



EBARA

EBARA SUBMERSIBLE SEWAGE PUMPS «with cutter»

MODEL DF

PT. LUKES INDONESIA

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Model DF

Model DFA

Model DFJ

APPLICATIONS

- Sewage
- Kitchen drains
- Industrial water drainage

FEATURES

1. Available with cutter type semi-open single blade impeller (50-80φ) and semi-open mixed flow double blade impeller, this pump is clog-free.
2. Built-in thermal protector automatically operates when current values fall below 7.5 kW or exceed 11 kW to prevent overload burn.
3. Optional quick discharge connector facilitates installation and maintenance.

ACCESSORIES

- Cabtyre cable (10m)
- Companion flange (1 set)

STANDARD SPECIFICATIONS

Treated liquid: Sewage and waste water

Liquid temperatures:

Model DF, DFA	0.4 ~ 7.5 kW	0 ~ 50°C
Model DFJ	0.4 ~ 3.7 kW	0 ~ 32°C

Structure Impeller Semi-open single blade (50—80φ)
Semi-open mixed flow double blade (100φ)

Shaft seal Double mechanical seal
Flange rating JIS B2212: 10 kgf/cm² thin type

Materials Casing Cast iron

Impeller Cast iron

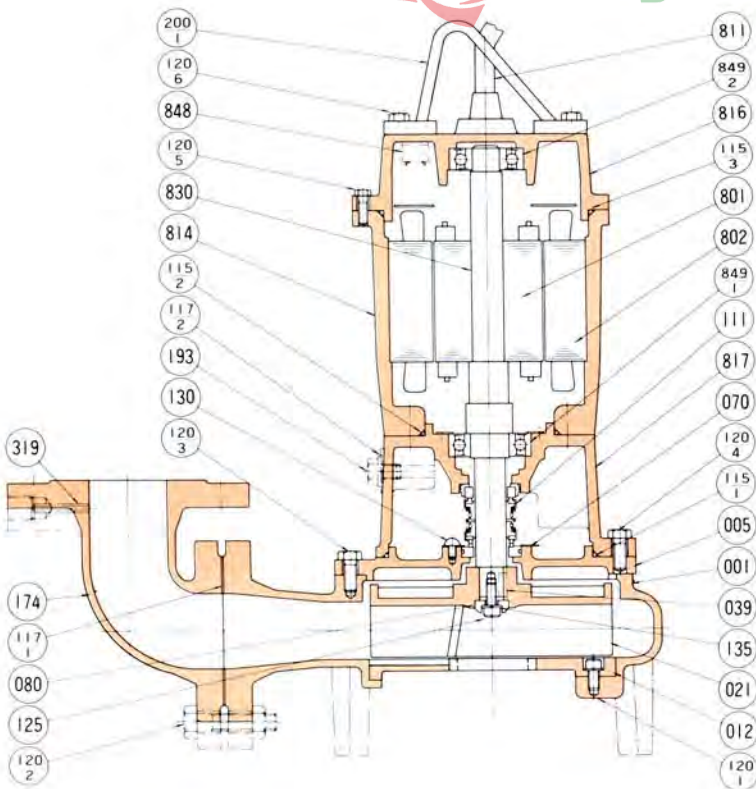
Shaft 403 stainless steel

Motor Type Dry type submersible

Number poles 4

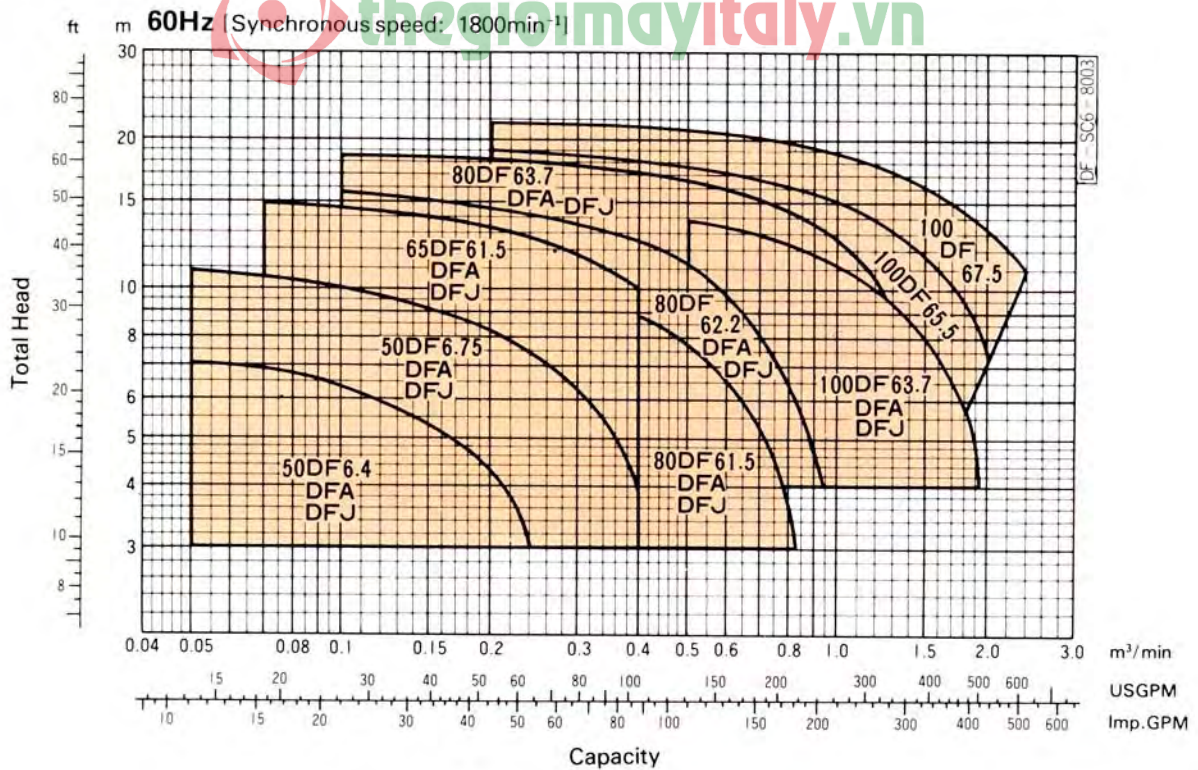
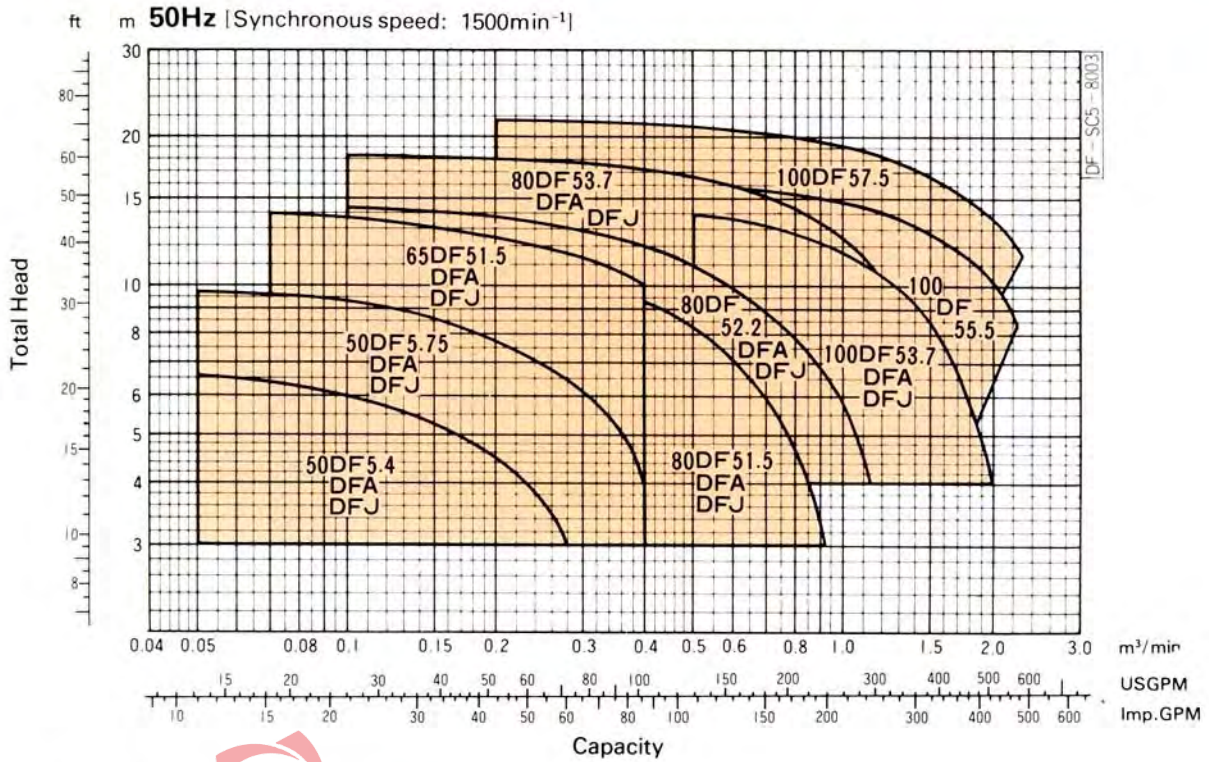
Size of foreign matter

