



Pump

Fan & Blower

MISSION STATEMENT



We strive to be the best independent supplier of water and process pumps, fan&blowers packages. Our aim is to give a high level of professional service and support, to be dedicated to the needs of our clients; exceeding their expectations and delivering the best value solutions.



We appreciate how important the human element in business is. We ensure we get to know our customers and understand their needs, so we can provide them with the best value solution.



WHO WE ARE

Matrix is a global engineering solutions company, with over 14 years of experience in focusing on projects in Oil & Gas, Power Generation, utilities infrastructure.

We have offices in strategic locations in Europe, Canada, Middle East and Asia. This ensures we are close to our customers and suppliers and helps us execute the management of projects with a local focus, whilst keeping globally connected.

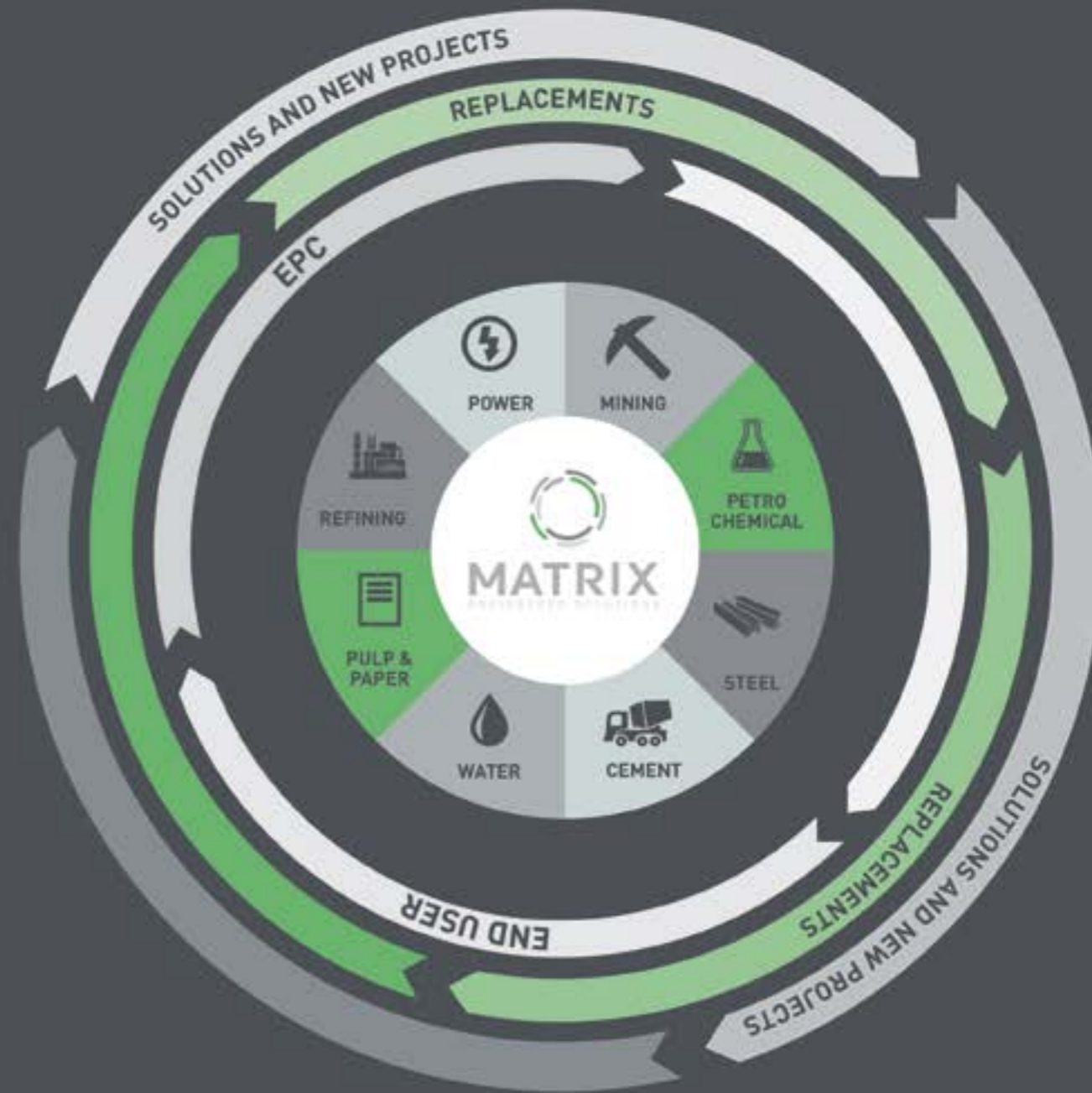
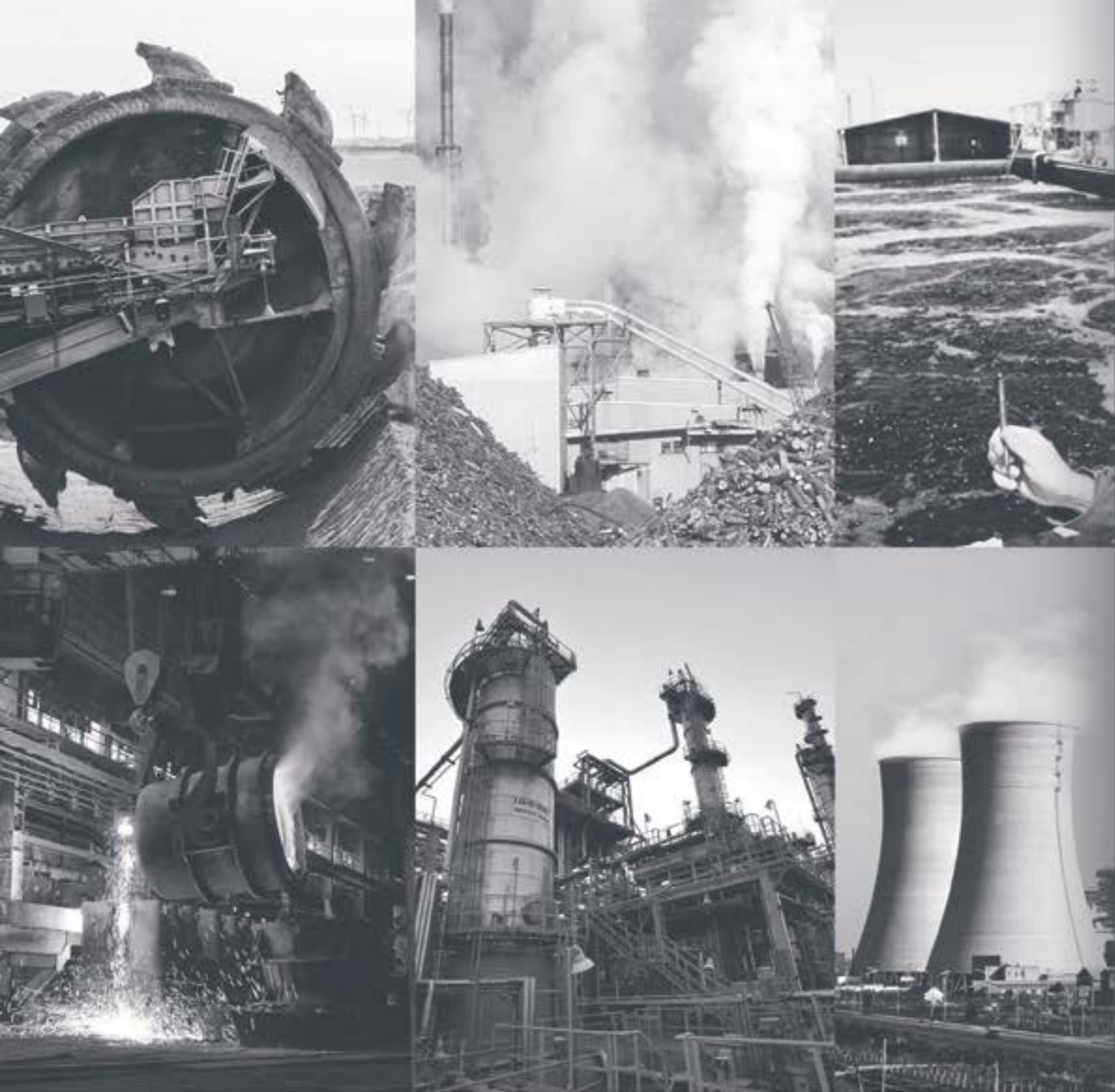


WHAT WE DO

Our scope includes pump, fan and blower packages for use in a variety of industries for fluid handling, air movement.

