



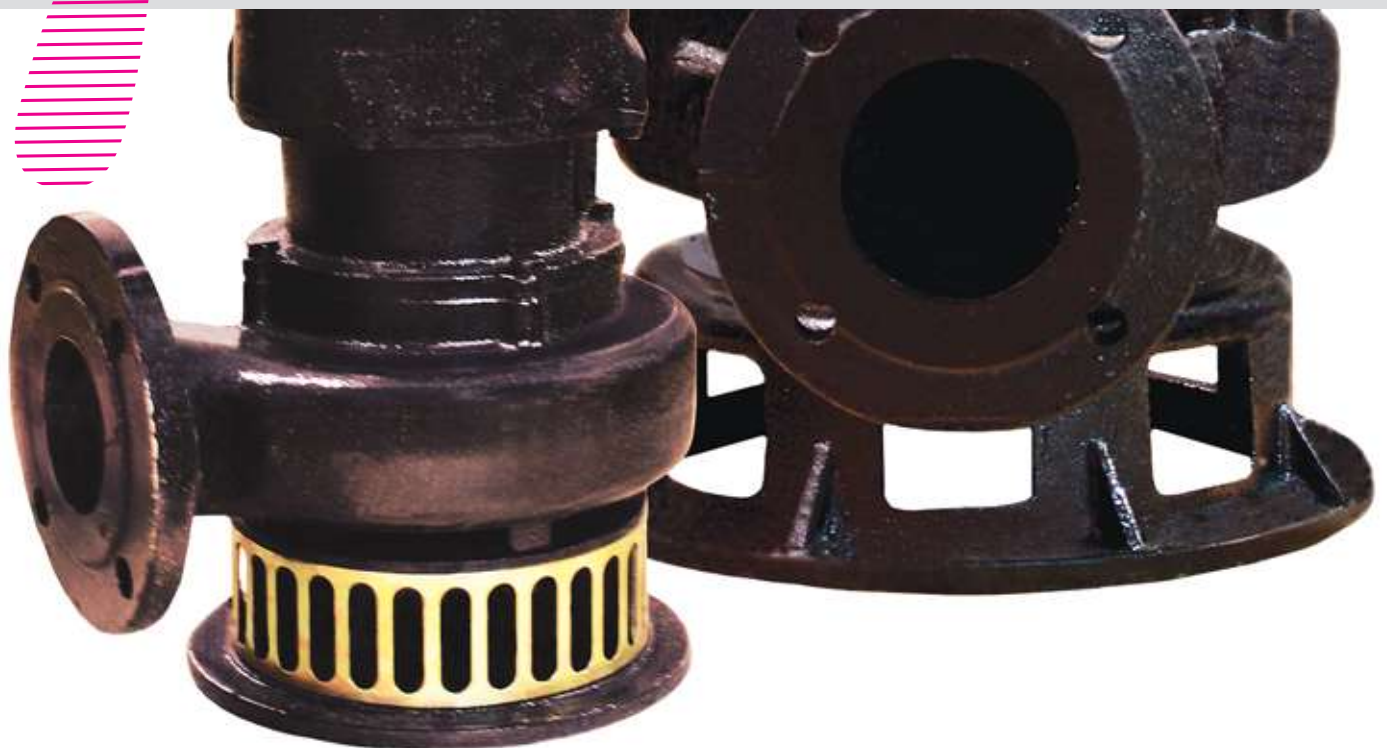
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NON-CLOG SUBMERSIBLE PUMPS TYPE: SP

General Data



APPLICATION

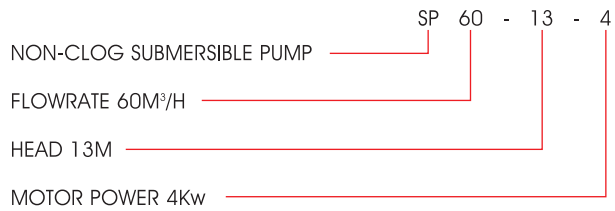
SP series non-clog submersible pumps are mainly used to pump waste, sewage and mud with solids in civil engineering, industry, and construction site, etc.

