



CORPORATE BROCHURE



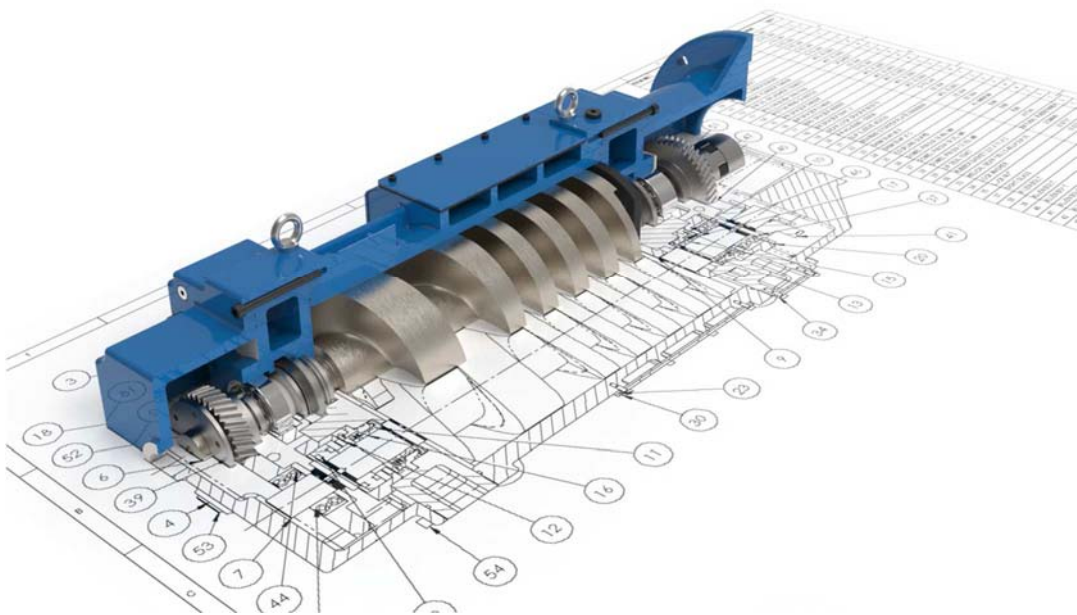
COMPANY PROFILE

DIICE Pumps and Engineering Solutions Pvt Ltd is a manufacturer of ROOTS type positive displacement blowers, Blower packages, Dry Screw Vacuum Pumps, and Industrial vacuum systems, which are extensively used in Process Industries & Research Organisations.

“We Envision the technology for tomorrow to reveal the new Horizons.”

DIICE provide intelligently designed high performance industrial pumps with excellent durability. Our focus is to bring innovative products to Indian market.

**“We are among the very few manufacturers of
DRY SCREW VACUUM PUMP in India.”**



Thirty years of cumulative experience in the field of vacuum and pressure pumps has led Diice team to establish the company in 2018; aiming to be the new star in the market.

We are the professional solution providers, offering innovative and cost effective engineering solutions of highest quality and proficient after sales service to our clients around the world.

“A Partner in Excellence”

DIICE believe in “total customer satisfaction” and “productive teamwork” and thrive to give excellent quality product and service led by continually improving the products better than yesterday.

