

Submersible Drainage Pumps

# SVC

***TERAL***

60Hz



**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 - 6 1.5 -S**

- ① Bore 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

### Standard specifications

Liquid handled	Liquid property... Sewage/waste/miscellaneous drainage
	Liquid temperature ... 0 ~ 40 °C, PH value: 5 ~ 9
Max. solids size for passage	Diameter ... 60 ~ 70% or less of nominal diameter
	Length ... 400% or less of nominal diameter
Structure	Semi-vortex
Material	Impeller ... FC200
	Main shaft ... SUS403(3.7kW or less) SUS420J <sub>1</sub> (5.5kW or more)*1
	Casing ... FC200
Motor	Type ... Dry submerged
	Power ... 3-phase 200/220V
	Synchronous rotation speed: 3600min <sup>-1</sup>
	Protector ... Automatic reset type auto-cut
Cable	VCT × 4 cores
Mechanical seal	Double mechanical seal
	Material: Pump side – SiC vs SiC Motor side – Ceramic vs Carbon
Lubricant	Turbine oil VG32
Flange spec	Bore diameter 50 ... Special flange
	Bore diameter 65, 80 ... JIS 10K thin type or equivalent
Paint	Acrylic alkyd resin
	Munsell 7.5R4/14

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



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

### Standard accessories

Cable	10m
Companion flange (packing, bolt and nut included)	1 set
Aboveground nameplate	1 pc

### Special specifications

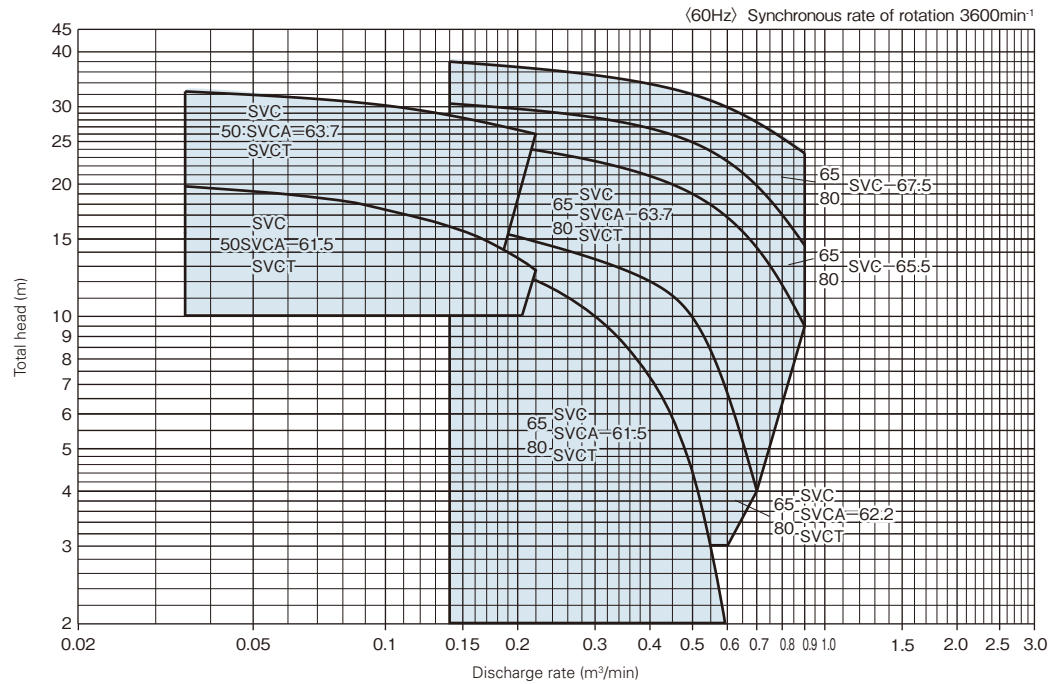
Motor	Power source	3-phase-400V/ 3-phase-440V/ 3-phase-460V(2.2kW or more)
	Main shaft	SUS420J2(5.5kW or more)
Lubricant		Liquid paraffin
Paint		Non-tar epoxy resin painting
Cable		Cable extension 20m / 30m

### Special accessories

Control panel  
 Float switch  
 Detachable device\*

※ The material is FC. The entire material can be changed to SCS, or only the chain and foundation bolt can be changed to SUS as option. Also it is possible to attach the sliding guide and chain only.

