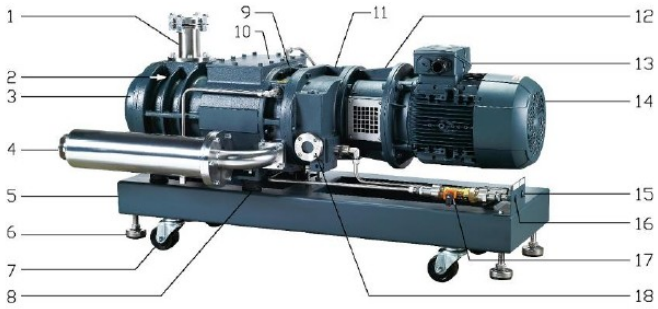
Vacuum Pumps America Inc.

Dry Screw Vacuum Pumps VPA-SS series

VPA-SS100, VPA-SS180, VPA-SS270, VPA-SS330, VPA-SS400, VPA-SS500, VPA-SS650, VPA-SS850



1. Inlet, 2. Housing, 3. Front cover, 4. Exhaust Silencer, 5. Painted Steel Base frame with wheels, 6. Anti vibration mounts, 7. Wheels, 8. Exhaust Port, 9. End plate, 10. Water cooling circuit top cover, 11. Gear box, 12. Motor bracket, 13. Motor terminal box, 14. Motor, 15. Cooling water inlet, 16. Cooling water outlet, 17. Cooling water sight glass, 18. Oil sight glass..

Features of VPA-SS series:

- Single stage design and short gas path enable gases and vapors easily discharged to the exhaust and eliminates any residue in the vacuum pump. Inlet filters are available upon request for dusty applications.
- Suitable for pumping Air, Inert gases, Flamable, Combustible, Toxic, Corrosive and Condensable gases, Oxygen, Ozone, etc... by use of special coatings for working chamber and screw rotors.
- No use of Oil or Water as pumping medium, low operation costs.
- The inside surface of working chamber and ouside surface of screw rotors are coated with special TEFLON coating makes them corrosion proof and ensures long pump life.
- Advanced screw rotors have high volume efficiency and are completely balanced.
- No interstage bearings, makes maintenance easy.
- Direct dirve and compact design with no belt or pully. Small footprint.
- Water cooled version satisfies the T4 requirements.
- High quality Teflon coated parts.
- VPA-SS series Dry Screw Vacuum Pumps are available with regular, Explosion Proof, Stainless Steel and ATEX motors at different voltages.
- Explosion Proof Dry Screw Vacuum Pumps VPA-SS series .
- ATEX approved Dry Screw Vacuum Pumps VPA-SS series .
- Standard 3 phase motors at 380V @ 50Hz, 208V, 230V, 460V and 575V@60Hz available with CSA, cUL, CE approval for all VPA-SS Dry Screw Vacuum Pumps.

Please contact: 416-407-0350 **E-mail: sales@vpamerica.com**

Advantages of direct drive motor in VPA-SS and VPA-SS/Ex series Dry Screw Vacuum Pumps:

For simplicity and space saving, VPA-SS100, VPA-SS180, VPA-SS270, VPA-SS330, VPA-SS400, VPA-SS500, VPA-SS650, VPA-SS850 and their explosion proof versions are available with D-flange adaptors for motor bracket. Various standard D-flange motors can be attached directly to our VPA-SS Dry Screw Vacuum Pumps.

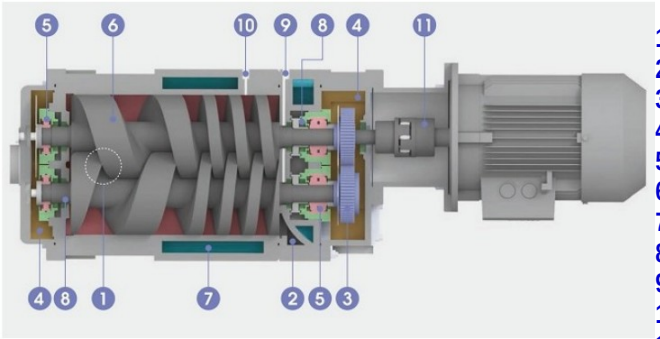
- Reduced installation space
- Simplified mounting
- Low vibration
- Reduced noise level
- No alignment required

Design Characteristics:

- Higher compression ratio and higher efficiency with advanced variable pitch screw rotors
- Higher pumping speed with short gas path
- Lower cost of ownership
- Over sized high quality bearings
- Gear side: Double Ball Bearing
- Shaft: Single Ball Bearing
- Non-derive end shafts: Roller Bearings
- Seals: Combination of mechanical and lip seal
- Seal Purging: Air or N_2
- No cooling gas up to VPA-SS850 is necessary.