PERFORMANCE RANGE

Speed	1440 - 3000rpm
Discharge dia.	50 - 150mm
Flow rate	7 - 210m ³ /h
Head	7 - 40m
Power	0.55 - 7.5Kw

OPERATION CONDITION

Power Source	: 380V 50Hz
Pumped Liquid PH	: 5-9
Max. Temperature	: 60°C
Allowable Passed Solid's Dia.	: 1/3 of discharge dia. (Approx)
Starting Method	: 4Kw below (DOL) : 5.5Kw and above (Start Delta)



EXCELLENT PERFORMANCE

Impeller with single or double blockage-free vane avoids jamming and clogging

CONVENIENT TO INSTALL

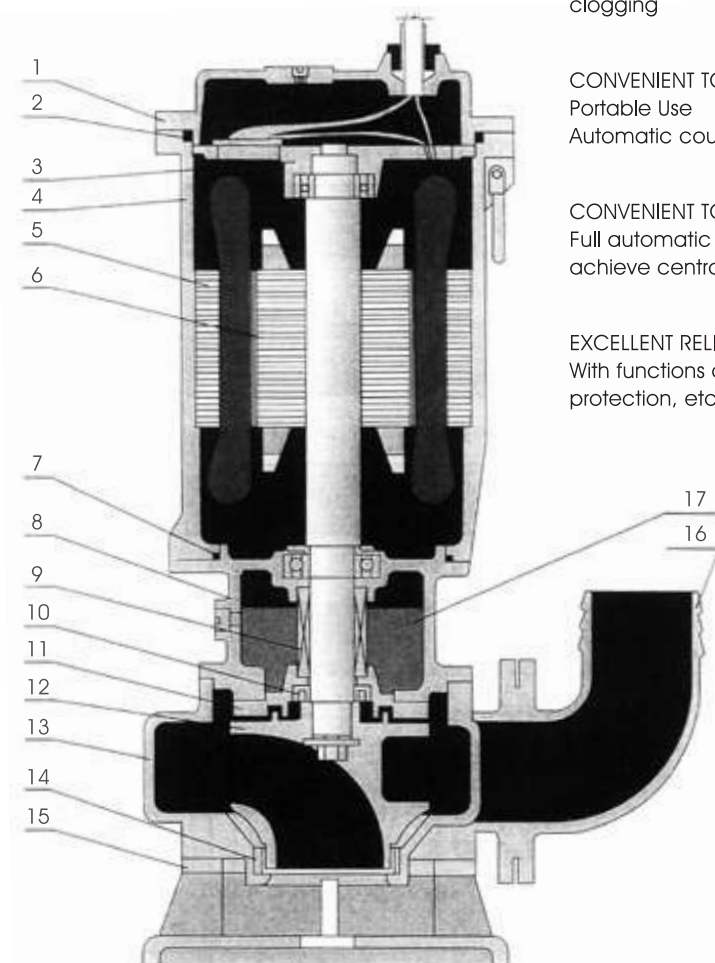
Portable Use
Automatic coupling installation version is also available

CONVENIENT TO CONTROL

Full automatic control system for protection and signal output is easy to achieve central monitoring