- **Pump**
- **Fan & Blowers**

We offer a specialist range of electro mechanical products that are used with rotating equipment.



HOW WE DO IT

We feel that our strength in the market comes from our close relationship with our customers, EPC Companies and the depth of experience that our team has.



We always strive to understand our client's needs and requirements and try put forward the best value solution.

MARKET APPROACH

NEW PROJECT

We work directly with End users and EPC companies to offer electro mechanical packages across the globe.



Our approach is always co-ordinated and geo-specific, involving our factory support and local offices to ensure we clearly understand the needs of all parties from consultant, end user, EPC so that we offer the right solution at the right place at the right price.

This strategic approach, alongside our high level of technical competence and close factory support, allows us to meet the expectations of our international high calibre customer base.

Key Points

- Selecting the right solution to match the project requirements
- Detailed Technical offer with good back-up and support
- Commercially focused to meet the client's expectation and budget
- Global Location for Order placement
- Experienced Project Management Team for order execution.



REPLACEMENT

We have a strong pedigree to be able to replace any existing pump or fan of any brand or type and give an enhanced /upgraded solution which provides better performance and longer life.

Paying for existing OEM replacement can be costly and pre-existing problems can quickly re-occur.

Our highly qualified engineers have acquired valuable experience from executing unique projects around the world. This allows us to upgrade any existing pump and fan with a more up-to-date, improved design with the same key dimensions, to give longer life solutions and enhanced performance.

Key Points

- Working directly with the factory engineering design team.
- Full site survey of existing equipment carried out
- Upgraded performance in same package size can often be achieved.



ANDRITZ
 OUR PARTNER
ANDRITZ
 PUMP SOLUTIONS



ANDRITZ is a global leading supplier of plants, equipment, and services for hydro power stations, the pulp and paper industry, the metal-working and steel industries.
 Headquarters: Graz, Austria.
 Global presence: over 250 production sites and service/sales companies worldwide.
 Decades of experience in building hydraulic machines and comprehensive process know-how form the basis of the high standard of ANDRITZ pump engineering.
 ANDRITZ offers everything from a single source from development work, model tests, engineering design, manufacture and project management, to after-sales service and training.
 ANDRITZ develops and manufactures standard and customized centrifugal pumps for a wide range of different applications and industries.

PUMP TYPES

FOR WATER APPLICATION



Single-stage centrifugal pumps ACP series

Industries: water, pulp and paper, food, mining, power, other industries
Design: single-stage, single-flow, open and semi-open impeller
Head: up to 190 m
Flow rate: up to 9000 m³/h
Pressure: up to 40 bar
Temperature: up to 200 °C
efficiency: up to 40 bar



Split case pumps ASP series

Industries: water, pulp and paper, power, other industries
Design: single-stage, axial split case
Head: up to 250 m
Flow rate: up to 40.000 m³/h
Efficiency: up to %91
Power: up to 7000 KW
Pressure: up to 25 bar
Temperature: up to 80 °C



Split case pumps for hot medium applications ASPH series

Industries: water, pulp and paper, power, other industries
Reference diameter: (DN) 100 to 1400, DIN EN1092 standard
Pressure classes: PN16/ PN25, depending on application, size, and material
Head: up to 180 m
Flow rate: up to 30.000 m³/h
Media temperature: up to 180°C
Efficiency: up to 90%
Drive power: up to 7 MW



Vertical line Shaft pumps

Industries: water, power, other industries
Design: radial, mixed flow or axial, adjustable or fixed
Head: Up to 80m (single-stage) up to 120 m (multi-stage)
Flow rate: up to 70.000 m³/h
Power: up to 10.000 KW
Efficiency: highest efficiency available



Multi-stage axial split case pumps ASPM series

Industries: water, power, other industries
Design: Multi-stage axial split case pumps with various impeller arrangements in single or double flow design
Head: up to 1000 m
Flow rate: up to 10 m³/s
Efficiency: Highest efficiency available
Power: up to 40 MW



Vertical Submerged pumps SAT/CAT series

Industries: water, pulp and paper, other industries
Design: vertical, submerged single-stage, single-flow, open or vortex impeller
Head: up to 50 m
Flow rate: up to 800 m³/s
Pressure: up to 16 bar
Temperature: up to 60 °C
Consistency: up to %6



High-pressure pumps, MP series

Industries: water, pulp and paper, power, other industries
Design: multi-stage, closed impellers
Head: up to 950 m
Flow rate: up to 400 m³/h
Pressure: up to 100 bar
Temperature: up to 160 °C
Efficiency: up to %78



Double-suction submersible motor pumps, HDM (Heavy Duty Mining) series.