Material of Construction and cut view of VPA-SS series Dry Screw Vacuum Pumps:

- Casing: Coated Ductile Iron,
- Screws: Coated Ductile iron
- Lip Seal: Polyimid in Stainless Steel
- Slip Sleeve: Ceramic Coated Stainless Steel
- Shaft Seals:
  - Suction Side: Double Leap Seal + Double Leap seal
  - Discharge Side: Lip & Mechanical Seal Oil seal



1. Inlet
2. Exhaust
3.Timing Gears
4. Oil reservoir
5. Bearings
6. variable Pitch Screw Rotors
7. Cooling Water Jacket
8. Shaft seals
9. Shaft seal Nitrogen purge gas
10. Nitrogen Dilution gas
11. Vacuum Pump and Motor Coupling

Optional materials and coatings:

Standard construction materials for Casing and Screw rotors are cast iron and ductile Iron respectively. All of our VPA-SS and VPA-SS/Ex series are Teflon coated insde. However, the following materials are also available for seals as well:

Special materials for special applications:

- Special O-rings and seals like Kalrez.

Specifications of VPA-SS and VPA-SS/Ex Dry Screw Vacuum Pumps:

Model	Pumping Speed m^3/h (CFM) 50Hz/60Hz		Ultimate Pressure Torr	Motor Power (KW)	RPM 50Hz/60Hz		Port Size † (mm) Inlet / Outlet		Oil Capacity (L)	Cooling Water (L/ min)	Nitrogen purge pressure (PSI)	Nitrogen purge flow for seals (slm)	Nitrogen purge flow for dilution (slm)	Noise level (dB)	Weight Pump only Approx (Kg).
VPA-SS100	80 (47)	100 (59)	7.5×10^{-3}	3.7	2900	3500	DN50	DN40	0.45	3	7.25 to 29	20 to 50	0 to 50	74	200
VPA-SS180	145 (85.3)	175 (103)	7.5×10^{-3}	5.5	2900	3500	DN50	DN50	1	4	7.25 to 29	20 to 50	0 to 50	74	300
VPA-SS270	228 (134)	273 (161)	7.5×10^{-3}	7.5	2900	3500	DN65	DN50	1	4	7.25 to 29	20 to 50	0 to 50	74	330
VPA-SS330	275 (162)	330 (194)	7.5×10^{-3}	11	2900	3500	DN65	DN50	1	4	7.25 to 29	20 to 50	0 to 50	77	375
VPA-SS400	333 (196)	400 (235)	7.5×10^{-3}	11	2900	3500	DN65	DN50	1	4	7.25 to 29	20 to 50	0 to 50	77	400
VPA-SS500	416 (245)	500 (294)	7.5×10^{-3}	15	2900	3500	DN65	DN50	1	4	7.25 to 29	20 to 50	0 to 50	77	420
VPA-SS650	540 (318)	650 (382)	7.5×10^{-3}	18.5	2900	3500	DN 100	DN65	2	5	7.25 to 29	20 to 50	0 to 50	77	800
VPA-SS850	708 (416)	850 (500)	7.5×10^{-3}	30	2900	3500	DN 125	DN80	2	6	7.25 to 29	20 to 50	0 to 50	77	920

Specifications are subjected to change without notice to improve product quality.

