

Submersible Drainage Pumps

SVC

TERAL

50Hz



TERAL INC.

Applications

- Drainage of dirty water including sewage and solids in sewage tank of a building
- Relay tank for wastewater from factory and industrial facility
- Raw water and wastewater from sewage/sewage treatment plant
- Community plant (combined treatment)
- Drainage of other types of sewage/water including solids

Features

- ① Able to use the pump for a wide range of drainage applications such as sewage, miscellaneous drainage and sewage.
- ② Easy to install and handle the pump because of compact size and lightweight.
- ③ A built-in protector prevents motor burn-out due to overload, constraint or open phases.
- ④ The shaft seal part adopts a double mechanical seal to prevent water from entering the motor.
- ⑤ Adopting semi-vortex makes the size of solids that pass through smaller than the conventional full vortex, and the performance has improved tremendously.
- ⑥ SVCA and SVCT models are equipped with an automatic operation device that enables automatic operation in response to water level change. SVCT performs automatic alternate/parallel operation using 2 pumps.

Description of types

50 SVC - 5 1.5 -S

① ② ③ ④ ⑤

- ① Nominal diameter
- ② Model SVC: Non-automatic
SVCA: Automatic
SVCT: Automatic alternate/parallel operation
- ③ Frequency 5 : 50Hz 6 : 60Hz
- ④ Output
- ⑤ Detachable device Blank: None
-C: with C-type detachable device
-S: with SEC-type detachable device



* Please note that some of the devices in the photo may differ from actual devices in painting color, etc.

Standard specifications/Special specifications

— : Not available

Pumping liquid	Liquid quality	Waste water, Miscellaneous wastewater, Sewage	
	Liquid temperature	0 - 40°C, PH5 - 9	
Max. solids size for passage		Diameter : 60 - 70% or less of nominal diameter Length : 400% or less of nominal diameter	
Specifications		Standard specifications	Special specifications
Structure		Semi-vortex	—
Material	Impeller	FC200	—
	Shaft	3.7kW or less : SUS403 5.5kW or more: SUS420J1 ^{*1}	SUS420J2: 5.5kW or more
	Casing	FC200	—
	Detachable device ^{*2}	Cast iron (chain, shackle and anchor bolt are SS400)	Stainless steel (including chain, shackle and anchor bolt) Chain and shackle only : SUS304 Chain, shackle and anchor bolt only : SUS304
Motor	Type	Dry submerged	—
	Power source	3-phase 200V/220V	3-phase 380V/400V/415V: 3.7kW or less 3-phase 380V/400V : 5.5kW or more
	Synchronous rotation speed	3000min ⁻¹	—
	Protective device	Automatic reset type auto-cut	—
Cable		VCT×4 cores	—
Cable length		10 m	20m-30m
Mechanical seal		Double mechanical seal Material: Pump side: Sic vs Sic Motor side: Ceramic vs Carbon	—
Lubricant		Turbine oil VG32	Liquid paraffin
Piping connection		Nominal diameter 50: dedicated flange Nominal diameter 65/80: JIS 10K thin type flange or equivalent	—
Painting	Paint color	Munsell 7.5R4/14	—
	Painting type	Acrylic alkyd resin	Non-tar epoxy resin

* Please note that in case of special specifications, the assembly drawing, etc., may differ from the standard drawing.

*1 The shaft material shall be changed to comply with Ministry of Land, Infrastructure and Transport Public Building Construction Standard Specification.

*2 It is possible to attach only the sliding guide and chain.