Model	Foreign matter diameter (mm)	Foreign matter length (mm)
50DF	35	150
65DF	40	195
80DF	50	240
100DF	60	300



PART NO.	PART NAME	PART NO.	PART NAME
001	CASING	120-6	BOLT
005	INTERMEDIATE CASING	125	BOLT
012	SUCTION COVER	130	SCREW
021	IMPELLER	135	WASHER
039	KEY	174	DISCHARGE ELBOW
070	PLATE	193	OIL PLUG
080	BUSHING	200-1	LIFTING HANGER
111	MECHANICAL SEAL	319	SPRING PIN
115-1	"O" RING	801	ROTOR
115-2	"O" RING	802	STATOR
115-3	"O" RING	811	CABTYRE CABLE
117-1	GASKET	814	MOTOR FRAME
117-2	GASKET	816	BRACKET
120-1	BOLT	817	BRACKET
120-2	BOLT	830	SHAFT
120-3	BOLT	848	THERMAL PROTECTOR
120-4	BOLT	849-1	BALL BEARING
120-5	BOLT	849-2	BALL BEARING

SELECTION CHARTS



Symbols

80 DF A 5 2.2

- Motor output kW
- Frequency: 50Hz 5, 60Hz 6
- Model
- Port diameter mm

[Model]

- DF: Manual type
- DFA: Automatic type
- DFJ: Automatic alternating type

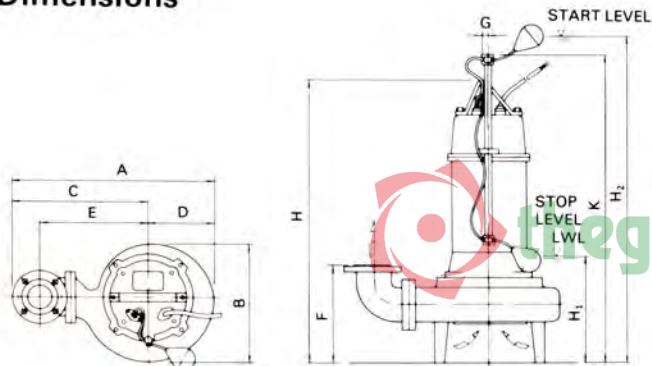
AUTOMATIC TYPE



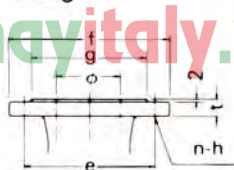
Features

- Automatic operation without use of control panel.
- Since a control panel is unnecessary, operation can begin as soon as the pumps are installed and connected to a power source.
- A highly reliable float switch, impervious to sewage and impurities, used for water surface level detection, prevents dry operation.