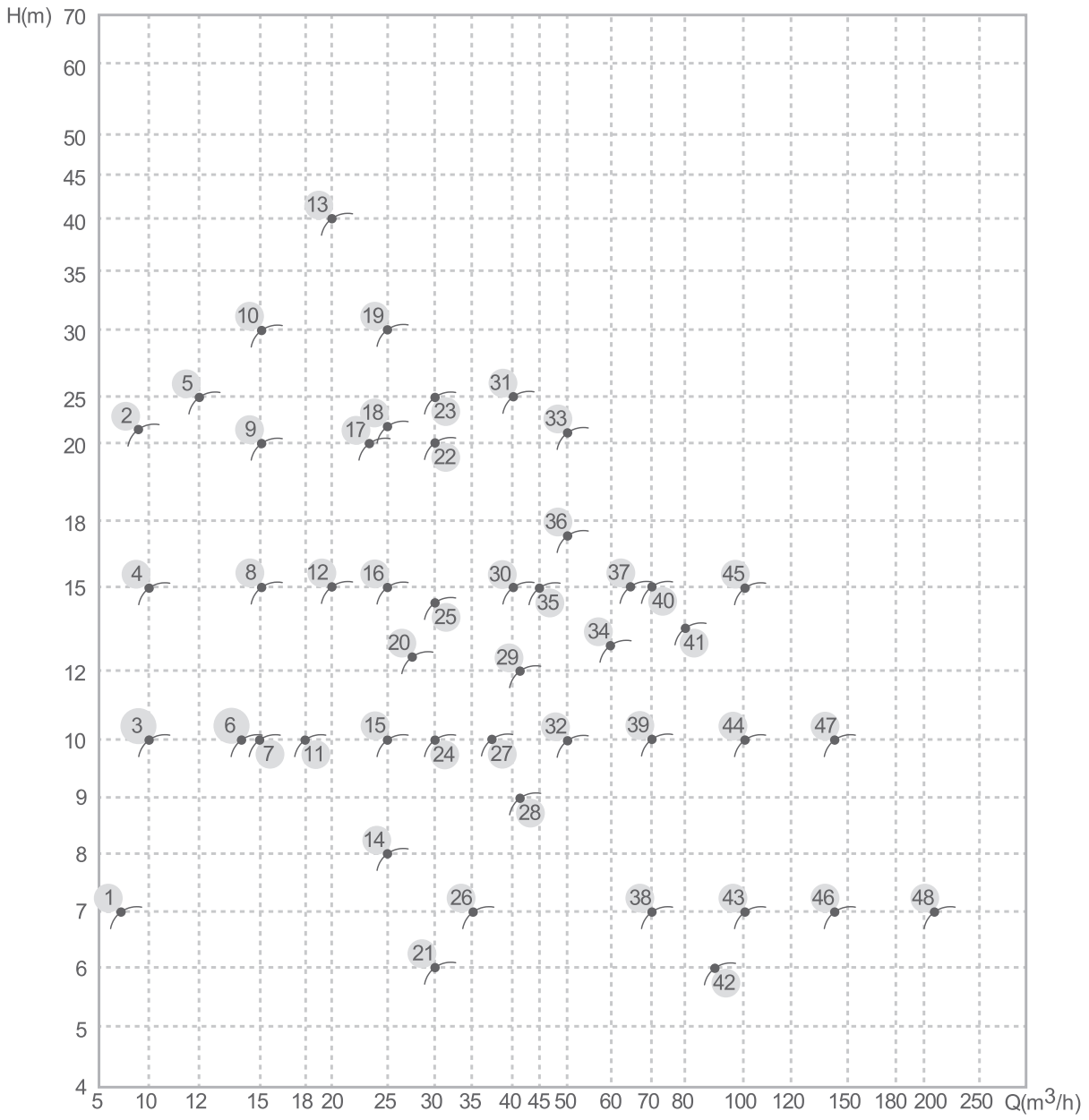
EXCELLENT RELIABILITY

With functions of leakage monitoring, overheating protection and overload protection, etc



No.	Parts
1	Pump Lid
2	O-Ring
3	Upper Bearing Plate
4	Motor Housing
5	Stator
6	Rotor
7	O-Ring
8	Motor Base
9	Mech Seal

No.	Parts
10	Lip Seal
11	Pressing Plate
12	Impeller
13	Volute
14	Sealing Ring
15	Stand
16	Discharge Elbow
17	Machinery Oil