## Selection chart



(Note) If the discharge rate is 0.6m<sup>3</sup>/min or more, select it from the bore diameter 80.

## Specifications

Operation method	Model	Bore diameter mm	Output kW	Specifications			
				Discharge rate m <sup>3</sup> /min	Total head m	Discharge rate m <sup>3</sup> /min	Total head m
Non-automatic	50SVC-61.5	50	1.5	0.035	19.8	0.22	12.7
	50SVC-63.7		3.7	0.035	32.5	0.22	26.0
	65SVC-61.5	65	1.5	0.14	14.4	0.60	1.7
	65SVC-62.2		2.2	0.14	16.5	0.70	4.0
	65SVC-63.7		3.7	0.14	25.5	0.90	9.5
	65SVC-65.5		5.5	0.14	30.5	0.90	14.5
	65SVC-67.5	80	7.5	0.14	38.0	0.90	23.5
	80SVC-61.5		1.5	0.14	14.4	0.60	1.7
	80SVC-62.2		2.2	0.14	16.5	0.70	4.0
	80SVC-63.7		3.7	0.14	25.5	0.90	9.5
	80SVC-65.5		5.5	0.14	30.5	0.90	14.5
	80SVC-67.5		7.5	0.14	38.0	0.90	23.5
Automatic	50SVCA-61.5	50	1.5	0.035	19.8	0.22	12.7
	※ 50SVCA-63.7		3.7	0.035	32.5	0.22	26.0
	65SVCA-61.5	65	1.5	0.14	14.4	0.60	1.7
	※ 65SVCA-62.2		2.2	0.14	16.5	0.70	4.0
	※ 65SVCA-63.7		3.7	0.14	25.5	0.90	9.5
	80SVCA-61.5	80	1.5	0.14	14.4	0.60	1.7
	※ 80SVCA-62.2		2.2	0.14	16.5	0.70	4.0
	※ 80SVCA-63.7		3.7	0.14	25.5	0.90	9.5

Operation method	Model	Bore diameter mm	Output kW	Specifications			
				Discharge rate m <sup>3</sup> /min	Total head m	Discharge rate m <sup>3</sup> /min	Total head m
Automatic alternate parallel operation	50SVCT-61.5	50	1.5×2	0.035	19.8	0.22	12.7
	※ 50SVCT-63.7		3.7×2	0.035	32.5	0.22	26.0
	65SVCT-61.5	65	1.5×2	0.14	14.4	0.60	1.7
	※ 65SVCT-62.2		2.2×2	0.14	16.5	0.70	4.0
	※ 65SVCT-63.7		3.7×2	0.14	25.5	0.90	9.5
	80SVCT-61.5	80	1.5×2	0.14	14.4	0.60	1.7
	※ 80SVCT-62.2		2.2×2	0.14	16.5	0.70	4.0
	※ 80SVCT-63.7		3.7×2	0.14	25.5	0.90	9.5

The models with "※" marked indicate special specification.