Dimensions



Flange



Unit: mm

ϕ	e	f	g	t	n	h
50	120	155	100	18	4	15
65	140	175	120	18	4	15
80	150	185	130	18	8	15
100	175	210	155	20	8	15

50Hz

Unit: mm

Size ϕ	Model	Output kW	Pump and motor											Weight (Mass) kg
			A	B	C	D	E	F	G	H ₁	H ₂	H	K	
50	50DFA5.4	0.4	393	222	283	110	205	175	25	250	650	555	630	32.5
	50DFA5.75	0.75	411	239	293	118	215	175	25	250	650	555	630	35.5
65	65DFA51.5	1.5	497	291	353	144	265	200	20	320	860	724	840	55
80	80DFA51.5	1.5	524	292	378	146	285	220	20	320	860	745	840	58
	80DFA52.2	2.2	542	308	388	154	295	220	20	320	860	805	840	70
	80DFA53.7	3.7	567	328	403	164	310	220	20	320	860	805	840	78
100	100DFA53.7	3.7	614	335	445	169	340	250	20	370	910	856	890	85

60Hz

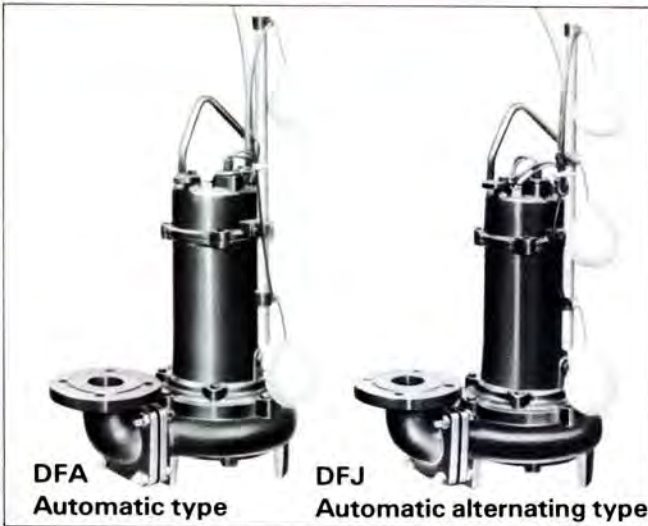
Unit: mm

Size ϕ	Model	Output kW	Pump and motor											Weight (Mass) kg
			A	B	C	D	E	F	G	H ₁	H ₂	H	K	
50	50DFA6.4	0.4	373	208	273	100	195	175	25	250	650	557	630	31.5
	50DFA6.75	0.75	393	222	283	110	205	175	25	250	650	550	630	34.5
65	65DFA61.5	1.5	462	258	333	129	245	200	20	320	860	724	840	51
80	80DFA61.5	1.5	519	282	378	141	285	220	20	320	860	745	840	58
	80DFA62.2	2.2	524	292	378	146	285	220	20	320	860	806	840	68
	80DFA63.7	3.7	542	308	388	154	295	220	20	320	860	805	840	76
100	100DFA63.7	3.7	614	335	445	169	340	250	20	370	910	856	890	85