***** To convert m^3/h to cfm, divide by 1.69***

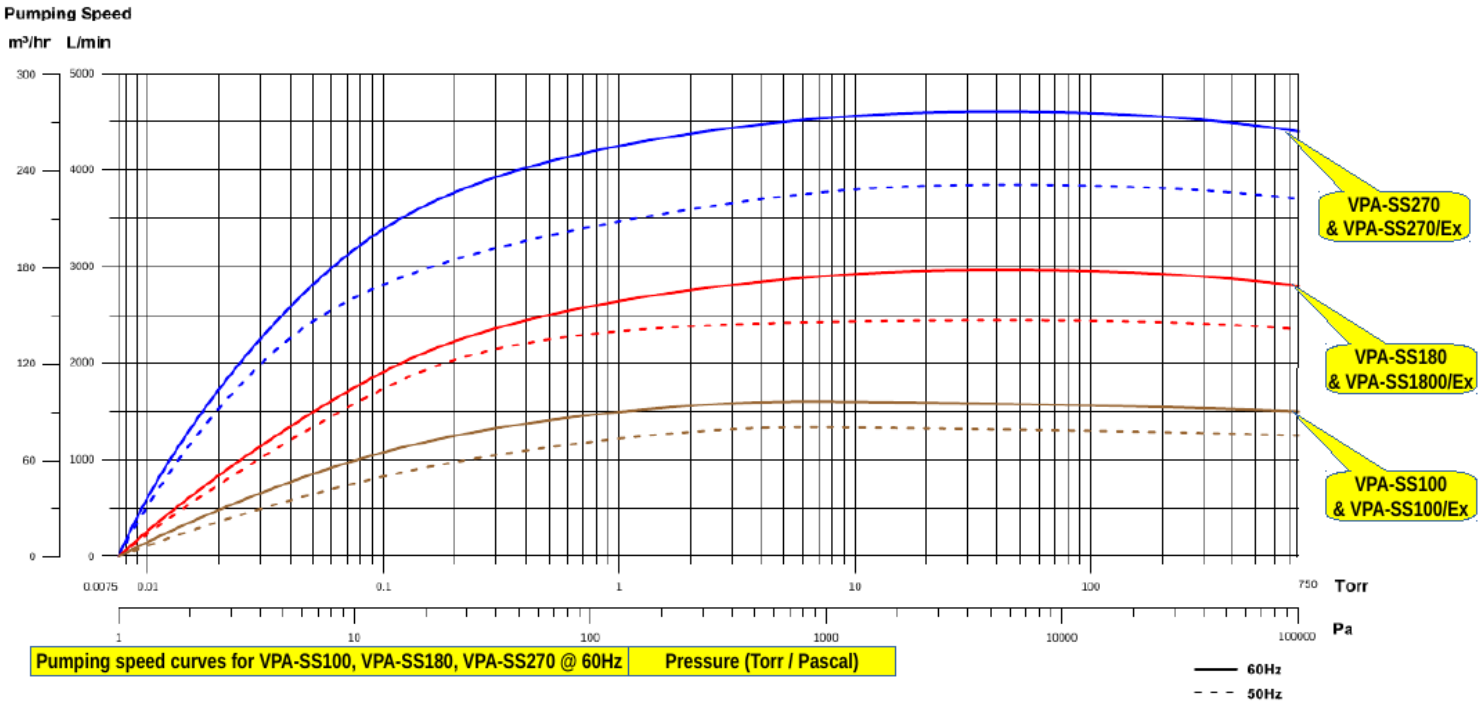
Example: 800 m^3/h ÷ 1.69= 473.37 cfm

† All types of inlet and outlet port size based on ISO and ANSI standards available upon request.

Applications of VPA-SS series Dry Screw Vacuum Pumps:

