œrlikon
leybold vacuum

SCREWLINE

Dry Compressing Screw Vacuum Pump for Industrial Applications

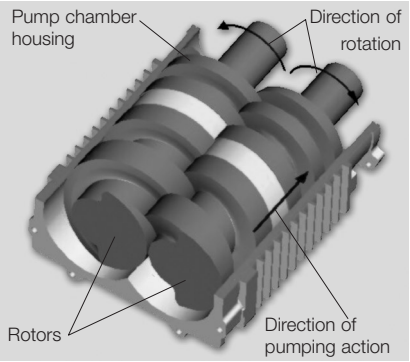
171.06.02
Excerpt from the Oerlikon Leybold Vacuum Full Line Catalog
Product Section C05
Edition May 2007

Contents

Dry Compressing Screw Vacuum Pump SCREWLINE

Principle of Operation

SCREWLINE vacuum pumps are dry compressing backing pumps, the operation of which is based on the screw principle. The pumping chamber of the pump is formed by two synchronised positive displacement rotors and the housing enclosing these. Since the rotors rotate in opposite directions, the chambers move steadily from the intake to the exhaust side of the pumps thereby resulting in a smooth pumping action (see figure below). Since with a single SCREWLINE rotor pair a multi-stage compression process is implemented, the component count in the pumping path is very low. In this way maintenance and servicing work is much simplified.



Principle of operation of the SCREWLINE pumps

Properties

The direct pumping path without multiple deflections for the medium make the SCREWLINE vacuum pumps highly insensitive to foreign materials. This ensures a high uptime in industrial processes.

The two shaft-sealed non-contacting and thus practically wear-free, which allows for very long maintenance intervals.

For standard applications no purge gas is required. However, a purge gas supply can be connected as an option to purge the seals, should the application process require this.

Because of the cantilevered bearing arrangement for the SCREWLINE rotors, a potential source of failure (i.e. a bearing on the intake side) is entirely eliminated. On the one hand, no lubricants from the bearings can enter into the vacuum process, and the other hand also an impairment of the bearing by aggressive process media can be excluded.

A further benefit of the cantilevered bearing arrangement is the easy accessibility of the pump chamber. This innovative design feature allows the removal of the pump housing without time-consuming and costly disassembly of the bearings. Thus on-site cleaning of all surfaces in contact with the medium is possible. In particular, if the processes involved considerable amounts of contaminants this is a significant advantage which ensures a long uptime.

SP250 with silencer (horizontal)

Besides the integrated oil cooling arrangement for the rotors, the SCREWLINE pumps are air-cooled from the outside. Here rotor and housings are thermally linked via the oil cooler. Thus SCREWLINE pumps adapt themselves ideally to the ambient conditions under changing operating situations.

A water-cooled version is offered as SCREWLINE SP630 F. This product version is intended for operation in air-conditioned rooms.

The SCREWLINE port folio is completed through ATEX-certified variants.

Moreover, the SCREWLINE portfolio also includes pump versions suited for pumping pure oxygen (O_2).

Oil/water cooling unit SP630 F

Maintenance and Monitoring

During the development of the SCREWLINE pumps special emphasis was placed on a particularly simple maintenance concept. On the one hand this has been implemented through the cantilevered bearing arrangement, on the other hand all maintenance components and controls have been located on the so-called service side for easy accessibility. Thus the space requirement which needs to be taken into account during planning has been optimised. The lower space requirement gives the user more flexibility during installation of the pump.

The monitoring system SP Guard was developed specially for constant monitoring of the operational status of the SCREWLINE vacuum pumps. The operating parameters are constantly acquired and processed.

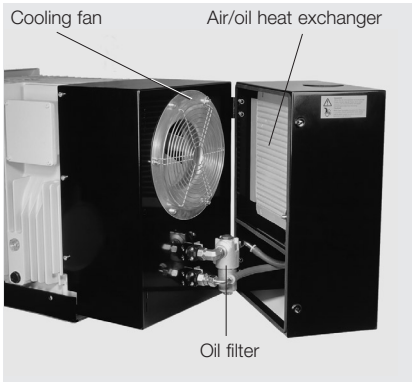
This enables the user to introduce preventive actions early enough so as to ensure trouble-free operation of his SCREWLINE vacuum pumps. The key current operating parameters can be read off from a display. Moreover, connection to a PLC is possible. Maintenance of the SCREWLINE pumps will generally be limited to a regular visual inspection of the pump and the annual change of gear oil and oil filter. The oil fill ports as well as the filters are readily accessible and can be easily exchanged.

With the aid of a flushing kit (optional) it is possible to clean the pump chamber, while the pump is operating without process. Deposits due to the process can thus be removed effectively and quickly without the need of having to disassemble the housing.

Also cleaning of the air/oil heat exchanger can be done simply on-site by blowing out the heat exchanger with compressed air.

Accessories

SCREWLINE vacuum pumps offer to the user a high degree of flexibility. Inlet and exhaust connections are made through universal flanges, respectively clamped flanges, permit simple integration within the system. Through the accessories which are available, the pump can be optimally adapted to the individual requirements of differing applications.