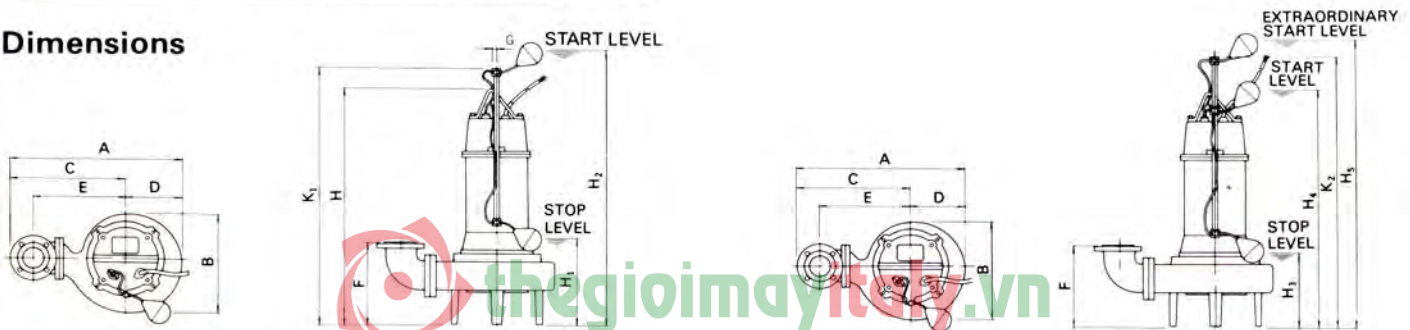
AUTOMATIC ALTERNATING TYPE (Built-in Operating Apparatus)

Features

- Automatic, automatic alternating and parallel operation without use of control panel.
- Since a control panel is unnecessary, operation can begin as soon as the pumps are installed and connected to a power source.
- A highly reliable float switch, impervious to sewage and impurities, used for water surface level detection, prevents dry operation.



Dimensions



No. 2 PUMP Model DFA

No. 1 PUMP Model DFJ

50Hz

Unit: mm

Size ϕ	Model	Output kW	Pump and motor															Weight (Mass) kg	
			A	B	C	D	E	F	G	H	K ₁	H ₁	H ₂	K ₂	H ₃	H ₄	H ₅	No. 1	No. 2
50	50DFJ5.4	0.4	393	222	283	110	205	175	25	555	630	250	650	740	220	570	760	32.5	32.5
	50DFJ5.75	0.75	411	239	293	118	215	175	25	555	630	250	650	740	220	570	760	35.5	35.5
65	65DFJ51.5	1.5	497	291	353	144	265	200	20	724	840	320	860	950	290	780	970	55	55
80	80DFJ51.5	1.5	524	292	378	146	285	220	20	745	840	320	860	950	290	780	970	58	58
	80DFJ52.2	2.2	542	308	388	154	295	220	20	805	840	320	860	950	290	780	970	70	70
	80DFJ53.7	3.7	567	328	403	164	310	220	20	805	840	320	860	950	290	780	970	78	78
100	100DFJ53.7	3.7	614	335	445	169	340	250	20	856	890	370	910	1000	340	830	1020	85	85

60Hz

Unit: mm

Size ϕ	Model	Output kW	Pump and motor															Weight (Mass) kg	
			A	B	C	D	E	F	G	H	K ₁	H ₁	H ₂	K ₂	H ₃	H ₄	H ₅	No. 1	No. 2
50	50DFJ6.4	0.4	373	208	273	110	195	175	25	557	630	250	650	740	220	570	760	31.5	31.5
	50DFJ6.75	0.75	393	222	283	110	205	175	25	550	630	250	650	740	220	570	760	34.5	34.5
65	65DFJ61.5	1.5	462	258	333	129	245	200	20	724	840	320	860	950	290	780	970	51	51
80	80DFJ61.5	1.5	519	282	378	141	285	220	20	745	840	320	860	950	290	780	970	58	58
	80DFJ62.2	2.2	524	292	378	146	285	220	20	806	840	320	860	950	290	780	970	68	68
	80DFJ63.7	3.7	542	308	388	154	295	220	20	805	840	320	860	950	290	780	970	76	76
100	100DFJ63.7	3.7	614	335	445	169	340	250	20	856	890	370	910	1000	340	830	1020	85	85