Industries: water, mining, other industries
Design: multi-stage, double suction submersible motor
Head: up to 1.500 m
Flow rate: up to 6.000 m³/h
Pressure: up to 150 bar
Temperature: up to 75 °C
Speed: up to 3.600 rpm

PUMP TYPES

FOR WATER APPLICATION



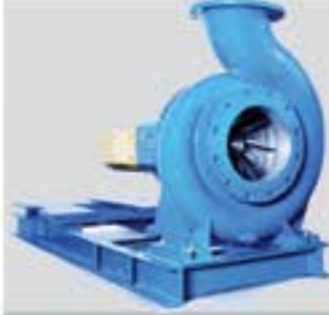
Medium-consistency pumps MC series

Industries: pulp and paper, food
Design: single-stage, single-flow, semi-open impeller
Consistency: up to %16
Head: up to 190 m
Flow rate: up to 13.000 adm/d
Pressure: up to 25 bar
Temperature: up to 140 °C



Pump as turbines

Industries: power
Design: single-stage and multi-stage; single-flow or double suction; open or closed impeller
Head: up to 80 m
Flow rate: up to 6 m³/s
Out put: up to 2 MW



Sewage pumps, dry VP/CP series

Industries: water
Design: Single-stage, single-flow; semi-open vortex impeller
Head: Up to 75 m
Flow rate: up to 1,800 m³/h
Pressure: up to 16 bar
Free passage: Up to 140 mm
Temperature: up to 120 °C



Single-flow submersible motor pumps, SU series

Industries: water, mining, other industries
Design: multi stage, single suction submersible motor
Head: up to 800 m
Flow rate: up to 900 m³/h
Pressure: up to 100 bar
Temperature: up to °75 C
Speed: up to 3.600 rpm



High-pressure pumps, HP series

Industries: water, pulp and paper, power, other industries
Design: multi-stage, high-pressure
Head: up to 630 m
Flow rate: up to 850 m³/h
Pressure: up to 63 bar
Temperature: up to °140 C
Speed: up to 3.600 rpm
Efficiency: up to %90



Sewage pumps, wet SW series

Industries: water
Design: single-stage, submersible, close-coupled
Head: up to 80 m
Flow rate: up to 2,600 m³/h
Pressure: up to 10 bar
Temperature: up to °40 C



Self-priming centrifugal pumps AD series

Industries: water, pulp and paper, food, other industries
Design: single-stage, single-flow, semi-open impeller
Head: up to 190 m
Flow rate: up to 9,000 m³/h
Pressure: up to 40 bar
Temperature: up to 200 °C
Efficiency: up to 88%



Sewage pumps, dry SD series

Industries: water
Design: single-stage, channel impeller
Head: up to 100 m
Flow rate: up to 10,000 m³/h
Free passage: up to 200 mm
Pressure: up to 15 bar
Temperature: up to °140 C
Speed: up to 3600 rpm

HIGHLIGHTED PROJECT



Sina mass OKI project

OKI 2/2 mt/y chemical craft pump project



Project Overview

- Country: Indonesia;
- Pumps: 596 sets pump including 33 VLSP for a pulp mill in Sumatra island;

Benefit:

- Significant reference in Standard process pump area
- Full set of process pumps for the biggest pulp plant in the world covering all the mill areas including water intake.