Oil/water cooling unit SP630

The New Dry Compressing Screw Vacuum Pump for Industrial Applications

Pump system SCREWLINE SP630 with RUVAC WAU 2001

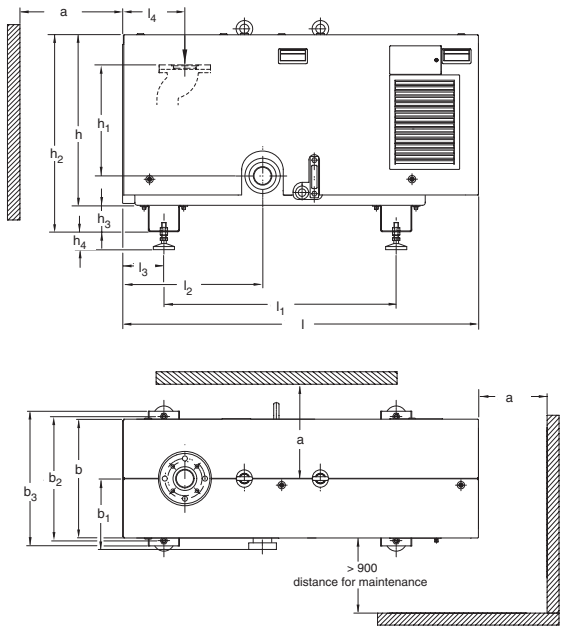
The SCREWLINE pumps were developed in view of the special requirements of industrial applications. The innovative design allows these pumps to be used whenever reliable, compact and low maintenance vacuum solu-tions are demanded.

Advantages to the User

- Minimum downtimes, maximum availability, highly rugged
  - The only vacuum pump with a cantilevered bearing arrangement in the industrial market
  - Monitoring through SP Guard
  - Highly tolerant of particles and vapours
- Low cost of ownership
  - No purge gas and no cooling water is required for standard applications
  - Low power consumption
  - No contaminated waste oil, no waste disposal costs
- Long maintenance intervals and low servicing complexity
  - Easy and rapid accessibility of all maintenance components and controls
  - Only an annual change of the gear oil is necessary
  - On-site cleaning of the rotors is easy to perform
- Highly flexible
  - Accessories are available for most demanding processes
  - The modular concept allows easy adaptation of the pumping speed of up to 2000 m^3/h by combination with RUVAC Roots vacuum pumps
  - Connections provided through universal flanges, respectively clamped flanges allow for simple and flexible integration within systems
  - Basic models plus accessories allow the pumps to be equipped according to specific require-ments
- High pumping speed at low ultimate pressure
- Excellent suitability for the short cycles of load lock chambers or similar applications

Typical Applications

- Industrial furnaces
- Coating technology
- Load lock chambers
- Metallurgical systems
- Packaging technology
- Drying processes
- Degassing
- Research and development
- Lamps and tubes manufacture
- Automotive industry
- Packaging industry
- Space simulation
- Electrical engineering

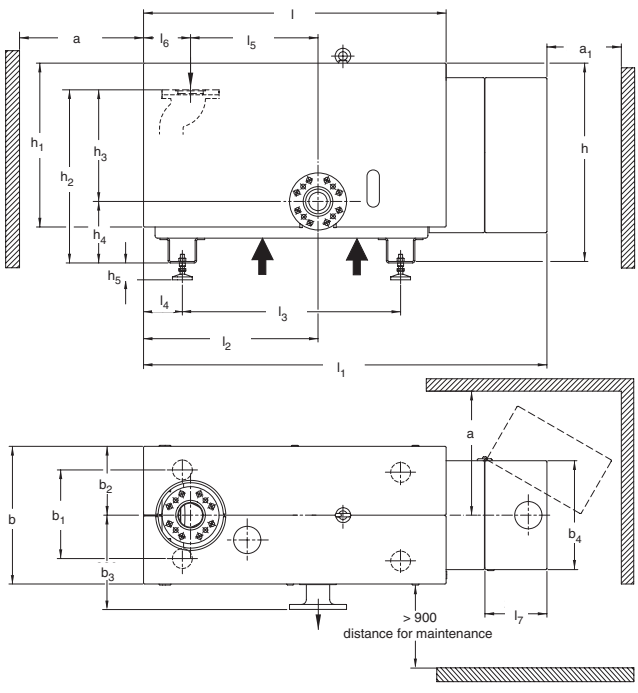


	a	b	b_1	b_2	b_3
mm	> 500	450	268	470	510
in.	> 19.69	17.72	10.55	18.50	20.08

	h	h_1	h_2	h_3	h_4
mm	646	385	746	100	68 - 75
in.	25.43	15.16	29.37	3.94	2.68 - 2.95

