

# FTF • FTF-MD/MC FEATURES

## FRP TURBO FAN

### MODEL FTF



Model FTF FRP Turbo Fan has been recognized as breakthrough fan capable of long-term continuous operation, leading the industry in employing the oil lubricated bearing system.

Application of new techniques to strength analysis and research for optimal impeller/casing design and flow drove the development of this ideal fan that delivers vastly improved performance – and also energy savings, helping reduce CO<sub>2</sub> emissions.

#### • Highly improved efficiency

Efficiency has highly improved upon the former by the maximum ten percent at a total pressure. Also, sound level has been reduced by one to five decibel Ampere.

#### • The extension of capacity

Extended capacity range. A 30%(approx.) increase in static pressures and capacities gives the series extended application range, meaning cost saving where smaller models suffice.

It will make your initial cost reduce. The values of power for capacity range chart are calculated with the allowance of five percent for shaft brake horse power.

#### • FRP molded casing

Easy and economical maintenance work has been realized by employing FRP molded casing, excellent in corrosion resistance and endurance. Employing our own FRP-molding-technique has attained smooth-beautiful finished casing and quality preventing adherence of scale and dirt.

#### • Quality maintenance

Equipping open-close inspection window at the upper part of belt-guard facilitates interior check. Easy maintenance has attained by equipping the inspection window for model FTF-303 & FTF-403 casing.

### MODEL FTF-MD MOTOR DIRECT DRIVE



### MODEL FTF-MC COUPLING-DRIVE



#### • Inverter-compatible

The inverter is provided to cover a wide range of revolutions and capacities. It provides the same coverage as a belt-driven type. The inverter provides superb operational control and significant energy efficiency. This model is designed so that operation can continue with a commercial power source if the inverter fails.

#### • Greatly reduced maintenance requirements

The design eliminates burdensome monitoring, replacement, and tension adjustments and the like associated with V-belts. The only consumable part is the motor bearing, which provides a longer service life because the impeller mass represents the only radial load. The long life reduces running costs.

#### • Ease of maintenance

The casing is provided with a large opening offering easier access for casing inspection and impeller cleaning.

#### • Back pullout system (Model FTF-MD)

Models FTF503–803 are provided with a back pullout system that enables removal of the impeller together with the motor, suction duct, and discharge duct. This system facilitates maintenance and rapid parts replacement. The impeller can also be removed from the suction side.

#### • Space-saving design (Model FTF-MD)

Elimination of the space required for the belt and belt-drive system results in an even smaller footprint.

#### • Choose an electric motor to achieve targeted performance.

For Models FTF503–803, either MD or MC types, you can select a specific model of motor from a specific manufacturer. Choose either a general-purpose or universal motor.

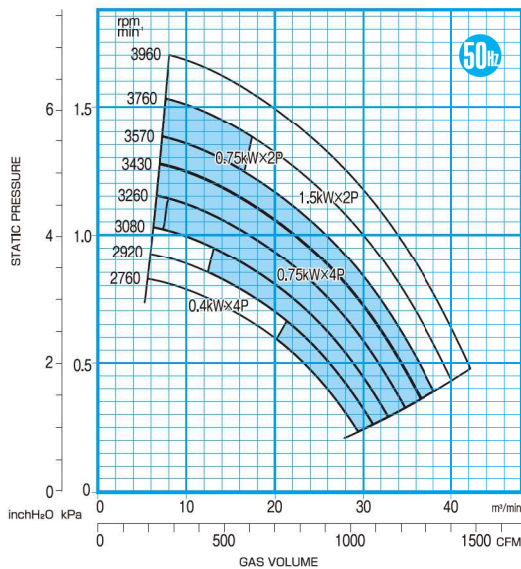
#### Typical applications:

- As a corrosive gas fan/blower in a chemical or pharmaceutical plant
- As a corrosive gas fan/blower for emissions treatment equipment and gas absorbing towers
- As a corrosive gas fan/blower in a sewage plant and a human-waste treatment plant
- As a corrosive gas fan/blower in a semiconductor fabrication plant
- As a fan /blower to eliminate coastal salt pollution

