

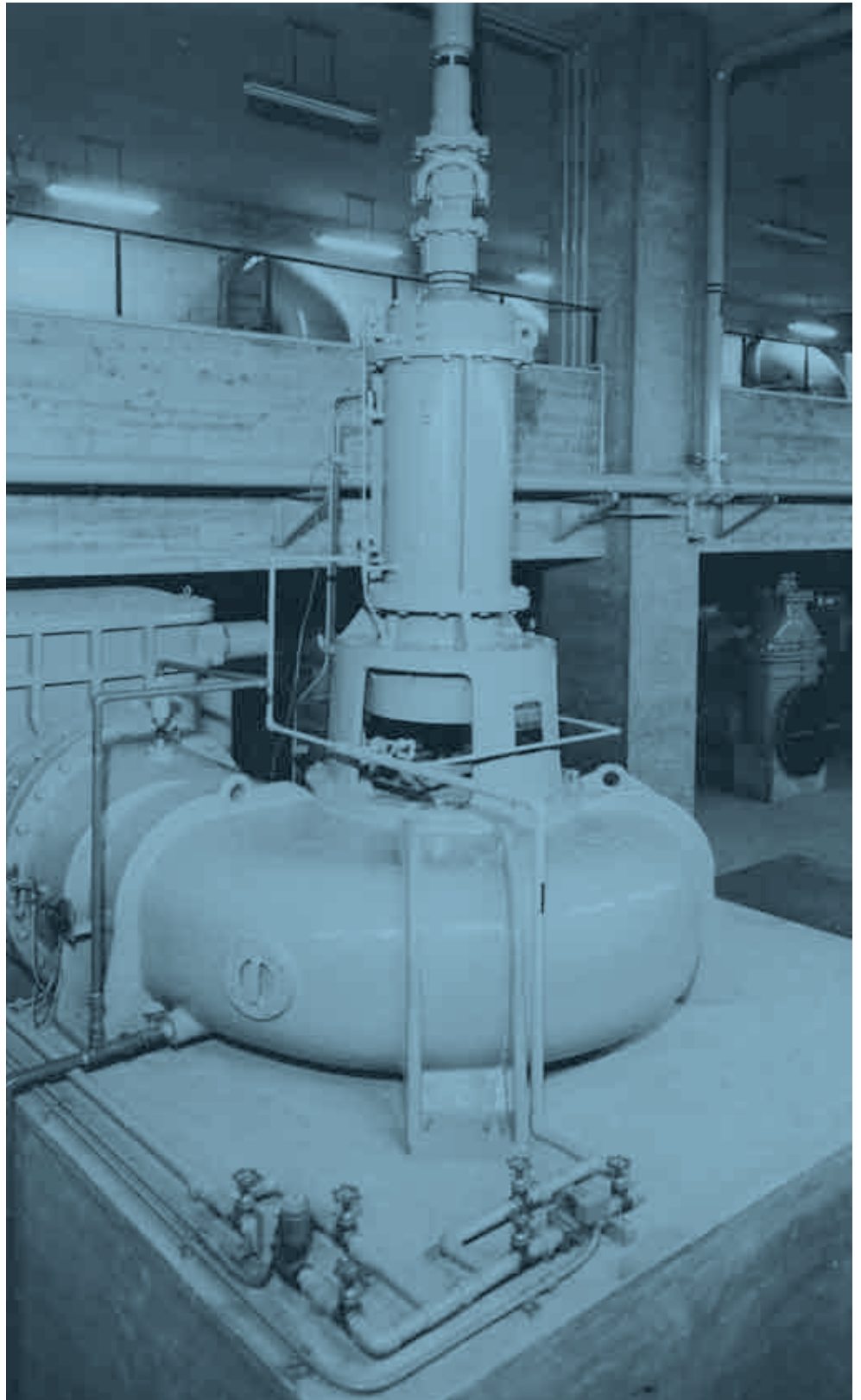


VERTICAL MIXED FLOW VOLUTE PUMP

MODEL:DS-VV



*Low head pumps
with excellent characteristics*

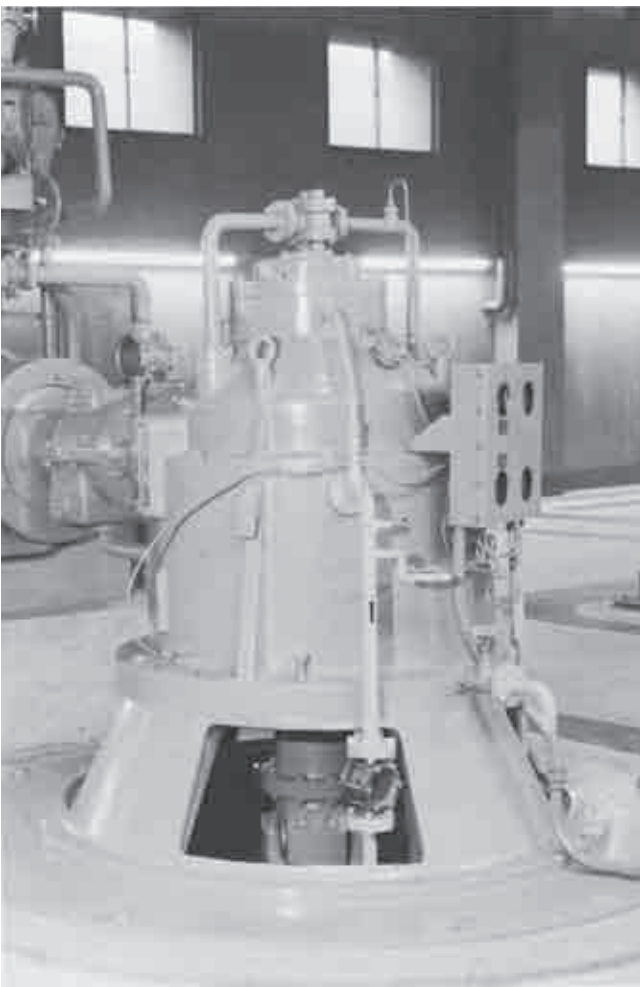


Kubota Vertical Mixed Flow Volute Pump: Model DS-VV

Kubota vertical mixed flow volute pumps have mixed flow type impellers built in a volute-type casing. The features of the two types are combined to assure excellent characteristics. These pumps are widely used as low-head pumps.

Main applications