	l	l_1	l_2	l_3	l_4
mm	1348	880	529	156	236
in.	53.08	34.65	20.83	6.14	9.29

Dimensional drawing for the SCREWLINE SP250

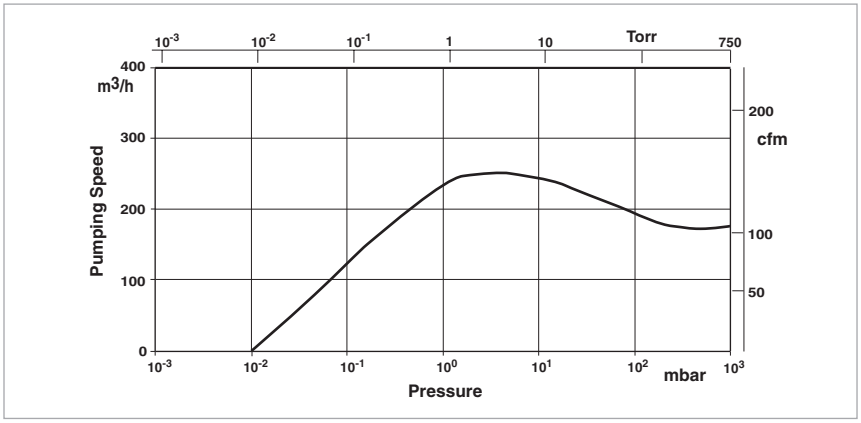


	a	a_1	b	b_1	b_2	b_3	b_4
mm	> 500	> 300	555	470	276	380	439
in.	> 19.69	> 11.81	21.85	18.05	10.87	14.96	17.28

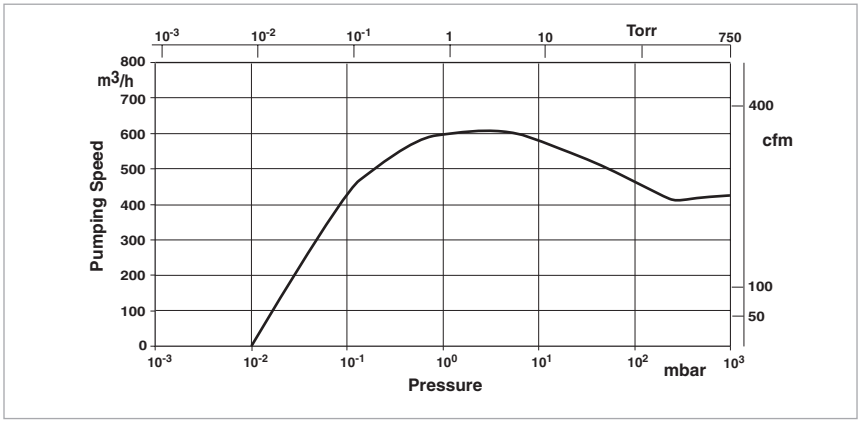
	h	h_1	h_2	h_3	h_4	h_5	l
mm	806	636	698	450	248	68	1220
in.	31.73	25.04	27.48	17.72	9.76	2.68	48.03

	l_1	l_2	l_3	l_4	l_5	l_6	l_7
mm	1626	703	880	157	514	189	250
in.	64.02	27.68	34.65	6.18	20.24	7.44	9.84

Dimensional drawing for the SCREWLINE SP630



Effective pumping speed of the SCREWLINE SP250 for air, without gas ballast (50 Hz)



Effective pumping speed of the SCREWLINE SP630 for air, without gas ballast (50/60 Hz)

Products

Technical Data

	SCREWLINE SP250	
	50 Hz	60 Hz
Effective pumping speed $m^3 \times h^{-1}$ (cfm)	270 (≥ 157)	300 (≥ 194)
Ultimate pressure, total mbar (Torr)	≤ 0.01 (≤ 0.0075)	≤ 0.005 (≤ 0.0038)
Permissible intake pressure, max. mbar (Torr)	1030 (773)	1030 (773)
Maximum exhaust pressure with reference to the ambient pressure	$p_{ex} = p_{amb}$ + 200 mbar (150 Torr) – 50 mbar (37 Torr)	$p_{ex} = p_{amb}$ + 200 mbar (150 Torr) – 50 mbar (37 Torr)
Noise level [1] dB(A)	≤ 75	≤ 75
Permissible ambient temperature °C (°F)	+10 to +40 (+50 to +104)	+10 to +40 (+50 to +104)
Contamination degree [2]	3	3
Water vapour tolerance (with gas ballast) mbar (Torr)	60 (45)	75 (56)
Water vapour capacity (with gas ballast) $kg \times h^{-1}$ ($gal \times h^{-1}$)	10 (2.7)	18 (4.9)
Relative humidity of the ambient air [3] %	max. 95	max. 95
Installation location	up to 3000 metres (9.800 feet) (above sea level)	up to 3000 metres (9.800 feet) (above sea level)
Cooling	Air	Air
Power supply ΔΔ Δ	29.0 A / 200 V 14.5 A / 400 V	39.0 A / 210 V 18.4 A / 460 V
cos φ	0.84	0.88
Nominal power kW (HP)	7.5 (10.0)	11.5 (15.6)
Power consumption at ultimate pressure kW (HP)	5.9 (7.9)	7.2 (9.8)
Motor rotational speed rpm	2920	3505
Type of protection IP	55	55
Thermal protection class	F	F
Lubricant filling (ANDEROL 555) l	7	7
Intake flange, standard Clamping flange Flange Flange	ISO 1609-1986 (E)-63 (DN 63 ISO-K) [4] ASME B 16.5 NPS 3 class 150 EN 1092-2-PN 6 - DN 65	ISO 1609-1986 (E)-63 (DN 63 ISO-K) [4] ASME B 16.5 NPS 3 class 150 EN 1092-2-PN 6 - DN 65
Exhaust flange, standard Clamping flange	ISO 1609-1986 (E)-63 (DN 63 ISO-K)	ISO 1609-1986 (E)-63 (DN 63 ISO-K)
Exhaust flange, optional Clamping flange Flange Flange Flange	ISO 1609-1986 (E)-63 (DN 63 ISO-K) [4] ASME B 16.5 NPS 3 class 150 EN 1092-2-PN 16 - DN 65 EN 1092-2-PN 6 - DN 65	ISO 1609-1986 (E)-63 (DN 63 ISO-K) [4] ASME B 16.5 NPS 3 class 150 EN 1092-2-PN 16 - DN 65 EN 1092-2-PN 6 - DN 65
Materials (components in contact with the gas)	Aluminum, alumnium anodic oxidised, C steel, CrNi steel, grey cast-iron, FPM (Viton)	Aluminum, alumnium anodic oxidised, C steel, CrNi steel, grey cast-iron, FPM (Viton)
Weight, approx. kg (lbs)	450 (992)	450 (992)
Dimensions (W x D x H) mm (in.)	1350 x 530 x 880 (53.1 x 20.9 x 34.6)	1350 x 530 x 880 (53.1 x 20.9 x 34.6)