## Motor specification table

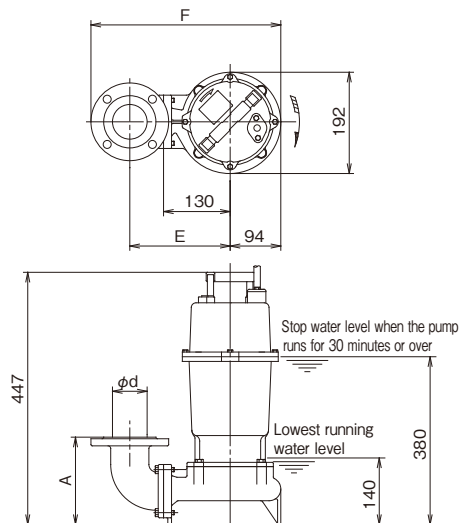
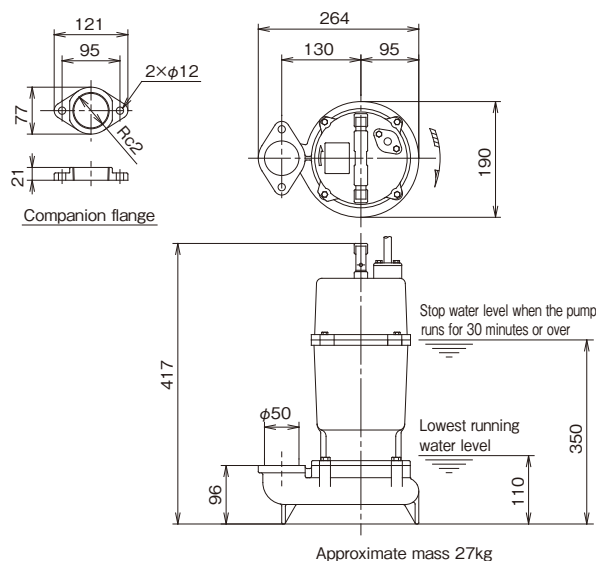
Output kW	Type	Number of poles P	Phase/voltage V	Rating	Starting		Thermal class	Protector	Cable				
				Current A	Method	Current A			Type	Number of cores	Size mm <sup>2</sup>	Length m	Finishing outer diameter mm
1.5	Dry	2	3-phase,200/220V	6.8/6.5	Direct-on-Line	35.0/38.0	E	○	VCT	4	1.25	10	11.1
2.2	Dry	2	3-phase,200/220V	9.2/8.6	Direct-on-Line	55.4/61.4	B	○	VCT	4	1.25	10	11.1
3.7	Dry	2	3-phase,200/220V	14.8/13.8	Direct-on-Line	97.0/108	F	○	VCT	4	2	10	11.8
5.5	Dry	2	3-phase,200/220V	21.5/19.5	Direct-on-Line	120/134	B	○	VCT	4	3.5	10	13.9
7.5	Dry	2	3-phase,200/220V	28.5/25.5	Direct-on-Line	166/186	B	○	VCT	4	5.5	10	16.5

## Assembly drawing

Flange dimensions: JIS 10K thin type or equivalent

### ●Non-automatic 50SVC-61.5

### ●Non-automatic 65SVC-61.5/80SVC-61.5



## Dimensions

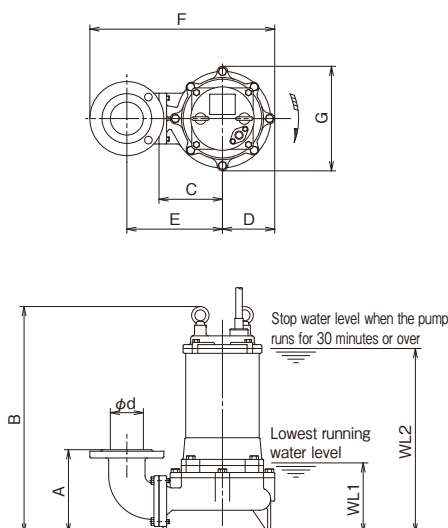
(Unit: mm)

Bore diameter d	Model	Output kW	Pump dimensions			Approx. mass kg
			A	E	F	
65	65SVC-61.5	1.5	184	210	392	36.5
80	80SVC-61.5	1.5	179	245	432	37