NON-CLOG SUBMERSIBLE PUMP

No.	Model	Discharge Diameter (mm)	Capacity (m ³ /h)	Head (m)	Speed (r/min)	Power (kW)	Efficiency (%)	Weight (kg)
1	SP 7-7-0.55	50	7	7	2920	0.55	20	25
2	SP 9-22-2.2	50	9	22	2900	2.2	33	50
3	SP 10-10-0.75	50	10	10	2780	0.75	38	28
4	SP 10-15-1.5	50	10	15	2860	1.1	40	30
5	SP 12-25-3	50	12	25	2940	3	30	80
6	SP 13-10-1.1	50	13	10	2840	1.1	48	30
7	SP 15-10-1.1	50	15	10	2840	1.1	40	30
8	SP 15-15-1.5	50	15	15	2900	1.5	46	45
9	SP 15-20-2.2	50	15	20	2890	2.2	43	50
10	SP 15-30-4	50	15	30	2900	4	37	80
11	SP 18-10-1.5	50	18	10	2840	1.5	40	45
12	SP 20-15-2.2	50	20	15	2880	2.2	48	50
13	SP 20-40-7.5	50	20	40	2950	7.5	36	150
14	SP 25-8-1.5	50	25	8	2840	1.5	36	45
15	SP 25-10-2.2	50	25	10	2880	2.2	48	50
16	SP 25-15-2.2	50	25	15	2860	2.2	47	50
17	SP 24-20-4	50	24	20	2880	4	49	80
18	SP 25-22-4	50	25	22	2880	4	49	80
19	SP 25-30-5.5	50	25	30	2930	5.5	34	150
20	SP 27-13-2.2	50	27	13	2900	2.2	43	50
21	SP 30-6-1.5	50	30	6	2840	1.5	27	45
22	SP 30-20-4	50	30	20	2880	4	50	80
23	SP 30-25-5.5	50	30	25	2930	5.5	34	150
24	SP 30-10-2.2	80	30	10	2900	2.2	51	55
25	SP 30-14-3	80	30	14	2930	3	42	80
26	SP 35-7-2.2	80	35	7	2900	2.2	54	55
27	SP 37-10-3	80	37	10	2920	3	48	80
28	SP 42-9-2.2	80	42	9	2900	2.2	58	55
29	SP 42-12-3	80	42	12	2920	3	48	80
30	SP 40-15-4	80	40	15	2920	4	47	80
31	SP 40-25-7.5	80	40	25	1470	7.5	46	190
32	SP 50-10-3	80	50	10	2920	3	46	80
33	SP 50-22-7.5	80	50	22	1480	7.5	50	190
34	SP 60-13-4	80	60	13	2920	4	50	80
35	SP 45-15-5.5	100	45	15	1470	5.5	47	160
36	SP 50-17-5.5	100	50	17	1470	5.5	47	160
37	SP 65-15-5.5	100	65	15	1470	5.5	50	160
38	SP 70-7-3	100	70	7	1450	3	52	100
39	SP 70-10-4	100	70	10	1450	4	53	110
40	SP 70-15-7.5	100	70	15	1470	7.5	54	190
41	SP 80-13-7.5	100	80	13	1470	7.5	55	190
42	SP 90-6-4	100	90	6	1440	4	52	110
43	SP 100-7-4	100	100	7	1440	4	52	110
44	SP 100-10-5.5	100	100	10	1470	5.5	50	160
45	SP 100-15-7.5	100	100	15	1460	7.5	55	190
46	SP 140-7-5.5	150	140	7	1470	5.5	45	190
47	SP 145-10-7.5	150	145	10	1470	7.5	42	200
48	SP 210-7-7.5	150	210	7	1470	7.5	45	200

NON-CLOG
SUBMERSIBLE PUMP

VERSION OF PORTABLE USE

In this version of portable use, the discharge of elbow is directly connected with a hose and the pump is supported by its foot (see Fig. 2). It is mainly used for drainage purpose, and it is convenient to move to different places.