COMPANY PHILOSOPHY

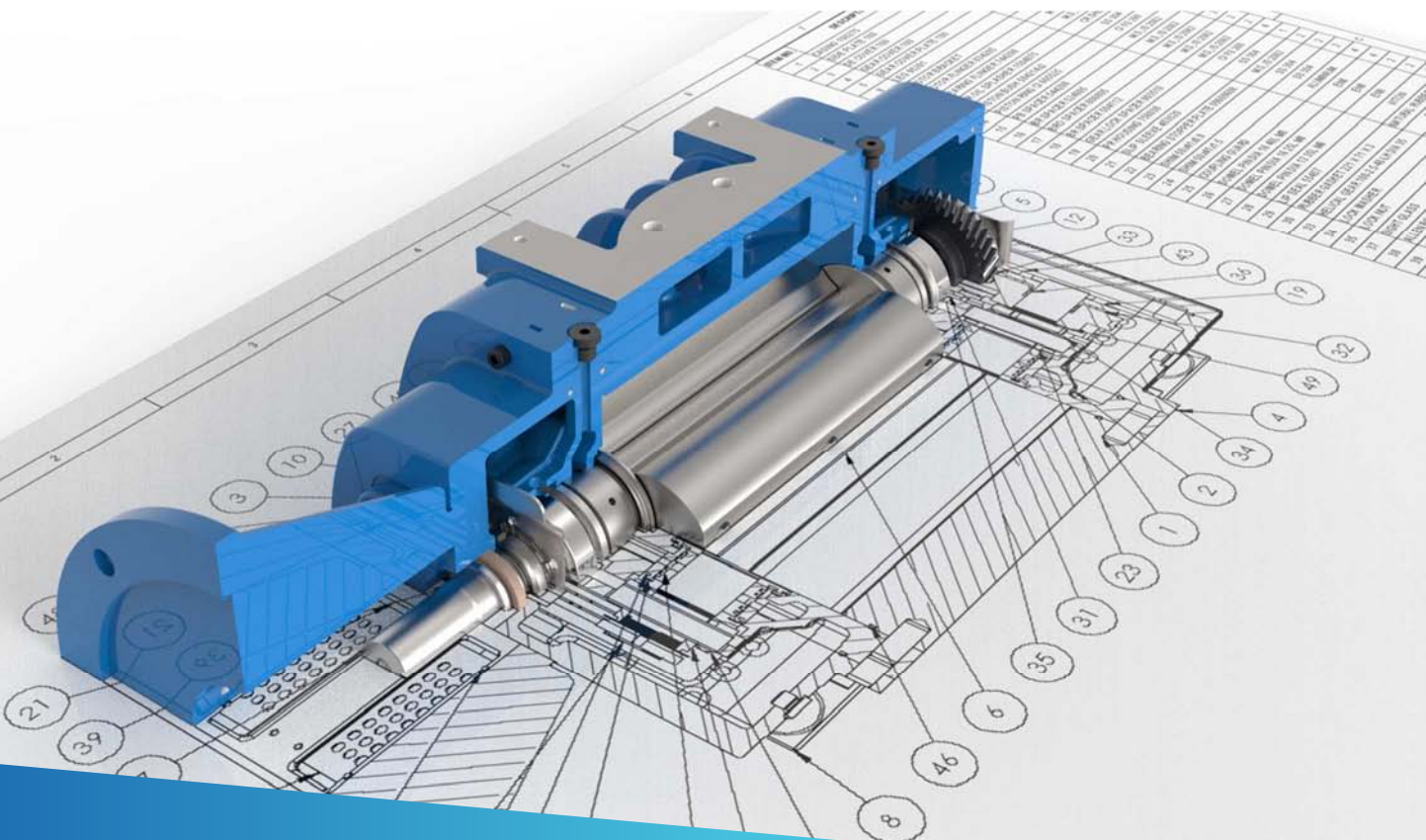
We promise our customers to deliver

- **D**URABLE - A product designed to last longer
- **I**NNOVATIVE - A product that is ahead of its time
- **I**NTELLIGENT - A product that is smart
- **C**OST EFFECTIVE - A product that is economically efficient to use
- **E**CO FRIENDLY - A product that is friendly to nature

Besides all, a product beautifully and intelligently crafted you can't keep your eyes off !

To keep the pace with a growing technology, DIICE brings you the

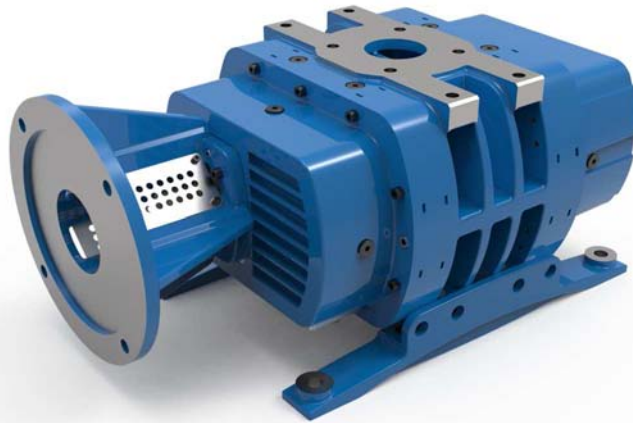
"Technology of Future"