## Assembly drawing

### ●Non-automatic 50SVC-63.7/65SVC-62.2, 63.7, 65.5, 67.5/ 80SVC-62.2, 63.7, 65.5, 67.5

Flange dimensions: JIS 10K thin type or equivalent



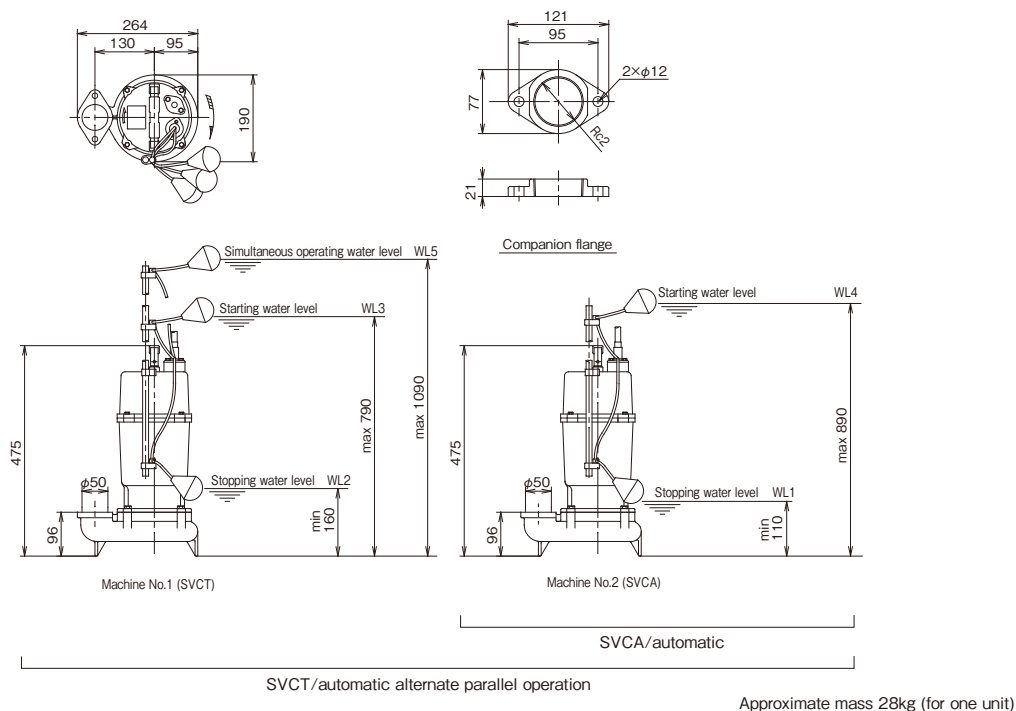
## Dimensions

(Unit: mm)

Bore diameter d	Model	Output kW	Pump dimensions							Operating water level		Approx. mass kg
			A	B	C	D	E	F	G	WL1	WL2	
50	50SVC-63.7	3.7	183	510	140	115	221	413	229	125	404	48
65	65SVC-62.2	2.2	199	527	140	120	220	428	239	175	434	50.5
	65SVC-63.7	3.7	199	547	140	120	220	428	239	175	457	59.5
	65SVC-65.5	5.5	201	626	160	132	241	461	264	190	570	87
	65SVC-67.5	7.5	201	626	160	132	241	461	264	190	570	92
80	80SVC-62.2	2.2	194	527	140	120	255	468	239	175	434	51
	80SVC-63.7	3.7	194	547	140	120	255	468	239	175	457	60
	80SVC-65.5	5.5	196	626	160	132	276	501	264	190	570	88
	80SVC-67.5	7.5	196	626	160	132	276	501	264	190	570	93