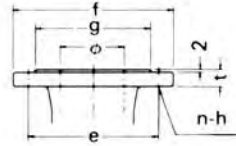
MANUAL TYPE



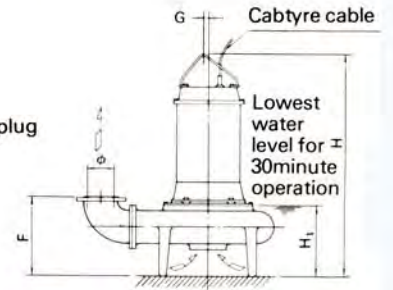
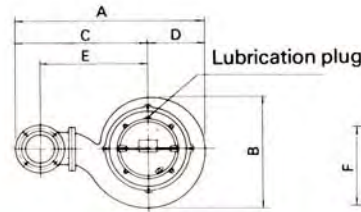
Dimensions

Unit: mm

Flange



ϕ	e	f	g	t	n	h
50	120	155	100	18	4	15
65	140	175	120	18	4	15
80	150	185	130	18	8	15
100	175	210	155	20	8	15



50Hz

Unit: mm

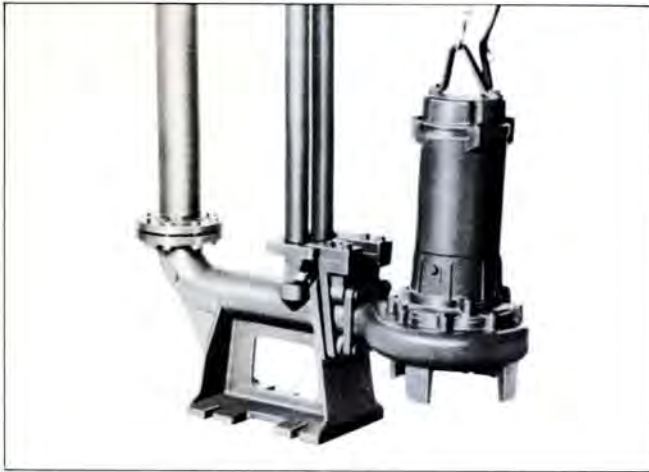
Size ϕ	Model	Output kW	Pump and motor									Weight (Mass) kg
			A	B	C	D	E	F	G	H ₁	H	
50	50DF5.4	0.4	393	222	283	110	205	175	25	120	510	31
	50DF5.75	0.75	411	239	293	118	215	175	25	120	510	34
65	65DF51.5	1.5	497	291	353	144	265	200	20	140	585	52
80	80DF51.5	1.5	524	292	378	146	285	220	20	165	606	55
	80DF52.2	2.2	542	308	388	154	295	220	20	165	682	67
	80DF53.7	3.7	567	328	403	164	310	220	20	165	682	80
100	100DF53.7	3.7	614	335	445	169	340	250	25	185	731	79
	100DF55.5	5.5	646	370	460	186	355	333	10	205	866	123
	100DF57.5	7.5	673	385	480	193	375	333	10	205	858	141

60Hz

Unit: mm

Size ϕ	Model	Output kW	Pump and motor									Weight (Mass) kg
			A	B	C	D	E	F	G	H ₁	H	
50	50DF6.4	0.4	373	208	273	100	195	175	25	120	512	30
	50DF6.75	0.75	393	222	283	110	205	175	25	120	510	33
65	65DF61.5	1.5	462	258	333	129	245	200	20	140	585	48
80	80DF61.5	1.5	519	282	378	141	285	220	20	165	606	55
	80DF62.2	2.2	524	292	378	146	285	220	20	165	683	65
	80DF63.7	3.7	542	308	388	154	295	220	20	165	682	73
100	100DF63.7	3.7	614	335	445	169	340	250	25	185	731	79
	100DF65.5	5.5	614	335	445	169	340	250	10	205	866	132
	100DF67.5	7.5	646	369	460	186	355	333	10	205	866	132