Sewage drainage; dirty water drainage; agricultural irrigation drainage; construction site water drainage; other ordinary pumping and drainage applications.



Features

1. Non-clogging

Unlike conventional mixed flow type pumps, the casing does not have a guide vane. Moreover, the impeller is of the semi-open type with no shrouds and is equipped with a small number of vanes. Flow spaces are, therefore, large and the pump is almost free from clogging by impurities or solids contained in the water.

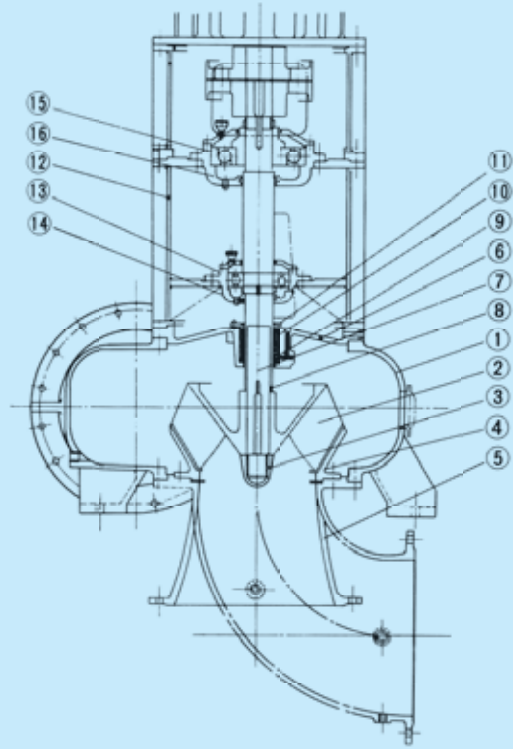
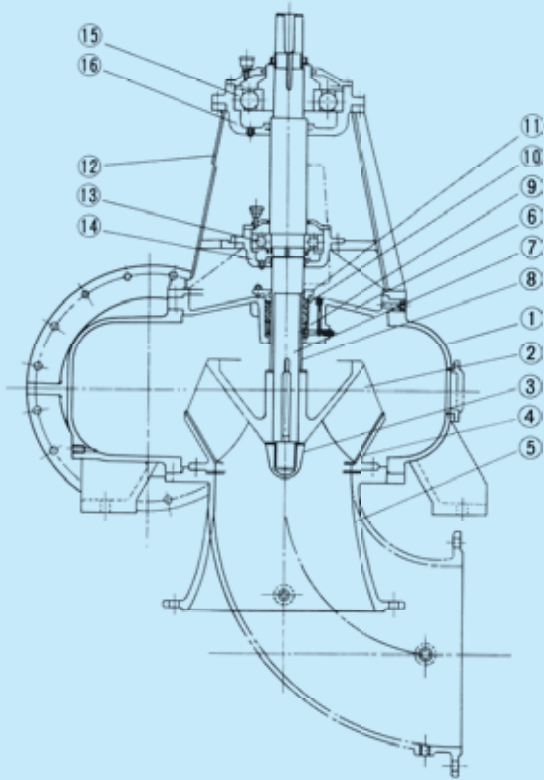
2. Safe operation over a wide range of heads.