## Assembly drawing

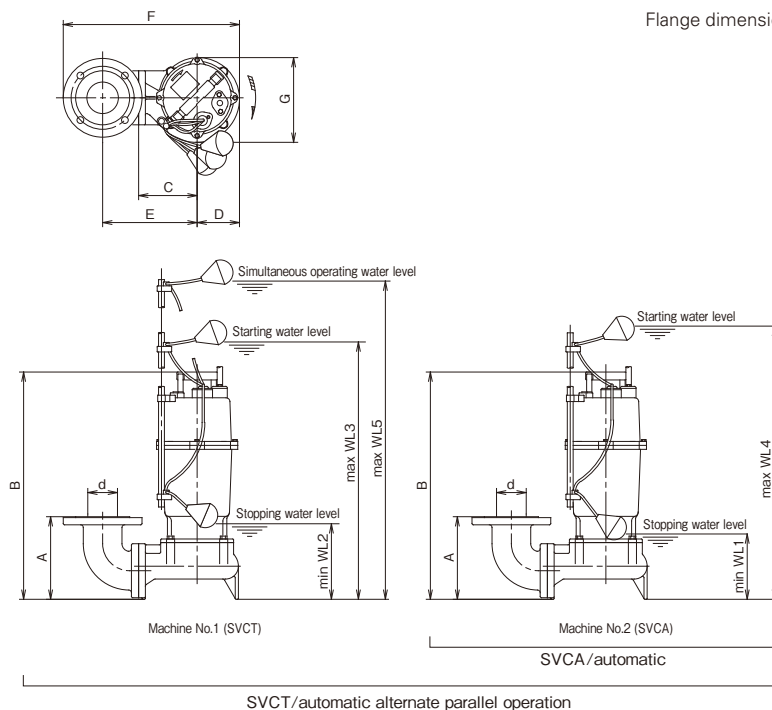
### Automatic (automatic alternate parallel operation) 50SVCA(T)-61.5



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)-61.5/80SVCA(T)-61.5



Flange dimensions: JIS 10K thin type or equivalent

## Dimensions

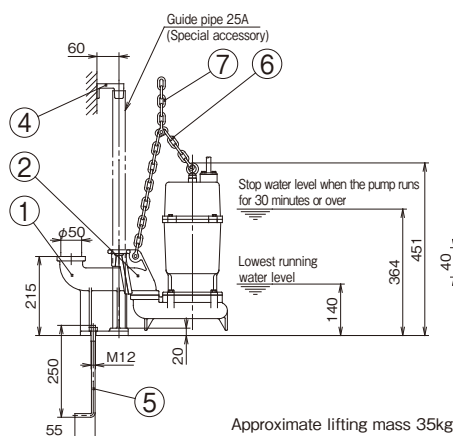
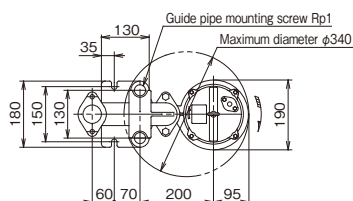
(Unit: mm)

Bore 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)-61.5	1.5	184	505	130	94	210	392	192	140	190	820	920	1120	37.5
80	80SVCA(T)-61.5	1.5	179	505	130	94	245	432	192	140	190	820	920	1120	38

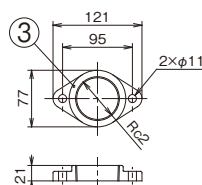
- Set the operating water level for SVCT model to  $WL1 < WL2 < WL3 < WL4 < WL5$  and make the difference in water level of each float 50mm or more.
- Approximate mass is for one unit.
- In case of SVCT type, the required power supply capacity is equal to the motor output of 2 pumps.

## ■ Assembly drawing

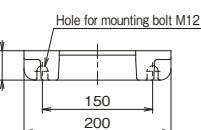
●Non-automatic with SEC-type detachable device 50SVC-61.5-S