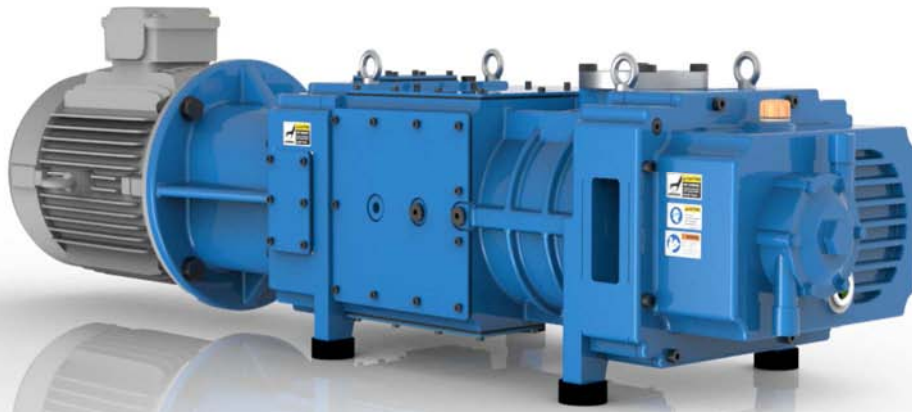
DIICE PRODUCTS FOR YOUR BUSINESS NEEDS

PRODUCTS UNDER **VACUUM** DIVISION

ASHTA Series Mechanical Vacuum Booster Air and Water Cooled



VARTANI Series Dry Screw Vacuum Pump



DIICE PRODUCTS FOR YOUR BUSINESS NEEDS

PRODUCTS UNDER **VACUUM** DIVISION

VARUN Liquid Ring Vacuum Pump



VYOM Rotary Vane Vacuum Pump



TTP Piston Vacuum Pump



DIICE PRODUCTS FOR YOUR BUSINESS NEEDS

PRODUCTS UNDER **VACUUM** DIVISION

SHUNYA Vacuum Station



DRAVYA Vacuum Station



VYOM Rotary Vane Vacuum Station



TTP Piston pump vacuum Station



DIICE PRODUCTS FOR YOUR BUSINESS NEEDS

PRODUCTS UNDER **PRESSURE** DIVISION

ASHTA Series Bilobe Roots Blower (Air Cooled and Water Cooled)



TRIVRT Series Trilobe Roots Blower (Air Cooled and Water Cooled)



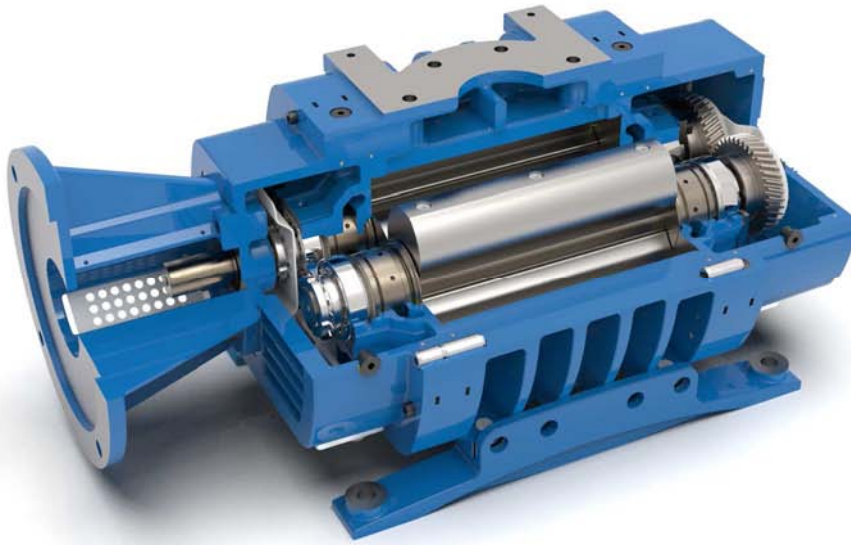
Turbo Blowers

COMING SOON



ASHTA Series Vacuum Booster

Air and Water Cooled



Innovatively designed and precisely engineered pump to provide you the High pumping capacities and Higher vacuum levels

- ASTV boosters, the root type Positive displacement vacuum pumps, provide you the **top notch performance** in every application field with the combination of backup pump.
- With high pumping speed range from 150 m³/hr to 10000m³/hr, oil cooling and various sealing options, ASTV boosters are suitable for a wide range of applications.
- ASTV boosters own features of **Stable Operation, Low Noise, Low Vibration and High Ultimate Pressure.**

ASHTA Series Vacuum Booster

Air and Water Cooled

APPLICATIONS

- Vacuum Degassing
- Application Of Thin Coats
- Evaporation
- Heat Treatment
- Ionic Nitrating
- Metallization
- Vacuum Distillation
- Vacuum Dryer
- Vacuum Impregnation



Unique Design Features And Advantages Of ASTV Pumps

- Advanced Rotor Technology for low power consumption, less vibration and noise.
- Rotor are perfectly geometry symmetrical and dynamic balanced to the grade of turbines.
- Advanced seal mechanism make these pumps less vulnerable to leakages of process medium.
- Long life antifriction bearings and thick shaft design allow the pump to run over 3000RPM with an ease.
- Oil coolers to work through high temperature applications.
- Flexible mounting allows vertical and horizontal flow.
- Compact Design for less installation space.
- Robust build for higher compression ratios.
- Helical ground gears for longer life and quiet operations.
- Unique impeller design for high volumetric efficiency.
- MOC stainless steel and various coating options for harsh process applications.
- Magnetic coupling to hermetically seal the pump from environment.