Standard accessories

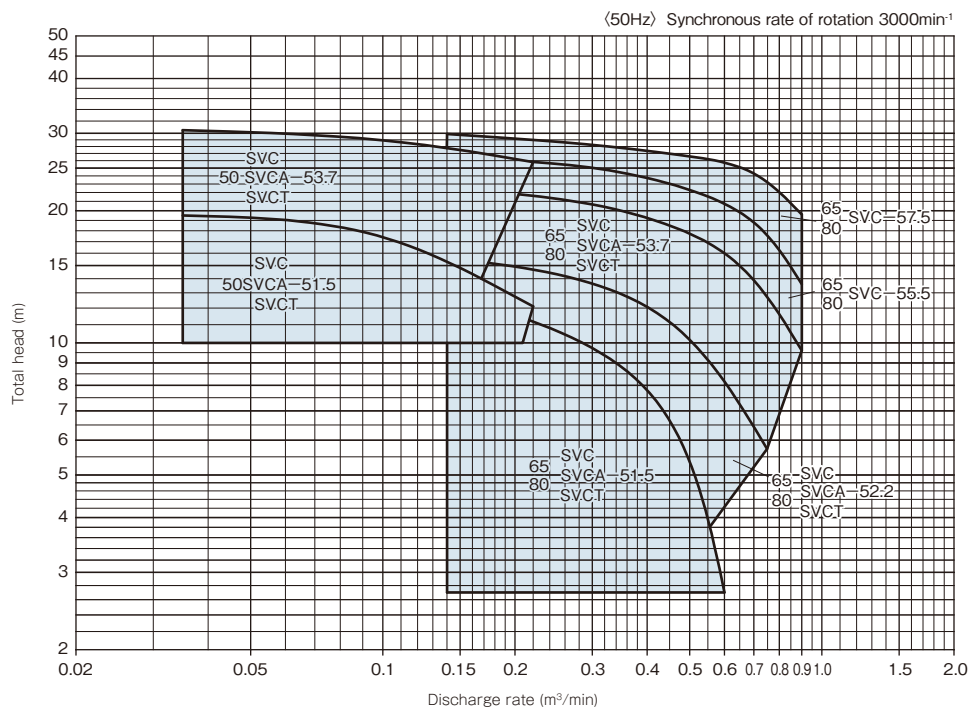
Cable	10m
Companion flange (packing, bolts and nuts included)	1set
Ground nameplate	1

* Standard accessories are included in the product components.

Special accessories

Sluice valve, check valve
Check valve for sewage
Float switch

Selection chart



(Note) If the discharge rate is 0.6m³/min or more, select it from the bore diameter 80.

Specifications

Operation method	Nominal diameter mm	Model	Output kW	Specifications	
				Discharge rate m ³ /min	Total head m
Non-automatic	50	50SVC-51.5	1.5	0.10	17.3
		50SVC-53.7	3.7	0.10	28.7
	65	65SVC-51.5	1.5	0.30	9.9
		65SVC-52.2	2.2	0.30	13.6
		65SVC-53.7	3.7	0.45	18.4
		65SVC-55.5	5.5	0.50	22.2
		65SVC-57.5	7.5	0.50	26.6
	80	80SVC-51.5	1.5	0.30	9.9
		80SVC-52.2	2.2	0.30	13.6
		80SVC-53.7	3.7	0.45	18.4
		80SVC-55.5	5.5	0.50	22.2
		80SVC-57.5	7.5	0.50	26.6

Operation method	Nominal diameter mm	Model	Output kW	Specifications	
				Discharge rate m ³ /min	Total head m
Automatic	50	50SVCA-51.5	1.5	0.10	17.3
		50SVCA-53.7	3.7	0.10	28.7
	65	65SVCA-51.5	1.5	0.30	9.9
		65SVCA-52.2	2.2	0.30	13.6
		65SVCA-53.7	3.7	0.45	18.4
		65SVCA-55.5	5.5	0.50	22.2
	80	80SVCA-51.5	1.5	0.30	9.9
		80SVCA-52.2	2.2	0.30	13.6
	80	80SVCA-53.7	3.7	0.45	18.4
		80SVCA-55.5	5.5	0.50	22.2
Automatic alternate/parallel operation*	50	50SVCT-51.5	1.5×2	0.10	17.3
		50SVCT-53.7	3.7×2	0.10	28.7
	65	65SVCT-51.5	1.5×2	0.30	9.9
		65SVCT-52.2	2.2×2	0.30	13.6
		65SVCT-53.7	3.7×2	0.45	18.4
		65SVCT-55.5	5.5×2	0.50	22.2
	80	80SVCT-51.5	1.5×2	0.30	9.9
		80SVCT-52.2	2.2×2	0.30	13.6
	80	80SVCT-53.7	3.7×2	0.45	18.4
		80SVCT-55.5	5.5×2	0.50	22.2

*Use a combination of SVCT (Primary pump) and SVCA (Secondary pump). This combination enables automatic alternate/parallel operation.