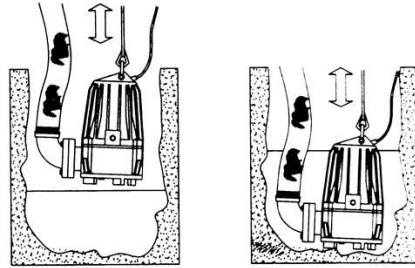


Fig.2

No.	Model	∅ A	L5Max	H ₁
1	SP 7-7-0.55	220	270	450
2	SP 10-10-0.75	155	240	480
3	SP 10-15-1.1	190	225	400
4	SP 13-10-1.1	190	225	400
5	SP15-10-1.1	190	225	400
6	SP 15-15-1.5	200	250	550
7	SP 18-10-1.5	200	250	550
8	SP 25-8-1.5	200	250	550
9	SP 30-6-1.5	200	250	550
10	SP 9-22-2.2	200	250	550
11	SP 15-20-2.2	200	250	550
12	SP 20-15-2.2	200	250	550
13	SP 25-10-2.2	200	250	550
14	SP 25-15-2.2	200	250	550
15	SP 27-13-2.2	200	250	550
16	SP 30-10-2.2	230	290	570
17	SP 35-7-2.2	230	290	570
18	SP 40-9-2.2	230	290	570
19	SP 12-25-3	240	280	680
20	SP 30-14-3	250	300	680
21	SP 37-10-3	250	300	680
22	SP 42-12-3	250	300	680
23	SP 50-10-3	250	300	680
24	SP 70-7-3	320	430	680
25	SP 15-30-4	240	280	680
26	SP 24-20-4	240	280	680
27	SP 25-22-4	240	280	680
28	SP 30-20-4	240	280	680
29	SP 40-15-4	250	300	680
30	SP 60-13-4	250	300	680
31	SP 70-10-4	320	430	660
32	SP 90-6-4	320	430	660
33	SP 100-7-4	320	430	660
34	SP 25-30-5.5	280	320	750
35	SP 30-25-5.5	280	320	750
36	SP 45-15-5.5	390	460	920
37	SP 50-17-5.5	390	460	920
38	SP 65-15-5.5	390	460	920
39	SP 70-15-5.5	390	460	920
40	SP 100-10-5.5	390	460	920
41	SP 140-7-5.5	460	550	970
42	SP 20-40-7.5	280	340	750
43	SP 40-25-7.5	390	460	920
44	SP 50-22-7.5	390	460	920
45	SP 70-15-7.5	390	460	920
46	SP 80-13-7.5	390	460	920
47	SP 100-15-7.5	390	460	920
48	SP 145-10-7.5	460	550	970
49	SP 210-7-7.5	460	550	970

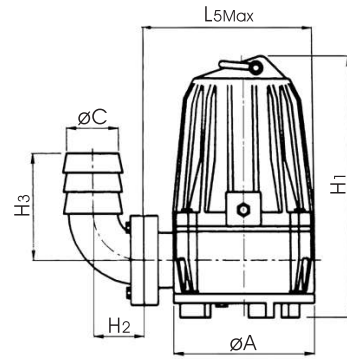


Fig.3

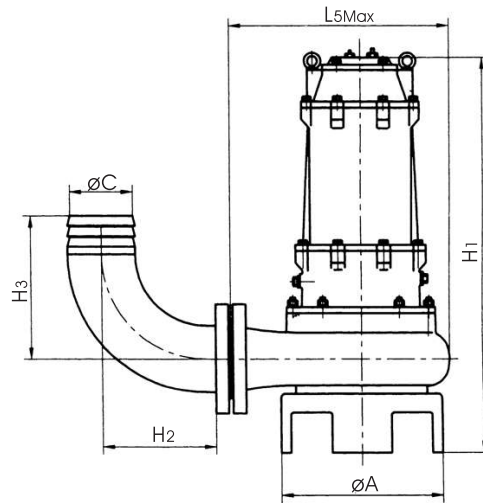


Fig.4

	Dia. of Discharge	∅ C	H ₂	H ₃
1	50	58	100	120
2	80	78	120	150
3	100	104	150	180
4	150	154	200	200

In this version of installation, float switch full automatic protection device and control cabinet are available according to consumers' request.

