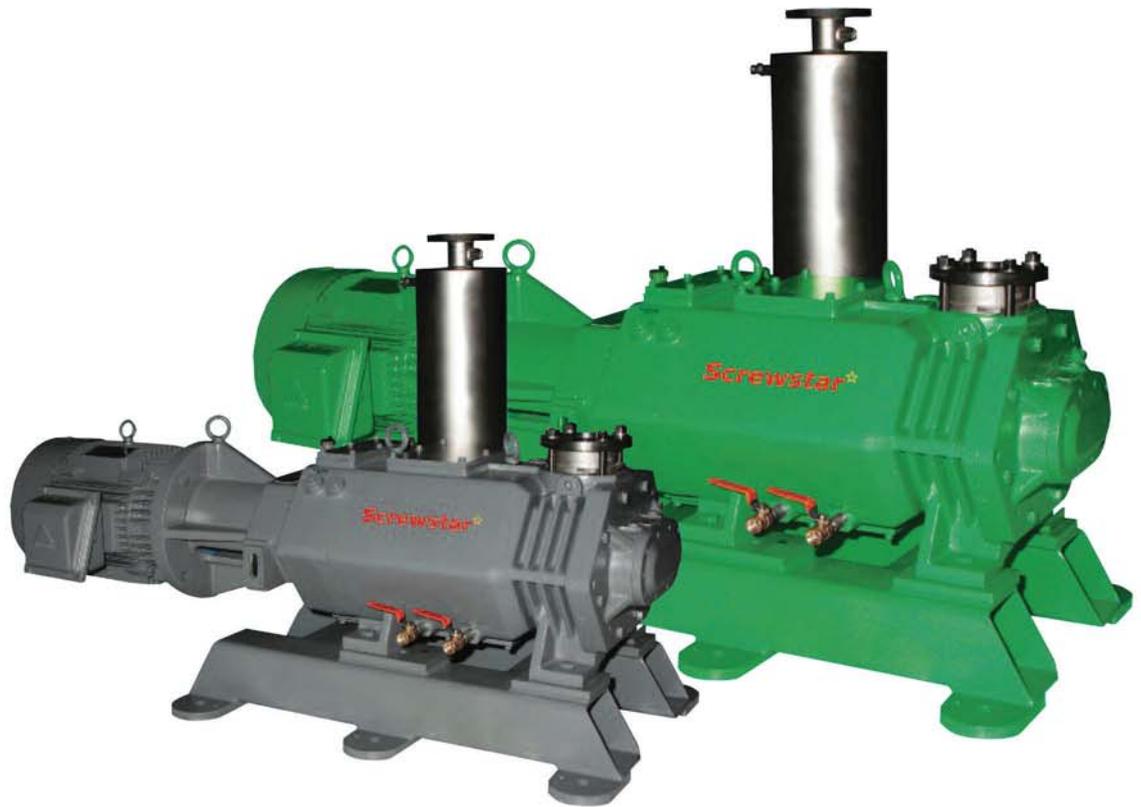


Screw Dry Vacuum Pump

Screwstar[★] Series

For Process & Industrial Applications



Partnering Chemical & Industrial Processes with Dry Vacuum Expertise



" SVC Co., Ltd. " explores and demonstrates its own engineering expertise in vacuum pump design as a true customer and market satisfactory manufacturer of industrial dry pumps specialized in screw technology to fulfill various process and environmental demand from diverse industrial sectors. The company was rebranded and incorporated in 2011 from former "Screwvacuum Company" to introduce new technologies in a succes of previous experience with previous conventional design of screw dry pumps operating in Europe and Asia. The company's vacuum expertise had been accumulated in through last over 20 years as the founders of the company and employees had experienced various vacuum applications during their careers in global leading vacuum & industrial companies.

" SVC Co., Ltd. " will do its best to supply optimum vacuum solution by meeting various customers' requirement with its professional application know-how and complete commissioning with accumulated experiences and data in the chemical and other industries.