[1] with sealed off lines at ultimate pressure (in accordance with ISO 4871)
[2] in accordance with EN 50178
[3] in accordance with EN 60721-3-3
[4] this flange is required when ISO-K flanges are to be connected (Part No. 267 47)

Ordering Information

	SCREWLINE SP250		
	Standard	**ATEX**	**O_2**
SCREWLINE SP250 (50/60 Hz)			
with SP Guard			
and manual gas ballast	**Part No. 115 001**	**–**	**–**
with SP Guard and			
electromagnetic gas ballast	**Part No. 115 002**	**–**	**–**
with SP Guard,			
electromagnetic gas ballast			
and purge gas unit	**Part No. 115 003** [1]	**Part No. 115 003**	**Part No. 115 019**
with SP Guard, special gaskets,			
electromagnetic gas ballast			
and purge gas unit			
category 3GD IIC 160 °C inside	**–**	**Part No. 115 009**	**–**
with SP Guard,			
electromagnetic gas ballast			
and purge gas unit			
category 3GD IIC 160 °C inside /			
category 3GD EEx nA IIC 160 °C outside	**–**	**Part No. 115 010**	**–**
with SP Guard,			
electromagnetic gas ballast			
and purge gas unit			
category 2G3D b IIC 135 °C inside /			
category 3GD EEx nA IIC 160 °C outside			
(50 Hz only)	**–**	**Part No. 115 011**	**–**
with manual gas ballast	**Part No. 115 004**	**–**	**–**
with electromagnetic gas ballast	**Part No. 115 005**	**–**	**–**
Exhaust silencer	**Part No. 119 002**	**Part No. 119 002**	**Part No. 119 002**
Exhaust non-return valve (DN 100 PN 6)	**Part No. 119 011**	**Part No. 119 011**	**–**
Adaptor for RUVAC 501/1001	**Part No. 119 022**	**Part No. 119 022**	**Part No. 119 022**
Purge gas retrofit kit	**Part No. 119 031**	**–**	**–**
Filter adapter DN 65 ISO-K	**Part No. 119 019**	**Part No. 119 019**	**–**
Dust filter	**Part No. 951 68**	**–**	**–**
Purge kit [2]	**Part No. 119 015**	**Part No. 119 015**	**–**

[1] ATEX Category 3 as standard (Directive 94/9/EG)
[2] available from August 2007

