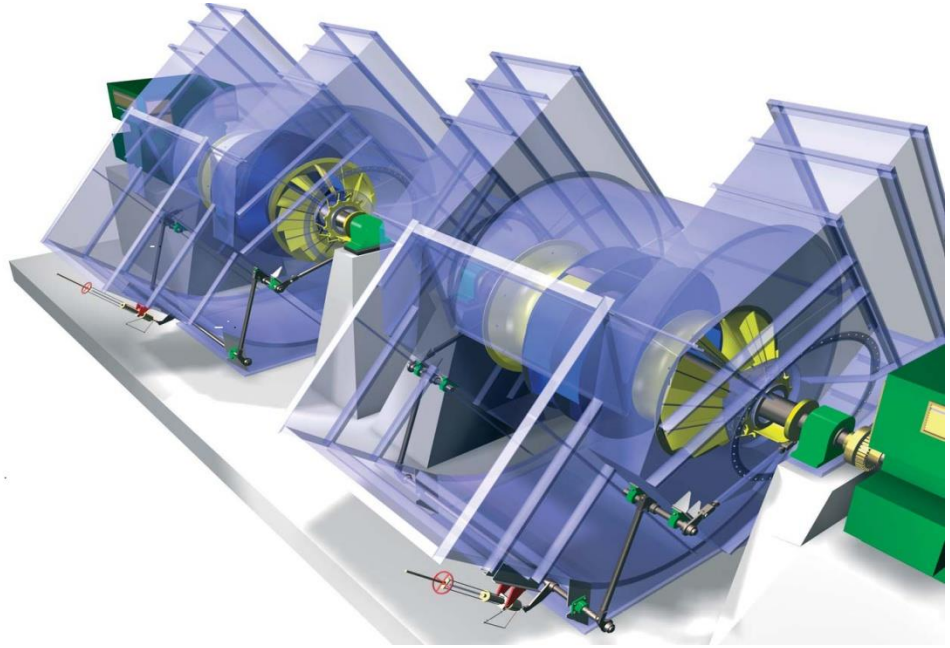
Vento Tesla Fan Private Limited - *Engineered air*



An Introduction & Products

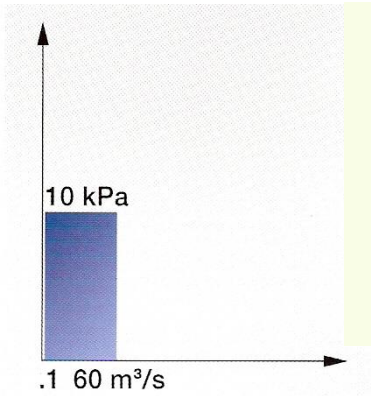
1 About Vento Tesla Fan

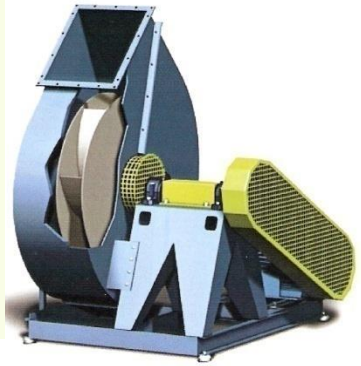
Overview

- ISO 9001-2015 Accredited Company
- Private Limited Company under MSME
- Over 100 Fan Installations in India
- Design Engineering with 3D drawing and Ansys software
- State of the art manufacturing facility
- Expertise on replacement and retrofit jobs with the help of existing information and site visit.
- Dedicated After Sales Service Team.

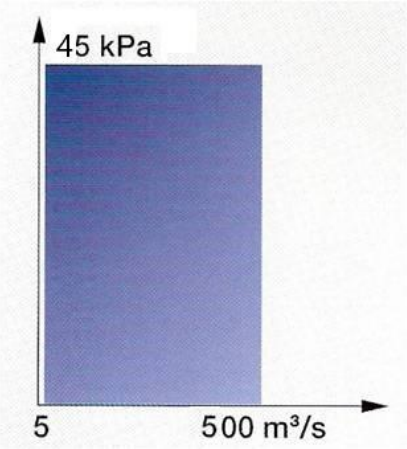
Vento Tesla Fan Products and Services & Capabilities

- LIGHT, MEDIUM & HEAVY DUTY CENTRIGUGAL FANS





Industrial Fan
Standard made fans.
Application:
Cement
Pulp and paper
Dust and fume extraction
Automobile



Heavy Industrial Fan
Tailor made fans.
Application:
Cement
Steel
Power
Oil & Gas
Fertilizer

Vento Tesla Fan Products and Services & Capabilities

- AXIAL FLOW FAN

Industry

Building, car park (smoke exhaust), marine and tunnel ventilation

Performance range & Size

- Flow up to 85 m^3/sec
- Pressure up to 2500 Pa
- Impeller diameter: From 315 mm to 1800 mm

Vento Tesla Fan Products and Services & Capabilities

- AXIAL FLOW FAN

Industry

Tunnel (rail, road)

- tested to 400°C for 2 hours

Performance range & Size

- Pressure from 200Pa up to 2000Pa
- Flow from 10m³/sec to 300m³/sec
- 11kW to 500kW; temp: from -20°C up to 60°C
- Outer diameter from 1200mm to 2300mm

Vento Tesla Fan Products and Services & Capabilities

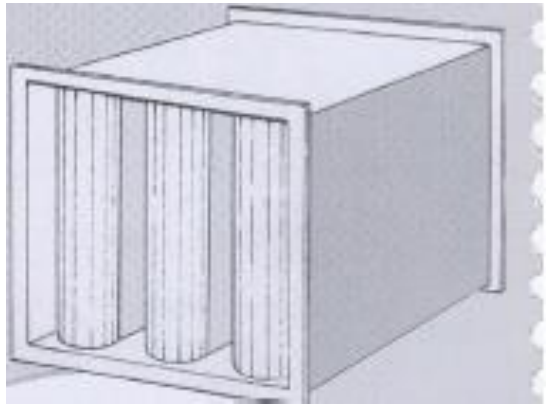
- INLET GUIDE VANE , CONICAL IVC & ML DAMPER