ASHTA Series Vacuum Booster

Air and Water Cooled

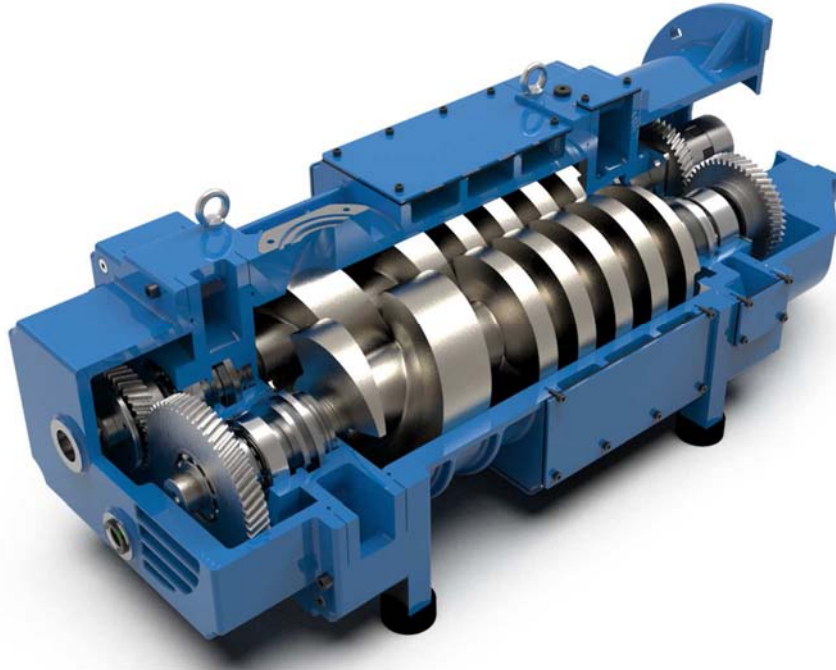


Performance Table

Model			ASTV250	ASTV500	ASTV1000	ASTV2000	ASTV3000	ASTV4000	ASTV5000
Performance	Displacement @50Hz	m ³ /hr	225	511	815	1920	2880	3940	4540
	Displacement @60Hz	m ³ /hr	280	630	1018	2340	3490	4765	5485
	Differential pressure @50HZ (max)	mbar	100	100	100	100	75	70	60
	Differential pressure @60HZ (max)	mbar	80	80	80	80	65	60	50
Power	@ Ultimate vacuum	kW	0.4	0.9	1.1	2.1	2.8	3.4	3.8
	@ Peak pumping	kW	0.7	1.6	2.7	5.9	6.5	7.9	7.8
Process Connections	Inlet	Special	50NB	65NB	80NB	100NB	150NB	150NB	200NB
	Exhaust	Special	50NB	50NB	50NB	80NB	100NB	125NB	150NB
Cooling Water	Connection		G1/2" F	G1/2" F	G1/2" F	G1/2" F	G1/2" F	G1/2" F	G1/2" F
	Flow	l/min	<10	<10	<10	<10	<10	<10	<10
	Supply Pressure (Max)	bar	3	3	3	3	3	3	3
	Pressure Drop	bar	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Temperature	°C	5-40	5-40	5-40	5-40	5-40	5-40	5-40
Operating Data	Noise	dB(A)	<80	<80	<80	<80	<80	<80	<80
	Operating Temp	°C	20-90	20-90	20-90	20-90	20-90	20-90	20-90
	Vibration (max)	mm/s	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)
	Lubrication		Shell T-68						

VARTANI Series

NEWER Version of Dry screw Vacuum Pump



A State-of-the-Art product, engineered with cutting edge technology offering high performance at low running costs

- DIICE introduces an advanced **VARTANI Series VRT Dry Screw Vacuum pump**, a robust pump with distinctive screw technology to take vacuum performance to the next level, run hassle free even in harsh chemical environment with long service intervals at low running costs.
- A **Unique screw technology** provides Optimized variable internal compression to effectively reduce energy consumption, lowering discharge temperature and increase thermal stability of the pump

VARTANI Series NEWER Version of Dry screw Vacuum Pump



Salient features and advantages of VRT pumps

- Unique screw technology to reduce power consumption and achieve high vacuum levels.
- Rotors Balanced to grade of turbine provides high stability and low vibrations.
- Advanced seal combination between the gas chamber and Oil chamber increases operational reliability.
- Innovative design of the pump helps in to reduce stresses on the bearings and seals.
- Highly précised Helical Gears for quiet operations and low power losses.
- Smaller & compact design for less floor space.
- Oil & Water free Vacuum suitable for pumping Toxic, Corrosive and condensable gases.
- Easy Solvent Recovery at Pump Exhaust.
- Low vibration and Low noise levels to run smoothly.
- Extended bearing life with Oil cooling and lubrication.
- Longer Maintenance Intervals to reduce overall cost.