MODEL DF WITH QUICK DISCHARGE CONNECTOR



Features

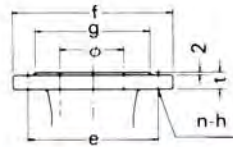
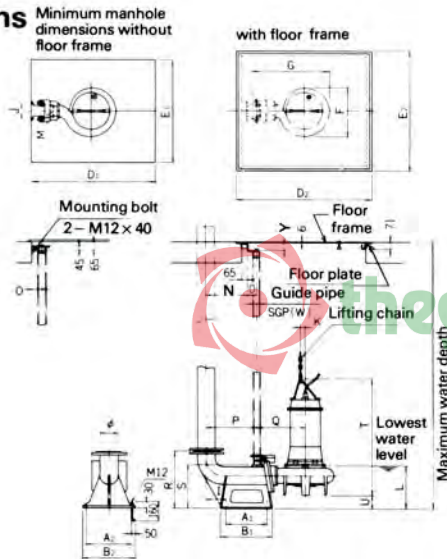
1. Pump mounting and demounting can be performed safely and quickly outside the tank.
2. Smaller expense is required for checking and repair, as it is not necessary to empty the tank.
3. The pump can be mounted securely by using a guide rail.

• Composition of quick discharge connector

With Device		With Pump	
Device proper	1 set	Sliding guide	1 set
Guide pipe fastening hardware	1 set	Pump mounting/demounting flange	1 set
Flange with bolts	1 set	Pump lifting chain	1 set

* Floor frame, floor plate (for 1 - 4 pumps) and guide pipe (white gas pipe or stainless steel pipe) are available as optional accessories.

Dimensions



Flange

Unit: mm

φ	e	f	g	t	n	h
50	120	155	100	18	4	15
65	140	175	120	18	4	15
80	150	185	130	18	8	15
100	175	210	155	20	8	15

Foundation

Unit: mm

Model	A ₁	A ₂	B ₁	B ₂
50DF	180	120	300	180
65DF	195	160	315	220
80DF	220	180	340	240
100DF	220	180	340	240

50Hz

Unit: mm

Size φ	Model	Access hole				Quick discharge connector								Guide pipe				Pump and motor					Lowest Water Level L	Weight (Mass) kg	
		D ₁	D ₂	E ₁	E ₂	I	K	N	O	P	R	S	J	M	X	Y	F	G	Q	T	U	Pump		Q.D.C	
50	50DF5.4	700	930	500	830	184	25	235	75	310	250	185	60	70	1B	86	222	429	281	510	60	180	31	25	
	50DF5.75	700	930	500	830	184	25	235	75	310	250	185	60	70	1B	86	239	447	291	510	60	180	34	25	
65	65DF51.5	700	930	500	830	190	20	245	85	330	320	265	60	90	1½B	86	291	529	333	585	115	225	52	35	
	80DF51.5	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	292	543	345	606	130	295	55	40	
80	80DF52.5	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	308	561	355	682	130	295	67	40	
	80DF53.7	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	328	586	370	682	130	295	80	40	
100	100DF53.7	800	1130	500	830	186	25	265	85	350	360	310	60	90	1½B	86	335	591	370	731	115	240	79	45	
	100DF55.5	800	1130	500	830	186	10	265	85	350	360	310	60	90	1½B	86	369	623	385	866	42	240	123	45	
	100DF57.5	800	1130	500	830	186	10	265	85	350	360	310	60	90	1½B	86	385	650	405	858	42	240	141	45	