Version of portable use is only for those which power is below 11Kw.

VERSION OF AUTOMATIC COUPLING

Type GAK series automatic coupling system is suitable for the installation of non-clog submersible pump. The pump can be, mounted securely by using a guide rail. Smaller expense is required for the checking and repair, as it is not necessary to empty the tank.

Diagram of installation of automatic coupling system (Fig.5):

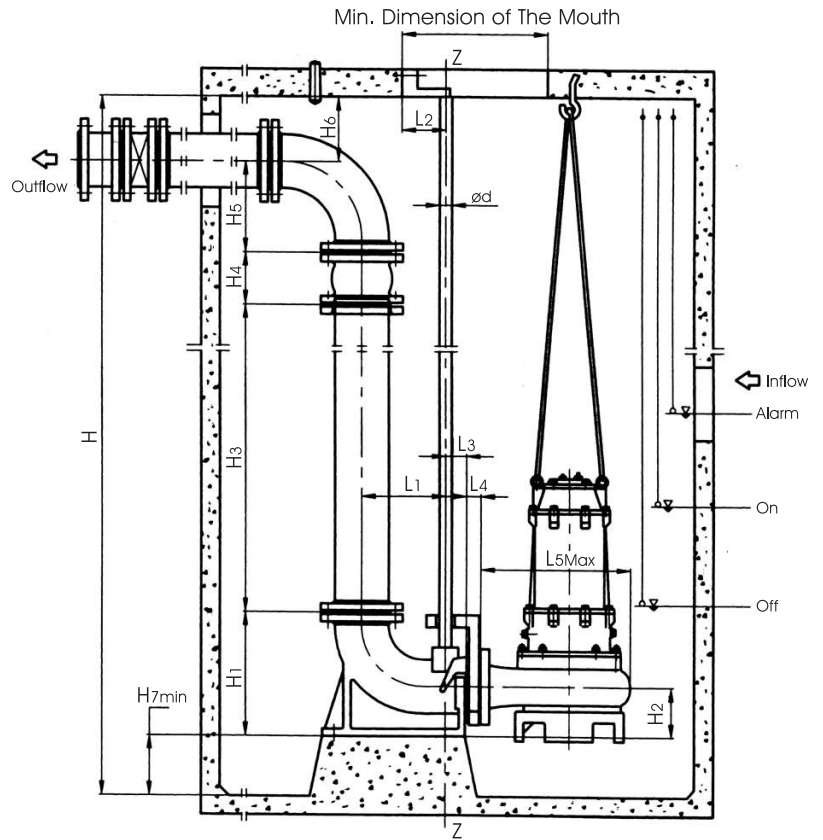


Fig.5

1) DEPTH OF THE POOL

$$H = H_1 + H_3 + H_4 + H_5 + H_6 + H_{7\text{Min}}$$

Note

- $H_{7\text{Min}}$ is height of convex surface for pedestal
- H_1 is height of pedestal
- H_3 is vertical height of discharge pipe
- H_4 is mounting dimension of turable rubber jointer
- H_5 is height of center of discharge pipe elbow
- H_6 is distance from the centre of discharge albow to the bottom side of the pool cover (Dimension H_3 , H_4 , H_5 and H_6 is subject to customer)

2) DIMENSION OF THE MOUTH OF WASTE WATER POOL $M > L_2 + L_3 + L_4 + L_{5\text{Max}}$

L_2 is mounting dimension of the supporter

L_3 is distance from Z-axis to flange of the pump

L_4 is mounting dimension of bracket

$L_{5\text{Max}}$ is max. dimension from discharge flange to casing outside

3) DIMENSION RELEVANT TO DESIGN OF SUMP

Min. dimension from casing to the wall should exceed 300mm at our suggestion. When several pumps must be installed in parallel we advise that the distance between each casing should exceed 400mm.