The pump maintains high efficiency over a wide range of heads and is designed not to operate excessively beyond the maximum output of the prime mover.

3. Simple maintenance and inspection

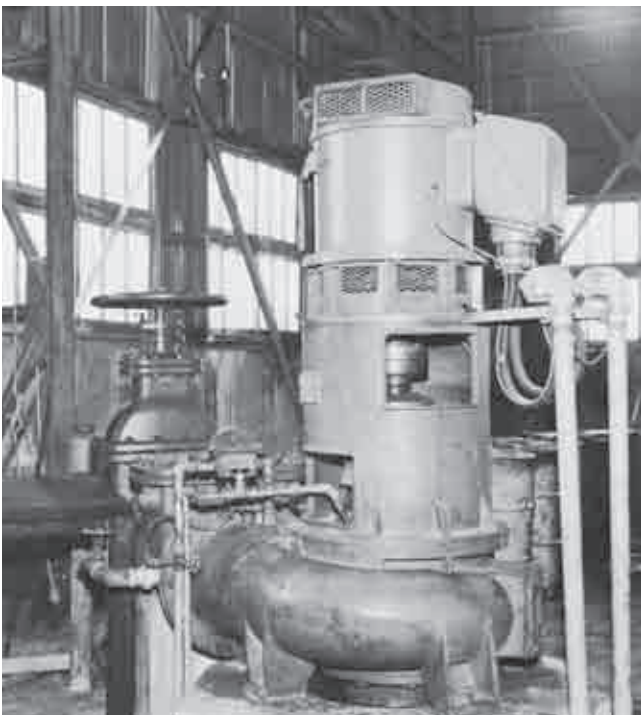
- (1) The pump is light, compact and of simple construction.
- (2) The casing and suction bend have windows to facilitate interior inspection.
- (3) The bearings are grease (or oil) lubricated and are not in contact with the water. They are, therefore, extremely durable.
- (4) Pressurized fresh water supply ports are provided at the shaft seal to extend the life of the sleeve and gland packing.
- (5) The suction liner which forms the impeller shroud is made of wear resistant material and can be replaced simply by removing the suction bend.
- (6) The gap between impeller and suction liner can be adjusted from outside by turning the bearing nut on top of the main shaft. This eliminates the need to dismantle the pump.

List of Parts for DS-VV



- | | | | |
|-----------------|-----------------|--------------------|-----------------------|
| 1 Casing | 5 Suction cover | 9 Seal ring | 13 Lower ball bearing |
| 2 Impeller | 6 Casing cover | 10 Gland packing | 14 Lower bearing box |
| 3 Impeller nut | 7 Main shaft | 11 Packing gland | 15 Upper ball bearing |
| 4 Suction liner | 8 Sleeve | 12 Bearing bracket | 16 Upper bearing box |