VARTANI Series

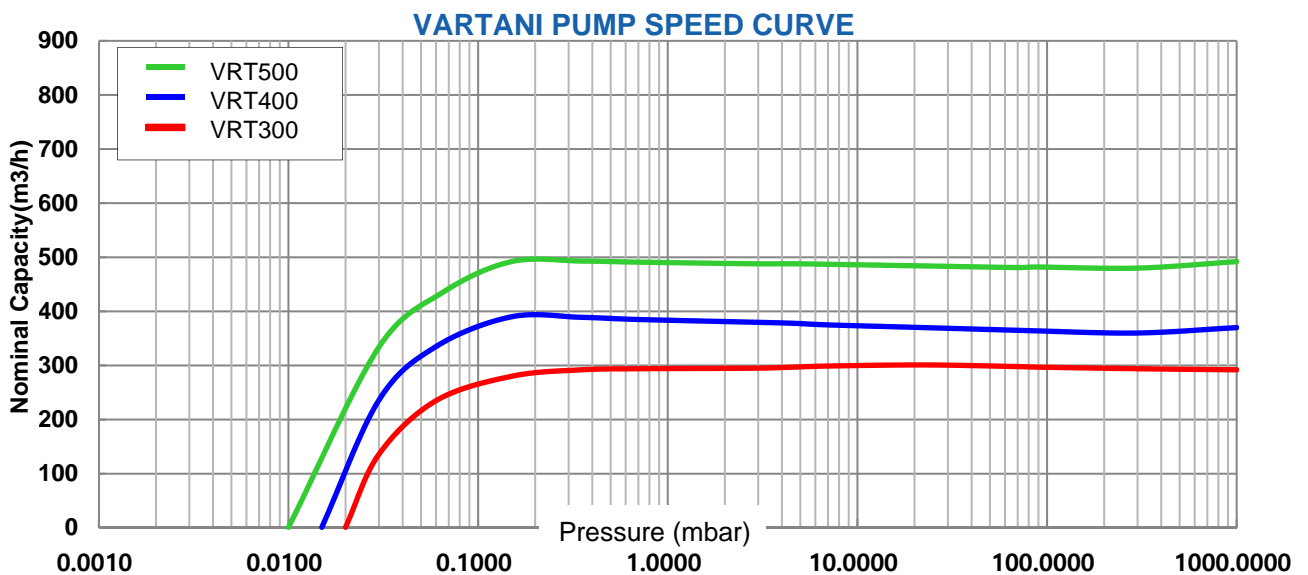
NEWER Version of Dry screw Vacuum Pump



Performance Table

Model		Metric			Imperial				
		VRT 300	VRT 400	VRT 500	VRT 300	VRT 400	VRT 500		
Performance	Displacement @50 Hz	m ³ /hr	300	400	500	CFM	177	236	295
	Ultimate pressure @50Hz	mbar	0.05	0.05	0.05	Torr	0.0375	0.0375	0.0375
Motor Parameters	Power	kW	7.5	11	15	hp	10	15	20
	RPM*	RPM	2920	2920	2920	RPM	2920	2920	2920
Process Connections	Inlet	Special	50NB	65NB	80NB	Special	50NB	65NB	80NB
	Exhaust	Special	50NB	50NB	50NB	Special	50NB	50NB	50NB
Cooling Water	Connection		G1/2" F	G1/2" F	G1/2" F		G1/2" F	G1/2" F	G1/2" F
	Flow	l/min	<10	<10	<10	gal/min	<2.1	<2.1	<2.1
	Supply Pressure (Max)	bar	7	7	7	psig	100	100	100
	Pressure Drop	bar	0.5	0.5	0.5	psig	7	7	7
	Temperature	°C	5-40	5-40	5-40	°F	41-100	41-100	41-100
Purge Gas	Connection		G1/4" F	G1/4" F	G1/4" F		G1/4" F	G1/4" F	G1/4" F
	Pressure	bar	1-3	1-3	1-3	psig	14-42	14-42	14-42
	SSP Flow	l/min	<12	<12	<12	l/min	<12	<12	<12
	Gas Ballast Flow	l/min	<50	<50	<50	l/min	<50	<50	<50
Operating Data	Noise	dB(A)	<80	<80	<80	dB(A)	<80	<80	<80
	Operating Temp	°C	20-90	20-90	20-90	°F	68-194	68-194	68-194
	Exhaust Pressure (Max)	mbar	1200	1200	1200	psig	17.4	17.4	17.4
	Vibration (max)	mm/s	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	mm/s	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)
	Lubrication		Shell T-68				Shell T-68		

