

Cautions when installing / piping YD-GS[H] / GSF series

1) Caution when installation

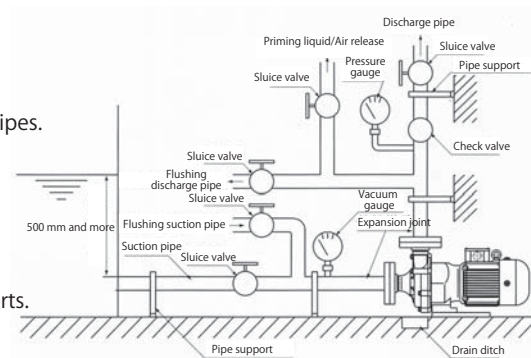
- ① If a large amount of air enters during operation, pumping failure occurs and causes the pump trouble.
 - Locate that the liquid level in a tank is 50 cm and more higher than the suction inlet of the pump.
 - Do not make spaces in the suction pipe where air stays or install up and down piping.
 - Install the suction pipe on the 1/100 and more up grade to the pump.
 - Use the suction pipe is bigger than the pump bore. If they are different, use the eccentric reducer to level the top.
- ② Place the strainer at the suction pipe to prevent dust and foreign objects enter.
However, clean the strainer periodically to prevent clogging and minimize loss resistance.
- ③ It is recommended to place check valves at the discharge rising pipe to prevent water hammer as follows.
Bypass pipes are also recommended to place underneath for air release.
 - The discharge pipe is long and the total head is 10 m and more.
 - The tip of the discharge pipe is 9 m and more higher than the suction tank.
 - The piping condition to use 2 and more pumps in parallel.
- ④ Install bendings and expansion joints not to leak liquid by the pump deformation for the pipes' heat expansion.
- ⑤ Main parts inside the pump are made of plastic. Handle them with care not to make an impact.

2) Prohibition of flange uneven tightening and overtightening

- ① Align the pipe flange parallel to the pump flange and do not tighten bolts excessively.
- ② When piping, adjust the assembling dimensions.
If assemble while not fit in, the pump casing may be damaged.
Moreover, uneven tightening may cause liquid leakage from packings. Tighten it diagonally and evenly.

3) Prohibition of piping load

- ① Be completely subjected to a piping load by pipe supports.
- ② When the temperature of liquid is high (40°C and more), install bendings and expansion joints not to be applied a load to the pump by heat expansion of pipes.
- ③ Do not use metal pipes as much as possible and use the plastic one.
※Especially, metal pipes are often used for strong sulfuric acid and caustic soda and obey the above prohibitions ② & ③.



4) Minimum flow rate

During operation, secure the following minimum flow rate to cool the sliding parts.

- Motor output 0.18 ~ 0.26kW : 5 L/min.
- Motor output 0.4 ~ 0.75kW : 10 L/min.
- Motor output 1.5 ~ 3.7kW : 20 L/min.

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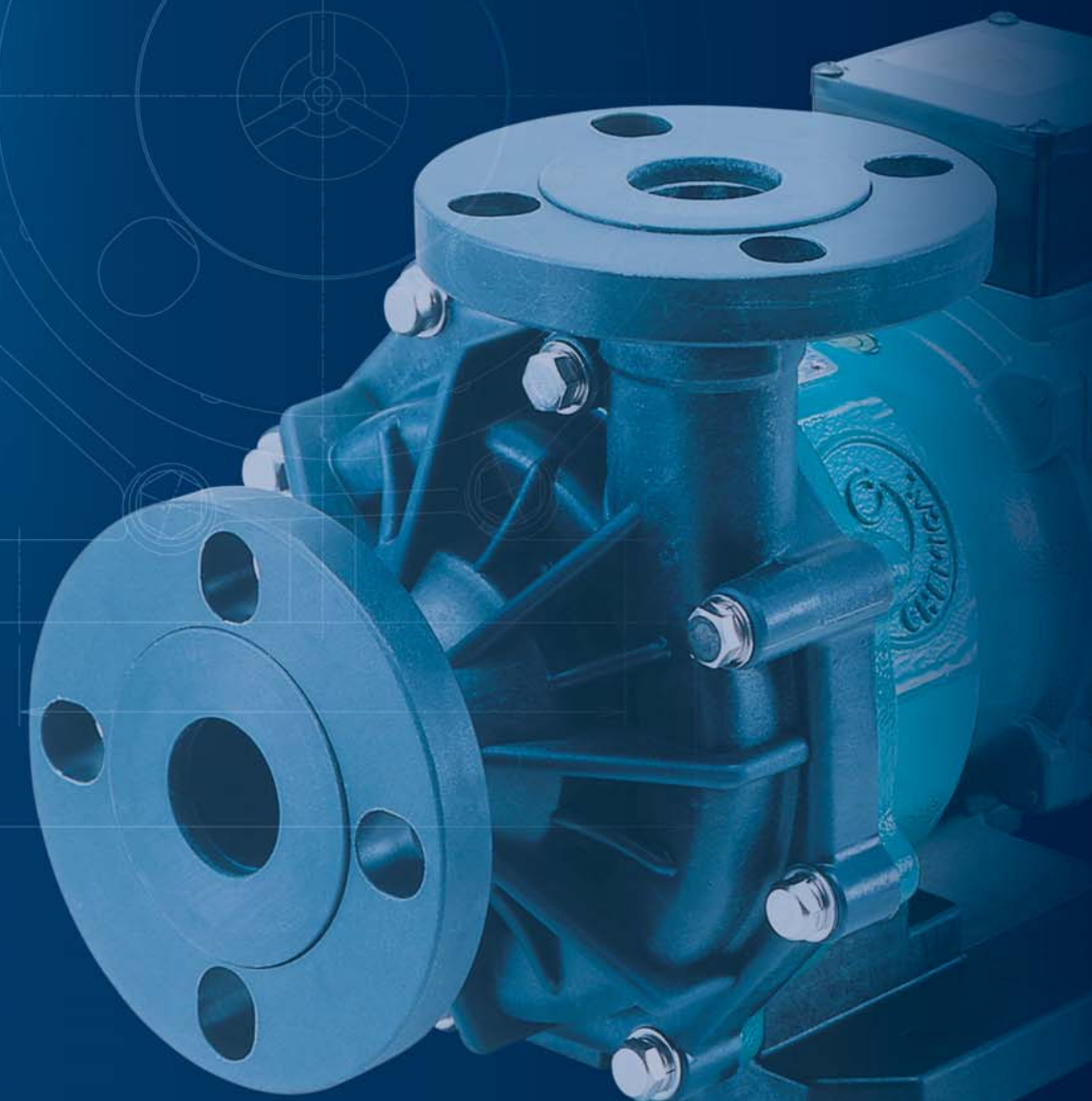
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■ Note:



GS series

High head magnet drive pump CHEMIFREE





300 series

- Low power consumption is achieved for motor efficiency.
- 50/60Hz in common use.
- Terminal box on the motor is adopted and easy wiring.
- Small and light design.
- Fluoro-rubber (FKM) O-ring is standard.



Type	Model	Bore (mm)		Standard performance (m - L/min.)				Output (W)	Output (W)	Voltage (V)
		Suc.	Dis.	50Hz		60Hz				
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.			
300 GS	YD-3320GS1	16	16	2 - 30	1.3	3 - 34	1.3	35	45	1PH/200V
	YD-3420GS1	16	16	3 - 31	1.1	3 - 43	1.1	40	60	
	YD-3520GS1	20	20	3 - 40	1.2	5 - 40	1.2	65	100	
	YD-3720GS1	20	20	4 - 50	1.1	6 - 51	1.1	120	160	



16/20 series

- **The impeller is our original and high efficient.**
 - Low price is achieved while enhancing durability.
 - YD-GSF series (ETFE) is available for specific gravity until 1.9.
- **Our original durable motor is adopted.**
 - The terminal box is as standard.
 - Oil seal is installed to prevent invasion by gas or mist.
 - Thermal protector is incorporated to prevent overload operation.