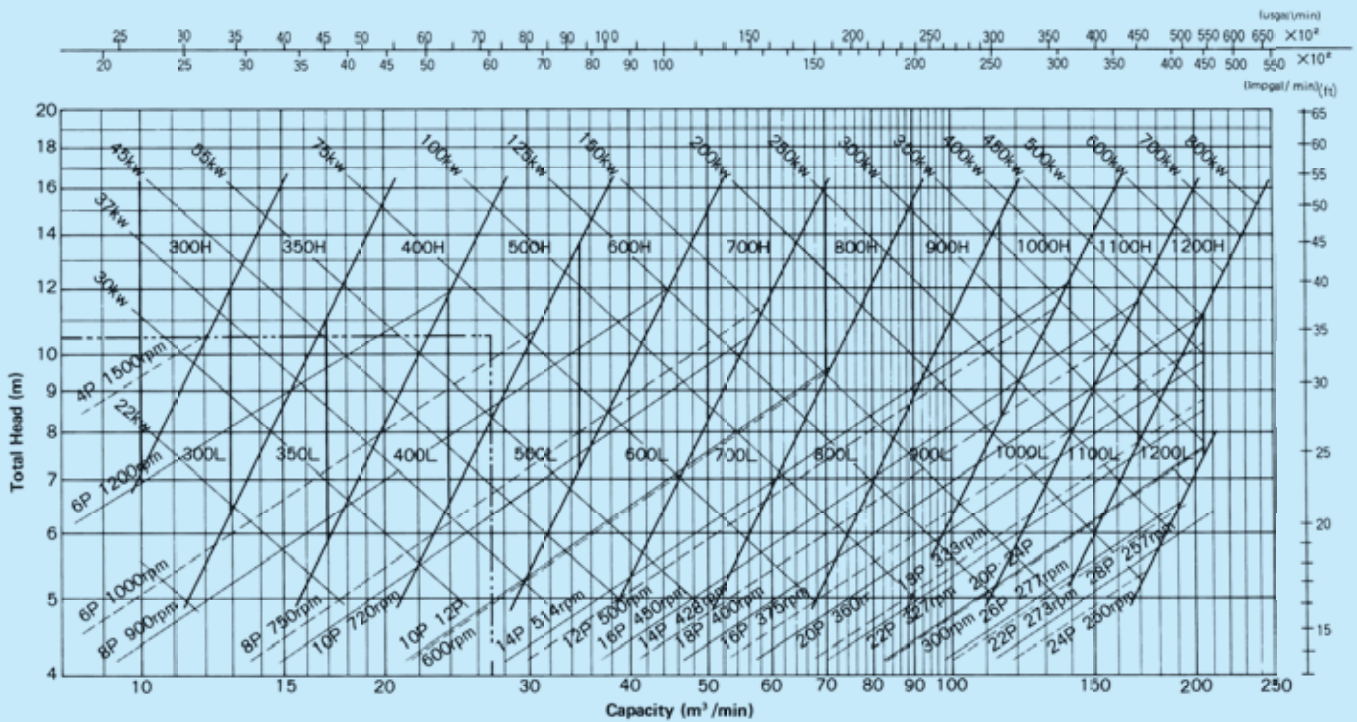
Note: This construction employs frame numbers 300H-700H and 300L-700L.
For higher capacities, some changes are made in the bearing structure.



Selection of pump structure

Both the single-floor and two-floor types are available. Selection between the two types depends on the pump house construction. The single floor type is economical because the motor can be mounted directly on the pump casing. However, the multi-floor type is better from the viewpoints of moisture-proofing and safety during flooding.

Selection Table for DS-VV



Example of Selection

Capacity: 27m³/min
(7133 usgal/min : 5940 Impgal/min)

Total head: 10.5m(34.5 ft)