Technical Data

	SCREWLINE SP630	
	50 Hz	**60 Hz**
Pumping speed $m^3 \times h^{-1}$ (cfm)	630 (371)	630 (371)
Ultimate total pressure mbar (Torr)	≤ 0.01 (≤ 0.0075)	≤ 0.01 (≤ 0.0075)
Maximum exhaust pressure with reference to the ambient pressure	$p_{ex} = p_{amb}$ + 200 mbar (150 Torr) – 50 mbar (37 Torr)	$p_{ex} = p_{amb}$ + 200 mbar (150 Torr) – 50 mbar (37 Torr)
Intake pressure limits, max. mbar (Torr)	1030 (773)	1030 (773)
Noise level [1] dB(A)	≤ 75	≤ 75
Permissible ambient temperature °C (°F)	+10 to +40 (+50 to +104)	+10 to +40 (+50 to +104)
Contamination degree [2]	3	3
Water vapour tolerance (with gas ballast) mbar (Torr)	40 (30)	40 (30)
Water vapour capacity (with gas ballast) kg x h^{-1} (gal x h^{-1})	14 (3.7)	14 (3.7)
Relative humidity of the ambient air [3] %	max. 95	max. 95
Installation location	up to 3000 metres (9.800 feet) (above sea level)	up to 3000 metres (9.800 feet) (above sea level)
Cooling	Air	Air
Power supply ΔΔ Δ	56 A / 200 V 28 A / 400 V	52 A / 210 V 24 A / 460 V
cos φ	0.89	0.90
Nominal power kW (HP)	15 (20)	15 (20)
Power consumption at ultimate pressure kW (HP)	< 11 (< 15)	< 11 (< 15)
Motor rotational speed rpm	2930	3530
Type of protection IP	55	55
Thermal protection class	F	F
Lubricant filling (ANDEROL 555) l	15	15
Intake flange and exhaust flange compatible to	EN 1092-2 - PN 6 - DN 100 EN 1092-2 - PN 16 - DN 100 ISO 1609-1986 (E)-100 (DN 100 ISO-K) [4] ASME B 16.5 NPS4 class 150	EN 1092-2 - PN 6 - DN 100 EN 1092-2 - PN 16 - DN 100 ISO 1609-1986 (E)-100 (DN 100 ISO-K) [4] ASME B 16.5 NPS4 class 150
Materials (components in contact with the gas)	Aluminum, alumnium anodic oxidised, C steel, CrNi steel, grey cast-iron, FPM (Viton)	Aluminum, alumnium anodic oxidised, C steel, CrNi steel, grey cast-iron, FPM (Viton)
Weight, approx. kg (lbs)	530 (1166)	530 (1166)
Dimensions (W x D x H) mm (in.)	1630 x 660 x 880 (64 x 26 x 35)	1630 x 660 x 880 (64 x 26 x 35)

[1] with sealed off lines at ultimate pressure (in accordance with ISO 4871)

[2] in accordance with EN 50178

[3] in accordance with EN 60721-3-3

[4] this flange is required when ISO-K flanges are to be connected (P/N 267 50)

Additional Technical Data

	SCREWLINE SP630 F	
	50 Hz	60 Hz
Cooling	Water	Water
Water connection G	1/2" ISO 228-1	1/2" ISO 228-1
Water temperature °C (°F)	5 - 35 (41 - 95)	5 - 35 (41 - 95)
Minimum water feed pressure bar (psi, gauge)	2 (15)	2 (15)
Nominal flow at a water feed temperature of 25° C (77 °F) l/min (gal/min)	12 (3)	12 (3)

Ordering Information

SCREWLINE SP630/SP630 F

	50 Hz	60 Hz
SCREWLINE SP630		
air cooled,		
with adapter for RUVAC 2001, SP Guard		
and electromagnetic gas ballast	**Part No. 117 005**	**Part No. 117 006**
with SP Guard and manual gas ballast	**Part No. 117 007**	**Part No. 117 008**
with SP Guard and		
electromagnetic gas ballast	**Part No. 117 009**	**Part No. 117 010**
with adaptor for RUVAC 2001, SP Guard		
and manual gas ballast	**Part No. 117 011**	**Part No. 117 012**
with SP Guard, purge gas kit		
and manual gas ballast	**Part No. 117 017** [1]	**Part No. 117 018** [1]
with SP Guard, purge gas kit		
and electromagnetic gas ballast	**Part No. 117 019** [1]	**Part No. 117 020** [1]
with electromagnetic gas ballast	**Part No. 117 021**	**Part No. 117 022**
with manual gas ballast	**Part No. 117 023**	**Part No. 117 024**
SCREWLINE SP630 F		
water cooled,		
with adapter for RUVAC 2001, SP Guard		
and electromagnetic gas ballast	**Part No. 117 105**	**Part No. 117 106**
with SP Guard and manual gas ballast	**Part No. 117 107**	**Part No. 117 108**
Exhaust silencer	**Part No. 119 001**	**Part No. 119 001**
Roots pump adapter		
for RUVAC 2001	**Part No. 119 021**	**Part No. 119 021**
Dust filter [2]	**Part No. 951 72**	**Part No. 951 72**
Elbow 90° (DN 100 ISO-K)	**Part No. 887 26**	**Part No. 887 26**
Clamping screws for DN ISO-K	**Part No. 267 01**	**Part No. 267 01**
Centering ring for DN ISO-K	**Part No. 268 06**	**Part No. 268 06**
Flushing kit SP 630		
with tap water connection	**Part No. 500 003 063** [3]	**Part No. 500 003 063** [3]
with purging vessel	**Part No. 500 003 068** [3]	**Part No. 500 003 068** [3]
Flushing kit SP 630 and fitted RUVAC		
with tap water connection	**Part No. 500 003 074**	**Part No. 500 003 074**
with purging vessel	**Part No. 500 003 075**	**Part No. 500 003 075**
Intermediate piece DN 100 ISO-K	**Part No. 119 020**	**Part No. 119 020**
Gas ballast, manual (DN ISO-K) [4]	**Part No. 119 051**	**Part No. 119 051**
Gas ballast, 24 V DC (DN 16 KF) [4]	**Part No. 119 052**	**Part No. 119 052**
SP Guard kit, complete [5]	**Part No. EK 110 000 809**	**Part No. EK 110 000 809**
Non-return valve (DN 100 PN [6]	**Part No. 119 010**	**Part No. 119 010**
Purge gas retrofit kit [4]	**Part No. 119 030**	**Part No. 119 030**
Flushing kit [6]	**Part No. 119 015**	**Part No. 119 015**