Type	Model	Bore (mm)		Standard performance (m - L/min)				Output (kW)	Voltage (V)
		Suc.	Dis.	50Hz		60Hz			
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.		
GS	YD-16X8GS1	20	16	5 - 50	1.1	6.5 - 60	1.1	0.18	3PH/200V
	YD-20A6GS1	20	20	7 - 60	1.4	9.5 - 70	1.1	0.26	1PH/100V
	YD-20Y6GS1	20	20	7 - 60	1.4	9.5 - 70	1.1	0.26	3PH/200V
GS High head	YD-16A8GSH1	20	16	12 - 24	1.1	17 - 25	1.1	0.26	1PH/100V
	YD-16Y6GSH1	20	16	12 - 24	1.1	17 - 25	1.1	0.26	3PH/200V
	YD-20A6GSH1	20	20	9.5 - 70	1.1	—	—	0.26	1PH/100V
	YD-20Y6GSH1	20	20	9.5 - 70	1.1	—	—	0.26	3PH/200V
GSF	YD-16X8GSF1	20	16	5 - 60	1.2	5 - 60	1.2	0.18	3PH/200V
	YD-20A6GSF1	20	20	7.5 - 70	1.2	8 - 70	1.2	0.26	1PH/100V
	YD-20Y6GSF1	20	20	7.5 - 70	1.2	8 - 70	1.2	0.26	3PH/200V



2500 series

- **Lineup to Bore 25A**
The bore of the pump (0.4kW~2.2kW) is 25A and the pipe material cost can be reduced.
- **It is suitable for high pressure water rinse.**
It has a good record for water rinse at the process emphasized pressure than capacity.
- **IE3 motor is the same size & weight as before.**
The size & weight is the same as before and installation condition is no object when replacement.



4000/5000 series

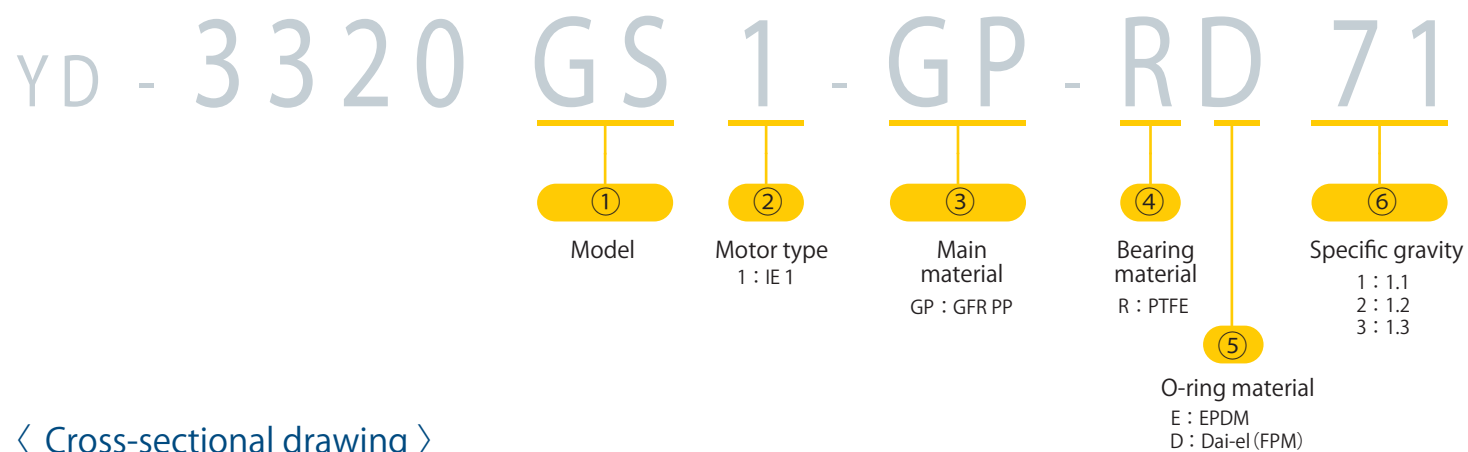
- **Small footprint**
It is suitable for the small work space.
- **High head magnet drive pump**
It measures up to transfer from a height and high pressure.
- **IE3 motor is the same size & weight as before.**
The size & weight is the same as before and installation condition is no object when replacement.

New lineup ! Large capacity : YD-5005GS3

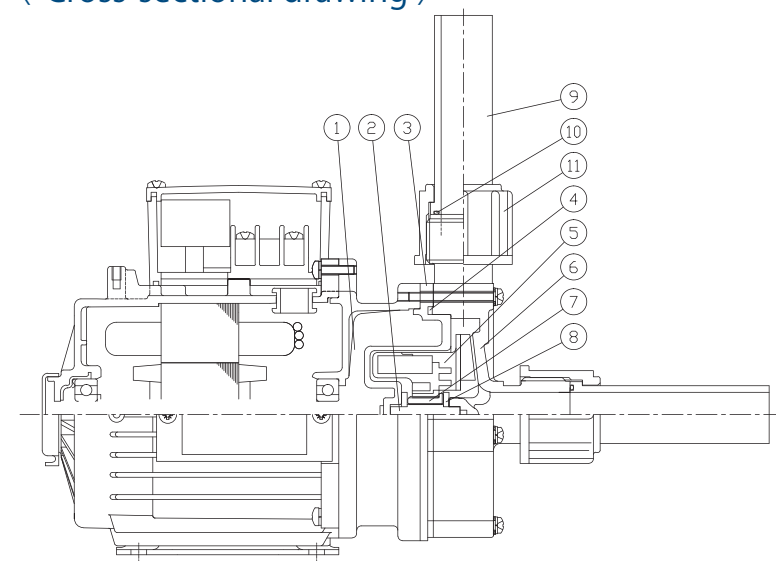


Type	Model	Bore (mm)		Standard performance (m - L/min)				Output (kW)	Voltage (V)
		Suc.	Dis.	50Hz		60Hz			
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.		
GS	YD-2500GS1	25	25	14 - 50	1.0	14 - 50	1.0	0.4	3PH/200V
	YD-2501GS3			21 - 50	1.0	21.5 - 50	1.0	0.75	3PH/200V
	YD-2502GS3			25.5 - 50	1.3	34 - 50	1.0	1.5	3PH/200V
	YD-2503GS3			—	—	37 - 50	1.1	2.2	3PH/200V
	YD-4000GS1	40	40	11 - 100	1.05	11 - 100	1.05	0.4	3PH/200V
	YD-4001GS3			15 - 150	1.05	15 - 150	1.05	0.75	3PH/200V
	YD-4002GS3	50	40	19 - 200	1.1	19 - 200	1.1	1.5	3PH/200V
	YD-4003GS3			23 - 200	1.1	25 - 200	1.1	2.2	3PH/200V
YD-4005GS3	25 - 200			1.4	34 - 200	1.1	3.7	3PH/200V	
YD-5005GS3	65	50	20 - 500	1.1	20 - 500	1.1	3.7	3PH/200V	
GSF	YD-2500GSF1	25	25	9 - 50	1.2	9 - 50	1.2	0.4	3PH/200V
	YD-2501GSF3			16.5 - 50	1.2	15 - 50	1.2	0.75	3PH/200V
	YD-2502GSF3			24 - 50	1.2	26 - 50	1.2	1.5	3PH/200V
	YD-2503GSF3			23.5 - 50	1.9	33 - 50	1.2	2.2	3PH/200V
	YD-4000GSF1	40	40	8.5 - 100	1.2	9 - 100	1.2	0.4	3PH/200V
	YD-4001GSF3			12 - 150	1.2	11.5 - 150	1.2	0.75	3PH/200V
	YD-4002GSF3	50	40	18 - 200	1.2	17.5 - 200	1.2	1.5	3PH/200V
	YD-4003GSF3			21 - 200	1.2	22.5 - 200	1.2	2.2	3PH/200V
	YD-4005GSF3			25 - 200	1.3	30 - 200	1.2	3.7	3PH/200V
	YD-4005GSF3			25 - 200	1.3	30 - 200	1.2	3.7	3PH/200V

< Model description >



< Cross-sectional drawing >



No.	Part name	Qty	Material
1	Magnet housing	1	Plastic magnet
2	Shaft	1	Alumina ceramics
3	Back casing	1	GFR-PP
4	O-ring	1	FKM
5	Impeller	1	GFR-PP
6	Casing	1	GFR-PP
7	Bearing	1	PTFE
8	Bearing washer	2	Alumina ceramics
9	Union socket	2	PVC
10	O-ring	2	FKM
11	Union nut	2	GFR-PP