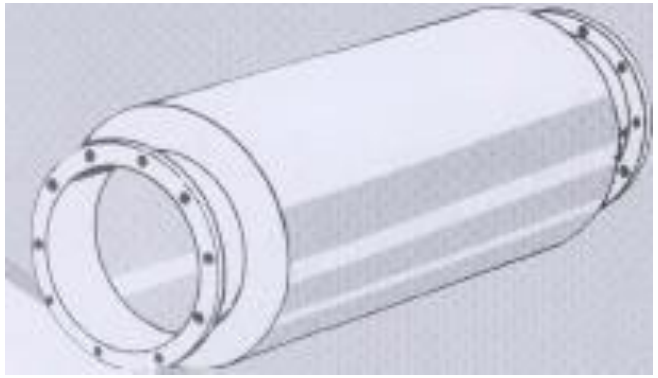
Industry

Cement / Steel / Power/ Fertilizer

Vento Tesla Fan Products and Services & Capabilities

- FAN SILENCERS



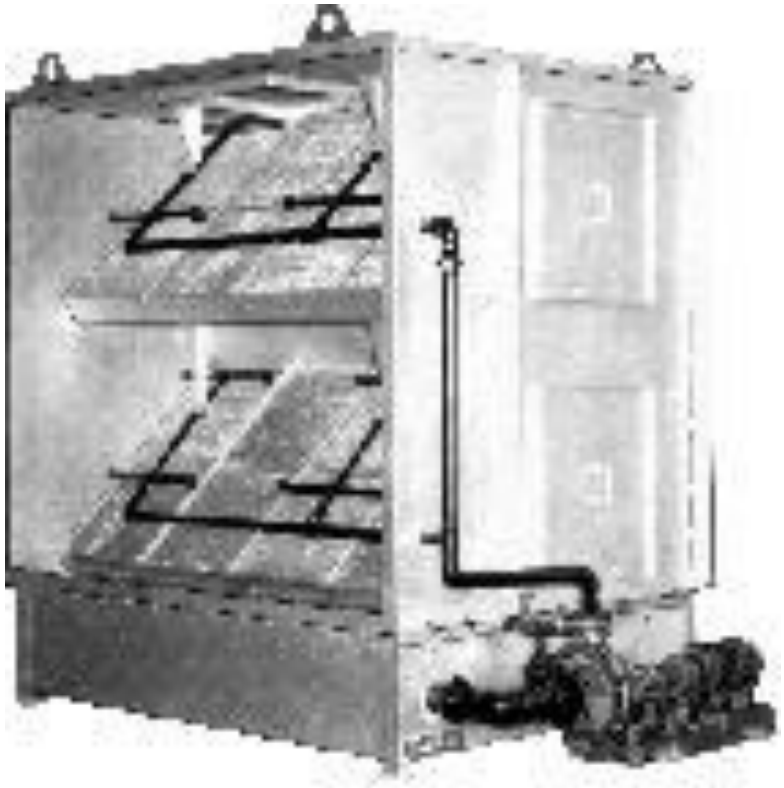


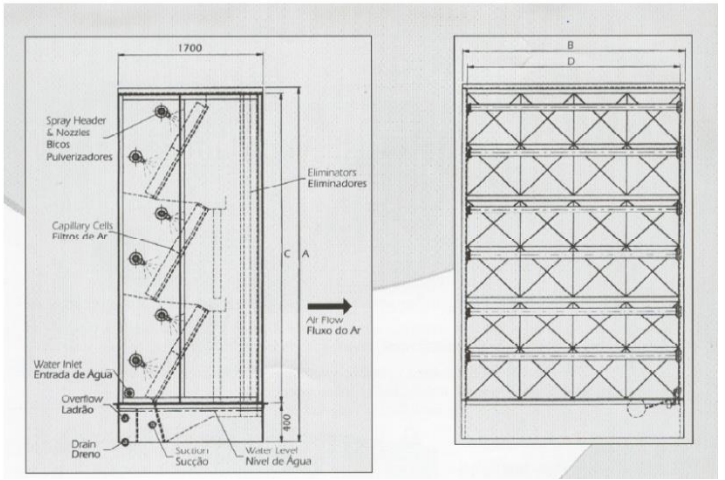
Industry

Cement / Steel / Power/ Fertilizer / Tunnel CarPark

Vento Tesla Fan Products and Services & Capabilities

- AIR WASHERS

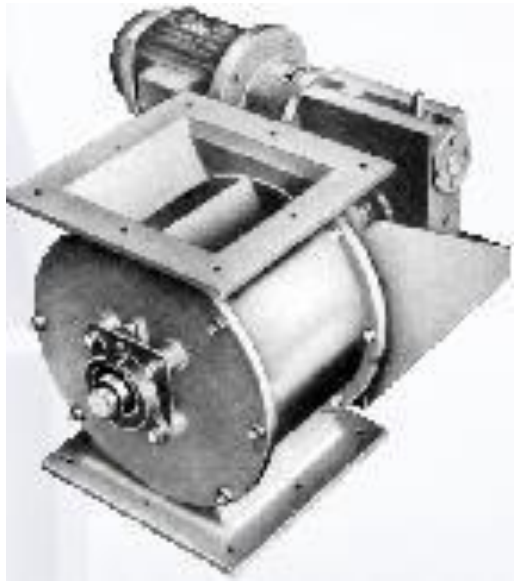


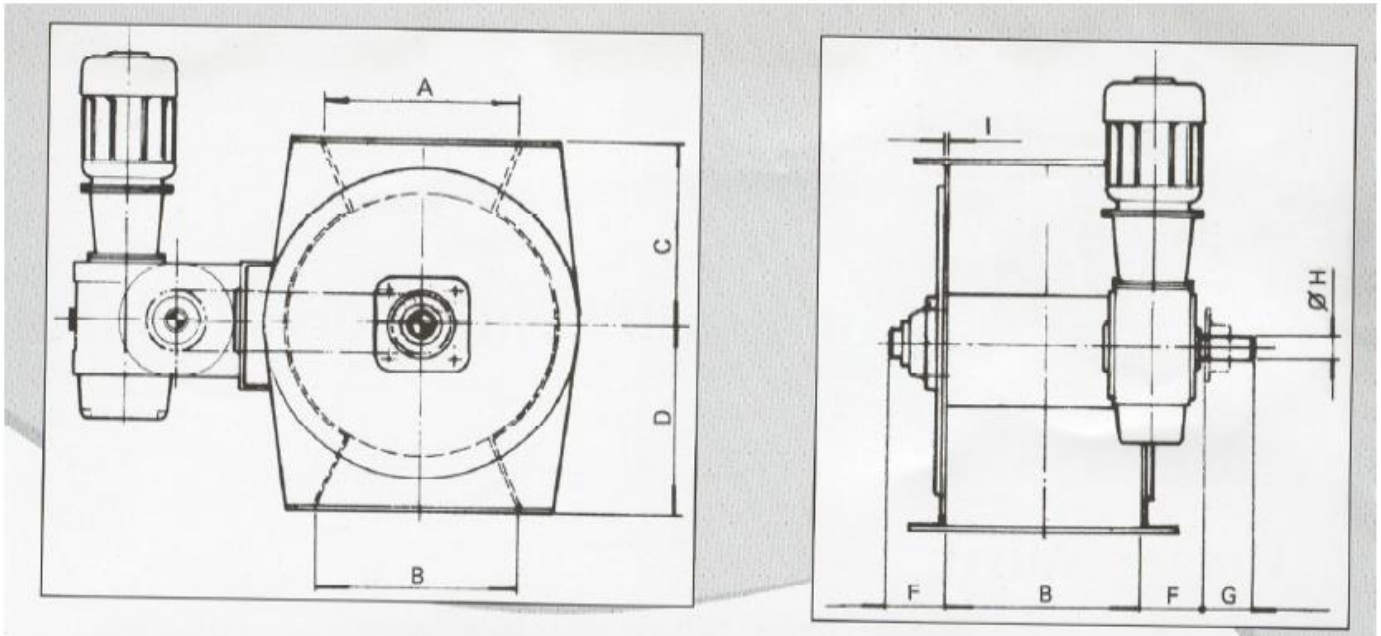


TYPE TIPO	Nº CELL Nº PLACAS	VOLUME m /h VOLUME m /h	WATER L/h ÁGUA L/h	A	B	C	D	WEIGHT kg PESO kg
2-2	4	6.000	4.000	1250	1016	950	1092	620
2-3	6	9.000	6.000	1250	1524	950	1600	860
2-4	8	12.000	8.000	1250	2032	950	2110	1080
2-5	10	15.000	10.000	1250	2540	950	2620	1130
4-3	12	18.000	12.000	2234	1524	1834	1600	1180
4-4	16	24.000	16.000	2234	2032	1834	2110	1490
4-5	20	30.000	20.000	2234	2540	1834	2620	1770
4-6	24	36.000	24.000	2234	3048	1834	3128	1780
6-4	24	36.000	24.000	3118	2032	2718	2110	1810
6-5	30	45.000	30.000	3118	2540	2718	2620	2190
6-6	36	54.000	36.000	3118	3048	2718	3128	2560
6-7	42	63.000	42.000	3118	3556	2718	3637	2980
6-8	48	72.000	48.000	3118	4064	2718	4165	3360
8-7	56	84.000	56.000	4002	3556	3602	3637	3790
8-8	64	96.000	64.000	4002	4064	3602	4165	4220
8-9	72	108.000	72.000	4002	4572	3602	4673	4580
8-10	80	120.000	80.000	4002	5080	3602	5181	4930
8-11	88	132.000	88.000	4002	5588	3602	5689	5360