4) ORDERING PROCEDURE

When ordering, please specify the pool depth and the distance from the center of discharge pipe to the bottom beside the selected model.

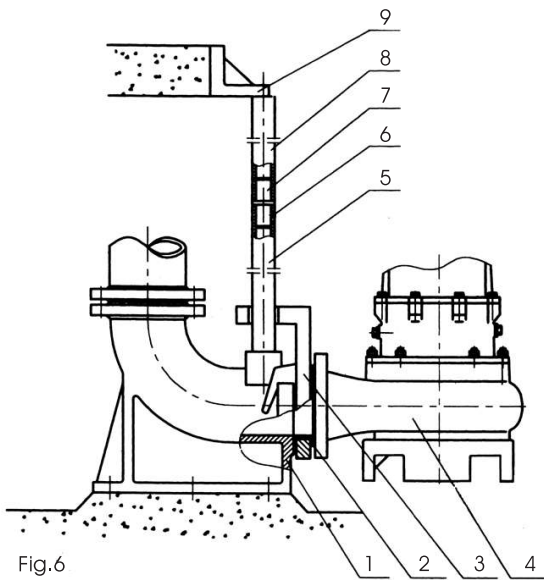


Fig.6

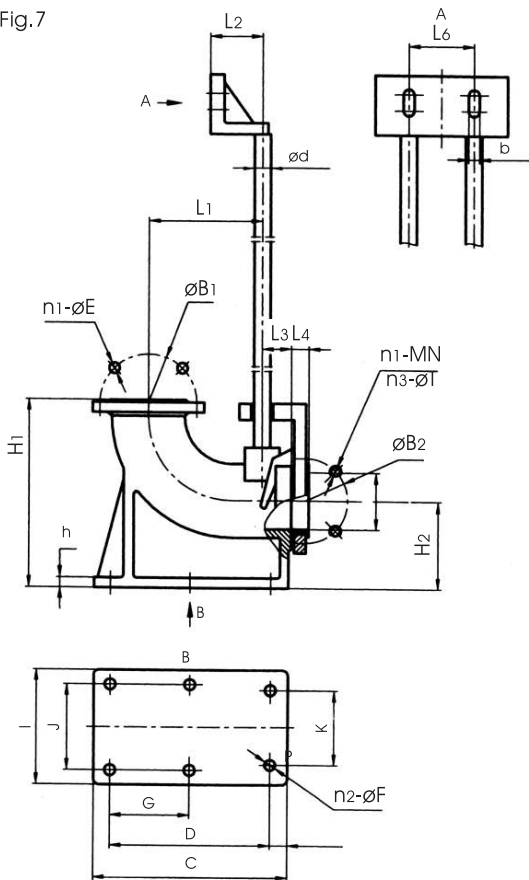
DESCRIPTION OF AUTOMATIC COUPLING SYSTEM



No.	Description
1	Pedestal
2	Bracket
3	Joint Face Cushion
4	Submersible Sewage Pump
5	Long Guide Tube
6	Hexagon Socket Setscrews (used when pool depth exceed 6m)
7	Pipe Coupling (used when pool depth exceed 6m)
8	Short Guide Tube
9	Leader Supporter

Structure Fig.6

Fig.7



No.	1	2	3	4
Type	50GAK	80GAK	100GAK	150GAK
A	50	80	100	150
B1	125	160	180	240
C	300	345	352	410
D	225	250	270	310
n1-E	4-17,5	8-17,5	8-17,5	8-22
n1-N	4-12	4-16	4-16	/
n2-F	4-18	4-18	4-18	4-18
n2-T	/	/	/	8-17,5
H1	320	300	360	400
H2	150	150	180	200
I	260	340	340	370
J	220	300	300	330
K	220	220	220	230
L1	220	235	240	310
L2	100	110	110	110
L3	40	40	40	40
L4	26	27	44	48
P	47	65	52	72
b	18	18	18	18
d	48	60	60	60
h	25	30	30	30
L6	100	100	100	100
B2	110	150	170	225