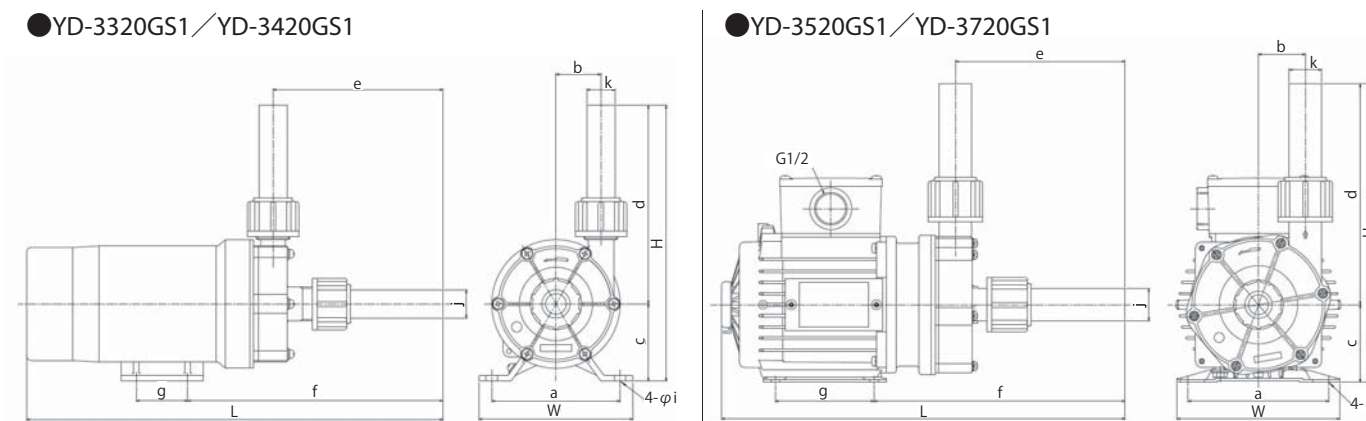
< Use >

- For rinse in plating equipment
- For circulation in draft chamber
- For circulation in small scrubber
- To transfer chemical / waste liquid



Notice ※GS series : It is regulated by Catch-all. When exporting the pump, please observe the export regulations.
 ※GSF series : It is regulated by List Control. When exporting the pump, it requires export license by METI.

< Outline dimension >



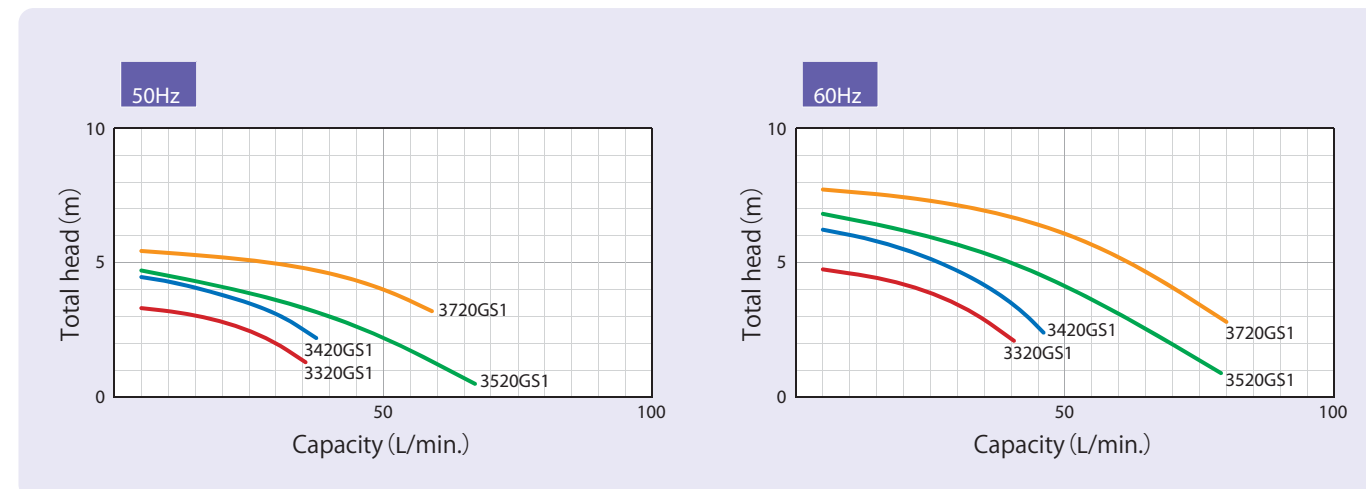
< Dimension >

Model	W	H	L	a	b	c	d	e	f	g	i	j	k
YD-3320GS1	120	214.5	324.5	100	35	60	154.5	132.5	199	40	9	16A Union	16A Union
YD-3420GS1													
YD-3520GS1	133	242.5	327	100-114	38	63	179.5	137.5	203.5	80	7-19	20A Union	20A Union
YD-3720GS1													

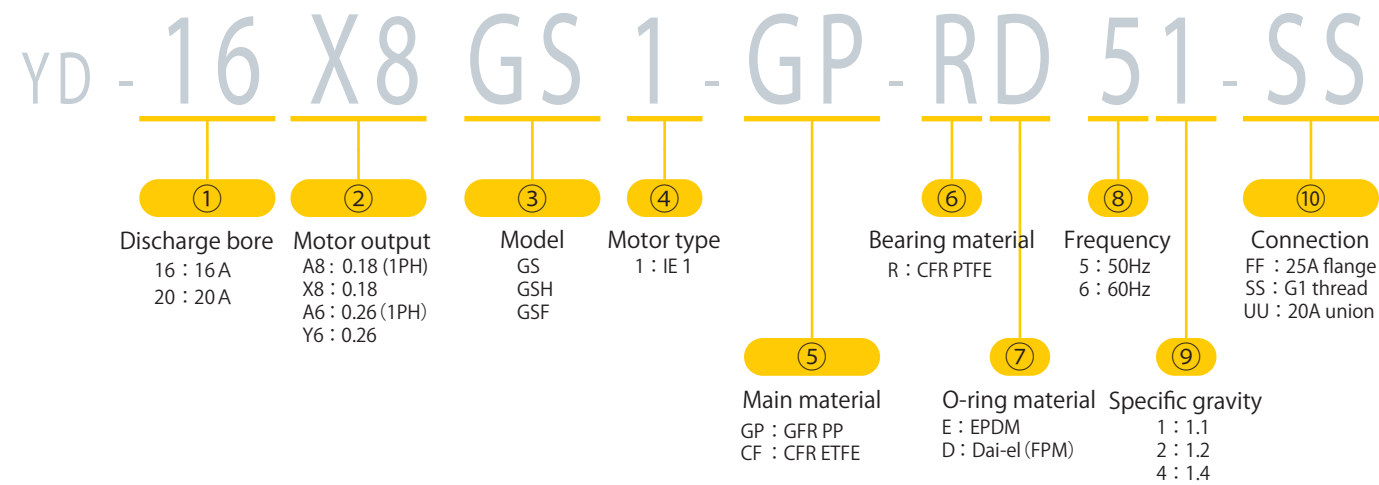
< Standard performance >

Type	Model	Bore (mm)		Standard performance (m - L/min)				Output (W)		Voltage (V)	Weight (kg)
		吸込	吐出	50Hz		60Hz		50Hz	60Hz		
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.				
300 GS	YD-3320GS1	16	16	2 - 30	1.3	3 - 34	1.3	35	45	1PH/200V	3.4
	YD-3420GS1	16	16	3 - 31	1.1	3 - 43	1.1	40	60		3.4
	YD-3520GS1	20	20	3 - 40	1.2	5 - 40	1.2	65	100		4.8
	YD-3720GS1	20	20	4 - 50	1.1	6 - 51	1.1	120	160		5.4