Vento Tesla Fan Products and Services & Capabilities

- ROTARY VALVES





SIZE TAMANHO	CAPACITY - (m /h) CAPACIDADE - (m /h)			H.P. H.P.		ROTOR Ø mm	A	B	C	D	F	G	H	I
	20 RPM	30 RPM	40 RPM	Standard Normal	Heavy-duty Pesado									
VC-15	1,7	2,6	3,4	0,33	0,75	150	114	114	120	120	65	60	1"	
VC-20	4	6	8	0,33	0,75	200	150	150	135	135	65	60	1"	
VC-30	13,8	20,2	27	0,5	1	300	225	225	200	200	70	70	1"	
VC-40	31	46,8	62,4	1	1,5	400	305	305	280	280	75	75	1"	
VC-50	62	93,6	124	1,5	2,5	500	380	380	330	330	85	95	1"	
VC-60	108	162	216	2	3	600	457	457	380	380	95	110	2"	

Vento Tesla Fan Markets

Vento TESLA FAN Engineered air

General Industries


Food Industry


Automotive


Paint booths


Chemistry


Dedusting


Machines


Paper


Pétrochemical


Textile


Glassware

Energy


Thermal power plants


Generators


Nuclear


Power transformers

Vento Tesla Fan Markets

FAN SUPPLIED TO JSW : FAN CAPCITY : 1,15,000M3/HR ,PR : 350 MMWG KW – 132 KW ,
APPLICATION : AFTER BAG FILER FAN

Vento Tesla Fan Markets

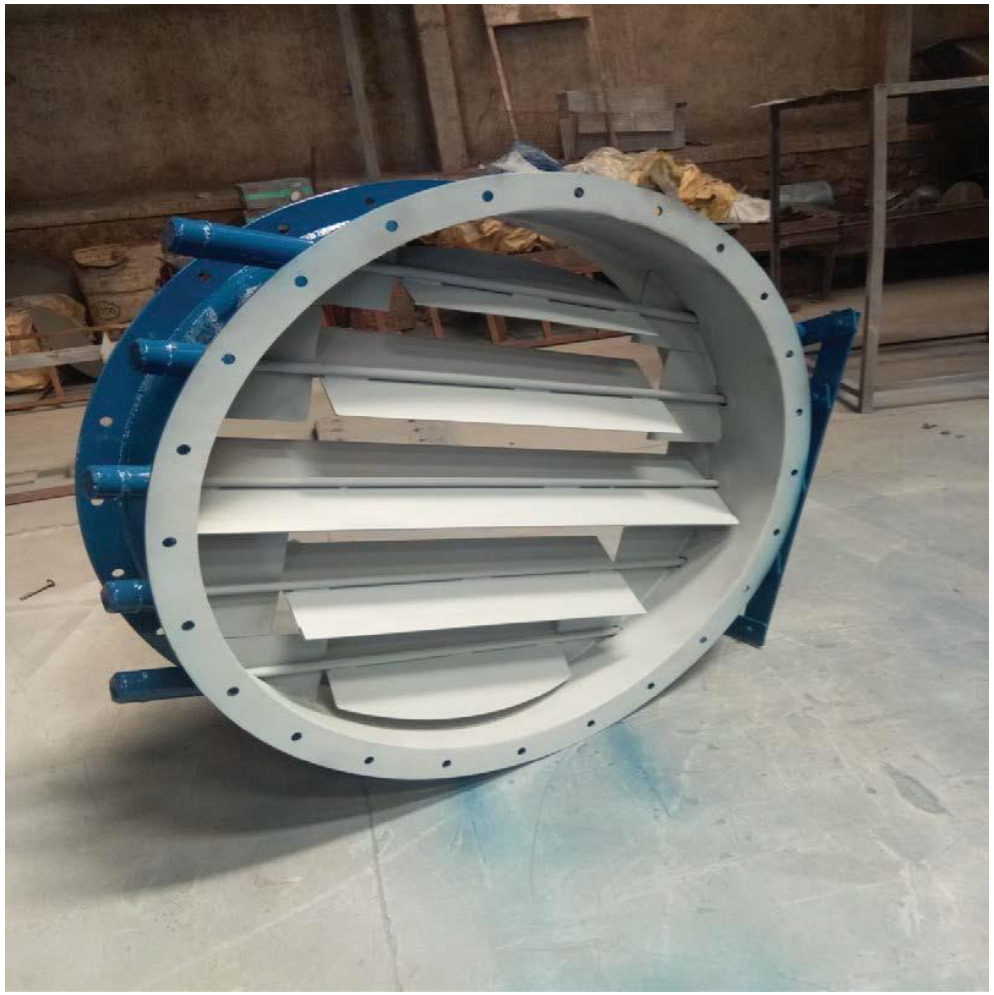
FAN SUPPLIED TO TVG CHEMICAL : FAN CAPCITY :8,000M3/HR ,PR : 650 MMWG KW – 45KW ,

APPLICATION : AFTER WET SCRUBBER

Vento Tesla Fan Markets

FAN SUPPLIED TO TVG CHEMICAL : FAN CAPCITY :,65000M3/HR ,PR : 450 MMWG KW – 90KW

APPLICATION : FD FAN



Vento Tesla Fan Markets

FAN SUPPLIED TO NAVA BHARAT VENTURIES :

FAN CAPCITY :75000M3/HR ,PR : 550 MMWG KW – 125 KW

APPLICATION : FLUE GAS IDFAN

TESLA FAN SUPPLIED TO HIL PVT LTD :