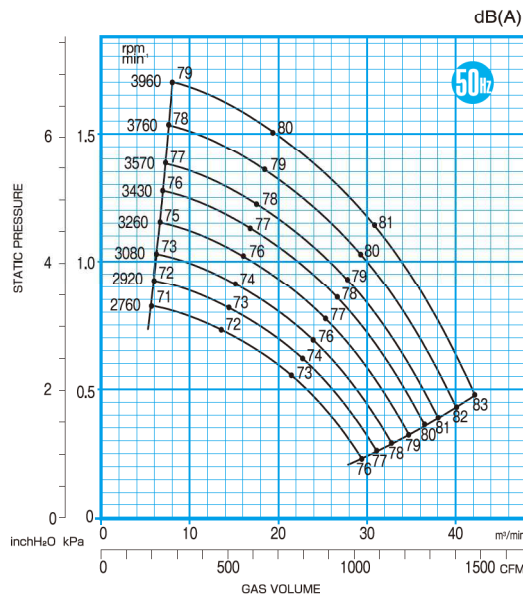
# CTF/FTF 50Hz CAPACITY RANGE CHART

**CTF151**

**CAPACITY RANGE CHART**

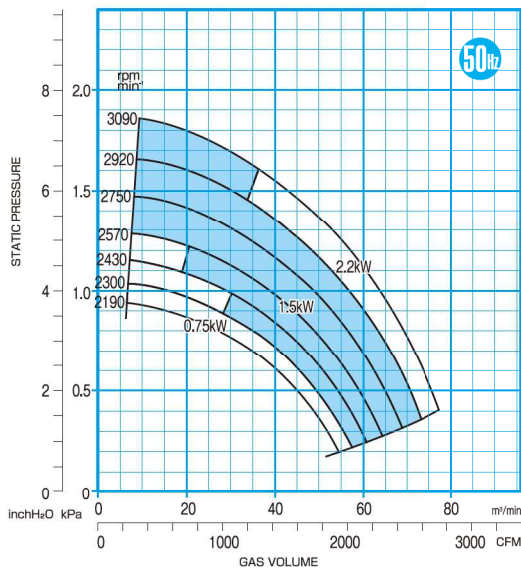


**SOUND LEVEL**

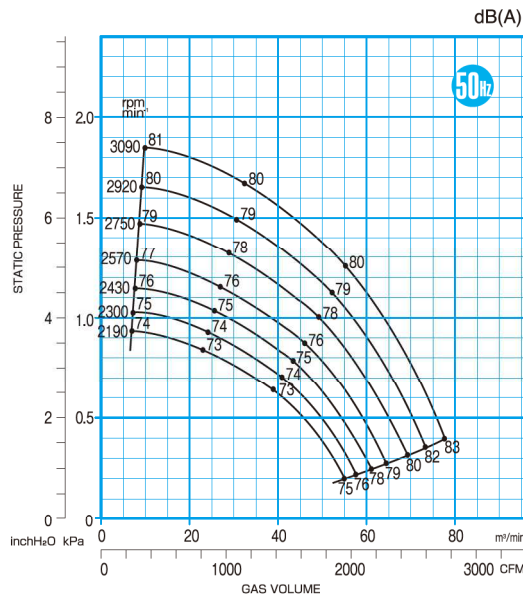


**CTF201**

**CAPACITY RANGE CHART**

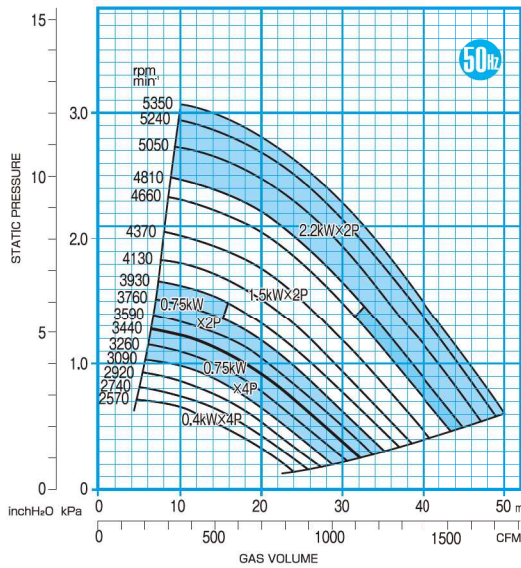


