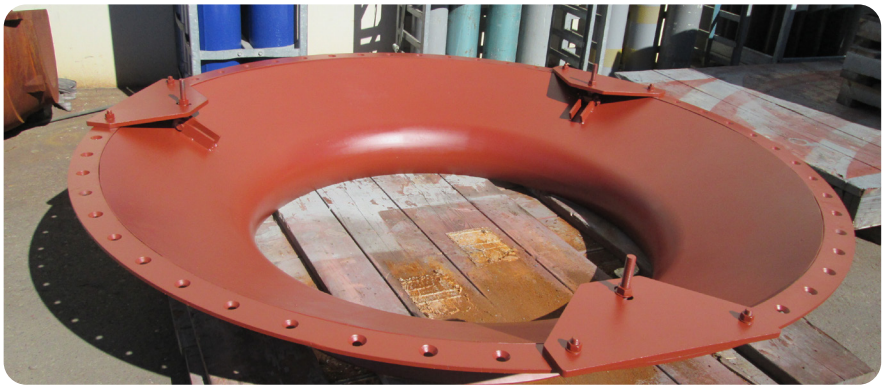
DHAF FAN

EFFICIENT PERFORMANCE FOR DEMANDING INDUSTRIAL ENVIRONMENTS

DURABLE, ENERGY-EFFICIENT, QUICK TO INSTALL

Our DHAF fan is the right choice for the toughest industrial process environments

Tested according to AMCA standards



Tool for easy adjustment of inlet cone

Designed for the toughest environments

Fuller's double-suction HAF (DHAF) fan is a new-generation fan designed for efficient performance within demanding industrial environments. Whether installed within the pyro and grinding processes of a cement plant or in the high gas-flow environment of a steel or power plant, it is highly energy-efficient and durable.

DHAF is the next generation of Fuller's HAF fan. First used in 1980, there are currently more than 250 HAF fans in operation worldwide. Extensively tested according to AMCA standards, the DHAF is a centrifugal fan with a double inlet, which efficiently transports clean or dust-laden flue gases or air.

It is ideal for use as an induced-draft fan for cement kilns, dryer crushers, raw mills, cement mills, coal mills, and other high-capacity applications in other industrial process environments.

Smooth-running operations

A process fan is an essential element within process environments. A well-functioning DHAF contributes significantly to smooth-running operations – allowing the other equipment in the system to perform as it should – by delivering reliable, regulated airflow and pressure.

The double-suction technology easily generates the necessary airflows – but with a comparatively low power consumption – to help keep your operating costs down.

Innovation in installation

Fuller's DHAF is ideal for retrofits and new installations and our aim is to help you reduce installation costs and get you quickly up and running.

NO GUESSWORK

Easy installation, safe and efficient maintenance

Fuller aims to ensure you have all the necessary information to get the fan up and running fast as well as maintain its operations. We have documentation ready at hand, including instructions, load drawings and motor data. Not only to ensure fast and easy installation, but also ensure that maintenance of the DHAF and its components can be carried out with maximum safety and efficiency.

Next-generation features

The DHAF fan boasts a range of impressive features:

- Design range of 60 to 900 m3/s at 5,000 to 25,000 Pa
- The new shaft cone improves fan performance and protects the shaft against wear
- DHAF fan has equal inlet and outlet velocity
- All DHAF fans can be delivered with different degrees of wear protection for the impeller and fan casing
- Special hub wear protection for the hub and the hub bolts
- DHAF fans are prepared for active balancing systems
- The bearings have a calculated lifetime of at least 100,000 hours
- The rotor is manufactured to the highest quality standards

The fan is contained in a single unit and with its relatively few parts, requires minimal installation effort. The impeller, including inlet cone, coupling and bearings, is delivered pre-assembled from Fuller's production facilities.

Positioning the inlet cone inside the casing is often one of the more difficult installation procedures. To reduce complexity and delays, Fuller has developed a special tool for easy adjustment of the inlet cone position during installation. With this tool you can accurately place the cone within the casing, achieving the tight spacing required for optimum performance and efficiency.

Retrofit installations are fast and easy, making the DHAF a highly suitable replacement for worn-out fans.

The DHAF can be supplied on a steel frame, which eliminates the need for re-building the full foundation.

Standard sizes

Fuller's DHAF fans are available in 10 standard sizes, with impeller diameters ranging from 1.8 to 5.5 metres. This makes it possible to calculate and design exactly the right sized fan for your operational needs, ensuring low running costs and high reliability.

Minimizing stoppages

ID fans work in harsh environments transporting heavy, dust-laden air. The build-up that can occur on the impeller is the biggest operational burden, often leading to excessive vibrations and, in the worst case, prolonged stoppages.

To maximise the fan's operation time, Fuller provides two proven solutions, depending on the type of dust build-up.

- For soft build-up, an automatic air blaster system installed in the fan cleans the dust from the blades. The fan does not need to be stopped for cleaning.
- For hard build-up, an active balancing system is mounted on the fan, and can extend the running time before cleaning is required.

In 2016, we expanded the apabilities of Fuller's next-generation HAF fans by introducing two new series to the DHAF family.

The DHAF-B series produces a 25 percent higher volume compared with our original DHAF, based on the same diameter. And the

DHAF-C series produces 50 percent more volume from the same diameter.

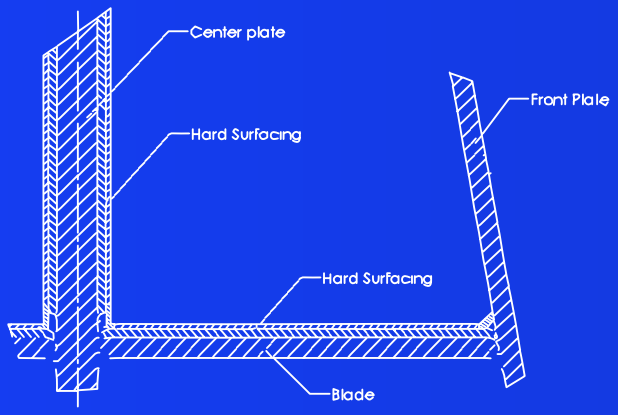
Impeller, delivered pre-assembled

Wear protection

A unique feature of the DHAF is the specially designed shaft cone that covers around the hub and the shaft.

Not only does this protect the shaft from rapid wear, but it also increases flow capacity by reducing turbulence in the fan.

Fuller can also provide four different kinds of wear protection for the DHAF. Based on individual requirements, we can supply the wear protection that will maximise the lifetime of your fan, whether it is normal protection or protection with Chromium Carbides or tungsten.



Example of fan design

Process	ID fan	Cement mill filter fan	Raw mill fan	
Pressure total	7,422	9,475	10,362	Pa
Volume flow	321	186	323	m^3/s
Efficiency	86.3	87.7	88.8	%
Fan size	DHAF-A315/354R	DHAF-A250/270	DHAF-A355/396RH	

Shaft and hub cone

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