PLUG-FAN CAPCITY :,45000M3/HR , PR : 250 MMWG KW – 45 KW

APPLICATION : BOILER

Vento Tesla Fan Markets

FAN SUPPLIED TO DALMIA CEMENT ,

CAP:145000 M3/HR. PR : 450 mmWg

FAN SUPPLIED TO INDIA CEMENT ,

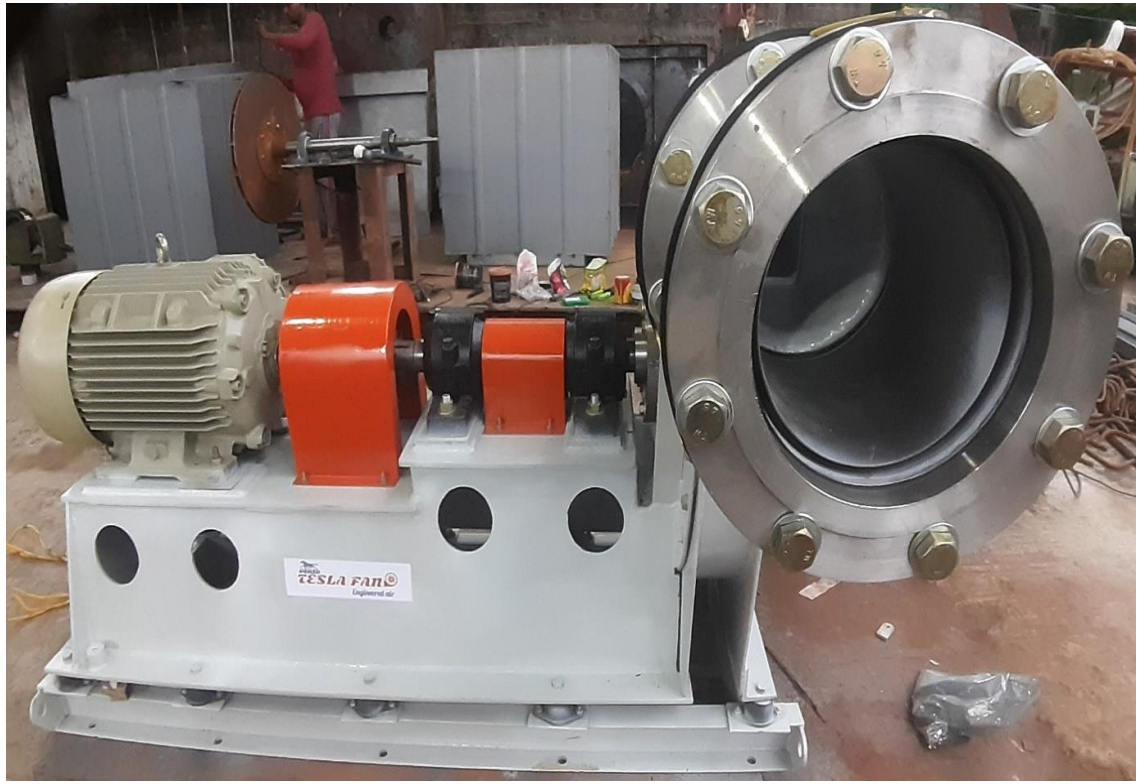
CAP:175000 M3/HR. PR 50,

MOTOR -45 KW, 990 RMP , DIA -1600 – AXIAL FAN

Vento Tesla Fan Markets

FAN SUPPLIED TO HPCL -RAIPUR : FAN

CAPCITY : 2000M3/HR ,PR : 950 MMWG ,APPLICATION : VRU



FAN SUPPLIED TO HPCL -VIZAG

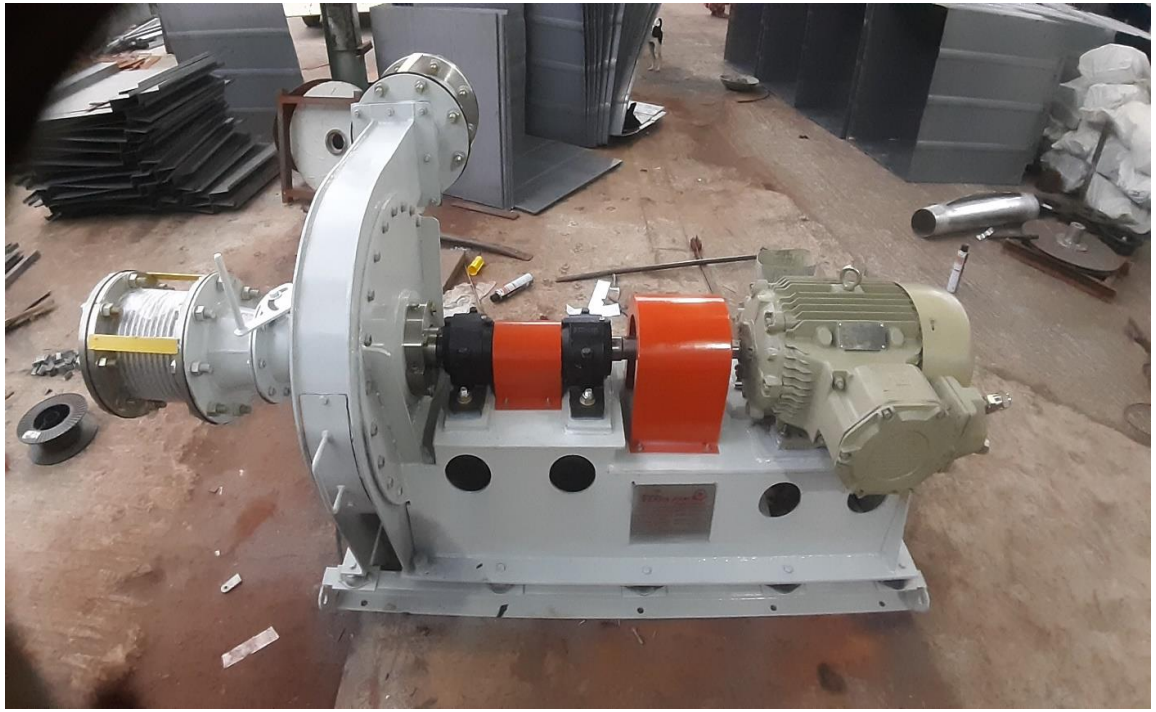
FAN CAPCITY : 1900M3/HR ,PR : 950 MMWG ,APPLICATION : VRU

Vento Tesla Fan Markets

TESLA FAN SUPPLIED TO IOCL -LUCKNOW

FAN CAPCITY : 1900M3/HR ,PR : 950 MMWG ,

APPLICATION : VRU



FAN SUPPLIED TO EXPANDED POLYMER

FAN CAPCITY : 5000M3/HR ,PR : 350 MMWG ,

APPLICATION : EXHAUST FAN

Vento Tesla Fan Markets

FAN SUPPLIED TO OPTIMA POWER

AXIAL FAN CAPCITY : 75000 CMH/ PR 50 MMWG -ATEX FAN

FAN SUPPLIED TO EXPANDED POLYMER

FAN CAPCITY : 7000M3/HR ,PR : 450 MMWG ,

APPLICATION : SUPPLY FAN

Vento Tesla Fan Markets

FAN SUPPLIED TO OPTIMA POWER

AXIAL FAN CAPCITY : 75000 CMH/ PR 50 MMWG -ATEX FAN

FAN SUPPLIED TO EXPANDED POLYMER

FAN CAPCITY : 7000M3/HR ,PR : 450 MMWG ,

APPLICATION : SUPPLY FAN

Vento TESLA FAN Engineered air

Applications


Cement


Food, Dairy


Paint Booth


Pulp & Paper


Packaging


Furnaces


General Manufacturing


De-dusting, Bag Filters


Power Boilers


Refinery Fired Heaters


Steel Processing

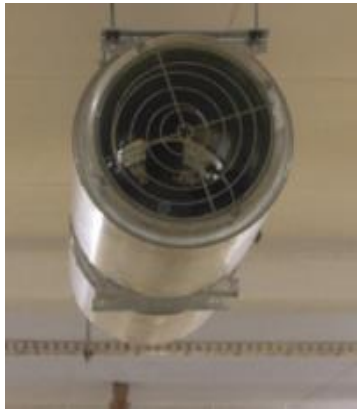

WasteWater Treatment


Ship-building


Tunnels


Glassware


HVAC



Fan Basics

CENTRIFUGAL FAN - PURPOSE

- The basic purpose of a “fan” is to move a mass of gas or air at the desired velocity.
- Fan will deliver the gas or air with an appreciable rise in pressure to overcome some kind of resistance in flow
- Air or gas enters the impeller axially through the inlet nozzle and leaves radially.
- The pressure is developed due to the centrifugal force imparted on the gas trapped between the blades.
- The partial vacuum creates further suction imparting continuous air / gas flow.

Fan Basics

PARAMETERS REQUIRED FOR FAN SELECTIONS

- ✓ **Inlet Flow**
- ✓ **Inlet Static Pressure**
- ✓ **Outlet Static Pressure**
- ✓ **Inlet Temperature**
- ✓ **Mechanical Design Temperature**
- ✓ **Inlet Actual Density or Inlet Reference density with Site elevation**
- ✓ **Dust Load**