**SOUND LEVEL**

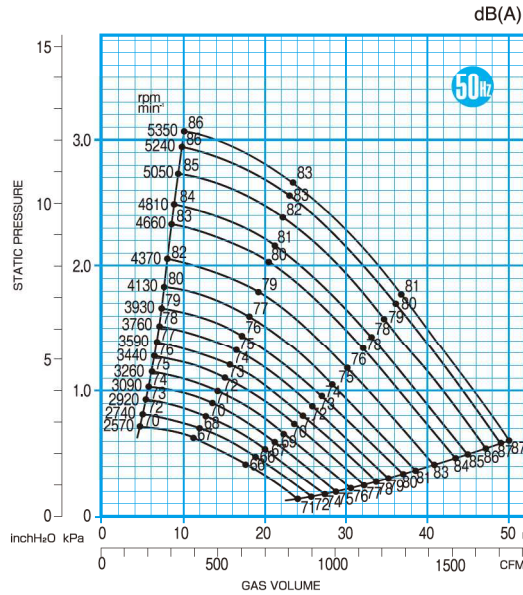


**FTF153**

**CAPACITY RANGE CHART**

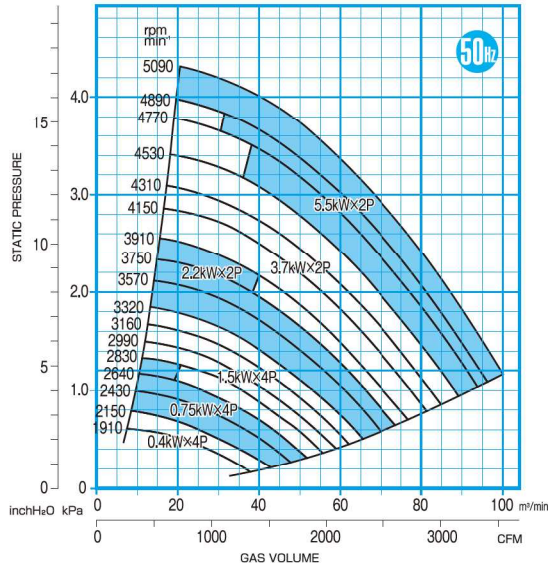


**SOUND LEVEL**

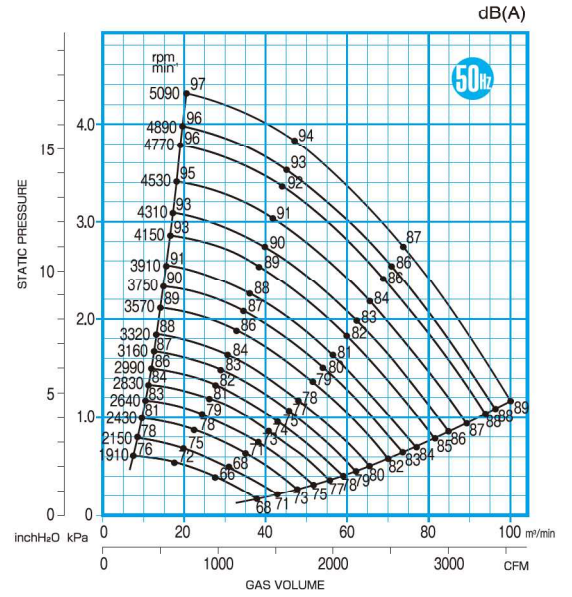


# FTF203

CAPACITY RANGE CHART