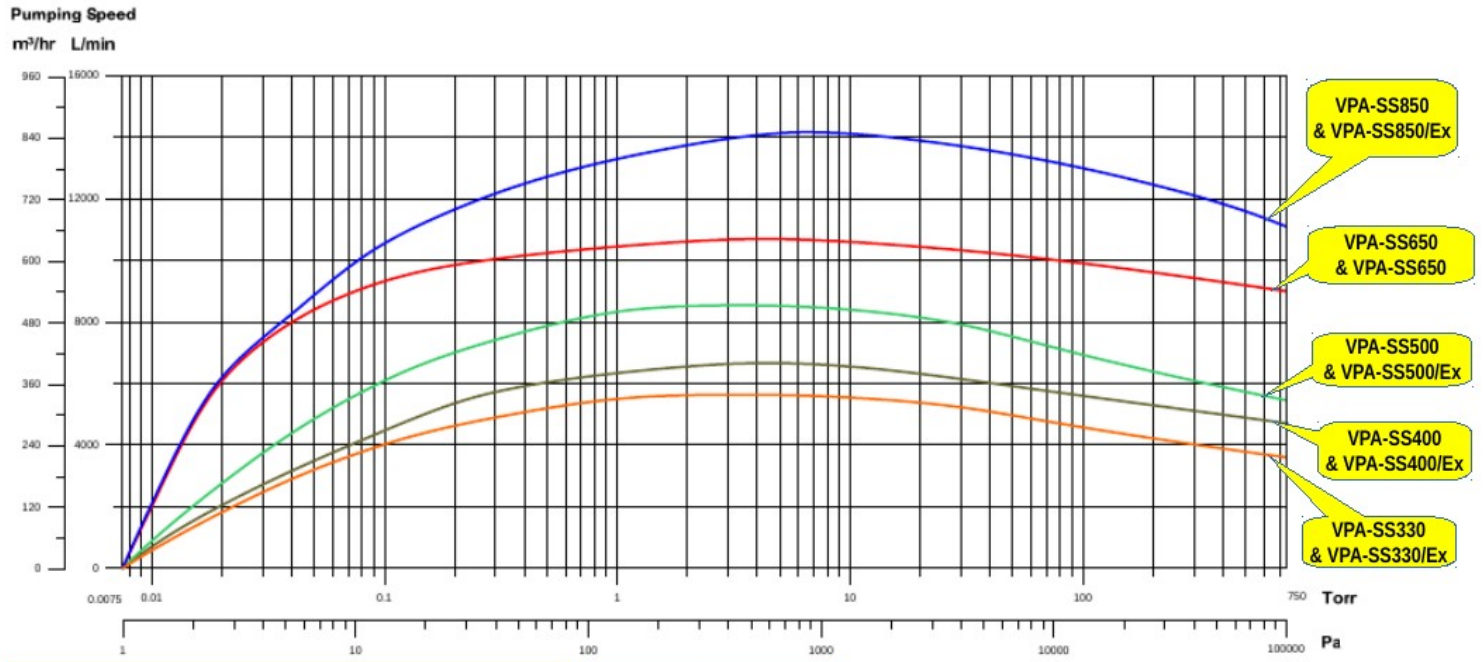
Autoclaves, Automotive, Backing pump for Turbomolecular pumps, Brake Fluid Filling Systems, Brazing, Casting, Chemical Distillation Ex, Bio Fuel Production, Chemical Processing Ex , Chemical Vapour Deposition, Chemical Laboratories Ex , Chemical Coatings, Central Vacuum Systems, Debinderization, Degassers Ex , Degassing Ex , Drying Ex, Drying Chambers, Evacuating of Refrigeration Systems , Evacuation of Process Chambers Ex , Forming, Food processing, Food Industry, Freeze dryer, Freeze Drying, Fermentation, Heat Treatment, Heat Exchanger Drying in Power Plants, Dry Screw vacuum Pumps for Hazardous Area Ex , Impregnating Ex , Investment Casting, Impregnation, Laboratory Experiments, Leak Detection of systems, Light Bulb Manufacturing, Liquid Gas Storage, Vacuum Metallurgy, Metal Processing, Nuclear power plants, Nuclear waste management, Packaging, PET Processing, Pharmaceutical Processes Ex, Physical Vapour Deposition, Physics Laboratories, Potting, Research & Development, Roll Coating, Refineries Ex , Silicon Crystal Growing, Sintering, Solvent Recovery Ex , Spray Dryers, Transformer Drying Ex , Vacuum Coating, Vacuum Furnaces, Vacuum Heat Treating, Vacuum Melting, Vacuum Metalizing, Vacuum Packaging, vacuum metallurgy, etc....