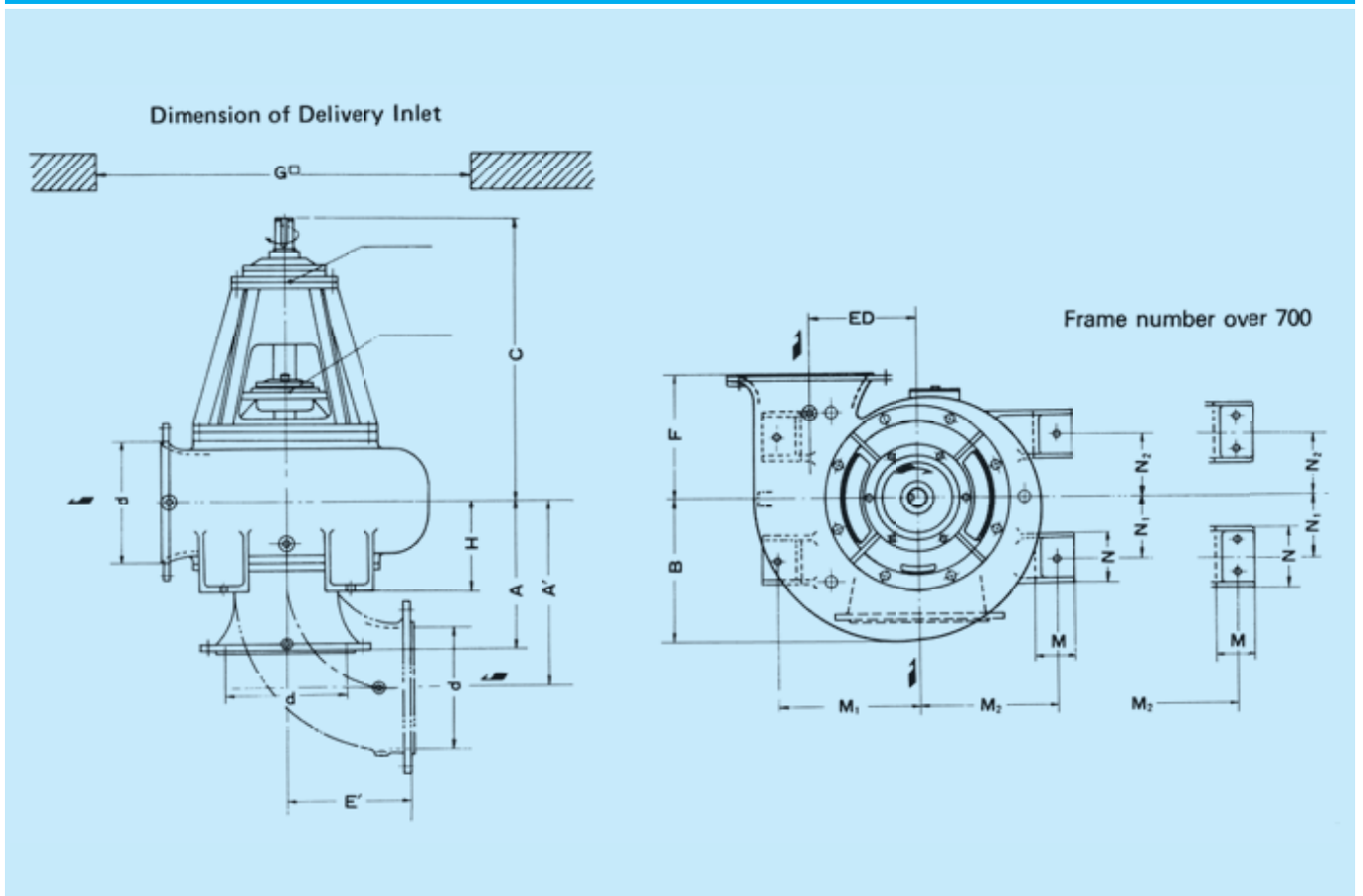
Frame number speed: in case of 50Hz 6P 1,000rpm
in case of 60Hz 8P 900rpm

Prime mover output: 75Kw

Note: 1. 000H and 000L show the frame numbers.

2. The solid line indicating rotary speed is for 60Hz and the broken line for 50Hz.
3. Kw values represent required prime mover output in the case of direct coupling.
4. The above diagram is based on the condition of positive suction pressures. If suction pressure is negative, the rotary speed will be different. In this latter case, please consult Kubota.