In April 2007, SDP Screw dry vacuum pump series had been launched in the market to meet customer's various needs. However, we realized that none of conventional technologies could give 100% satisfaction to resolve existing pumping issues. That's why the company is doing and will do its ultimate best effort to demonstrate newer vacuum technologies.

It will be the company's pleasure to continuously support customers' vacuum process issues and grow together with customers. Our working philosophy is "share the vision, grow together, customer satisfaction is our growth initiative"



Overview

Screwstar dry pumps are designed under SVC's unique screw profile engineering to fulfill wide range of chemical and industrial processes. It is operating by rotating a paired screws that efficiently admit gases from inlet into the pump inside and compress through the screws' swept volume toward the discharge.

The hybrid screw design with engineered combination of variable pitches, in comparison with traditional ones, significantly increases compression efficiency for faster and smoother pumping but decreases heat generation for safe pumping, particularly at the discharge, which comes from the specialty design of unique hydrodynamic spiral jacket cooling mechanism that results fulfilling ATEX directives. It also significantly reduces electrical consumptions but with sufficient pumping from atmosphere to its ultimate vacuum.

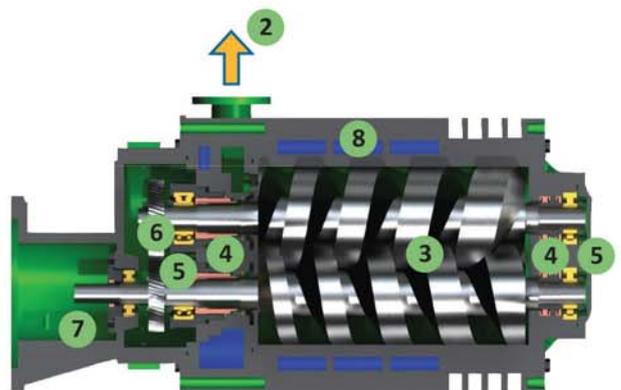
Non-seized rotation of screws without lubricants between screws and stator can be achieved by precision machining and balanced assembly of timing gears and bearings that are lubricated but well-sealed from pumping chamber.

Features & Characteristics

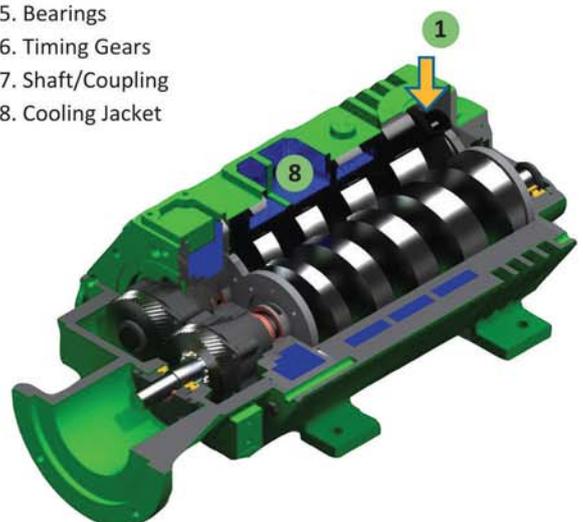
- Fast Pumping Down
- Superior Stand-alone Ultimate Vacuum
- Unique Hydrodynamic Spiral Jacket Cooling
- No Cooling Gas(up to 800) necessary
- Low Discharge Temperature
- Lower Power Consumption
- Low Vibration
- Low Noise Level
- Easy Maintenance
- Lower Maintenance Cost
- Robust Hexagonal Body Design
- Wide rangeability of Process Vacuum