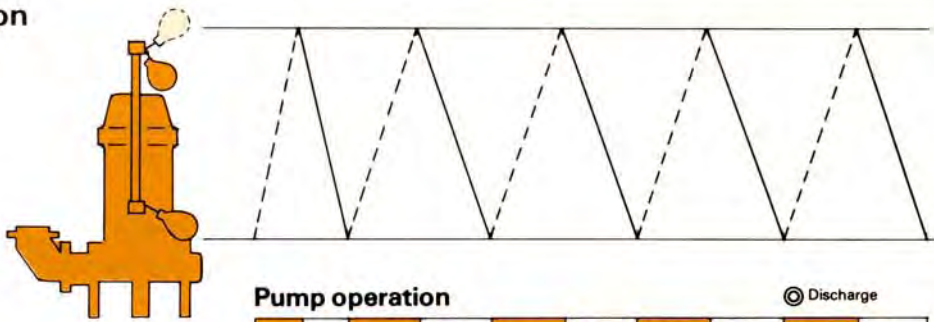
60Hz

Unit: mm

Size φ	Model	Access hole				Quick discharge connector								Guide pipe				Pump and motor					Lowest Water Level L	Weight (Mass) kg	
		D ₁	D ₂	E ₁	E ₂	I	K	N	O	P	R	S	J	M	X	Y	F	G	Q	T	U	Pump		Q.D.C	
50	60DF6.4	700	930	500	830	184	25	235	75	310	250	185	60	70	1B	86	208	409	271	512	60	180	30	25	
	50DF6.75	700	930	500	830	184	25	235	75	310	250	185	60	70	1B	86	222	429	281	510	60	180	33	25	
65	65DF61.5	700	930	500	830	190	20	245	85	330	320	265	60	90	1½B	86	258	494	313	585	115	255	48	35	
	80DF61.5	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	282	538	345	606	130	295	55	40	
80	80DF62.2	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	292	543	345	682	130	295	65	40	
	80DF63.7	700	930	500	830	176	20	255	85	340	360	300	60	90	1½B	86	308	561	355	682	130	295	73	40	
100	100DF63.7	800	1130	500	830	186	25	265	85	350	360	310	60	90	1½B	86	335	591	370	731	115	240	79	45	
	100DF65.5	800	1130	500	830	186	10	265	85	350	360	310	60	90	1½B	86	335	591	370	889	115	240	121	45	
	100DF67.5	800	1130	500	830	186	10	265	85	350	360	310	60	90	1½B	86	369	623	385	866	42	240	132	45	

AUTOMATIC, ALTERNATING AND PARALLEL OPERATION

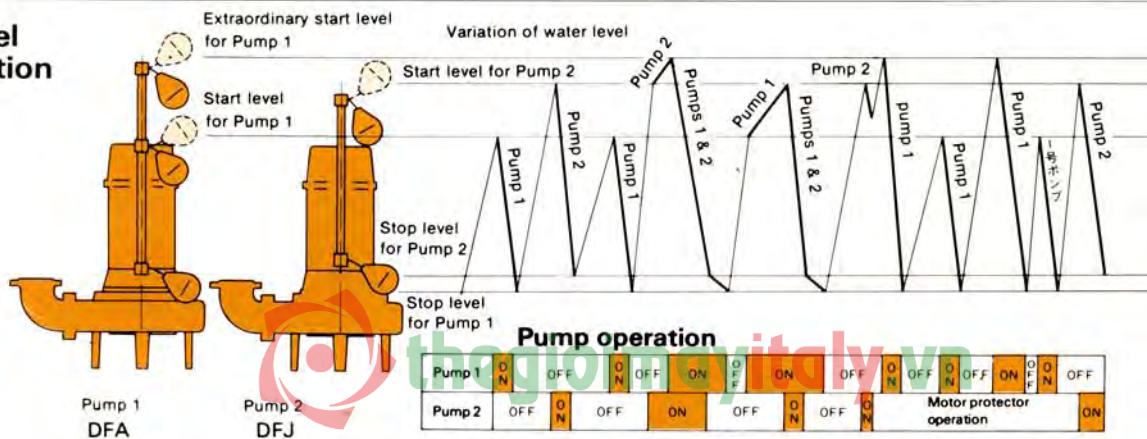
Automatic operation



Pump operation

Intake	⊙	Intake	⊙	Intake	⊙	Intake	⊙	Intake	⊙
OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON

Parallel operation



Pump operation

Pump 1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Pump 2	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON

Normal automatic alternating operation
Parallel operation at time of extraordinary flooding
Pump 2 motor protector operation
Pump 1 independent operation

Note: When Model DFJ is operated in parallel, it will be necessary to provide more than twice the usual amount of power.
 *All specifications subject to change without notice.
 In this catalog, the particulars in [] are in accordance with the International System of Units (SI) and given for reference only.

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