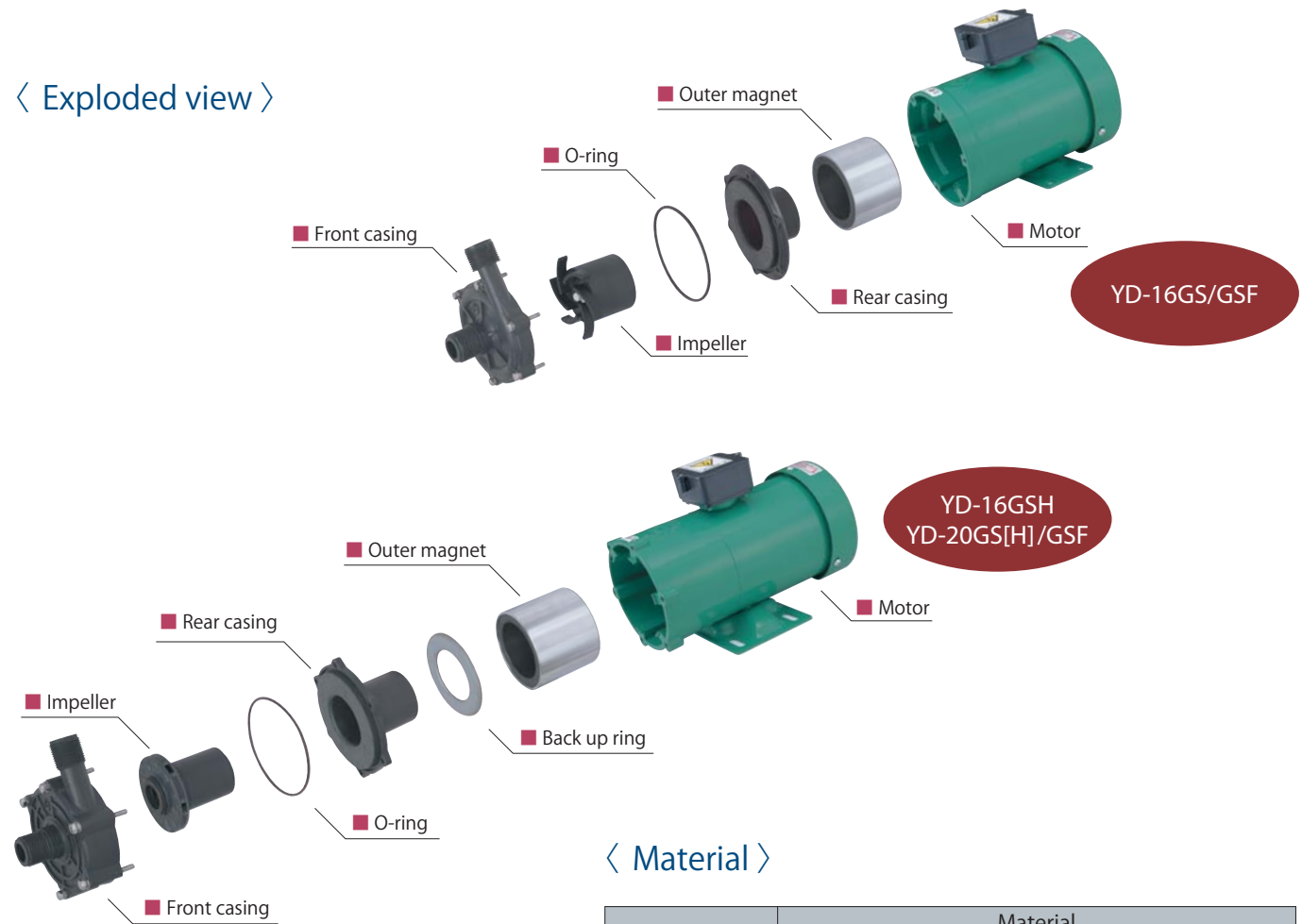
< Performance curve >



< Model description >



< Exploded view >



< Material >

Part name	Material	
	GS series	GSF series
Front casing	GFR PP	CFR ETFE
Impeller	(GFR) PP + Magnet	CFR ETFE + Magnet
Rear casing	GFR PP + GFR PPS	CFR ETFE
Outer magnet	Aluminum alloy + Magnet	
Motor	Aluminum lightweight motor	
O-ring	EPDM/FPM	
Back up ring	SPCC	

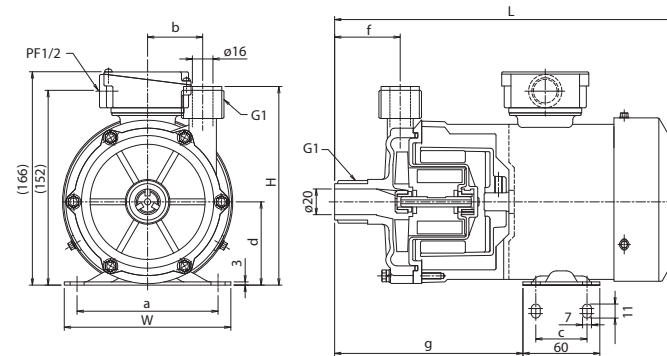
Notice

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 ※GSF series : It is regulated by List Control. When exporting the pump, it requires export license by METI.

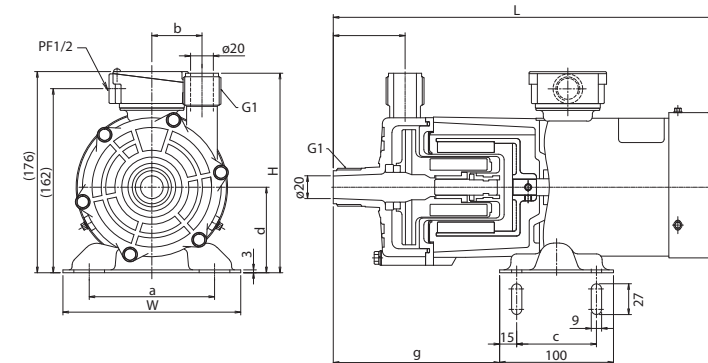
※ The exploded view is for only explanation of the structure. Parts are sold as a set. For more information, please contact us.

< Outline dimension >

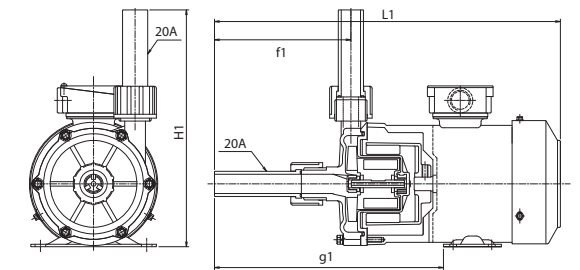
● Connection : SS type (Thread type)
YD-16GS/GSF



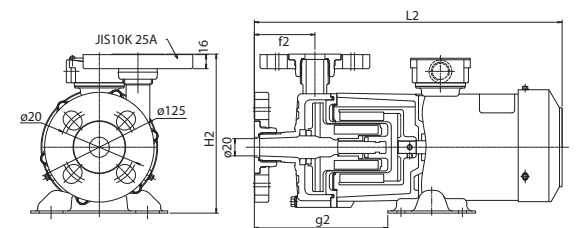
YD-16GSH/20GS(H)/20GSF



● Connection : UU type (Union type)



● Connection : FF type (Flange type)



< Dimension >

Model	W	H	L	a	b	c	d	f	g	f1	f2	g1	g2	H1	H2	L1	L2
YD-16GS YD-16GSF	130	155	269	110	43	40	65	51	147	141	57	237	153	245	161	359	275
YD-16GSH YD-20GS YD-20GSH YD-20GSF	156	175	346	110	44	70	75	63	146	153	69	236	152	265	181	436	352

Impeller

Original design with high efficiency and durability.
Staple of small magnet drive pump.



- 16GS/GSF: The impeller is open type and integrated with bearing.
- 16GSH/20GS(H)/20GSF: The impeller is closed type and high efficiency.

Exclusive motor (Incorporated thermal protector)

Measures for durability.



- Terminal box is standard.
- Oil seal to prevent invasion by gas and mist.
- Thermal protector to prevent overload operation.