Material of construction

- Casing : Coated Ductile Iron
- Screw : Coated Ductile Iron
- Lip Seal : Polyimide in Stainless Steel
- Slip Sleeve : Ceramic plated Stainless Steel
- Shaft Seals :
- HV(Suction) : Double Lip Seal + Double Lip Seal
- LV(Discharge) : Lip & Mechanical Seal, Oil Seal
- Bearings : Polyimide in Stainless Steel
- HV(Suction) : Roller Ball Bearing
- LV(Discharge) : Angular Double Ball Bearing
- Drive End : Single Ball Bearing
- Gear Box Oil : Shell Turbo Oil T
- Rear End Bearing : Mobile 1 Grease



1. Suction
2. Discharge
3. Screws
4. Seals
5. Bearings
6. Timing Gears
7. Shaft/Coupling
8. Cooling Jacket



SVC

Screwstar is a registered trademark of SVC Co., LTD., Copyright reserved

Chemical & Process Vacuum

Historically Chemical & Process Industries use steam ejectors, liquid ring pumps and once-through oil lubricated rotary pumps to meet their process needs for various level of vacuum conditions, which generate waste water and process effluent disposal. Nowadays in order to be compliant with restrictive national and international environmental regulations, to reduce operating cost, to enable easier process control and maintenance, these industries have replaced their existing pumping units with mechanical solutions. Ideally pump welcomes only gases and vapors but in such dynamic process environments with various process materials, chemical processes often involve toxic, aggressive and explosive materials, in some worst cases, liquid and solid carry-over. All protective equipments like filters, frame arresters and condensers, etc are fitted at both up and downstream of pumps but those are not sufficient always to overcome potential problems.

Chemistar™s are designed to efficiently pass over the minimal level of unexpected by-products and/or carry-overs to protect itself and minimize process down time even though it will be never perfect as mechanical limitation cannot be completely overcome.