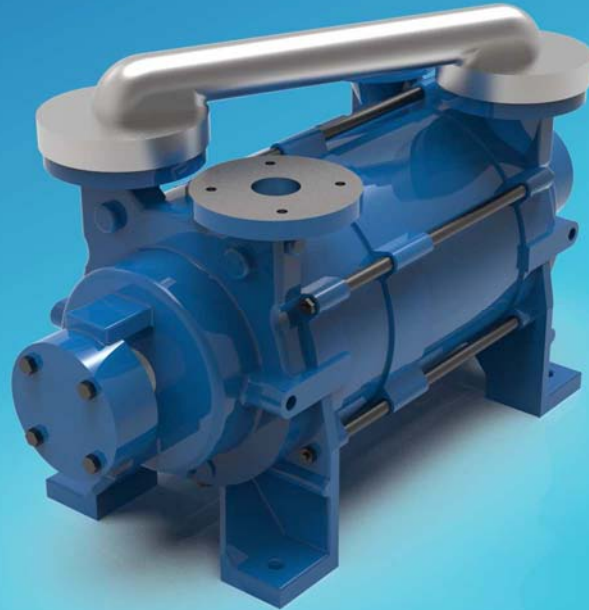
Pump Speed Curve



VARUN Series Liquid Ring Vacuum Pump

APPLICATIONS

- Vacuum Distillation
- Food Industries
- Steel Degassing
- Vacuum Packaging
- Transformer Drying
- Paper and Pulp Industry
- Vacuum Dryer
- Sterilization



Advantages Of VARUN Pumps

- DIICE offers VARUN Liquid Ring Vacuum pumps for Rough to Medium applications.
- VARUN Liquid Ring Vacuum Pumps are particularly advantageous when the pumping gas carries vapors along with it.
- These pump are extensively suitable for harsh and wet conditions.
- Provided with adequate MOC of wet parts and seals, these pumps can effectively deals with various chemicals.

Performance Table

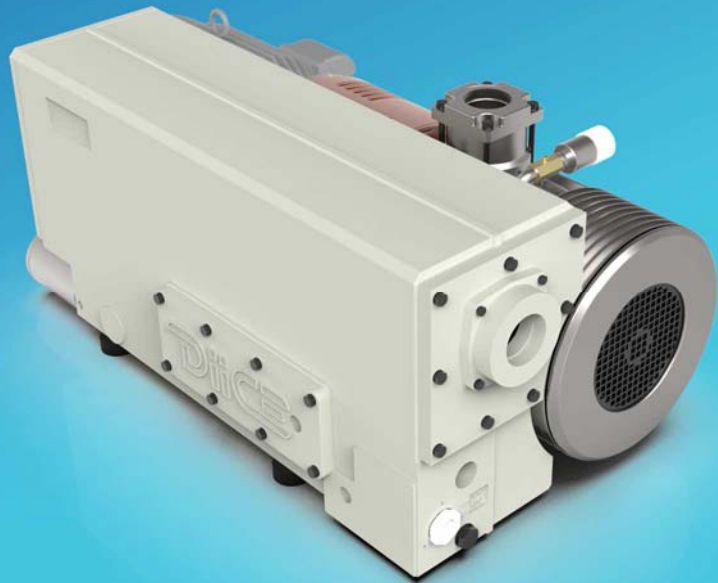
Model		VAR0100	VAR0150	VAR0200	VAR0300	VAR0450	VAR0600	VAR0700	VAR1100	VAR1350	VAR01800
Capacity	m ³ /hr	90	160	220	330	460	580	725	1100	1350	1800
Seal Water	LPM	7	9	14	20	24	30	40	50	65	75
Motor	KW/HP	3.7/ 5	5.50/7.5	7.50/10	11/15	15/20	18.50/25	22/30	30/40	37/50	45/60
Motor Speed	RPM	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450



VYOM Series Vane Vacuum Pump

APPLICATIONS

- Vacuum Degassing
- Application Of Thin Coats
- Transformer air evacuation/ drying
- Metallization
- Solar Lamination
- Vacuum Distillation
- Medical Capsules filling
- Vacuum Drying
- Vacuum Impregnation



Advantages Of VYOM Pumps

- A medium range vacuum pump highly efficient in clean vacuum applications.
- These pumps suit best with Laboratories, Semicon, Electrical and HVAC industries.
- When fitted with a gas-ballast valve, vapors can be pumped without condensation.