< Standard performance >

Small GS series (Main material : GFR PP)

Model	Connection	Bore (mm)		Standard performance (m - L/min)				Output (kW)	Voltage (V)	Weight (kg)
		Suc.	Dis.	50Hz		60Hz				
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.			
YD-16X8GS1-GP-R□△○-	SS Thread	20	16	5 - 50	1.1	6.5 - 60	1.1	0.18	3PH/200V	6.2
	UU Union	20	20							
	FF Flange	25A	25A							
YD-20A6GS1-GP-R□△○-	SS Thread	20	20	7 - 60	1.4	9.5 - 70	1.1	0.26	1PH/100V	8.9
	UU Union	20	20							
	FF Flange	25A	25A							
YD-20Y6GS1-GP-R□△○-	SS Thread	20	20	7 - 60	1.4	9.5 - 70	1.1	0.26	3PH/200V	8.0
	UU Union	20	20							
	FF Flange	25A	25A							

Small GSH series (Main material : GFR PP) (High head type)

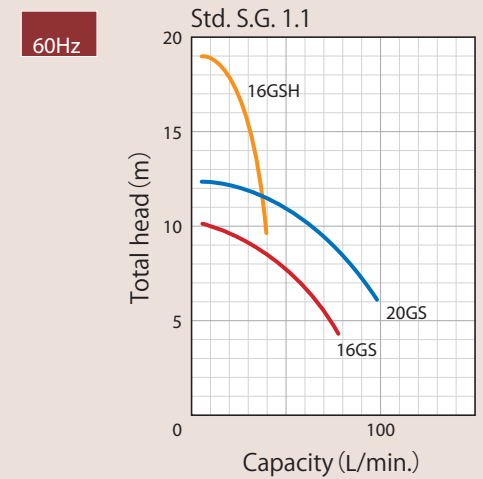
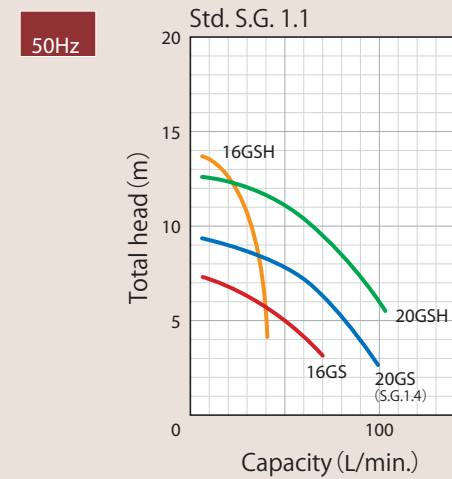
Model	Connection	Bore (mm)		Standard performance (m - L/min)				Output (kW)	Voltage (V)	Weight (kg)
		Suc.	Dis.	50Hz		60Hz				
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.			
YD-16A8GSH1-GP-R□△○-	SS Thread	20	16	12 - 24	1.1	17 - 25	1.1	0.18	1PH/100V	8.9
	UU Union	20	16							
	FF Flange	25A	25A							
YD-16Y6GSH1-GP-R□△○-	SS Thread	20	16	12 - 24	1.1	17 - 25	1.1	0.26	3PH/200V	8.0
	UU Union	20	20							
	FF Flange	25A	25A							
YD-20A6GSH1-GP-R□△○-	UU Union	20	20	9.5 - 70	1.1	-	-	0.26	1PH/100V	8.9
	FF Flange	25A	25A							
YD-20Y6GSH1-GP-R□△○-	UU Union	20	20	9.5 - 70	1.1	-	-	0.26	3PH/200V	8.0
	FF Flange	25A	25A							

Small GSF series (Main material : CFR ETFE)

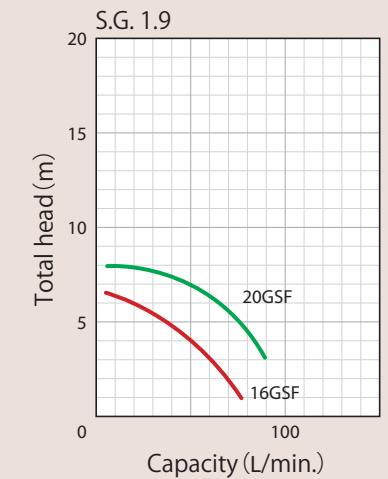
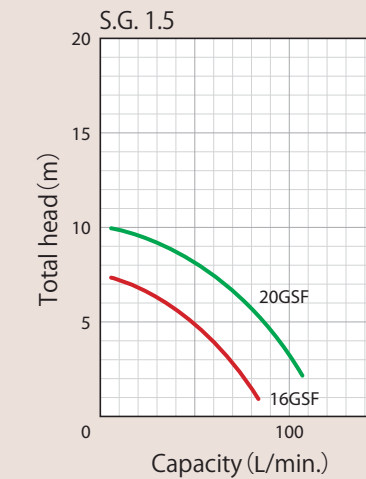
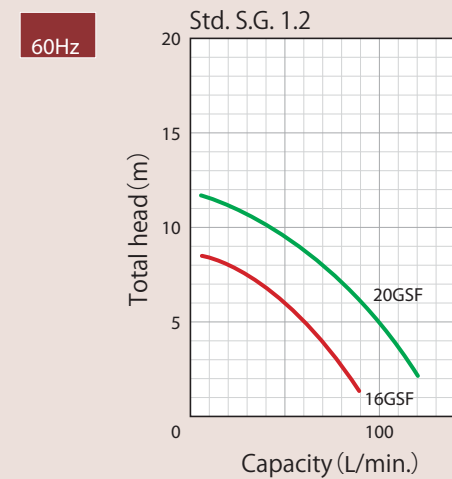
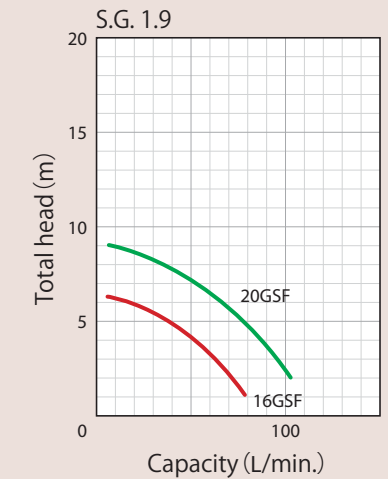
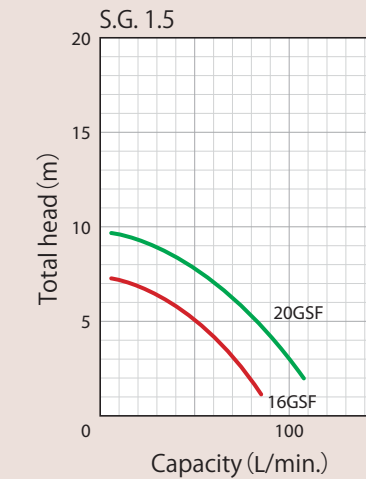
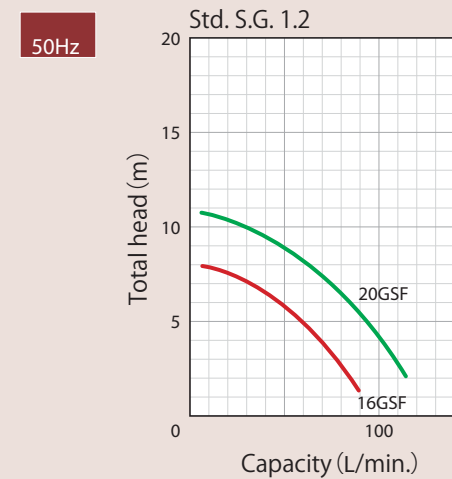
Model	Connection	Bore (mm)		Standard performance (L/min. - m)				Output (kW)	Voltage (V)	Weight (kg)
		Suc.	Dis.	50Hz		60Hz				
				Std. spec.	Std. S.G.	Std. spec.	Std. S.G.			
YD-16X8GSF1-CF-R□△○-	SS Thread	20	16	5 - 60	1.2	5 - 60	1.2	0.18	3PH/200V	6.6
	UU Union	20	20							
	FF Flange	25A	25A							
YD-20A6GSF1-CF-R□△○-	SS Thread	20	20	7.5 - 70	1.2	8 - 70	1.2	0.26	1PH/100V	9.2
	UU Union	20	20							
	FF Flange	25A	25A							
YD-20Y6GSF1-CF-R□△○-	UU Union	20	20	6.3 - 70	1.5	6.7 - 70	1.5	0.26	3PH/200V	8.3
	FF Flange	25A	25A							