Approximate lifting mass 35kg



Companion flange



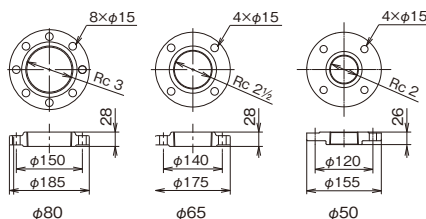
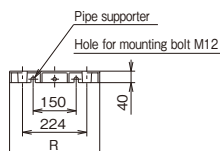
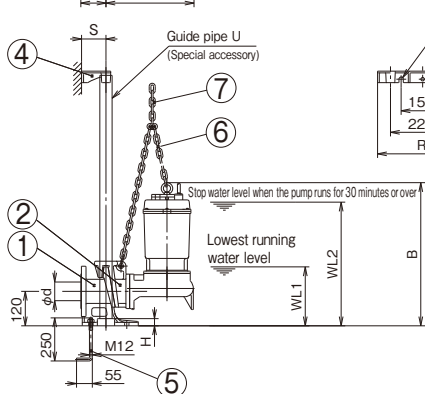
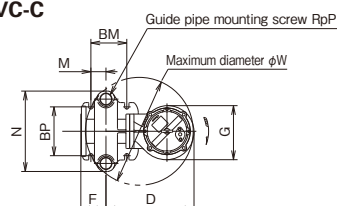
### Pipe support

## ■ 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	Foundation bolt	2	SS400
6	Balance chain	1	SS400
7	Hanging chain	6m	SS400

## ■ Assembly drawing

●Non-automatic with C-type detachable device  
50SVC-C/65SVC-C/80SVC-C



Companion flange

※If you require upper discharge, a bend pipe is necessary as a special accessory.

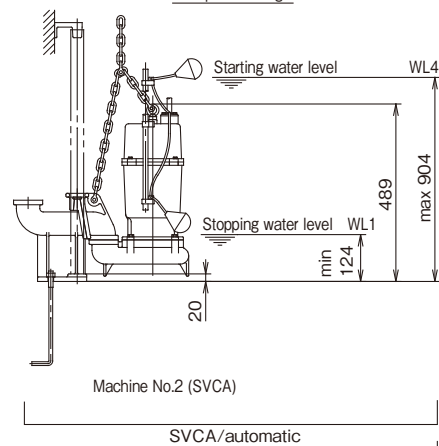
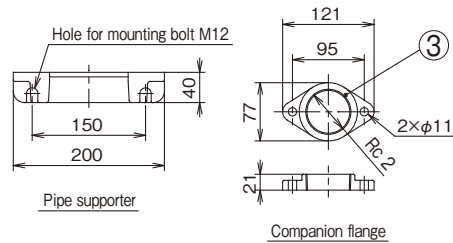
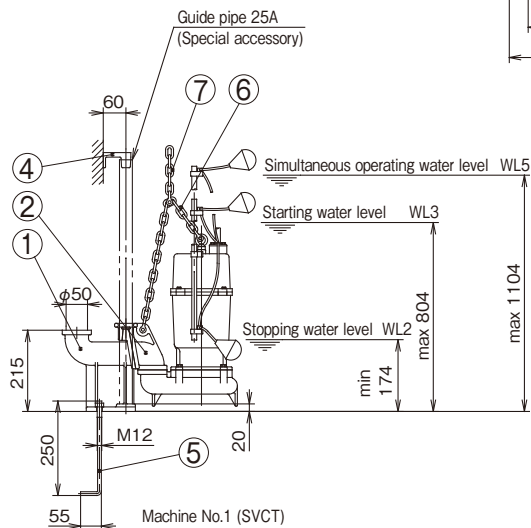
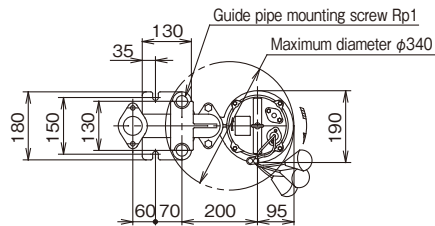
## ■ Dimensions

(Unit: mm)