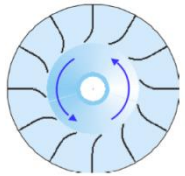
CENTRIFUGAL FAN – TYPES OF IMPELLER

- Aerofoil Blade – Max. 88 to 90 %

- Backward Curved – Max. 85 to 88 %

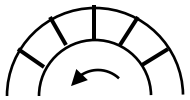
- Backward Inclined – Max. 75%

- Radial Tipped - Max. 70%



- Forward Curved – Max. 65%

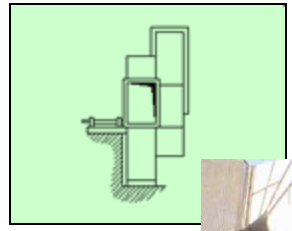
- Straight Radial – Max. 60%



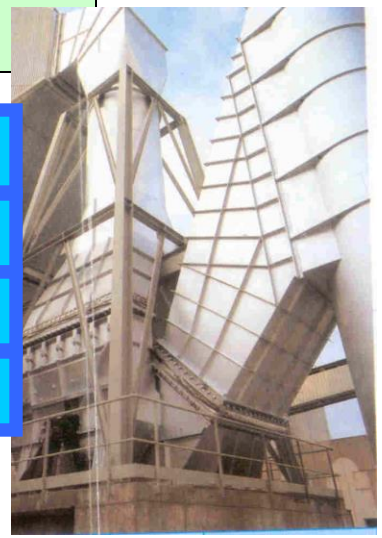
FAN ARRANGEMENT

OVERHUNG	BELT DRIVE		DIRECT DRIVE	
	S1	S1A	S8	S8A
	TS1	TS1A	TS8	TS8A

BETWEEN BEARINGS	BELT DRIVE		DIRECT DRIVE	
	3S1A	3D1A	3S8A	3D8A
	3TS1	3TS1A	3TS8	3TS8A
	3TD1	3TD1A	3TD8	3TD8A



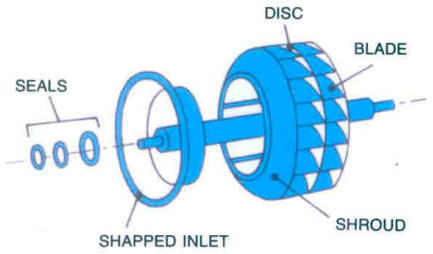
TFBB
TDR
380
3TD 8A

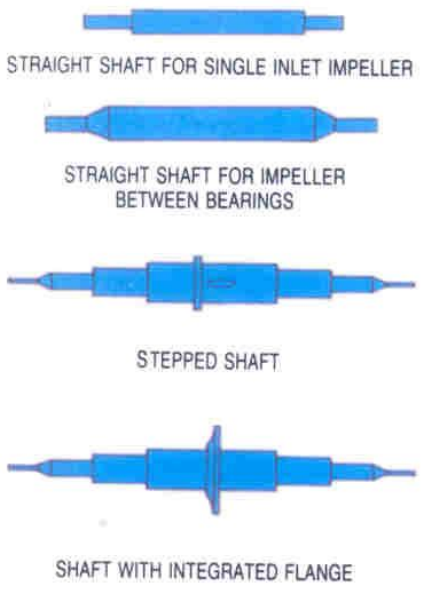


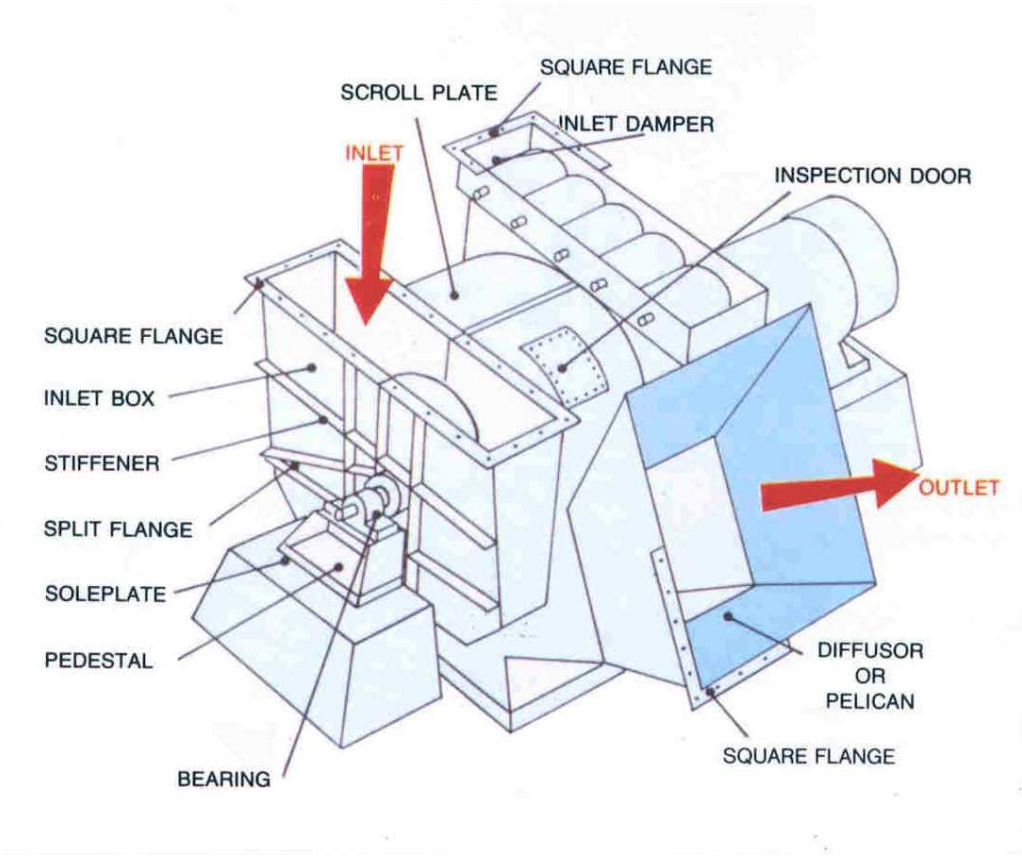
LEGEND

1= Belt Drive
3= Between Bearings
8= Direct Drive
T= Inlet Box
A= With independent bearing pedestals
S= Single Inlet
D= Double Inlet