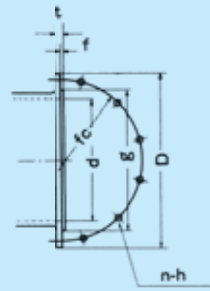
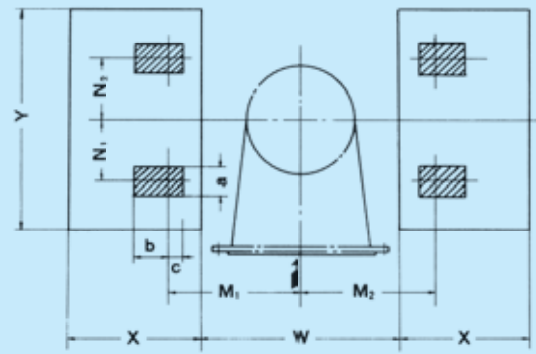
Dimensions of DS-VV



Dimensions of Main Part of Pump

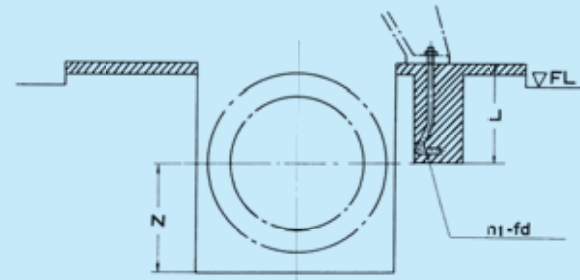
Frame number	Letter Designation														
	d	A	B	C	F	ED	H	M	M ₁	M ₂	N	N ₁	N ₂	A'	E'
300H	300	360	370	840	350	250	240	120	400	400	150	150	150	460	350
300L	300	380	430	840	400	300	270	120	450	450	150	175	175	490	350
350H	350	400	430	950	400	300	270	120	450	450	150	175	175	540	400
350L	350	430	480	950	450	350	300	150	500	500	200	200	200	560	400
400H	400	450	480	1000	450	350	300	150	500	500	200	200	200	610	450
400L	400	480	540	1000	500	400	370	150	550	550	200	225	225	640	450
500H	500	500	540	1100	500	400	370	150	550	550	200	225	225	740	500
500L	500	530	620	1100	550	450	420	200	600	600	250	250	250	770	500
600H	600	560	620	1200	550	450	420	200	600	600	250	250	250	870	600
600L	600	600	680	1200	600	500	480	200	650	650	250	275	275	920	600
700H	700	620	680	1300	600	500	480	200	650	650	250	275	275	1020	700
700L	700	650	810	1400	700	600	530	220	750	750	350	375	325	1050	700
800H	800	690	810	1500	700	600	530	220	750	750	350	375	325	1150	800
800L	800	740	920	1600	800	700	600	220	850	850	350	475	375	1200	800
900H	900	780	920	1700	800	700	600	220	850	850	350	475	375	1300	900
900L	900	840	1090	1700	900	760	650	250	1000	900	400	550	450	1360	900
1000H	1000	880	1090	1800	900	760	650	250	1000	900	400	550	450	1460	1000
1000L	1000	920	1170	1900	1000	900	700	250	1100	1000	400	600	500	1500	1000
1100H	1100	960	1170	2000	1000	900	700	250	1100	1000	400	600	500	1600	1100
1100L	1100	1010	1290	2000	1100	1000	750	300	1200	1100	450	625	525	1650	1100
1200H	1200	1050	1290	2100	1100	1000	750	300	1200	1100	450	625	525	1750	1200
1200L	1200	1100	1330	2100	1100	1000	750	300	1200	1100	450	625	525	1800	1200

Foundation of DS-VV



Dimensions of Flange

Nominal Dia. d	g	fc	D	t	f	n	h
300	362	414	464	24	4	10	23
350	414	472	530	24	4	10	25
400	466	524	582	26	4	12	25
500	572	639	706	28	4	12	27
600	676	743	810	30	4	16	27
700	780	854	928	30	4	16	33
800	886	960	1034	32	5	20	33
900	990	1073	1156	32	5	20	33
1000	1096	1179	1262	34	5	24	33
1100	1200	1283	1366	34	5	24	33
1200	1304	1387	1470	36	5	28	33