Motor specification table

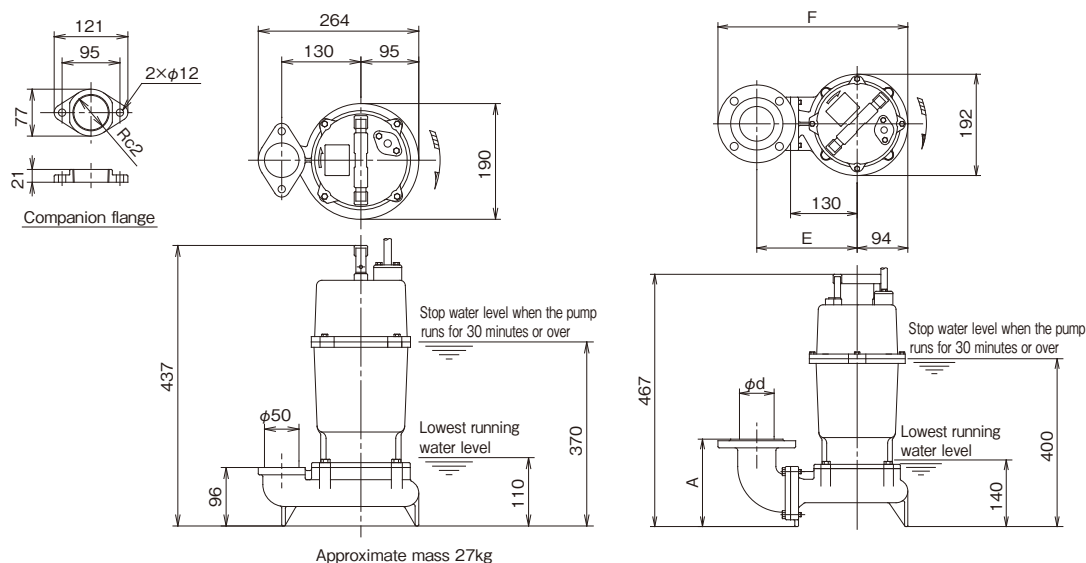
Output kW	Type	Number of poles P	Phase/voltage V	Rating Current A	Starting		Thermal class	Protector	Cable				
					Method	Current A			Type	Number of cores	Size mm ²	Length m	Finishing outer diameter mm
1.5	Dry	2	3-phase/200V	6.8	Direct-on-Line	38	E	○	VCT	4	1.25	10	11.1
2.2	Dry	2	3-phase/200V	10.2	Direct-on-Line	62.6	B	○	VCT	4	1.25	10	11.1
3.7	Dry	2	3-phase/200V	16.5	Direct-on-Line	109	F	○	VCT	4	2	10	11.8
5.5	Dry	2	3-phase/200V	21.5	Direct-on-Line	137	B	○	VCT	4	3.5	10	13.9
7.5	Dry	2	3-phase/200V	29	Direct-on-Line	194	B	○	VCT	4	3.5	10	16.5

Assembly drawing

Flange dimensions: JIS 10K thin type or equivalent

●Non-automatic 50SVC-51.5

●Non-automatic 65SVC-51.5/80SVC-51.5



Dimensions

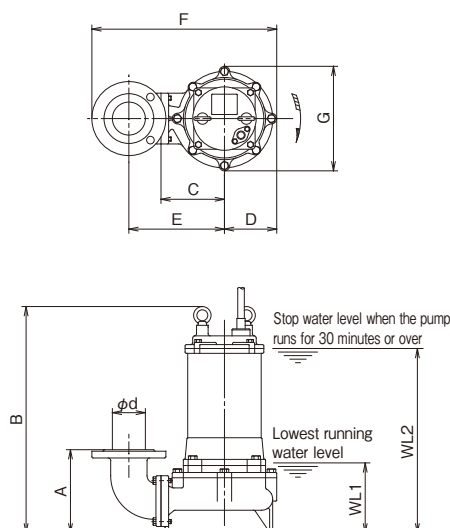
(Unit: mm)

Nominal diameter d	Model	Output kW	Pump dimensions			Approx. mass kg
			A	E	F	
65	65SVC-51.5	1.5	184	210	392	36.5
80	80SVC-51.5	1.5	179	245	432	37

Assembly drawing

●Non-automatic 50SVC-53.7/65SVC-52.2, 53.7, 55.5, 57.5/ 80SVC-52.2, 53.7, 55.5, 57.5