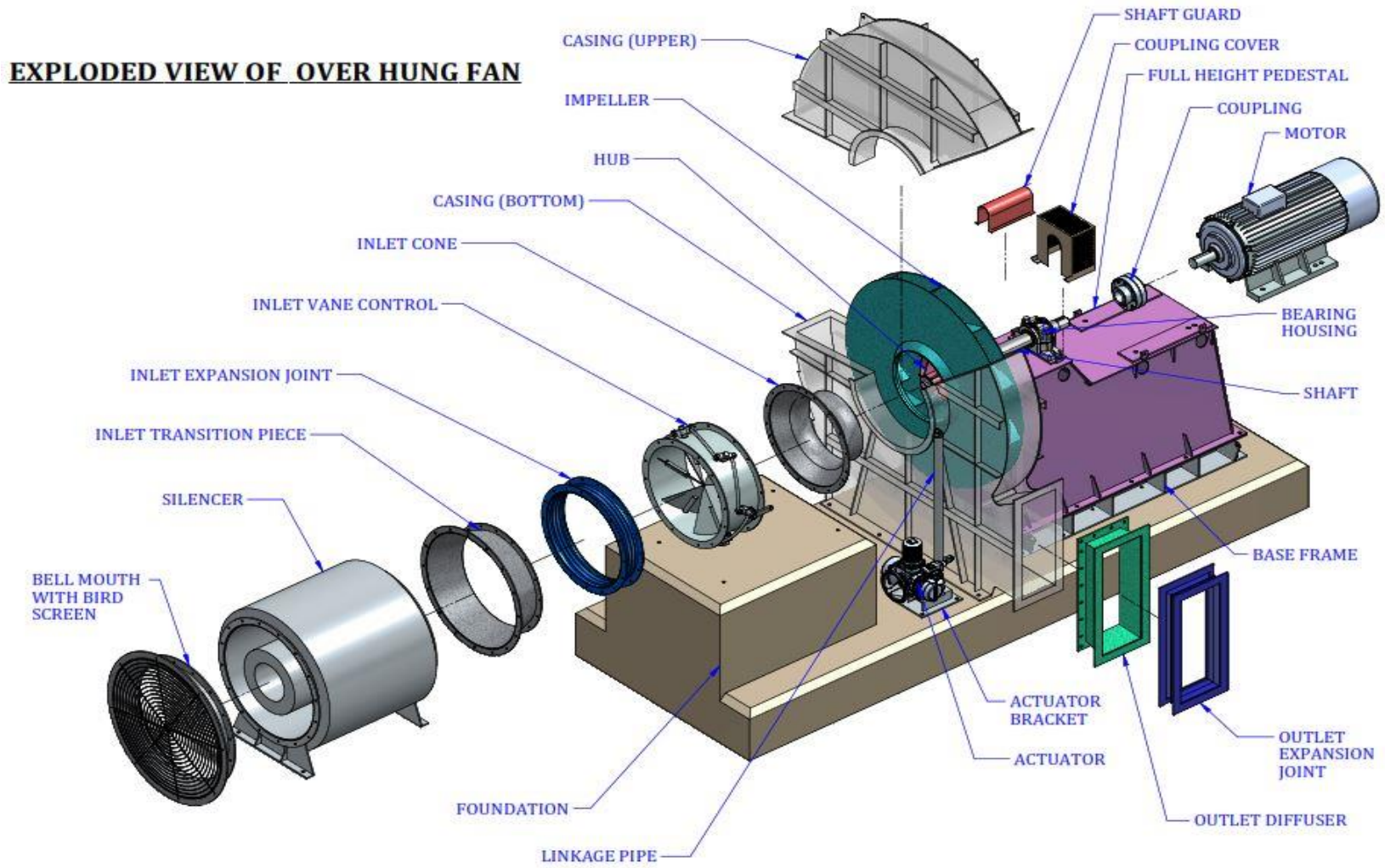
CENTRIFUGAL FAN TYPES AND TERMINOLOGY



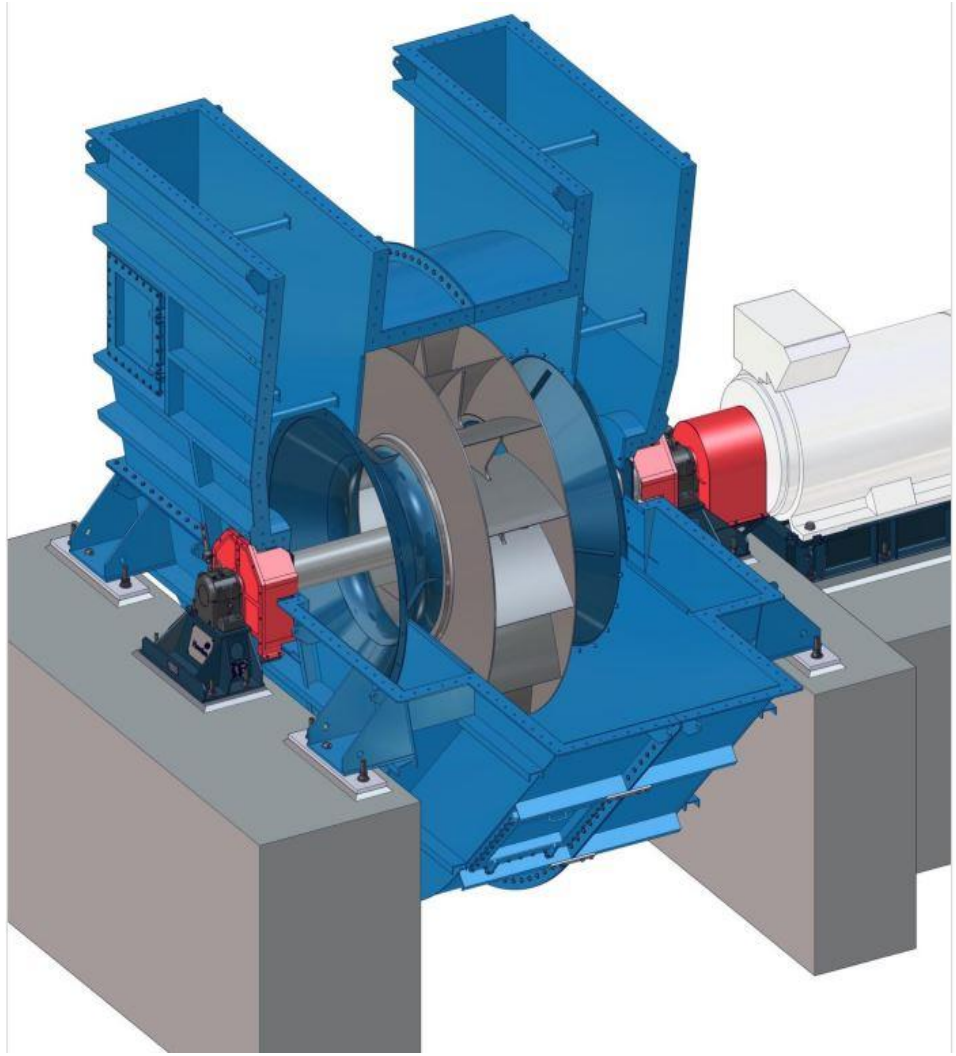


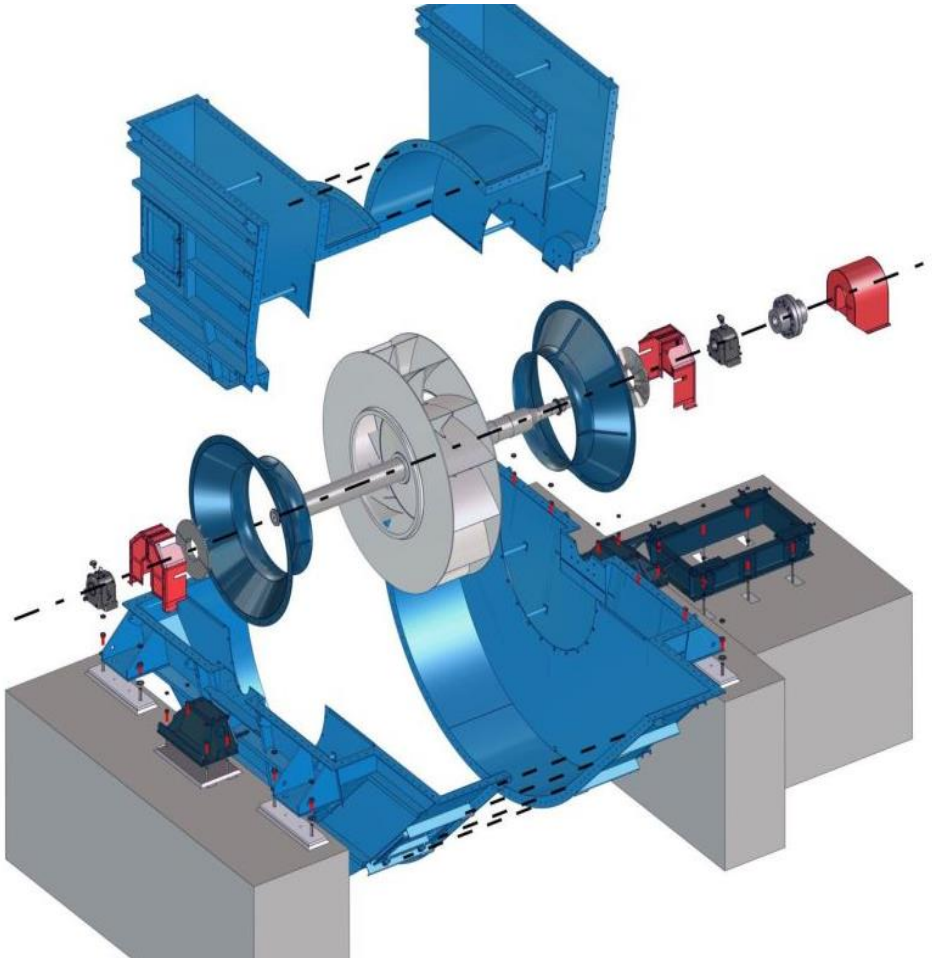


CENTRIFUGAL FAN - OVERHUNG ARRANGEMENT



CENTRIFUGAL FAN - SIMPLY SUPPORTED ARRANGEMENT





CENTRIFUGAL FAN - FAN LAWS CHANGE IN SPEED

- Volume is directly proportional to fan speed

$$\frac{Q_2}{Q_1} = \frac{N_2}{N_1}$$

- Pressure is proportional to the square of the velocity

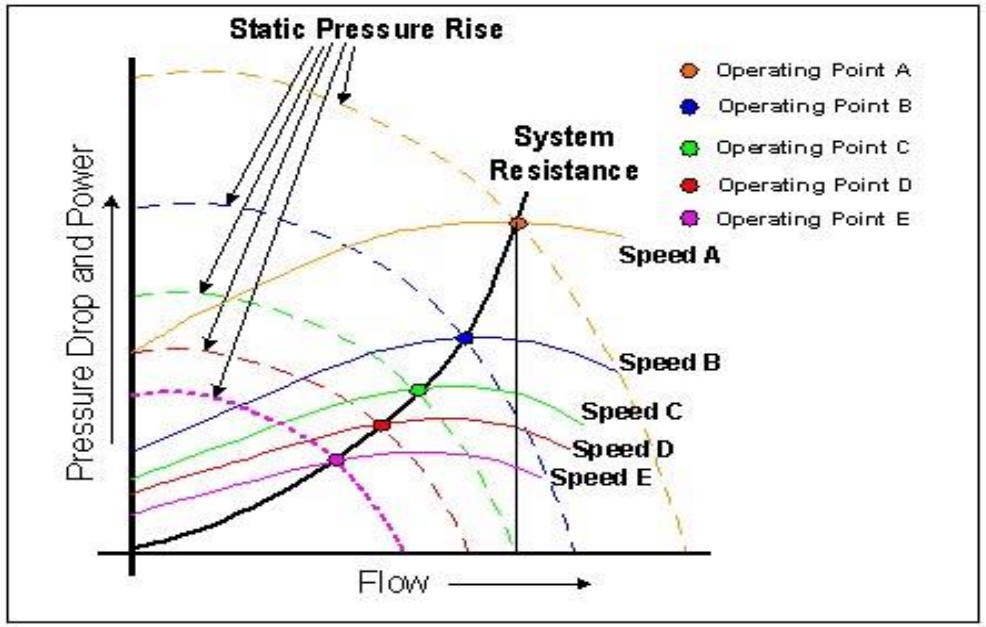
$$\frac{TP_2}{TP_1} = \frac{SP_2}{SP_1} = \frac{VP_2}{VP_1} = \left(\frac{N_2}{N_1}\right)^2$$