Project voest alpin

2 cooling water pumps for a combined cycle power plant



Country: Austria
 Type: Vertical Line Shaft Pumps
 Impeller: mixed flow, adjustable during operation
 Head: 21.00 m
 Flow: 7.08 m³/s
 Power: 1,800 kW
 Speed: 370 rpm

Project JSCO

Pumps for Steel Industries

Application: WTP pumps

Field: Steel making

Pump Type: ACP150-400.5 ,
ACP150-500.8 , ACP250-480.5 , ACP150
500.8 , ACP 100-500.8 , ACP 150-500.8 ,
ISO125X100-315.5 , ACP150-400.5
SW 200-460.Z/H/N , SW 80-250.K/G/N
Capacity(m³/h): 570 , 485 , 1120 , 588 ,
375 , 500 , 500 , 260 , 560 , 579 , 78.8
Head(m): 55, 95 , 50 , 80 , 100 , 75, 135 ,
35, 32 ,32



Project ECO Paper

Pulp & Paper / Romania 2015

Pump Type:
ACP Series(Qty): 39
S Series(Qty): 21
ISO Series(Qty): 3
FP Series(Qty): 3
VP series(Qty): 2
SAT Series(Qty): 4



Project TCT

South Africa

Field: Mining

Application: Acid mine water PH 2,5

Quantity: 7 Unit

Duty: 1500 m³/h, 430 m / 330 m

Materials: Duplex steel 1.4517

GX2CrNiMoCuN3-3-6-25

Power: 2400 kW

Voltage: 6600 Volt

Speed: 1485 rpm



Project Suiker Unie

Sugar industry / Germany

Application: water transport, muddy
water, press water, juice, milk of lime

Product: Crystal sugar

No. of pumps: 9

Types: No.

Beet capacity: 12.000 t/d

S200-470 HW: 4

ACP100-315 HW 1

ACP100-315 1

ACP125-250 1

ACP150-315 1

ISO125x100-315 1





OUR PARTNER

AEROMECCANICA STRANICH

Industrial Ventilation
and Dust Control

AEROMECCANICA STRANICH started its own activity in 1928, with the engineering, manufacturing and installation of centrifugal fans, axial fans and dampers for all the industrial applications, acquiring and keeping over the years, a leading position in the field. Since 1970 the Company developed the interest in the field of systems for pollutant and dusty gases control; on this purpose a structure has been specifically created for the engineering, manufacturing and installation of equipments such as wet and dry filters, cyclones, scrubbers and pneumatic cleaning and conveying systems, always trying to propose technologically advanced solutions, realized on the base of own licenses, or as a result of the cooperation with the leading Companies in the field, based in Europe and all over the world, achieving a role of excellence also in the pollution control field.

Industrial Ventilation

- HIGH PRESSURE MULTISTAGE CENTRIFUGAL Blowers
- HIGH PRESSURE CENTRIFUGAL FANS
- HIGH FLOWRATE CENTRIFUGAL FANS
- HEAVY DUST CONTENT CENTRIFUGAL FANS
- AXIAL FANS
- FANS AND BLOWERS ACCESSORIES

Dust control

- HIGH PRESSURE BAG FILTERS
- HIGH PRESSURE & TEMPERATURE CYCLONES
- BAG FILTERS
- CARTRIDGE FILTERS
- CYCLONES
- SCRUBBERS

The centrifugal fans bcsn, bcfn and tss series have been designed to convey air or gas with a maximum concentration of dust of 100 mg/nm³ (bcsn/bcfn) or 500 mg/nm³ (tss), they can be installed in:

- De-dusting,
- Process air drying,
- Fumes extraction,
- Industrial air conditioning,
- Waste incineration systems,
- Reformer,
- Boiler & Furnaces,

Our Fans & Blowers capacities can reach up to 2,000,000 m³/h, static pressure up to 10,000 mmh₂o (depend on application) and installed power of 8,000 kw.

The impeller of bcsn series has airfoil blades, the bcfn one has flat blades backwardly inclined and the tss one has curved blades backwardly.



FAN TYPES FOR ALL INDUSTRIES



ABD SERIES

1. volumetric flowrate up to 10.000 m³/h
2. static pressure up to 9.000 mmH₂O (multi-stage) and 2.500 mmH₂O (single-stage)
3. installed power up to 350 kW

Advantage:

- Impeller is best suited for fluid with dusts maximum concentration of 200 mg/Nm³.
- Highest Efficiency up to %75



TR SERIES

1. volumetric flowrate up to 300.000 m³/h
2. static pressure up to 800 mmH₂O
3. installed power up to 1000 kW

Advantage:

- Suitable for very dusty and abrasive fluid
- Impeller is best suited for fluid with dusts maximum concentration of 30 g/Nm³.
- Highest Efficiency up to %72



TSS SERIES

1. volumetric flowrate up to 350.000 m³/h
2. static pressure up to 1000 mmH₂O
3. installed power up to 900 kW

Advantage:

- Static efficiencies of %73 are obtained and noise levels are kept to a minimum.
- The TSS impeller is best suited for fluid with dusts maximum concentration of 200 mg/Nm³.