Dimensions of Foundation

Frame Number	Letter Designation										
	G	W	X	Y	Z	a	b	c	L	n ₁	fd
300 H	1100	600	350	600	300	100	140	60	300	4	M20
300 L	1200	700	350	700	350	100	140	60	300	4	M20
350 H	1200	700	350	700	350	100	140	60	300	4	M20
350 L	1300	700	400	800	400	150	140	60	350	4	M24
400 H	1400	700	400	800	400	150	140	60	350	4	M24
400 L	1500	800	400	800	450	150	140	60	350	4	M24
500 H	1500	800	400	800	450	150	140	60	350	4	M24
500 L	1600	900	450	900	500	150	180	70	450	4	M30
600 H	1700	900	450	900	500	150	180	70	450	4	M30
600 L	1800	1000	500	1100	600	150	180	70	450	4	M30
700 H	1900	1000	500	1100	600	150	180	70	450	4	M30
700 L	2100	1100	550	1300	700	300	180	70	450	8	M30
800 H	2200	1100	550	1300	700	300	180	70	450	8	M30
800 L	2400	1300	600	1500	800	300	180	70	450	8	M30
900 H	2400	1300	600	1500	800	300	180	70	450	8	M30
900 L	2600	1400	700	1700	900	350	210	90	550	8	M36
1000 H	2600	1400	700	1700	900	350	210	90	550	8	M36
1000 L	2900	1500	750	1900	950	350	210	90	550	8	M36
1100 H	2900	1500	750	1900	950	350	210	90	550	8	M36
1100 L	3200	1700	800	2000	1000	350	210	90	550	8	M36
1200 H	3200	1700	800	2000	1000	350	210	90	550	8	M36
1200 L	3200	1700	800	2000	1000	350	210	90	550	8	M36

When enquiring about our Mixed Flow Pumps, please provide the following information:

* **Capacity**

In cubic meters per hour, minute or second

* **Total head**

In meters (actual head + head loss)

* **Water**

Fresh water, muddy water or river water

* **Uses**

Water pumping for drainage or irrigation

* **Prime mover**

Motor or diesel engine (Voltage, cycles, r.p.m. and type of motor).

* **Drive system**

Connected direct to prime mover or via reduction gear

* **Single-floor type or two-floor type**

(Height of each floor in case of two-floor type)

* **Suction conditions**

* **Method of Operation**

Manual, automatic operation or remote control operation





KUBOTA Corporation

DOMESTIC OFFICES AND OVERSEAS OFFICES

Tokyo Office:

1-3, Nihonbashi-Muromachi 3-chome, Chuo-ku, Tokyo,
103-8310, Japan
Phone:Tokyo (03) 3245-3443/44, 3459/60
Facsimile: (03) 3245-3454

Head office:

2-47, Shikitsu-higashi 1-chome, Naniwa-ku, Osaka 556-8601, Japan
Phone:Osaka (06) 6648-2111
Facsimile: (06) 6648-3862

Overseas offices:

Kubota Corporation Bangkok Office

25th Floor, Serm-Mit Tower, 159 Sukhumvit 21 Road,
Wattana, Bangkok 10110, Thailand
Phone: +66-2260-6590
Facsimile: +66-2260-6589

Kubota Corporation Malaysia Representative Office

Leisure Commerce Square, 1105, Block A4,
Jalan PJS 8/9, 46150 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Phone: +60-3-7873-0060
Facsimile: +60-3-7874-9419

Kubota Corporation Cairo Office

Flat 18 (5th Floor), Building No.15, Abou El Feda St.,
Zamalek, Cairo, Egypt
Phone: +202-7360-283
Facsimile: +202-735-0340

Kubota Corporation Beijing Office

Room 1056, New Century Office Tower, No.6 Southern Road,
Capital Gym, Beijing 100044, People's Republic of China
Phone: (10) 6849-2277
Facsimile: (10) 6849-2280

Hirakata Plant

1-1-1, Nakamiya-Oike, Hirakata-city,
Osaka 573-8573, Japan
Phone: (072) 840-1429
Facsimile: (072) 849-2191

Inquiries for pumping equipment and systems:

To Pump Export Department

Kubota Corporation

1-3, Nihonbashi-Muromachi 3-chome, Chuo-ku,
Tokyo103-8310 Japan

TEL No:TOKYO (03) 3245-3457

Facsimile: TOKYO (03) 3245-3454

or One of the above Overseas Offices

E-Mail:pump@kubota.co.jp.

<http://www.kubota.co.jp/english>

KUBOTA reserves the right to change the design,
technical specification and dimensions without prior notice.