Flange dimensions: JIS 10K thin type or equivalent



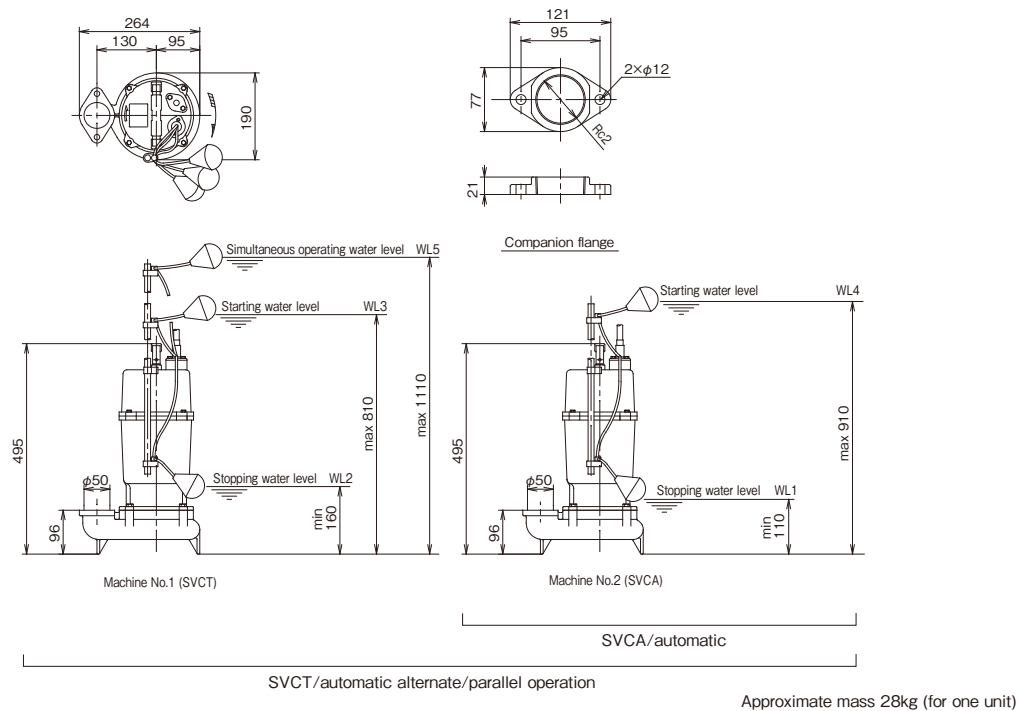
Dimensions

(Unit: mm)

Nominal diameter d	Model	Output kW	Pump dimensions							Operating water level		Approx. mass kg
			A	B	C	D	E	F	G	WL1	WL2	
50	50SVC-53.7	3.7	183	510	140	115	221	413	229	125	404	48
65	65SVC-52.2	2.2	199	527	140	120	220	428	239	175	434	50.5
	65SVC-53.7	3.7	199	547	140	120	220	428	239	175	457	59.5
	65SVC-55.5	5.5	201	626	160	132	241	461	264	190	570	87
	65SVC-57.5	7.5	201	626	160	132	241	461	264	190	570	92
80	80SVC-52.2	2.2	194	527	140	120	255	468	239	175	434	51
	80SVC-53.7	3.7	194	547	140	120	255	468	239	175	457	60
	80SVC-55.5	5.5	196	626	160	132	276	501	264	190	570	88
	80SVC-57.5	7.5	196	626	160	132	276	501	264	190	570	93

Assembly drawing

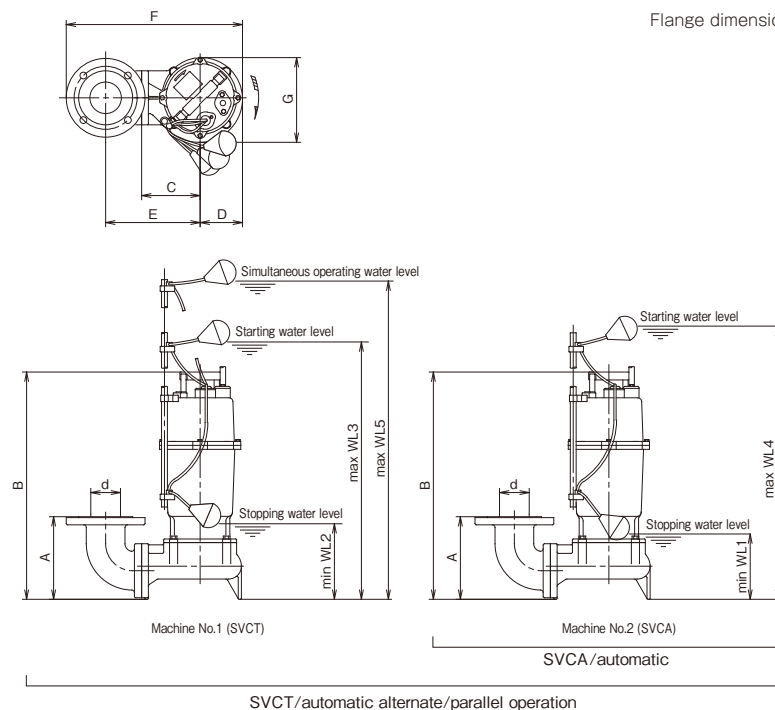
●Automatic (automatic alternate/parallel operation) 50SVCA(T)-51.5