BCFN SERIES

1. volumetric flowrate up to 700.000 m³/h
2. static pressure up to 600 mmH₂O
3. installed power up to 800 kW

Advantage:

- Static efficiencies of %78 are obtained and noise levels are kept to a minimum.
- The BCFN impeller is best suited for fluid with dusts maximum concentration of 500 mg/Nm³.

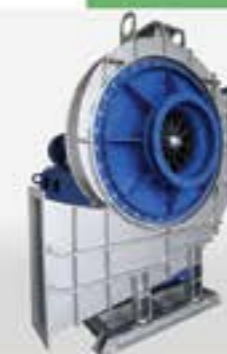


BCSN SERIES

1. volumetric flowrate up to 700.000 m³/h
2. static pressure up to 1.000 mmH₂O
3. installed power up to 2.000 kW

Advantage:

- Static efficiencies of %84 are obtained and noise levels are kept to a minimum.
- The BCSN impeller is best suited for fluid with dusts maximum concentration of 100 mg/Nm³.



HP SERIES

Turbofans type HP are designed for very high pressure and medium flow rate applications. By limiting the rotational speed, we allow for %15 energy savings in comparison with existing products in the market. The BDC impeller has 13 backwardly curved blades. Turbofans has a unique impeller innovative design (diameter of up to 2000 mm) which leads to static efficiencies up to %85.



BDC SERIES

Turbofans type BDC are designed for very high pressure and low flow rate applications. Turbofans has a unique impeller innovative design (diameter of up to 2000 mm) which leads to static efficiencies up to %85. By limiting the rotational speed, we allow for %15 energy savings in comparison with existing products in the market. The BDC impeller has 18 backwardly curved blades.



TS SERIES

1. volumetric flowrate up to 250.000 m³/h
2. static pressure up to 1400 mmH₂O
3. installed power up to 1000 kW

Advantage:

- Static efficiencies of %76 are obtained and noise levels are kept to a minimum.
- The TS impeller is best suited for fluid with dusts maximum concentration of 200 mg/Nm³.

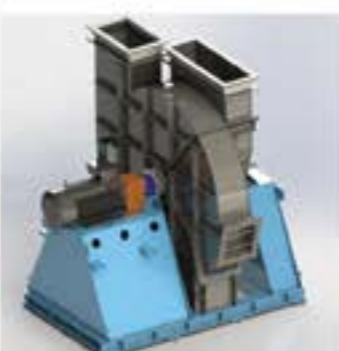


H-HR-HS

1. volumetric flowrate up to 250.000 m³/h for H series, 150.000 m³/h for HR series and 100.000 m³/h for HS series
2. static pressure up to 2.000 mmH₂O
3. installed power up to 2.000 kW for H series and 1000 kW for HR and HS series

Advantage:

- The H-HR-HS impeller is best suited for fluid with dusts maximum concentration of 200 mg/Nm³.



K-KR SERIES

1. volumetric flowrate up to 200.000 m³/h for K series and 120.000 m³/h for KR series
2. static pressure up to 1.850 mmH₂O
3. installed power up to 1.000 kW for K series and 800 kW for KR series

Advantage:

- Static efficiencies of %80 are obtained and noise levels are kept to a minimum.
- The K-KR impeller is best suited for fluid with dusts maximum concentration of 100 mg/Nm³.



TSAN SERIES

1. volumetric flowrate up to 500.000 m³/h
2. static pressure up to 1.850 mmH₂O
3. installed power up to 2.000 kW

Advantage:

- Static efficiencies of %82 are obtained and noise levels are kept to a minimum.
- The TSAN impeller is best suited for fluid with dusts maximum concentration of 100 mg/Nm³.



MULTI-STAGE CENTRIFUGAL FANS/BLOWERS

1. volumetric flowrate up to 10.000 m³/h
2. static pressure up to 8.000 mmH₂O
3. installed power up to 500 kW

Advantage:

- Multi stage fans/blowers are a good technical and also commercial solution. Although the static efficiency is not very high, these solutions can be used instead of some centrifugal compressor, usually more expensive.