1) ATEX Category 3 (Directive 94/9/EG)
2) For information on the dust filter please refer to the Product Section C02, Section "Accessories"
3) Both part numbers can also be used in the case of pump systems with a frame (pump system)
4) Can currently only be installed through a Oerlikon Leybold Vacuum service
5) Can only be installed as a service provided by Oerlikon Leybold Vacuum
6) Available from August 2007

Ordering Information

SCREWLINE SP630 / SP630 F ATEX

	50 Hz	60 Hz
SCREWLINE SP630 with SP Guard, purge gas kit and manual gas ballast Cat. 3G IIC T3 (160 °C) inside	**Part No. 117 017**	**Part No. 117 018**
with SP Guard, purge gas kit and electromagnetic gas ballast Cat. 3G IIC T3 (160 °C) inside	**Part No. 117 019**	**Part No. 117 020**
SCREWLINE SP630, water cooled Cat. 2G3D IIC (160 °C) Cat. 3G IIC T3 (160 °C) with purge gas kit and electromagnetic gas ballast	**Part No. 117 111** [1)]	**Part No. 117 112** [1)]
Exhaust silencer	**Part No. 119 001**	**Part No. 119 001**
Roots pump adapter for RUVAC 2001	**Part No. 119 021**	**Part No. 119 021**
Intermediate piece DN 100 ISO-K	**Part No. 119 020**	**Part No. 119 020**
Non-return valve (DN 100 PN 6)	**Part No. 119 010**	**Part No. 119 010**
Flushing kit [1)]	**Part No. 119 015**	**Part No. 119 015**

[1)] Available from August 2007

Ordering Information

SCREWLINE SP630 O_2

	50 Hz	60 Hz
SCREWLINE SP630 with SP Guard, purge gas kit and electromagnetic gas ballast	**Part No. 117 039**	**Part No. 117 040**
Exhaust silencer	**Part No. 119 001**	**Part No. 119 001**
Roots pump adapter for RUVAC 2001	**Part No. 119 021**	**Part No. 119 021**

Accessories

SP Guard

The monitoring system SP Guard was specially developed for constantly monitoring the operational status of the screw vacuum pump SCREWLINE SP630.

The operational parameters are constantly collected and evaluated.

In this way a high degree of reliability is attained.

Technical Data

		SP Guard
Power supply through power supply unit	V DC	24
Current consumption	A	0.2

Ordering Information

	SP-Guard
SP Guard kit, complete [1)]	**Part No. EK 110 000 809**
Supply 24 V DC, 230/120 V AC, 50/60Hz for SP-Guard	**Part No. 152 50**

[1)] Can currently only be installed through a Oerlikon Leybold Vacuum service

Vacuum Pump Oils

Lubricating oils for vacuum pumps must meet tough requirements. They need to have excellent lubricating properties and resist cracking when subjected to mechanical loads.

The vacuum pump oil ANDEROL® 555 detailed below was qualified for usage in the SCREWLINE line of pumps through a comprehensive series of experiments under application conditions in our own factory laboratories.

For these reasons please understand that we must make our warranty commitment dependent on the use of oils which have been qualified by us. Damages caused by the use of not suitably qualified lubricating oils are not covered by our warranty.

Safety data sheets are available upon request for professional users from:
Email „documentation.vacuum@oerlikon.com“ or from the Internet „www.oerlikon.com“.

Application Data	ANDEROL® 555
Type of oil	Diester oil

Ordering Information	Maintenance Kit for changing the Gear Oil
Maintenance kit stage 1 SP250 for changing the gear oil 7 l ANDEROL® 555, oil filter cartridge and gaskets	**Part No. EK 110 000 820**
SP630 for changing the gear oil 15 l ANDEROL® 555, oil filter cartridge and gaskets	**Part No. EK 110 000 792**

ANDEROL® is a trademark of ANDEROL BV

Sales and Service

Germany

Oerlikon
Leybold Vacuum GmbH
Bonner Strasse 498
D-50968 Cologne
Phone: +49-(0)221-347 1234
Fax: +49-(0)221-347 1245
sales.vacuum@oerlikon.com
www.oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Sales Area North/Northeast
Branch Office Berlin
Buschkrugallee 33
1. Obergeschoss
D-12359 Berlin
Phone: +49-(0)30-435 609 0
Fax: +49-(0)30-435 609 10
sales.vacuum.bn@oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Sales Area South/Southwest
Branch Office Munich
Sendlinger Strasse 7
D-80331 Munich
Phone: +49-(0)89-357 33 9-10
Fax: +49-(0)89-357 33 9-33
sales.vacuum.mn@oerlikon.com
service.vacuum.mn
@oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Sales Area West & Benelux
Branch Office Cologne
Bonner Strasse 498
D-50968 Cologne
Phone: +49-(0)221-347 1270
Fax: +49-(0)221-347 1291
sales.vacuum.kn@oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Service Competence Center
Emil-Hoffmann-Strasse 43
D-50996 Cologne-Suerth
Phone: +49-(0)221-347 1439
Fax: +49-(0)221-347 1945
service.vacuum.kn@oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Mobil Customer Service
Emil-Hoffmann-Strasse 43
D-50996 Cologne-Suerth
Phone: +49-(0)221-347 1765
Fax: +49-(0)221-347 1944
service.vacuum.kn@oerlikon.com