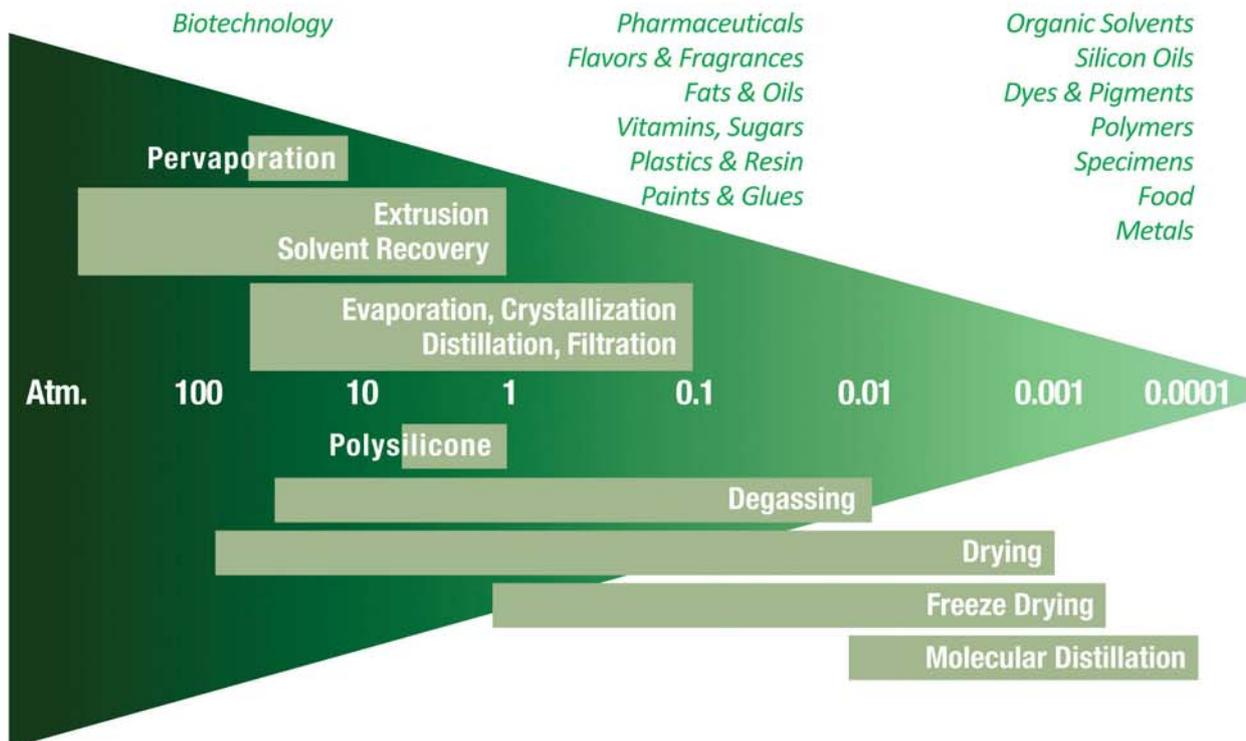


Chemistar™

Optional Accessories

- Pre-condenser
- Inlet Knockout Pot
- Receiver
- Isolation valve
- Inlet purge Kit
- Solvent Flush Kit
- Inlet Filter
- Flame Arresters
- Exhaust Silencer
- Exhaust Pressure Switch
- Exhaust Pressure Transmitter
- Exhaust Gas Temperature Transmitter
- Seal Purge Kit
- Control Panel
- Junction Box

Typical Applications



Industrial & General Vacuum

Diverse industries together with research laboratories often require vacuum processes and the requirement for process conditions including pumping down time, pressure holding zone, ultimate vacuum and the total or partial volume of pumping area are also so different. In terms of pressure range, it often require down to 10^{-6} torr or even lower from atmospheric pressure and the required pumping capacity reaches thousands of m^3 or a lot larger depending on industry scale.

Robustar™s are designed particularly for fast pumping of large volume in general industrial area and some process industrial area like steel degassing, house vacuum, etc. It is often combined with large booster pumps with necessary optional equipments for efficient treatment of process materials and for larger volume pumping. Also its large pumping capacity and stable operation from atmospheric to 0.1 torr or lower significantly saves process down time and sufficiently back up booster pumps toward lower pressure and efficiently hold the pressure zone for continuous processes. Further to this, its low vibration level is good enough for some vibration sensitive processes.