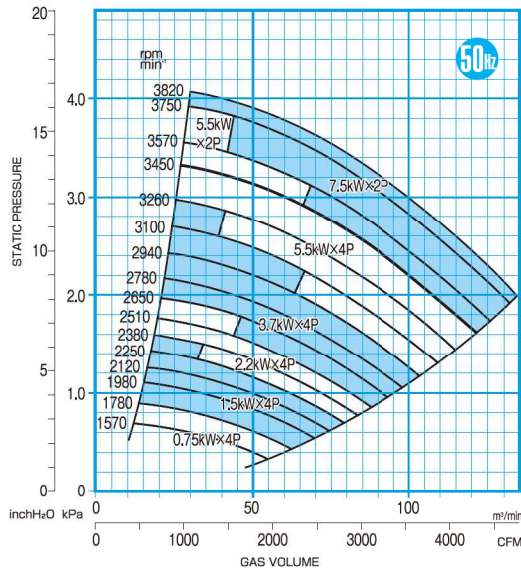


SOUND LEVEL

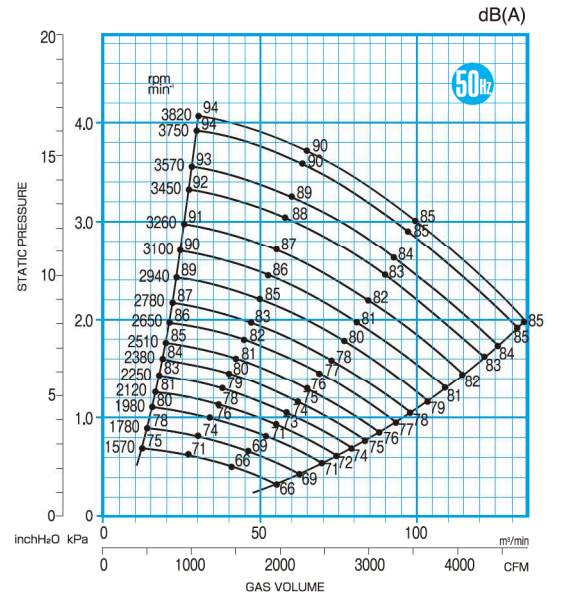


# FTF253

CAPACITY RANGE CHART

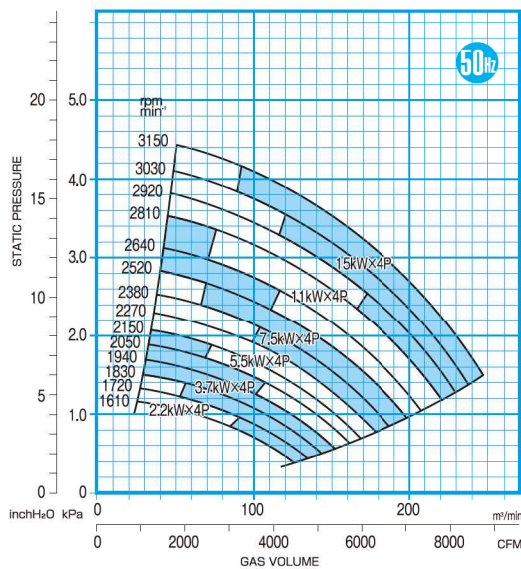


SOUND LEVEL

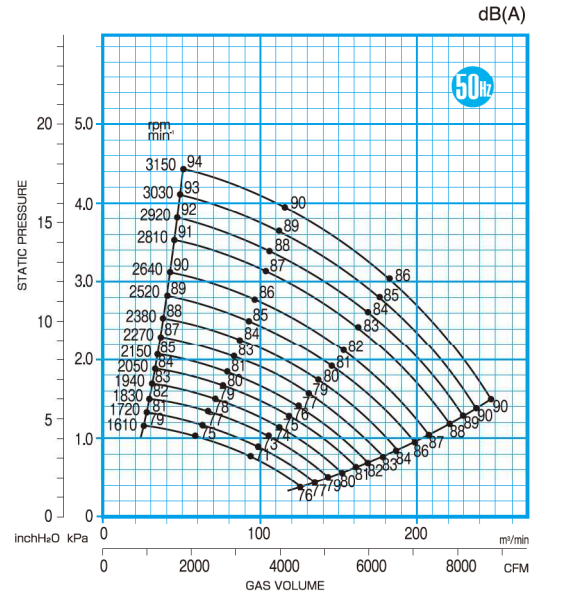


# FTF303

CAPACITY RANGE CHART



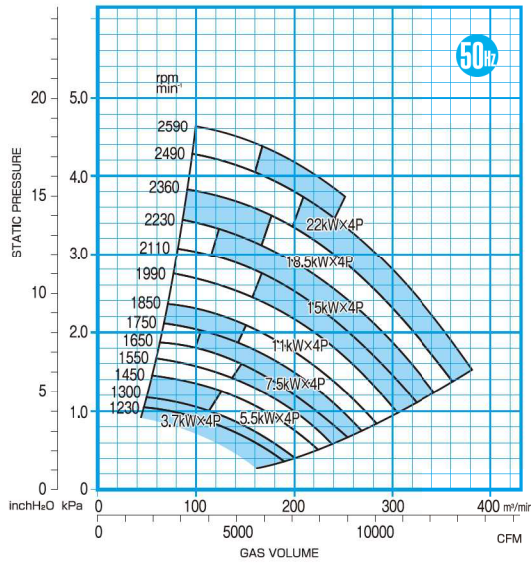