Set the operating water level for SVCT model to $WL1 < WL2 < WL3 < WL4 < WL5$ and make the difference in water level of each float 50mm or more.

Assembly drawing

●Automatic (automatic alternate/parallel operation) 65SVCA(T)-51.5/80SVCA(T)-51.5



Flange dimensions: JIS 10K thin type or equivalent

Dimensions

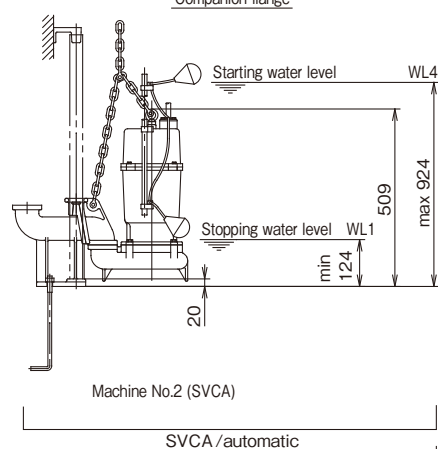
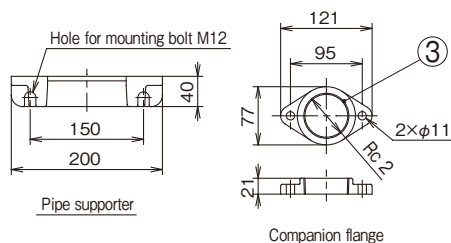
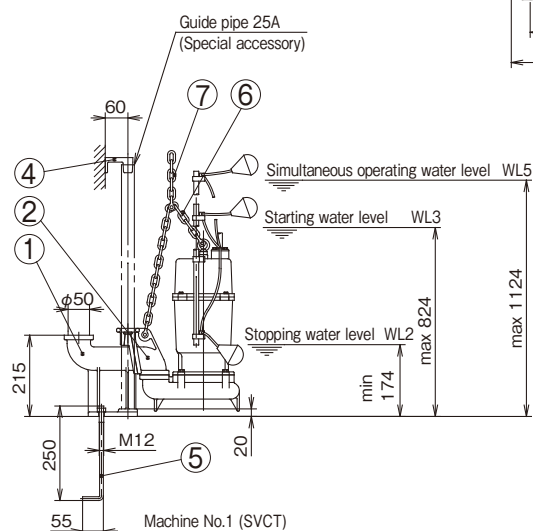
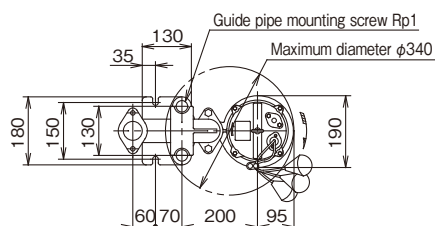
(Unit: mm)

Nominal diameter d	Model	Output kW	Pump dimensions							Operating water level					Approx. mass kg
			A	B	C	D	E	F	G	WL1	WL2	WL3	WL4	WL5	
65	65SVCA(T)-51.5	1.5	184	525	130	94	210	392	192	140	190	840	940	1140	37.5
80	80SVCA(T)-51.5	1.5	179	525	130	94	245	432	192	140	190	840	940	1140	38

1. Set the operating water level for SVCT model to $WL1 < WL2 < WL3 < WL4 < WL5$ and make the difference in water level of each float 50mm or more.
2. Approximate mass is for one unit.
3. In case of SVCT type, the required power supply capacity is equal to the motor output of 2 pumps.