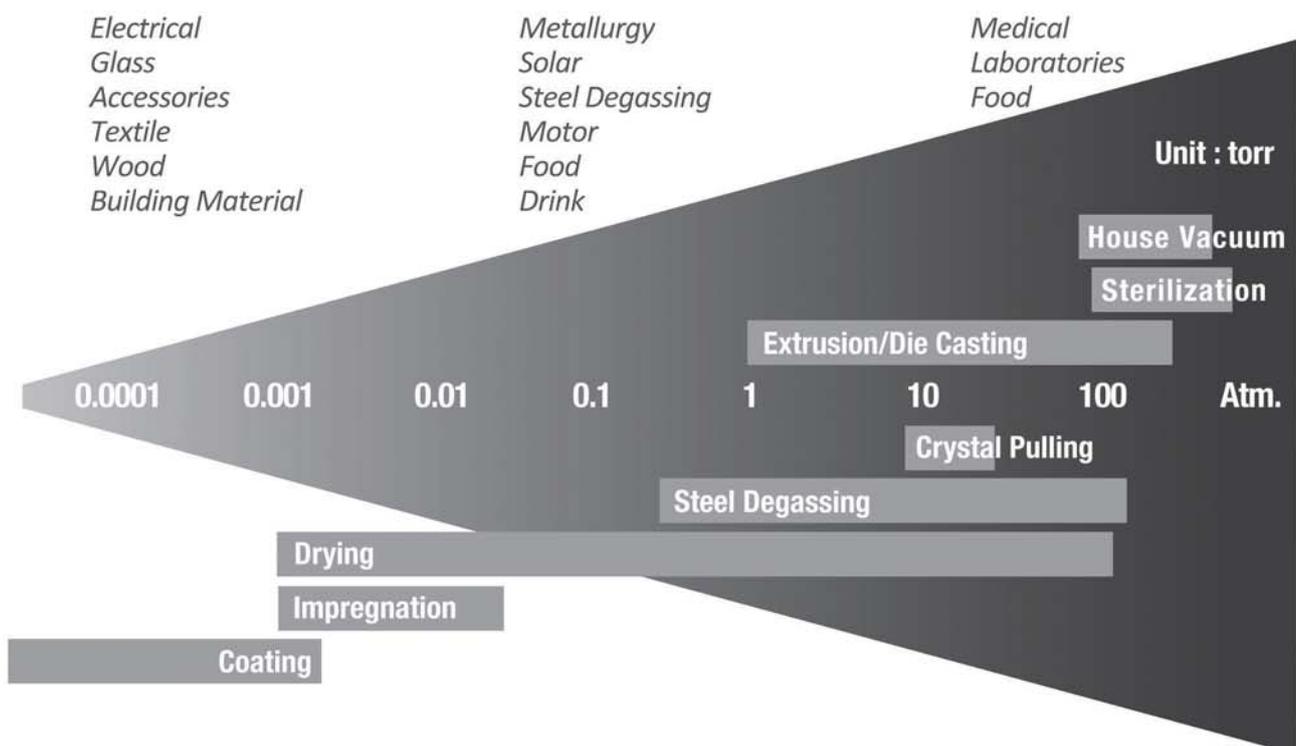


Robustar™

Optional Accessories

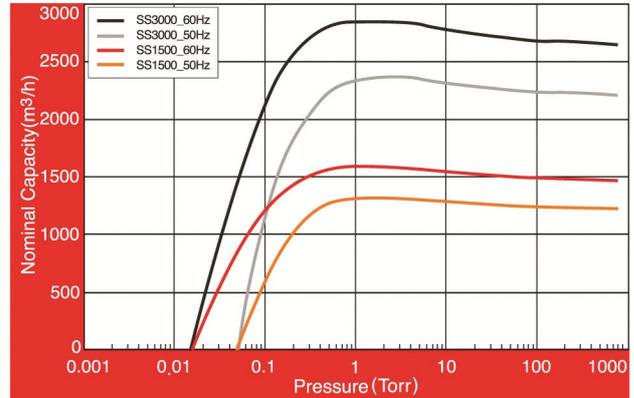
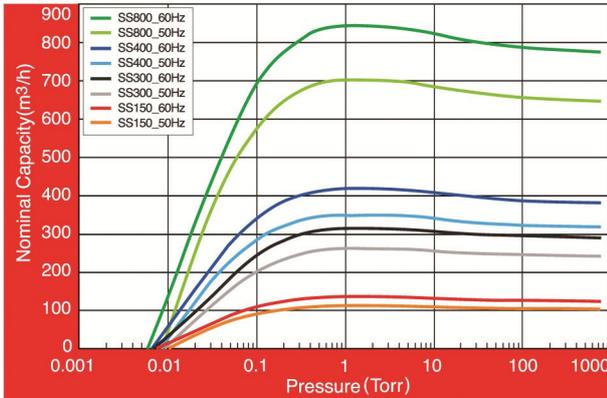
- Isolation Valve
- Inlet Filter
- Inlet purge Kit
- Solvent Flush Kit
- Exhaust Pressure Switch
- Exhaust Pressure Transmitter
- Exhaust Silencer
- Seal Purge Kit
- Control Panel
- Junction Box

Typical Applications



Performance & Specification

Pump Speed Curve



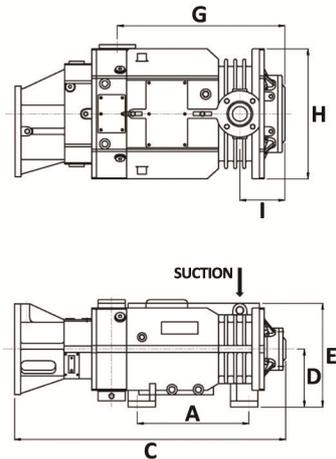
Performance based on ambient condition, tolerance ±10%