Performance Table

Model		VY065	VY100	VY200	VY300	
Performance	Displacement @50 Hz	m ³ /hr	65	100	190	300
	Ultimate pressure @50Hz	mbar	≤0.1	≤0.1	≤0.1	≤0.3
Motor Parameters	Power	kW	1.5	2.2	3.7	5.5
	RPM	RPM	1440	1440	1440	1440
Process Connections	Inlet	Special	40NB	40NB	50NB	50NB
	Exhaust	Special	40NB	40NB	50NB	50NB
Operating Data	Noise	dB(A)	<70	<70	<70	<70
	Operating Temp	°C	80-85	80-85	80-85	80-85
	Vibration (max)	mm/s	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)	1.8 (4.0)
	Oil capacity	Ltrs	1.5	2	7	9
	Recommended Oil		ISO 68	ISO 68	ISO 68	ISO 68

TTP Series Piston Vacuum Pump

APPLICATIONS

- Vacuum Degassing
- Application Of Thin Coats
- Evaporation
- Heat Treatment
- Ionic Nitrating
- Metallization
- Vacuum Distillation
- Vacuum Dryer
- Vacuum Impregnation



Advantages Of TTP Pumps

- TTP pumps are equipped with proven technology.
- These pumps are sturdy and maintenance free to deliver you best.
- A cost effective and simple solution of your requirements.
- These pumps are power-horse works significantly good for longer periods.

Performance Table

Model		TTPS255	TTPS264	TTPS275	TTPS027	TTPS035	TTPD255	TTPD264	TTPD275	TTPD027	TTPD035	
Performance	Capacity	CFM	21.6	34.6	60	110	149.6	10.8	17.3	30	55	85
		M3/hr	37	59	102	187	254	19	30	51	94	145
	Vacuum	inch	29	29	29	29	29.2	29.6	29.65	29.7	29.65	29.65
		mm Hg	737	737	737	737	742	752	754	755	754	754
Motor	HP	2	2	5	7.5	10	2	2	5	7.5	10	
	Kw	1.5	1.5	3.7	5.5	7.5	1.5	1.5	3.7	5.5	7.5	

Vacuum Pumping Station

DIICE offers a wide range of Vacuum Pumping stations to meet the requirement of various vacuum applications. When primary pump is not enough, it is then combined with roots booster in single stage or multistage combination enhanced by appropriate heat exchanger, condensers, filters, valves, instruments, control panels and various accessories.

DIICE offers the right combination of pumps and other components to provide you a highly efficient solution yet cost effective. Standard and customized solutions available to serve the need of process.

SHUNYA Screw Vacuum Pumping Station

A customized vacuum station designed with a combination of powerful VARTANI screw pump and Highly efficient ASHTA vacuum boosters provides you efficiently High pumping Capacity and higher vacuum level.



SHUNYA Screw Vacuum Package

Shunya package system is a high end product developed specially to cater the demands of Semicon industries. Available in Single and Multi stage configuration, it provides world class performance in R&D Lab OLED/LED, Flat panel display, solar applications. Contact DIICE for further details



DRAVYA LRP Vacuum Pumping Station

A combination of ASTHA boosters and Liquid ring pump, is designed to provide the optimum solutions to many rough Vacuum application where vapor loads are heavy and dirty.

These Vacuum Stations can be supplied in various configurations, suitable for operation in once through, partial or total recirculation and can be used as standalone pumps.



Vacuum Pumping Station

VYOM Vane Vacuum Pumping Station

Highly efficient ASHTA Series Vacuum booster combined in series with Vane pumps provides you VYOM Vacuum pumping stations which efficiently produce high pumping Capacity and higher vacuum level.



TTP Piston Vacuum Pumping Station

Powered with Piston Pump and Vacuum booster TTP Vacuum pumping station is a ready on solution for your pharma and chemical process.