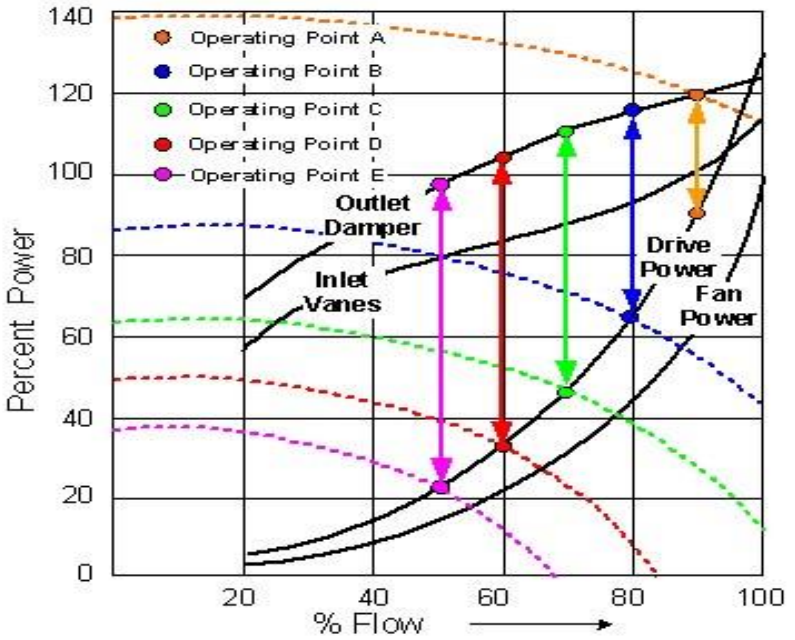
- Power is the product of volume by energy

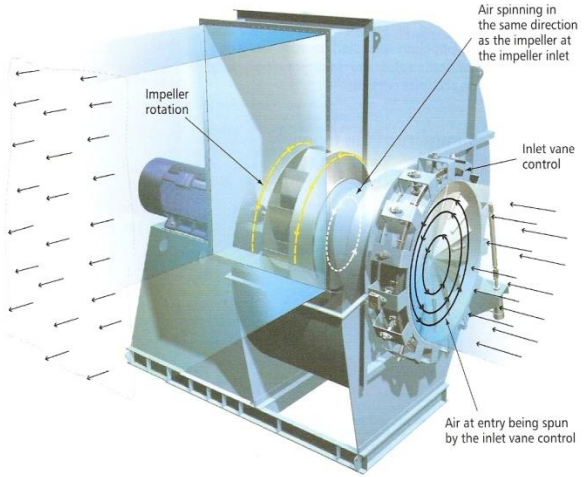
$$\frac{P_2}{P_1} = \left(\frac{N_2}{N_1}\right)^3$$

Fan Basics

CENTRIFUGAL FAN - PERFORMANCE CURVE



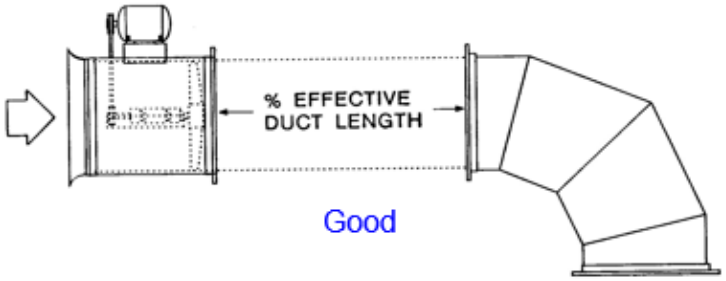


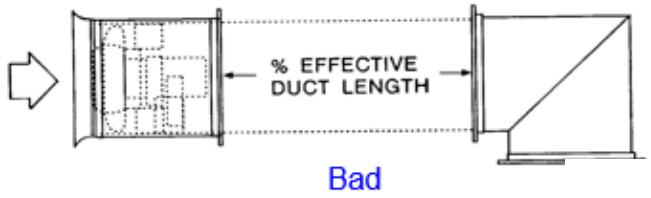


1. Variable speed
2. Inlet vane control
3. Damper

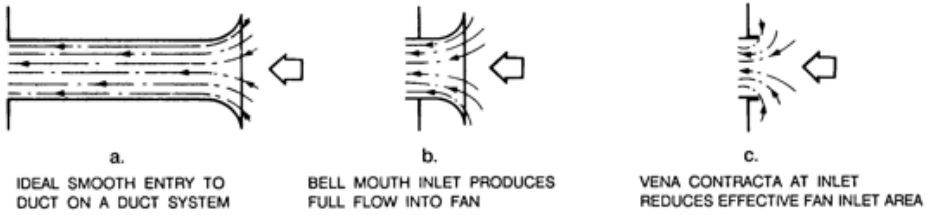
RADIAL FANS – INSTALLATIONS AND SYSTEM EFFECTS