SOUND LEVEL



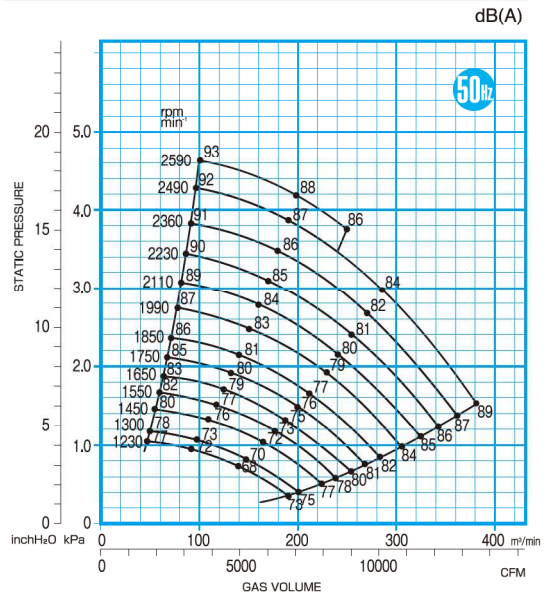
# FTF 50Hz CAPACITY RANGE CHART

**FTF403**

**CAPACITY RANGE CHART**

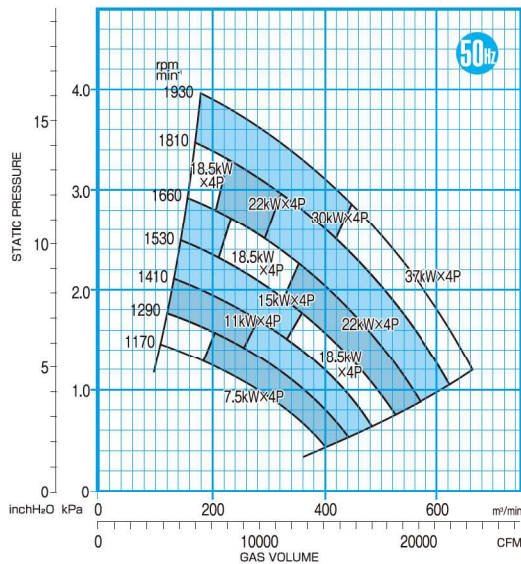


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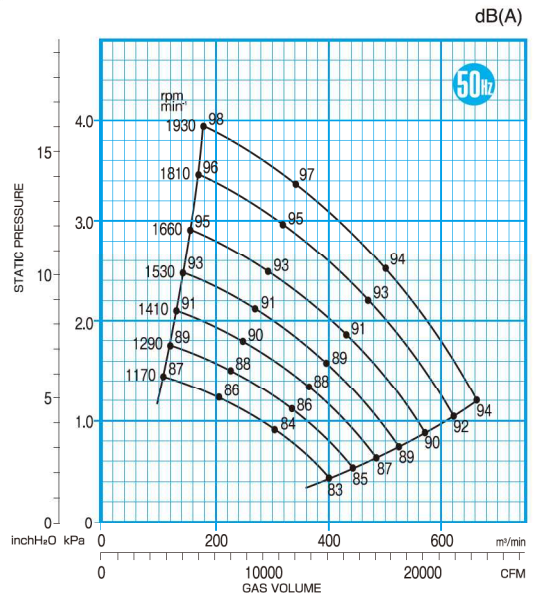