Specification

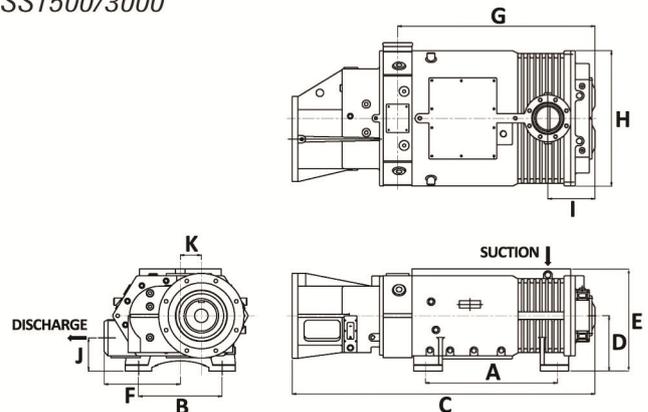
Model	SS150	SS300	SS400	SS800	SS1500	SS3000
Displacement (m³/hr, 50/60Hz)	110/130	250/300	330/400	660/800	1,250/1,500	2,250/2,700
Ultimate pressure (torr)	7.5×10 ⁴	7.5×10 ³	7.5×10 ³	7.5×10 ³	1.5×10 ²	1.5×10 ²
Motor power (kw, 50Hz/60Hz)	2.2/3.7	7.5/7.5	7.5/11	15/15	30/37	37/55
Rotation (max. rpm, 50Hz/60Hz)	2,900/3,500	2,900/3,500	2,900/3,500	2,900/3,500	1,450/1,750	1,450/1,750
Connection (Inlet/Outlet)	JIS 40/40A	JIS50/40A	JIS 65/50A	JIS 100/65A	JIS 125/80A	JIS 150/100A
Cooling water flow (l/min)	5~10	10~15	10~15	15~20	30~40	40~50
Gear oil capacity (l/min)	1	2	2	2.5	8	10
Seal type	HV : Double Lip Seal + Double Lip Seal / LV : Lip & Mechanical Seal, Oil Seal					
Apprx. weight (vare shaft, kg)	200	300	380	600	1,200	1,500

Dimension

SS150/300/400/800



SS1500/3000



Model	SS150	SS300	SS400	SS800	SS1500	SS3000
A	262	367	416	493	694	728
B	210	290	310	348	440	444
C	723	893	1016	1140	1592	1757
D	144	190	202	212	290	320
E	260	342	367	391	538	585
F	170	222	260	295	400	446
G	421	552	626	704	1037	1074
H	316	432	483	544	717	820
I	124	148	161	193	248	348
J	74	109	106	116	180	210
K	42.5	58	63.5	73	110	125
Suction Port	JIS40A	JIS50A	JIS65A	JIS100A	JIS125A	JIS150A
Discharge Port	JIS40A	JIS40A	JIS50A	JIS65A	JIS80A	JIS100A

Systemization

In case that all range of stand alone primary pumps are not enough for certain level of process vacuum capacity and/or ultimate vacuum, or process conditions require extra treatment of pumping vapor or gas, i.e. in order to trap condensates, powders, it is necessary to be combined with booster pumps, single stage or multi stages as necessary together with other accessories like condensers, receivers, knock out ports, filters, control panels, etc.

SVC is ready to provide optimized total package solution and will deliver package performance as required in order to enable customers to safely run pumping systems then reach the process yield.