Oerlikon
Leybold Vacuum GmbH,
Dresden
Zur Wetterwarte 50, Haus 304
D-01109 Dresden
Service:
Phone: +49-(0)351-88 55 00
Fax: +49-(0)351-88 55 041
info.vacuum.dr@oerlikon.com

Europe

Belgium

Oerlikon
Leybold Vacuum Nederland B.V.
Belgisch bijkantoor
Leuvensesteenweg 542-9A
B-1930 Zaventem
Sales:
Phone: +32-2-711 00 83
Fax: +32-2-720 83 38
sales.vacuum.zv@oerlikon.com
Service:
Phone: +32-2-711 00 82
Fax: +32-2-720 83 38
service.vacuum.zv@oerlikon.com

France

Oerlikon
Leybold Vacuum France S.A.
7, Avenue du Québec
Z.A. Courtaboeuf 1 - B.P. 42
F-91942 Courtaboeuf Cedex
Sales and Service:
Phone: +33-1-69 82 48 00
Fax: +33-1-69 07 57 38
sales.vacuum.or@oerlikon.com

Oerlikon
Leybold Vacuum France S.A.
Valence Factory
640, Rue A. Bergès - B.P. 107
F-26501 Bourg-lès-Valence Cedex
Phone: +33-4-75 82 33 00
Fax: +33-4-75 82 92 69
info.vacuum.vc@oerlikon.com

Great Britain

Oerlikon
Leybold Vacuum UK Ltd.
Unit 2
Silverglade Business Park
Leatherhead Road
UK-Chessington, Surrey KT9 2QL
Sales:
Phone: +44-13-7273 7300
Fax: +44-13-7273 7301
sales.vacuum.ln@oerlikon.com
Service:
Phone: +44-20-8971 7030
Fax: +44-20-8971 7003
service.vacuum.ln@oerlikon.com

Italy

Oerlikon
Leybold Vacuum Italia S.p.A.
8, Via Trasimeno
I-20128 Milano
Sales:
Phone: +39-02-27 22 31
Fax: +39-02-27 20 96 41
sales.vacuum.mi@oerlikon.com
Service:
Phone: +39-02-27 22 31
Fax: +39-02-27 22 32 17
service.vacuum.mi@oerlikon.com

Oerlikon
Leybold Vacuum Italia S.p.A.
Field Service Base
Z.I. Le Capanne
I-05021 Acquasparta (TR)
Phone: +39-0744-93 03 93
Fax: +39-0744-94 42 87
service.vacuum.mi@oerlikon.com

Netherlands

Oerlikon
Leybold Vacuum Nederland B.V.
Proostwetering 24N
NL-3543 AE Utrecht
Sales and Service:
Phone: +31-(30) 242 6330
Fax: +31-(30) 242 6331
sales.vacuum.ut@oerlikon.com
service.vacuum.ut@oerlikon.com

Spain

Oerlikon
Leybold Vacuum Spain, S.A.
C/. Huelva, 7
E-08940 Cornellà de Llobregat
(Barcelona)
Sales:
Phone: +34-93-666 46 16
Fax: +34-93-666 43 70
sales.vacuum.ba@oerlikon.com
Service:
Phone: +34-93-666 49 51
Fax: +34-93-685 40 10
service.vacuum.ba@oerlikon.com

Sweden

Oerlikon
Leybold Vacuum Scandinavia AB
Box 9084
SE-40092 Göteborg
Sales and Service:
Phone: +46-31-68 84 70
Fax: +46-31-68 39 39
info.vacuum.gt@oerlikon.com
Visiting/delivery address:
Datavägen 57B
SE-43632 Askim

Switzerland

Oerlikon
Leybold Vacuum Schweiz AG
Leutschenbachstrasse 55
CH-8050 Zürich
Sales:
Phone: +41-044-308 40 50
Fax: +41-044-302 43 73
sales.vacuum.zh@oerlikon.com
Service:
Phone: +41-044-308 40 62
Fax: +41-044-308 40 60
service.vacuum.zh@oerlikon.com

America

USA

Oerlikon
Leybold Vacuum USA Inc.
5700 Mellon Road
USA-Export, PA 15632
Phone: +1-724-327-5700
Fax: +1-724-325-3577
info.vacuum.ex@oerlikon.com
Sales:
Eastern & Central time zones
Phone: +1-724-327-5700
Fax: +1-724-333-1217
Pacific, Mountain, Alaskan &
Hawaiian time zones
Phone: +1-480-752-9191
Fax: +1-480-752-9494
Service:
Phone: +1-724-327-5700
Fax: +1-724-325-3577

Asia

P.R. China

Oerlikon
Leybold Vacuum (Tianjin)
International Trade Co. Ltd.
Beichen Economic
Development Area (BEDA),
Shanghai Road
Tianjin 300400
China
Sales and Service:
Phone: +86-22-2697 0808
Fax: +86-22-2697 4061
Fax: +86-22-2697 2017
sales.vacuum.tj@oerlikon.com
service.vacuum.tj@oerlikon.com