DUAL DRIVE CENTRIFUGAL FANS/BLOWERS

When in a plant is available steam with high pressure and temperature, it can be used to feed steam turbines that provide power for fans and blowers.

Usually also an electric motor is added as back-up driver when steam is not available for any reason. This situation is the typical background for a Dual Drive solution.



AXIAL FANS - VAO SERIES

1. capacities up to 1.600.000 m³/h
2. static pressure up to 200 mmH₂O
3. installed power up to 650 kW

Advantage:

- Axial fans VAO can reach static efficiency up to %70.
- Maximum temperature of continuously operating (impeller only) is 150 °C.
- The casing are protected by hot dip galvanisation in accordance with UNI 66-5744.



DAMPERS AND ACCESORIES FOR FANS AND BLOWERS

- Inlet Guide Vane, Inlet/Discharge Dampers, Butterfly Dampers and VIV
- Rainhoods, inlet screens, filters and sand trap, to be placed on air intakes on inlet stacks for suction protection against rain, sand, insects...
- Venturi flow meters
- Silencers on suction or discharge side
- Guillotine/Isolation dampers for suction or discharge
- Check dampers
- Anti-backflow valve-dampers

PRODUCT REFERENCES

HIGHLIGHTED PROJECT



INDUSTRY : STEEL

Location	SAO PAULO-BRAZIL
Year	2009
Fan type / Arrangement	TSAN 160/8
Quantity	2
Flow Rate (m3/h)	123.5
Pressure (mmwg)	1.27
Temperature (°C)	180
Rotational Speed (rpm)	1.785
Installed Power (kW)	670
Applicable Standards	A.S. std



INDUSTRY : STEEL

Location	ANGLEFORT- FRANCE
Year	2009
Fan type / Arrangement	TRS 220/3
Quantity	1
Flow Rate (m3/h)	341.6
Pressure (mmwg)	630
Temperature (°C)	190
Rotational Speed (rpm)	950
Installed Power (kW)	750
Applicable Standards	A.S. std



INDUSTRY : STEEL

Location	BHUSHAN STEEL INDIA
Year	2010
Fan type / Arrangement	ABD 113/7 TS
Quantity	2
Flow Rate (m3/h)	1,700
Pressure (mmwg)	9,178
Temperature (°C)	50
Rotational Speed (rpm)	2,980
Installed Power (kW)	130
Applicable Standards	A.S. std



INDUSTRY : COPPER PLANT

Application	N2 Blower
Fan type / Arrangement	ABD 117 DS
Quantity	2
Flow Rate (m3/h)	21,951
Pressure (mmwg)	752,0
Temperature (°C)	60
Rotational Speed (rpm)	2,980
Installed Power (kW)	300 kW
Applicable Standards	Stranich Std.



INDUSTRY : STEEL

Application	Ejector Stack Fan
Fan type / Arrangement	BCSN 730 DWDI
Quantity	1
Flow Rate (m3/h)	688,577
Pressure (mmwg)	910
Temperature (°C)	45
Rotational Speed (rpm)	1,490
Installed Power (kW)	2,300
Applicable Standards	Stranich Std.



INDUSTRY : PETROCHEMICAL

Application	Flue Gas
Fan type / Arrangement	BCSN-730 DWDI
Quantity	2
Flow Rate (m3/h)	853,708
Pressure (mmwg)	744.8
Temperature (°C)	147
Rotational Speed (rpm)	1638
Installed Power (kW)	2500
Applicable Standards	API



INDUSTRY : STEEL

Application	Main Air Blower
Fan type / Arrangement	K 260 M - DWDI
Quantity	1
Flow Rate (m3/h)	439,215
Pressure (mmwg)	2,350
Temperature (°C)	45
Rotational Speed (rpm)	1,490
Installed Power (kW)	4,000
Applicable Standards	Stranich Std.



INDUSTRY : PETROCHEMICAL

Location	Shell - Pearl Project(Qatar)
Fan type / Arrangement	BCSN-660 DWDI
Quantity	2
Flow Rate (m3/h)	300
Pressure (mmwg)	600
Temperature (°C)	147
Rotational Speed (rpm)	985
Installed Power (kW)	550
Applicable Standards	API



MATRIX *Rotary*
ENGINEERED SOLUTIONS



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