< Performance curve >

Small GS/GSH series



Small GSF series



< Model description >

YD - 40 01 GS 3 - GP - KD 51

① Discharge bore
25 : 25 A
40 : 40 A
50 : 50 A

② Motor output
00 : 0.4
01 : 0.75
02 : 1.5
03 : 2.2
05 : 3.7

③ Model
GS
GSF

④ Motor type
1 : Other than IE3
3 : IE3

⑤ Main material
GP : GFR PP
CF : CFR ETFE

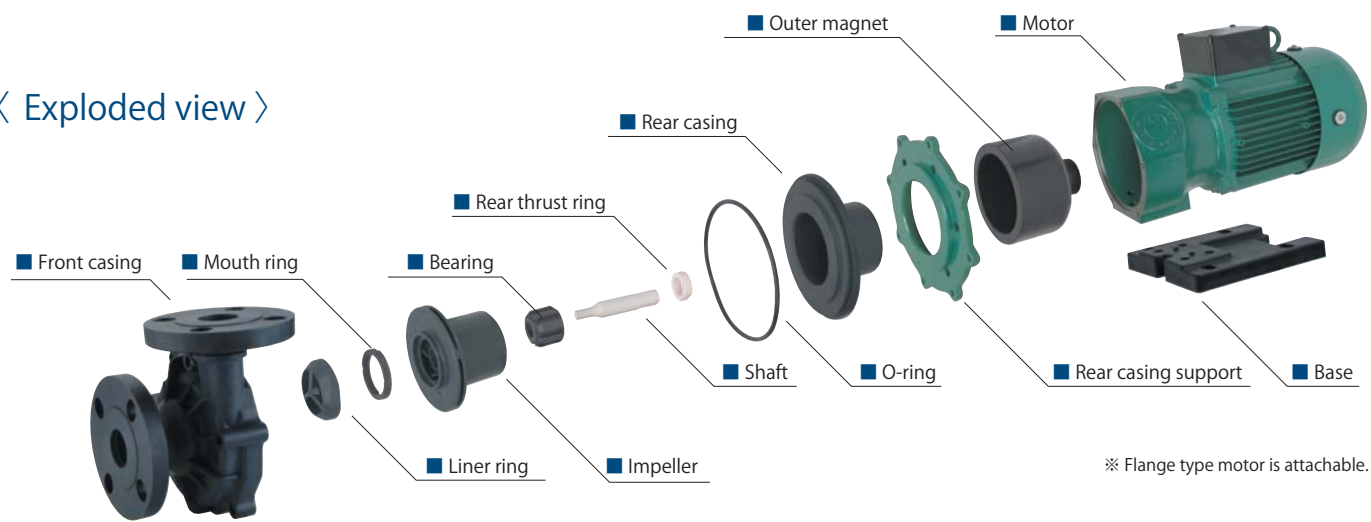
⑥ O-ring material
E : EPDM
D : Dai-el (FPM)

⑦ Bearing material
K : SiC (Standard)
C : High-density carbon
R : CFR PTFE
A : Alumina ceramics

⑧ Frequency
5 : 50Hz
6 : 60Hz

⑨ Specific gravity
0 : 1.0
1 : 1.05/1.1
2 : 1.2
3 : 1.3
4 : 1.4
5 : 1.5
6 : 1.6
9 : 1.9

< Exploded view >



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※GSF series : It is regulated by List Control. When exporting the pump, it requires export license by METI.

< Material >

Part name	Material	
	GS series	GSF series
Front casing	GFR PP	CFR ETFE
Liner ring	Alumina ceramics + GFR PPS	Alumina ceramics + ETFE
Mouth ring	CFR PTFE	
Impeller	(GFR) PP + Magnet	CFR ETFE + Magnet
Bearing	Standard : SiC (Carbon / Ceramics / CFR PTFE)	
Shaft	Alumina ceramics / SiC	
Rear thrust ring	Alumina ceramics / SiC	

Part name	Material	
	GS series	GSF series
O-ring	EPDM/FPM	
Rear casing	GFR PP	CFR ETFE
Rear casing support	FC200	
Outer magnet	FCD450-10 + Magnet	
Motor	FC200 + Aluminum frame motor	
Base	GFR PP/FC200	

※ The exploded view is for only explanation of the structure. Parts are sold as a set. For more information, please contact us.

Twofold Measures of dry running

Bearing design of heat release & insulation.

When the pump runs dry, friction generates at the sliding parts and the shaft and bearing are raised to high temperature. It cause the pump damage. However, GS series is our original structure to prevent deformation.

- Shaft (Ceramics)
- Cushion (PPS)
- Bearing (Carbon)

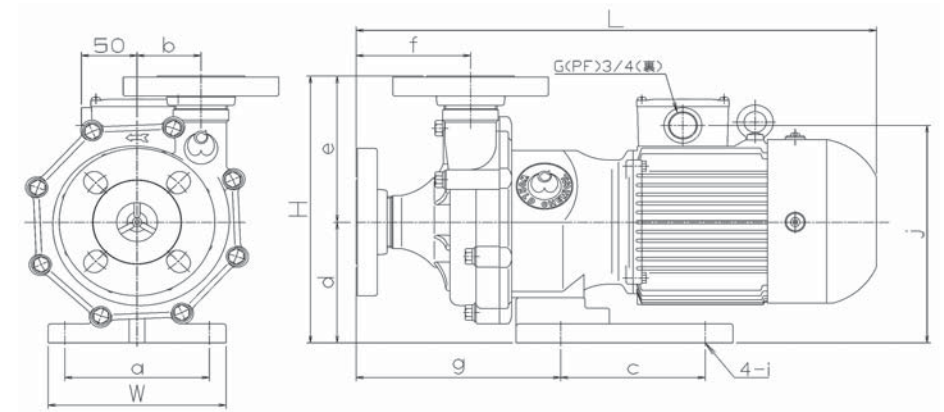
International PAT. JPN, USA, CAN, TWN, GER, FRA, GBR, NLD, ITA, SWE, DNK



Anti-air lock structure

If air enters, usually it is trapped in a rear casing. However, the rear casing and impeller have the special structure that air is easily moved and exhausted by our air release structure.

< Outline dimension >



< Dimension >

Model	W	H	L	a	b	c	d	e	f	g	i	j										
YD-2500GS(F)1	160	260	431	130	65	130	115	145	90	173	ø12	200										
YD-2501GS(F)3			457									207										
YD-2502GS(F)3	260	261	490	208	65	200	116	145	90	156	14-36	216										
YD-2503GS(F)3																						
YD-4000GS(F)1	140	216	423	110	51	98	95	121	87	150	12-18	180										
YD-4001GS(F)3	160	254	468	130	57.5	130	115	139	103	184	ø12	207										
YD-4002GS(F)3																						
YD-4003GS(F)3	260	261	490	208	65	200	116	145	89	156	14-36	216										
YD-4005GS(F)3												280	531	230	80	261	135	169	92	166	36-14	245
YD-5005GS3												331	541									

A Shaft

Thought-out shaft about durability with two points support.

- The durability of the shaft gets dramatically better by the two points support structure.
- SiC shaft which resists abrasion well is available.

B Rear casing

Air release structure of the rear casing with measures to prevent air lock.

- Air release structure of the rear casing and air stay prevention of the impeller fulfill measures against air lock.
- Carbon fiber is adopted to reinforce the rear casing and the pressure resistance gets dramatically better.

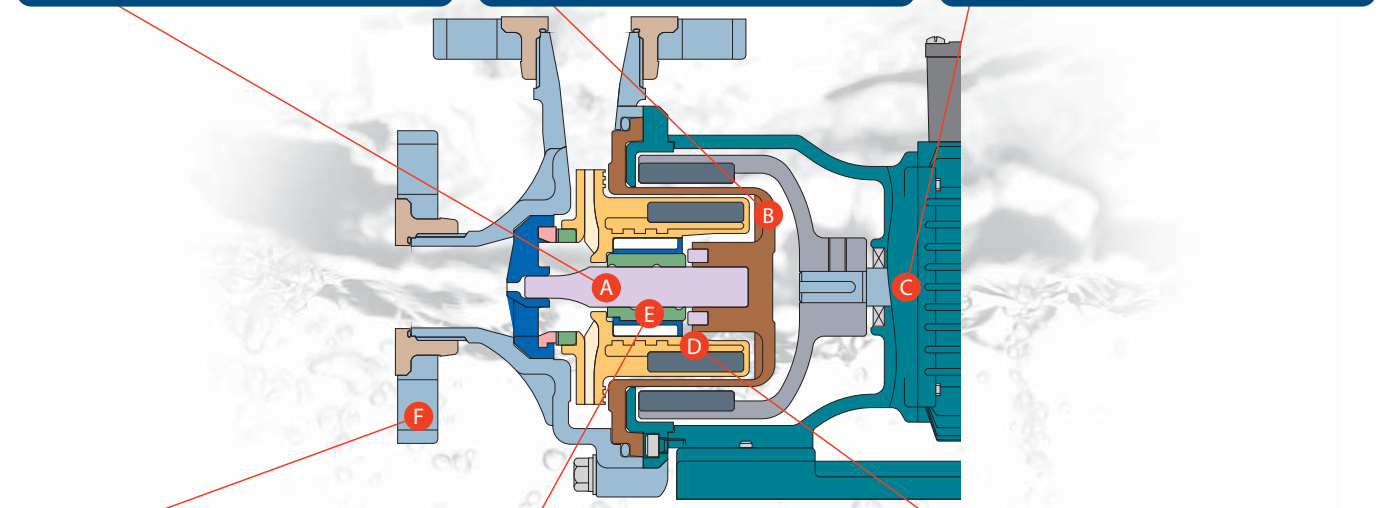
※ Only 4002-4005GSF3.