Assembly drawing

- Automatic (Automatic alternate/parallel operation)
with SEC-type detachable device 50SVCT(A)-51.5-S



SVCT/automatic alternate/parallel operation

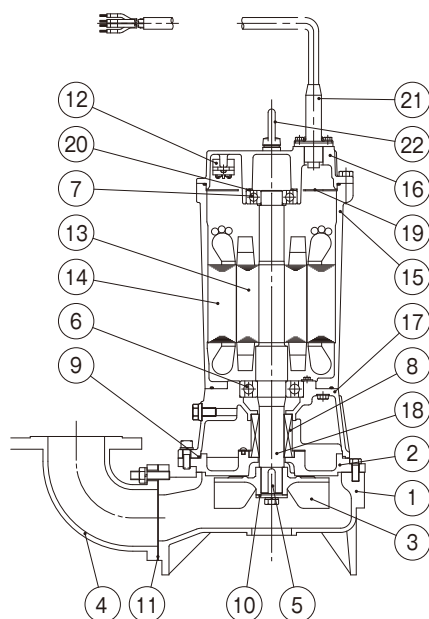
Set the operating water level for SVCT model to $WL1 < WL2 < WL3 < WL4 < WL5$ and make the difference in water level of each float 50mm or more.
Lifting mass 36kg (this is approximate mass for one unit.)

Parts list

No.	Part name	Qty	Material
1	Discharge pipe	1	FC200
2	Sliding guide	1	FCD450
3	Companion flange	1	FC200
4	Pipe supporter	1	FCD450
5	Anchor bolt	2	SS400
6	Balance chain	1	SS400
7	Hanging chain	6m	SS400

Sectional drawing

●Non-automatic SVC 5.5-7.5kW



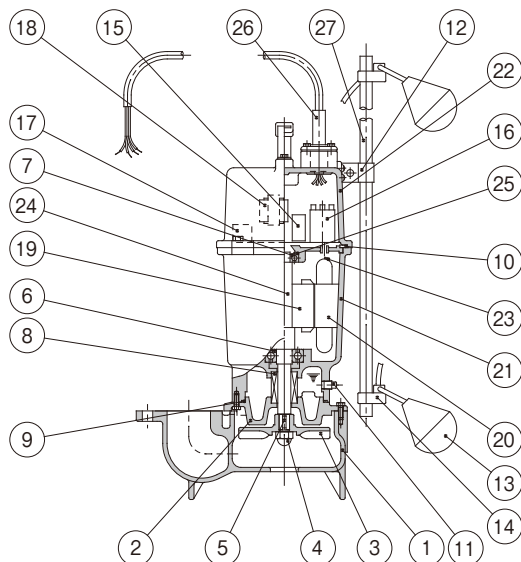
Parts list

No.	Part name	Qty	Material
1	Casing	1	FC200
2	Seal cover	1	FC200
3	Impeller	1	FC200
4	Discharge elbow	1	FC200
5	Key	1	SUS304
6	Ball bearing	1	SUJ
7	Ball bearing	1	SUJ
8	Mechanical seal	1 set	SiC vs SiC Ceramic vs Carbon
9	O-ring	1	NBR
10	Washer	1	SUS304
11	Sheet packing	1	Synthetic paper
12	Protector	1	—
13	Rotor	1	—
14	Stator	1	—
15	Motor frame	1	FC200
16	Upper bracket	1	FC200
17	Lower bracket	1	FC200
18	Motor shaft	1	SUS420J1
19	Baffle	1	Bakelite
20	Wave washer	1	S58C
21	Lead wire	1	VCT
22	Eye bolt	2	S25C