Oerlikon
Leybold Vacuum
(Tianjin) Co. Ltd.
Beichen Economic
Development Area (BEDA),
Shanghai Road
Tianjin 300400
China
Sales and Service:
Phone: +86-22-2697 0808
Fax: +86-22-2697 4061
Fax: +86-22-2697 2017
info.vacuum.tj@oerlikon.com
service.vacuum.tj@oerlikon.com

Oerlikon
Leybold Vacuum (Tianjin)
International Trade Co. Ltd.
Shanghai Branch:
Add: No.33
76 Futedong San Rd.
Waigaoqiao FTZ
Shanghai 200131
China
Sales and Service:
Phone: +86-21-5064-4666
Fax: +86-21-5064-4668
info.vacuum.sh@oerlikon.com
service.vacuum.tj@oerlikon.com

Oerlikon
Leybold Vacuum (Tianjin)
International Trade Co. Ltd.
Guangzhou Office and
Service Center
1st F, Main Building
Science City Plaza,
No.111 Science Revenue,
Guangzhou Science City
(GZSC) 510663, Guangzhou,
China
Sales:
Phone: +86-20-8723-7873
Phone: +86-20-8723-7597
Fax: +86-20-8723-7875
info.vacuum.gz@oerlikon.com
service.vacuum.tj@oerlikon.com

Oerlikon
Leybold Vacuum (Tianjin)
International Trade Co. Ltd.
Beijing Branch:
1-908, Beijing Landmark Towers
8 North Dongsanhuan Road
Chaoyang District
Beijing 100004
China
Sales:
Phone: +86-10-6590-7622
Fax: +86-10-6590-7607
sales.vacuum.bj@oerlikon.com

India

Oerlikon
Leybold Vacuum India Pvt Ltd.
EL-22, J Block
MIDC Bhosari
Pune 411026
India
Sales and Service:
Phone: +91-20-3061 60000
Fax: +91-20-2712 1571
sales.vacuum.pu@oerlikon.com
service.vacuum.pu@oerlikon.com

Japan

Oerlikon
Leybold Vacuum
Japan Co., Ltd.
Headquarter
23-3, Shin-Yokohama
3-chome
Tobu A.K. Bldg. 4th Floor
Kohoku-ku
Yokohama-shi 222-0033
Sales:
Phone: +81-45-471-3330
Fax: +81-45-471-3323
info.vacuum.yh@oerlikon.com
sales.vacuum.yh@oerlikon.com

Oerlikon
Leybold Vacuum
Japan Co., Ltd.
Osaka Sales Office
5-13, Kawagishi-machi
Suita-chi
Osaka 564-0037
Phone: +81-6-6393-5211
Fax: +81-6-6393-5215
info.vacuum.os@oerlikon.com
sales.vacuum.os@oerlikon.com

Oerlikon
Leybold Vacuum
Japan Co., Ltd.
Tsukuba Technical Service Center
Kogyo Danchi
21, Kasuminosato,
Ami-machi, Inashiki-gun
Ibaraki-ken, 300-0315
Service:
Phone: +81-298 89 2841
Fax: +81-298 89 2838
info.vacuum.iik@oerlikon.com
sales.vacuum.iik@oerlikon.com

Korea

Oerlikon
Leybold Vacuum Korea Ltd.
3F. Jellzone 2 Tower, 159-4
Jeongja-Dong, Bundang-Gu
Sungnam-Si, Gyeonggi-Do
Korea 463-384
Sales:
Phone: +82-31 785 1367
Fax: +82-31 785 1359

623-7, Upsung-Dong
Cheonan-Si
Chungcheongnam-Do
Korea 330-290
Service:
Phone: +82-41 589 3035
Fax: +82-41 588 0166

Singapore

Oerlikon
Leybold Vacuum
Singapore Pte Ltd.
No.1, International Business Park
B1-20B, The Synergy
Singapore 609917

Sales and Service:
Phone: +65-6303 7000
Fax: +65-67730 039
sales.vacuum.sg@oerlikon.com
service.vacuum.sg@oerlikon.com

Taiwan

Oerlikon
Leybold Vacuum Taiwan Ltd.
No 416-1, Sec. 3
Chung-Hsin Rd., Chu-Tung
Hsin-Chu, Taiwan, R.O.C.
Sales and Service:
Phone: +886-3-500 1688
Fax: +886-3-583 3999
sales.vacuum.hc@oerlikon.com
service.vacuum.hc@oerlikon.com

Oerlikon
Leybold Vacuum USA Inc.
5700 Mellon Road
USA-Export, PA 15632
Phone: +1-724-327-5700
Fax: +1-724-325-3577
info.vacuum.ex@oerlikon.com

Oerlikon
Leybold Vacuum GmbH
Bonner Strasse 498
D-50968 Cologne
Phone: +49-(0)221-347 0
Fax: +49-(0)221-347 1250
info.vacuum@oerlikon.com

oerlikon
leybold vacuum

www.oerlikon.com

LV_08929_2007 05.07