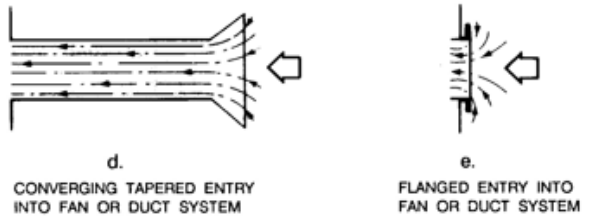
Elbows



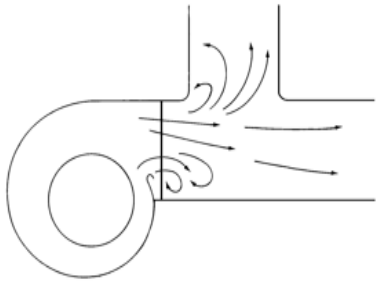


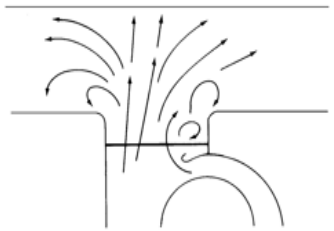
Fan Inlet





Duct Branches





Products and Applications

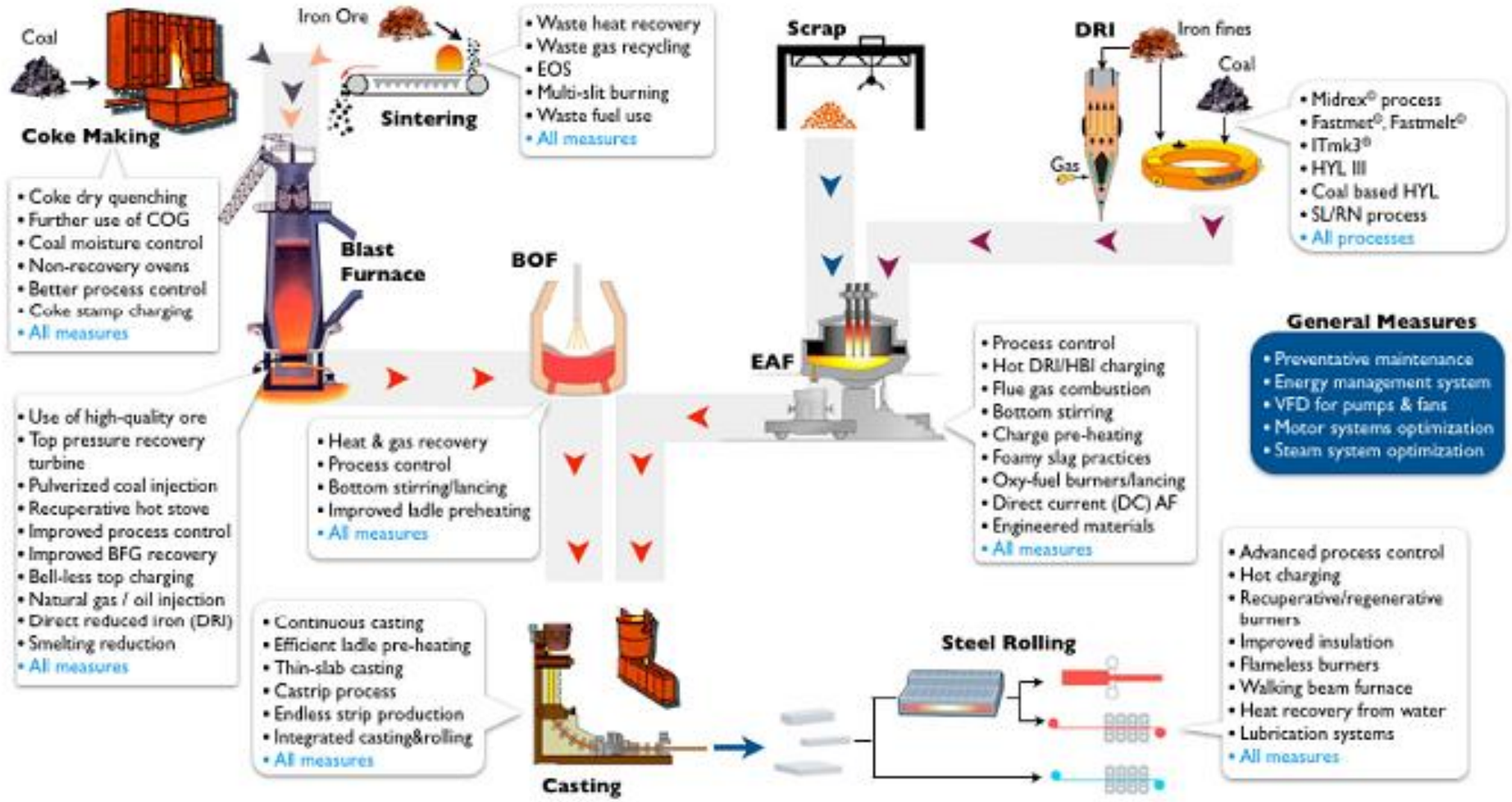
VENTO TESLA FAN PRODUCTS FOR CEMENT PRODUCTIONS :

- Process fans
- Auxiliary fans

Fan		Typical solutions				
		Blade type	Design	Maintenance	Hermit Crab solutions: performance, efficiency, noise, wear issues	Specific
1	Raw mill Fan	Backward curved blade	Wear protection 50 to 100 %, Chromium carbide	Repair of worn plates	performance, efficiency, wear issues (use of tungsten carbide)	Dust deflectors
2	Main EP fan/ Final Exhaust fan	Backward curved blade Backward airfoil blade behind EP			performance, efficiency	
3	Kiln ID Fan	Backward curved blade	Material selection Wear protection 25 to 50% Chromium carbide Rotor with high critical speed: above 1.5	Repair of worn plates	performance, efficiency, wear issues (use of tungsten carbide)	
4	Coal mill exhaust fan	Backward curved blade	Wear protection 100% except after EP, Chromium carbide	Repair of worn plates	performance, efficiency, wear issues (use of tungsten carbide)	Dust deflectors
5	Primary air fan	Backward curved blade Backward airfoil blade				
6	Clinker cooler fans	Backward curved blade	Silencers			
7	Cooler exhaust fan	Backward curved blade	Standard wear plates (behind EP) or Chromium carbide (after cyclones)	Repair of worn plates	performance, efficiency, wear issues (use of tungsten carbide)	Dust deflectors
8	Cement mill exhaust fan	Backward curved blade	Wear protection 100% except after EP Chromium carbide	Repair of worn plates	performance, efficiency, wear issues (use of tungsten carbide)	Dust deflectors
9, 10	Booster fans	Backward curved blade	Material selection Wear protection 25 to 50% Chromium carbide	Repair of worn plates	performance, efficiency, wear issues	

Products and Applications

VENTO TESLA FAN PRODUCTS FOR STEEL PRODUCTIONS :



CERTIFICATES

CERTIFICATE

CLEPIER

This is to certify that

VENTO TESLA FAN PRIVATE LIMITED

Registered Office:
3/1A, Kamdhenu Nagar, 1st Main Road, Thiruverkadu, Chennai – 600 077, Tamilnadu, India.

Works:
33/1A, Mettukuppam, Main Road, Vanagaram, Chennai – 600 095, Tamilnadu, India

ISO 9001:2015
Quality Management System

For the following scope

- Design, Manufacture and Sales of Centrifugal Fans & Blowers, Axial Fan, Air Handling Equipment & Material Handling Equipment

Certificate No: CL/A/56/QMS

This Certificate is Valid from Date: 13/09/2021 Until : 12/09/2024

Initial Certification Date : 13/09/2021
1st Surveillance on or before : 12/09/2022
2nd Surveillance one or before : 12/09/2023
Certification Valid Until : 12/09/2024

Authorized Signatory
For CLEPIER LTD.

Scan the QR code for current status and authenticity of the certificate

Accreditation Registration Number: PAC-GEAC-1812-102

UKcert Certification & Inspection

Certificate of Compliance

We hereby declare that the technical file of product complied with the requirement of Directive (2014/34/EU) ATEX Directive.

Certificate No.: TA-24162

Manufacturer
Name : VENTO TESLA FAN PRIVATE LIMITED
Address : PLOT NO. C, 3/1 MAIN ROAD, KAMADHENU NAGAR, THIRUVERKADU, THIRUVALLUR, CHENNAI – 600077, TAMIL NADU, INDIA.
Products :

Product Description	Type Description	Category	Product Group
Centrifugal Fan	TL- #630 - 500 & TFL- CBB -3 -40#60, TFL-HAC, TFL-HAB, TFL-HC, TFL-HD, TFL-HV, TFL-TL, TFL-FL, TFL-EL	2	Non-Electrical Equipment

Marking:

CE Ex II 2G 'c' T1...T6

CE Ex II 2D 'c' T1...T6

The Certification body has performed an audit of the above product quality system covering the design, manufacture and final inspection of the certified product. The quality system has been assessed, approved and is subject to continuous surveillance according to Directive (2014/34/EU) ATEX.

This certificate is issued under the following conditions:

1. It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design or type examination procedures, if requested.
2. The certificate remains valid until the manufacturing conditions or the quality systems are changed.
3. The certificate validity is conditioned by positive results or surveillance audits.
4. After Fulfilling The Relevant EU Legislation, the manufacturer shall affix to each device, of the above referenced models.
5. Compliance with the essential Health and safety Requirement has been assured by compliance with EN 14986:2017, EN ISO 80079-36:2016, EN ISO 80079-37:2016, EN1127-1:2019 & ISO 5801:2017.

Validity of this certificate can be verified at www.ukcert.uk/verify

Date of Certification	25th July. 2020
1st Surveillance Audit Due	24th July. 2021
2nd Surveillance Audit Due	24th July. 2022
Certificate Expiry (subject to the company maintaining its system to the required standard)	24th July 2023

Authorised Signatory

UK Certification & Inspection Ltd

Ex

Vento TESLA FAN
Engineered air

THANK YOU