Bore diameter d	Model	Output kW	Pump dimensions					Detachable device						Pipe supporter			Operating water level		Lifting mass kg
			B	D	F	G	W	H	M	N	P	BM	BP	R	S	U	WL1	WL2	
50	50SVC-63.7-C	3.7	567	337	84	229	405	20	51	275	1	115	130	304	75	25A	185	464	53
65	65SVC-61.5-C	1.5	524	307	88	188	380	25	53	280	1¼	125	170	314	85	32A	197	437	52.5
	65SVC-62.2-C	2.2	569	343	88	239	413	25	53	280	1¼	125	170	314	85	32A	217	463	64.5
	65SVC-63.7-C	3.7	589	343	88	239	413	25	53	280	1¼	125	170	314	85	32A	217	483	70.5
	65SVC-65.5-C	5.5	666	376	88	264	444	25	53	280	1¼	125	170	314	85	32A	230	610	93
	65SVC-67.5-C	7.5	666	376	88	264	444	25	53	280	1¼	125	170	314	85	32A	230	610	98
80	80SVC-61.5-C	1.5	524	307	88	188	380	25	53	280	1¼	125	170	314	85	32A	197	437	53
	80SVC-62.2-C	2.2	569	343	88	239	413	25	53	280	1¼	125	170	314	85	32A	217	463	65
	80SVC-63.7-C	3.7	584	343	88	239	413	25	53	280	1¼	125	170	314	85	32A	217	483	71
	80SVC-65.5-C	5.5	666	376	88	264	444	25	53	280	1¼	125	170	314	85	32A	230	610	94
	80SVC-67.5-C	7.5	666	376	88	264	444	25	53	280	1¼	125	170	314	85	32A	230	610	99

## Assembly drawing

### ●Automatic (Automatic alternate parallel operation) with SEC-type detachable device 50SVCT(A)-61.5-S



SVCT/automatic alternate parallel operation

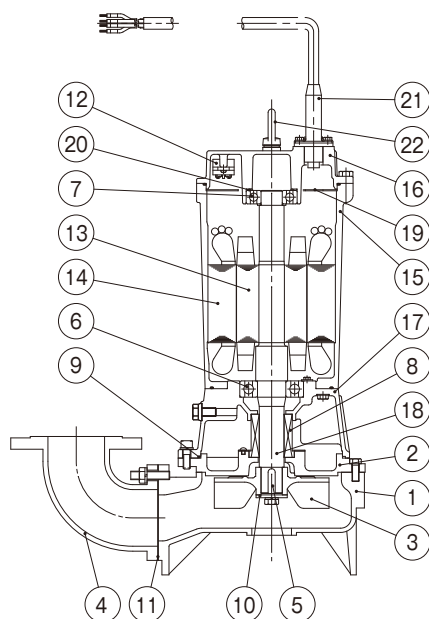
Set the operating water level for SVCT model to  $WL1 < WL2 < WL3 < WL4 < WL5$  and make the difference in water level of each float 50mm or more.  
Lifting mass 36kg (this is approximate mass for one unit.)

## 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	Foundation bolt	2	SS400
6	Balance chain	1	SS400
7	Hanging chain	6m	SS400

## Sectional drawing

### ●Non-automatic SVC 5.5-7.5kW



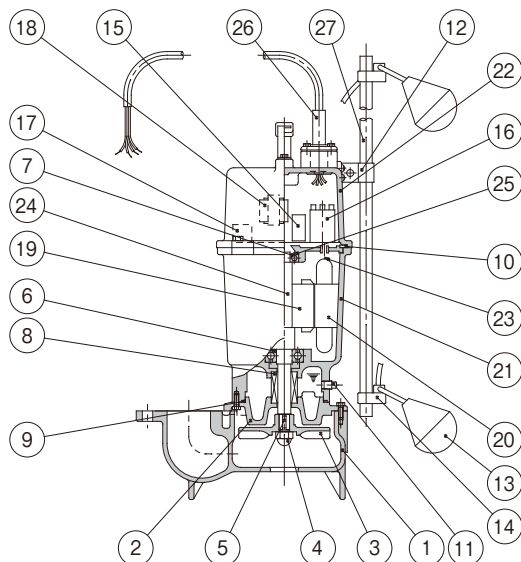
## Parts list

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-65.5 / 65SVC-67.5 / 80SVC-65.5 / 80SVC-67.5

## 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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