Ordering Information

Item Description	Ordering No	Item Description	Ordering No
CSS150 Complete pump with 60Hz Standard Motor(HICO)	CS1002-00-001	RSS150 Complete pump with 60Hz Standard Motor(HICO)	RS2022-00-001
CSS150 Complete pump with 50Hz Standard Motor(HICO)	CS1002-01-001	RSS150 Complete pump with 50Hz Standard Motor(HICO)	RS2022-01-001
CSS150 Bareshaft Pump	CS1002-02-001	RSS150 Bareshaft Pump	RS2022-02-001
CSS300 Complete pump with 60Hz Standard Motor(HICO)	CS1004-00-001	RSS300 Complete pump with 60Hz Standard Motor(HICO)	RS2024-00-001
CSS300 Complete pump with 50Hz Standard Motor(HICO)	CS1004-01-001	RSS300 Complete pump with 50Hz Standard Motor(HICO)	RS2024-01-001
CSS300 Bareshaft Pump	CS1004-02-001	RSS300 Bareshaft Pump	RS2024-02-001
CSS400 Complete pump with 60Hz Standard Motor(HICO)	CS1005-00-001	RSS400 Complete pump with 60Hz Standard Motor(HICO)	RS2025-00-001
CSS400 Complete pump with 50Hz Standard Motor(HICO)	CS1005-01-001	RSS400 Complete pump with 50Hz Standard Motor(HICO)	RS2025-01-001
CSS400 Bareshaft Pump	CS1005-02-001	RSS400 Bareshaft Pump	RS2025-02-001
CSS800 Complete pump with 60Hz Standard Motor(HICO)	CS1007-00-001	RSS800 Complete pump with 60Hz Standard Motor(HICO)	RS2027-00-001
CSS800 Complete pump with 50Hz Standard Motor(HICO)	CS1007-01-001	RSS800 Complete pump with 50Hz Standard Motor(HICO)	RS2027-01-001
CSS800 Bareshaft Pump	CS1007-02-001	RSS800 Bareshaft Pump	RS2027-02-001
CSS1500 Complete pump with 60Hz Standard Motor(HHI)	CS1008-00-002	RSS1500 Complete pump with 60Hz Standard Motor(HHI)	RS2028-00-002
CSS1500 Complete pump with 50Hz Standard Motor(HHI)	CS1008-01-002	RSS1500 Complete pump with 50Hz Standard Motor(HHI)	RS2028-01-002
CSS1500 Bareshaft Pump	CS1008-02-001	RSS1500 Bareshaft Pump	RS2028-02-001
CSS3000 Complete pump with 60Hz Standard Motor(HHI)	CS1010-00-002	RSS3000 Complete pump with 60Hz Standard Motor(HHI)	RS2030-00-002
CSS3000 Complete pump with 50Hz Standard Motor(HHI)	CS1010-01-002	RSS3000 Complete pump with 50Hz Standard Motor(HHI)	RS2030-01-002
CSS3000 Bareshaft Pump	CS1010-02-001	RSS3000 Bareshaft Pump	RS2030-02-001
CSS150 Clean & Overhaul Kit	CS1070-12-002	RSS150 Clean & Overhaul Kit	RS2070-12-002
CSS300 Clean & Overhaul Kit	CS1070-12-004	RSS300 Clean & Overhaul Kit	RS2070-12-004
CSS400 Clean & Overhaul Kit	CS1070-12-005	RSS400 Clean & Overhaul Kit	RS2070-12-005
CSS800 Clean & Overhaul Kit	CS1070-12-007	RSS800 Clean & Overhaul Kit	RS2070-12-007
CSS1500 Clean & Overhaul Kit	CS1070-12-008	RSS1500 Clean & Overhaul Kit	RS2070-12-008
CSS3000 Clean & Overhaul Kit	CS1070-12-009	RSS3000 Clean & Overhaul Kit	RS2070-12-009

SVC

www.screwvacuum.com
inquiry@screwvacuum.com

HQ & Factory 23, Noksansandan 77-ro 22beon-gil Gangseo-gu, Busan, Korea
Tel. +82 51 973 9016 FAX. +82 505 548 9016

Seoul Office 623ho, Ingye-Dong, Samho Park Tower, 303 Hyowon-Ro, Paldal-Gu,
Suwon-Si, Gyeonggi-Do, Korea
TEL. +82 31 226 9063 FAX. +82 505 548 9016