APPLICATIONS OF VACUUM PUMPING STATIONS

- Vapour Recovery Unit (VRU)
- Solvent Recovery System
- Pharmaceutical Industry
- Chemical Industry
- Petrochemical Industry
- Food Industry
- Central Vacuum System
- Industrial Applications
- Packaging Industry
- Laboratories

ASHTA Series Blower



Equipped with highly engineered rotors and seals ASTP Blower is a powerhouse of your plant

- After continual design and development DIICE introduces ASTP roots blower with proven twin lobe design engineered to give high volumetric efficiency. Four large chamber delivering Constant volume of air at constant pressure makes them most efficient blower in the category.
- With an ideal compression ratio of 2:1, these blowers are best suited in low pressure application of differential pressure of approx. 1000 mbar (15psi) on pressure duty and 500 mbar (15 in Hg or 375 mm Hg) on vacuum service
- An advanced heavy-duty design and high end performance make these pumps ideal for wide range of application to deliver oil free clean air.

ASHTA Series Blower

APPLICATIONS

- Aeration in ETP and WTP
- Material Conveying
- Biogas recovery and recirculation
- Solvent Vapor Extraction
- Conveying of gases in oil industries
- Pneumatic Conveying
- Air Supply for Oxidation



Pressure upto 1000 mbar (g)
Capacity up to 10000m³/hr

Unique Features and advantages to the customers

- Advanced rotor profile to reduce power consumption.
- Contact free operation for no friction losses
- Splash oil lubrication for longer life of pump
- Heavy Duty anti friction Steel Cage bearings for longer L10 life
- Helical gears for synchronized rotor timing and quiet operations
- Four hardened piston ring contactless labyrinth seal to provide better sealing
- Seal vent system to cool and reduce the pressure on seals
- Balancing of rotors to the grade of turbine for lower vibrations
- Optional Water cooling at high loads to reduce the thermal stresses
- Flexible mounting to mount the blower vertically or horizontally



ASHTA and TRIVRT Series Process Gas Blower

ASTG and TRTG blowers are distinctively designed and engineered to transfer gas mixtures whether it is corrosive, non-corrosive, Biogas, hazardous or harmful gas.

Robust design and High performance with advanced seal technology of mechanical and labyrinth seal make these pumps ideal to fit in process gas applications. And can be customized with a wide range of material (Cast iron, Aluminium, Bronze, copper, Ni based Cast iron, Stainless steel) and coating (ENP, Chrome, Zinc, PTFE, PFA, PEEK etc).

APPLICATIONS

- Pneumatic conveying
- Biogas recovery
- Degassing
- Furnace cooling
- Hydro gas recovery process.
- Coke blast-furnace gas recovery
- Gas recycling
- Mechanical vapour recompression
- Transfer of oxygen
- Other Petro chemical applications.
- Transpiration of various gases like Nitrogen, Argon, Methane, Helium, Hydrogen, CO₂



TRIVRT Series Pre Cooled Blowers

TRTN Series of PD blower can operate at high vacuum levels by injecting atmospheric air in blower. These innovatively designed blowers can operate at high vacuums without overheating and reach vacuum level up to 90% or -900 mbar without need of sealing or cooling water or heat exchanger.

TRTN blowers work perfectly for the applications requiring vacuum level beyond 500 mbar.

APPLICATIONS

- Vacuum trucks handling wet/dry industrial or municipal waste
- Pneumatic conveying of Ash, cement, chemicals etc
- Central vacuum systems
- De-aeration Plant



For blower selection please consult our technical team.

All process blowers can be driven by a permanent-magnetic coupling, which helps in preventing exchange of process gas and the ambient atmosphere as they are hermetically sealed.

TRIVRT Series Blower



A marvelous pump complimented with the features of sturdiness and silence

- TRTP blower is an innovatively designed three lobe roots blower with rotor tips at 120° . Robust design and advance rotor geometry of these blowers aids in reducing the vibrations, stresses and deflections in the rotor which significantly minimizes the possible rotor contact between rotors and casing.
- Unique design of blower delivers the air flow from six volume chambers per revolution, oppose to four volume chambers per revolution, at higher pulsation frequency which impressively reduces the pulsation magnitude and noise level at discharge.

TRIVRT Series Blower

Pressure upto 1000 mbar (g)
Capacity up to 10000m³/hr



Unique Features and Advantages to the Customers

- Unique rotor design to reduce the slips and pulsations
- Heavy duty shaft to resist heavy mechanical and hydraulic loads
- Splash oil lubrication for longer life of pump
- Heavy Duty Steel Cage bearings for longer life
- Precisely timed Helical gears for synchronized and quite operations
- Advanced seal technology to reduce stresses on seal and perform effective sealing
- Balancing of rotors to the grade of turbine for sturdy operations.
- Optional Water cooling at high loads to reduce the thermal stresses.
- Flexible mounting to mount the blower vertically or horizontally.



Are you looking for a Solution?
Solving your problem is our Business

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