Performance curves for VPA-SS100, VPA-SS100/Ex, VPA-SS180, VPA-SS180/Ex, VPA-SS270 and VPA-SS270/Ex:



Pumping speed curves for VPA-SS100, VPA-SS180, VPA-SS270 @ 60Hz | Pressure (Torr / Pascal)

Performance curves for VPA-SS330, VPA-SS400, VPA-SS500, VPA-SS650, VPA-SS850 and explosion proof versions:



Pumping Speed Curves for VPA-SS330, VPA-SS400, VPA-SS500, VPA-SS650, VPA-SS850 and Explsosion Proof versions @60Hz

Pressure: Torr / Pascal

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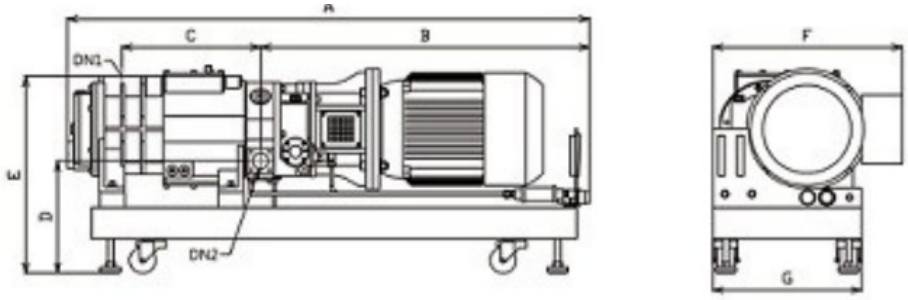
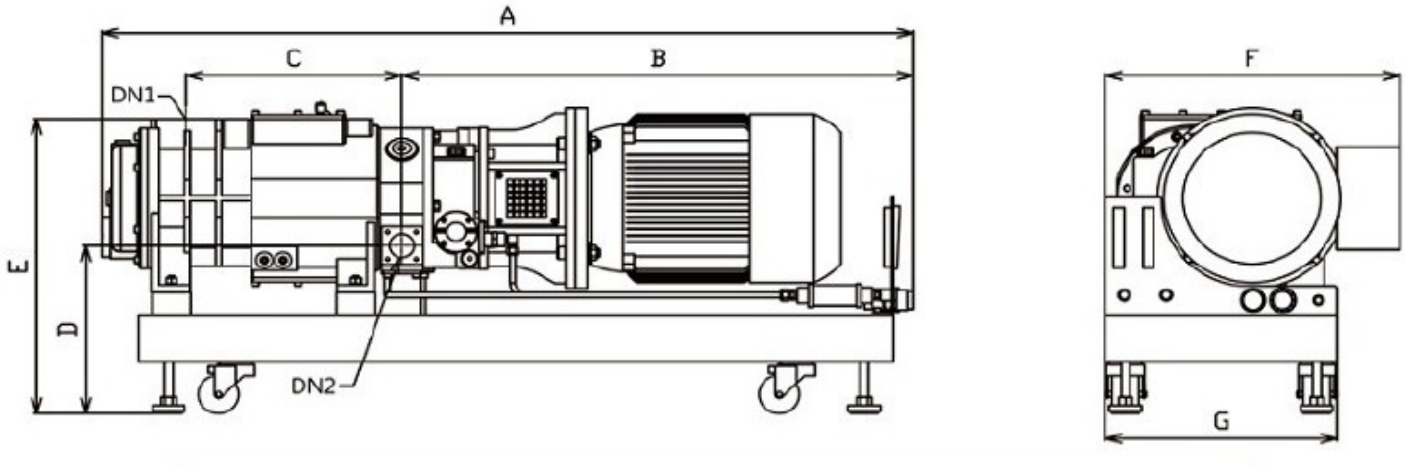
Overall Dimensions for VPA- SS100, VPA-SS180 and VPA-SS270 Dry Screw Vacuum Pumps:



Model	A**	B	C	D	E	F	G
VPA-SS100	1401	653	276	274	464	400	340
VPA-SS180	1207	762	295	309	542	480	395
VPA-SS270	1272	763	354	309	542	480	395

All dimensions are in mm.

Overall Dimensions for VPA- SS330, VPA-SS400, VPA-Ss500, VPA-SS650 and VPA-SS850 Dry Screw Vacuum Pumps:



Model	A**	B	C	D	E	F	G
VPA-SS330	1459	950	354	326	559	547	430
VPA-SS400	1507	950	400	326	572	547	430
VPA-SS500	1507	950	400	326	572	547	430
VPA-SS650	1634	955	478	367	677	627	555
VPA-SS850	1704	1025	477	247	717	680	560

*Dimentions are subjected to change without notice to improve product quality.

**Length of the pump can be different by using of different types of motors.

All dimensions are in millimeter.

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