C Exclusive motor (with Terminal box)

The exclusive motor is outdoor type as standard and the durability gets better.

- Reinforced plastic terminal box does not ruin and can be used in a chemical atmosphere. Besides, it is placed at the top of the motor to wire easily.
- Lip seal is attached for measures against gas caused corrosion and liquid leakage. It increases the motor life very much.
- When using the inverter with 400V, the motor is general one.

※ 0.75kW and more: IE3 motor



F Loose flange

No need to adjust the position of the bolt holes when installation.

- Loose flange is adopted to fit to the other side freely and possible to replace from other maker's pump with free from worry about connecting dimension.

E Bearing

Variety of Bearing against wide range of liquid.

- Selectable bearing depending on use liquid / with slurry or not.
- 4 types of material: Standard = SiC (Carbon / Ceramics / CFR PTFE)

D Impeller & Magnet

Rare earth magnet is adopted and makes the impeller compact.

(1.5kW and more)

- Powerful rare earth magnet is adopted. (1.5kW and more) It delivers superior performance.
- The impeller is integrated with the magnet and has a resistance to inverse rotation and high temperature.
- Our original impeller shape is high efficiency.

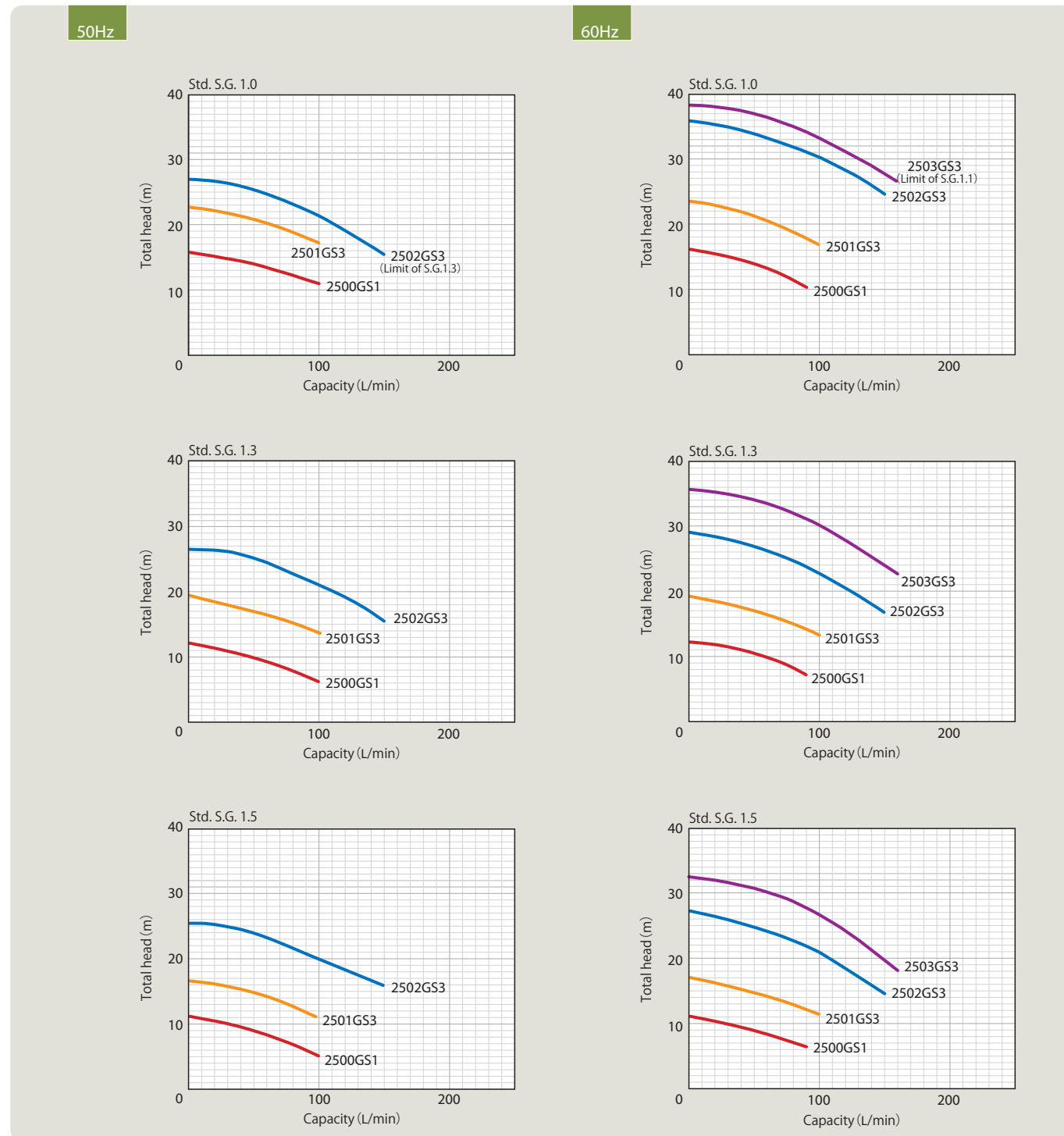
GS Series (Main material : GFR PP)

< Standard performance >

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				50Hz	60Hz		
YD-2500GS1	25	25	1.0	14-50	14-50	0.4	19.5
			1.3	10-50	10.5-50		
			1.5	9-50	9-50		
YD-2501GS3	25	25	1.0	21-50	21.5-50	0.75	21.5
			1.3	17-50	17-50		
			1.5	15-50	15-50		

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				50Hz	60Hz		
YD-2502GS3	25	25	1.0	25.5-50	34-50	1.5	26.5
			1.3	24-50	25-50		
			1.5	24-50	25-50		
YD-2503GS3	25	25	1.1	37-50	37-50	2.2	28.5
			1.3	34-50	34-50		
			1.5	31-50	31-50		

< Performance curve > 2500GS series



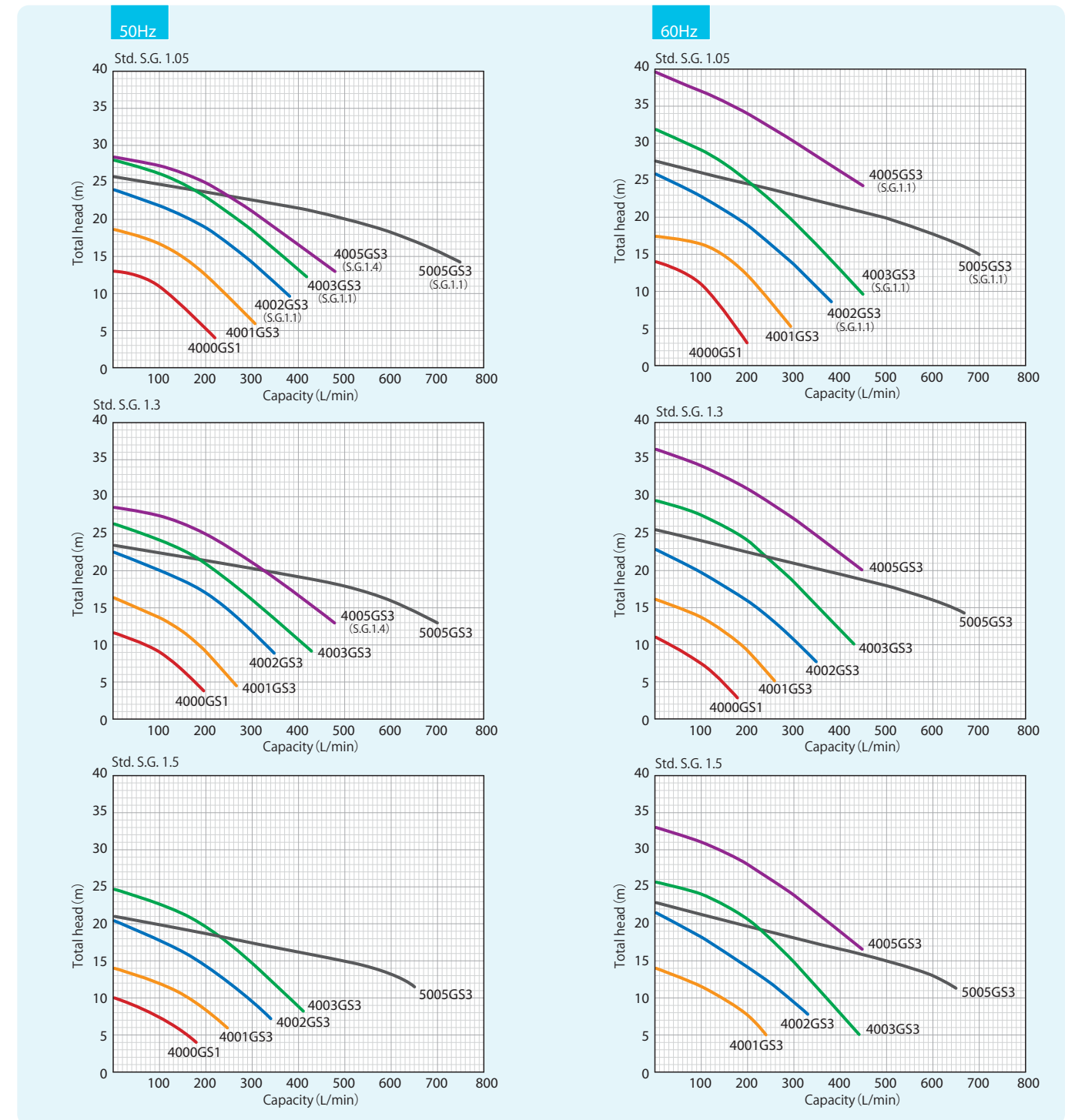
GS Series (Main material : GFR PP)