Applicable model : 65SVC-55.5 / 65SVC-57.5 / 80SVC-55.5 / 80SVC-57.5

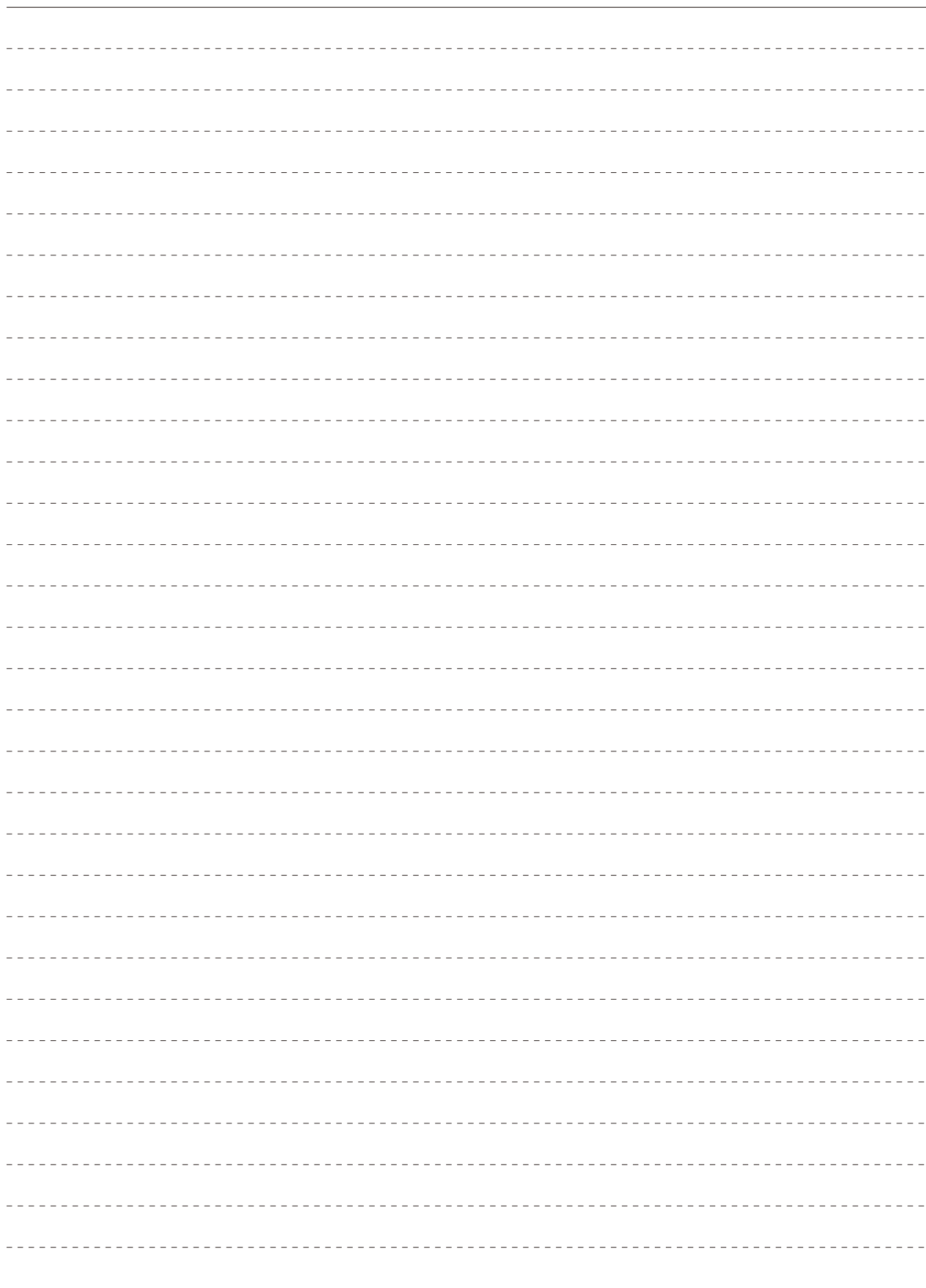
Sectional drawing

●Automatic SVCA



Parts list

No.	Part name	Qty	Material
1	Casing	1	FC200
2	Seal cover	1	FC200
3	Impeller	1	FC200
4	Impeller nut	1	SUS304
5	Key	1	SUS420J1
6	Ball bearing	1	SUJ2
7	Ball bearing	1	SUJ2
8	Mechanical seal	1 set	SiC vs SiC Ceramic vs Carbon
9	O-ring	1	NBR
10	Flat ring	1	NBR
11	Plug	1	SUS304
12	Support metal	1	SUS304
13	Float switch	2	—
14	Float holder	2	ABS Resin
15	Magnetic contactor	1	—
16	Power relay	1	—
17	Protector	1	—
18	Transformer	1	—
19	Rotor	1	S40
20	Stator	1	S40
21	Motor frame	1	FC200
22	Upper bracket	1	FC200
23	Stator winding	1	Cu
24	Motor shaft	1	SUS403
25	Wave washer	1	SK5-CSP
26	Lead wire	1	VCT
27	Float supporter	1	PVC





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