< Standard performance >

Model	Bore (mm)		S.G. limit	Performance THD-Capacity(m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				50Hz	60Hz		
YD-4000GS1	40	40	1.05	11-100	11-100	0.4	16.5
			1.3	9-100	7.5-100		
			1.5	7.5-100	7.5-100		
YD-4001GS3	40	40	1.05	15-150	15-150	0.75	19.5
			1.3	12-150	12-150		
			1.5	10.5-150	10-150		
YD-4002GS3	50	40	1.1	19-200	19-200	1.5	25.5
			1.3	17-200	16-200		
			1.5	14.5-200	14.5-200		

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				50Hz	60Hz		
YD-4003GS3	50	40	1.1	23-200	25-200	2.2	27.5
			1.3	21-200	24-200		
			1.5	19.5-200	20.5-200		
YD-4005GS3	50	40	1.1	34-200	34-200	3.7	41.5
			1.3	31-200	31-200		
			1.4	24-200	24-200		
YD-5005GS3	65	50	1.1	20-500	20-500	3.7	45.0
			1.3	18-500	18-500		
			1.5	15-500	15-500		

< Performance curve > 4000/5000GS series



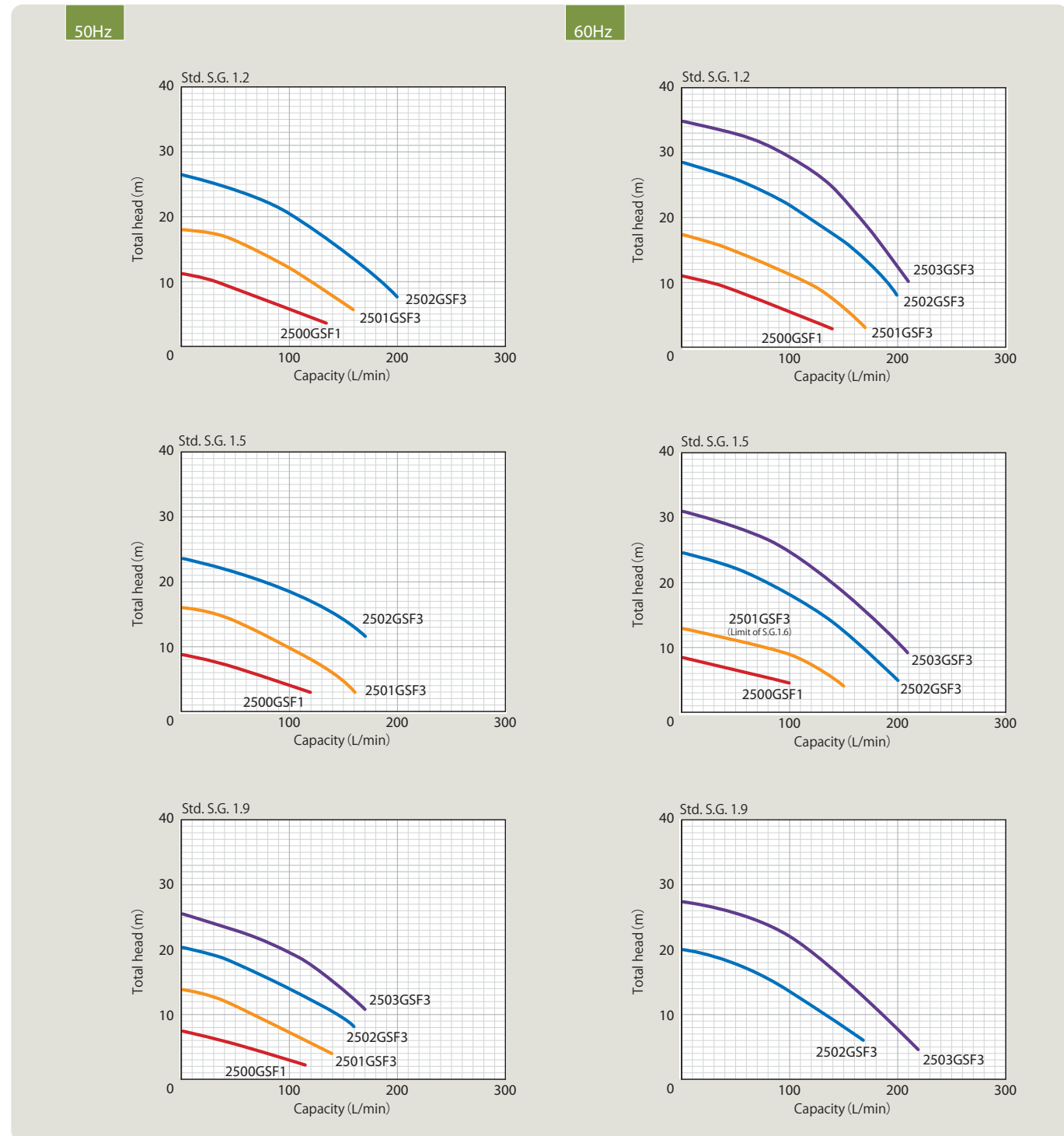
GSF series (Main material : CFR ETFE)

< Standard performance >

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				YD-2500GSF1	25		
1.5	7-50	6.5-50					
1.9	5.5-50						
YD-2501GSF3	25	25	1.2	16.5-50	15-50	0.75	22.5
1.5			14-50				
1.6				11-50			
1.9			11.5-50				

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				YD-2502GSF3	25		
1.5	22-50	22-50					
1.9	18-50	18-50					
YD-2503GSF3	25	25	1.2		33-50	2.2	30.0
1.5				28-50			
1.9			23.5-50	25.5-50			

< Performance curve > 2500GSF series



GSF series (Main material : CFR ETFE)

< Standard performance >

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				YD-4000GSF1	40		
1.5	7-100	6-100					
1.9	5.5-100						
YD-4001GSF3	40	40	1.2	12-150	11.5-150	0.75	20.5
1.5			9-150	9-150			
1.9			8-100	9-100			
1.2			18-200	17.5-200			
YD-4002GSF3	50	40	1.5	15-200	14-200	1.5	27.0
1.9			12.5-200	10.5-200			

Model	Bore (mm)		S.G. limit	Performance THD-Capacity (m - L/min)		Output (kW)	Weight (kg)
	Suc.	Dis.		50Hz	60Hz		
				YD-4003GSF3	50		
1.5	19-200	19.5-200					
1.9	15.5-200	15-200					
YD-4005GSF3	50	40	1.2		30-200	3.7	43.0
1.3				25-200			
1.5				27.5-200			
1.9				23-200			

< Performance curve > 4000GSF series