**FTF503**

**CAPACITY RANGE CHART**

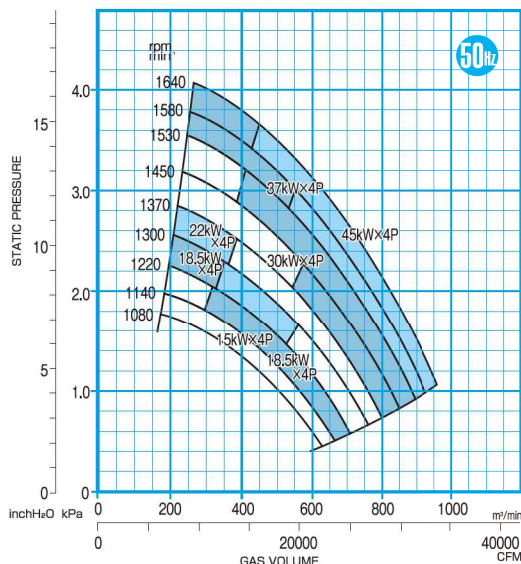


**SOUND LEVEL**

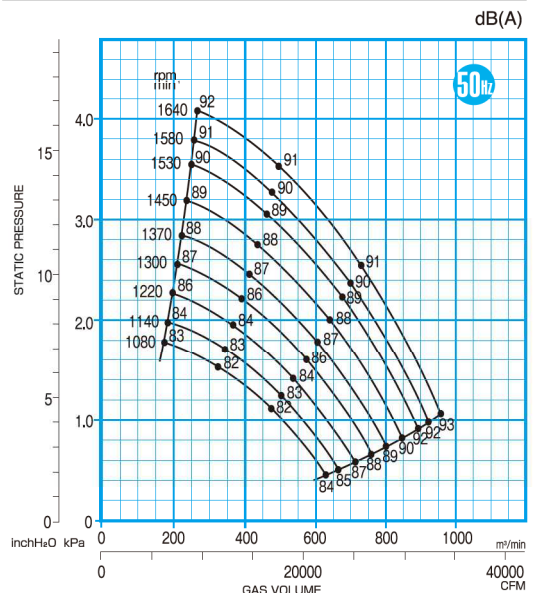


**FTF603**

**CAPACITY RANGE CHART**

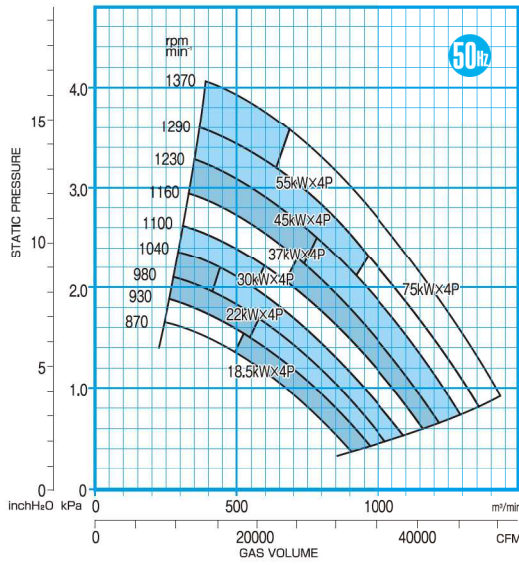


**SOUND LEVEL**

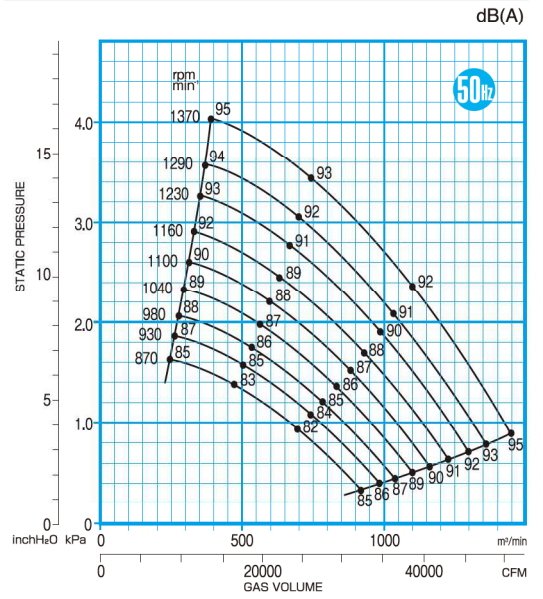


# FTF703

CAPACITY RANGE CHART

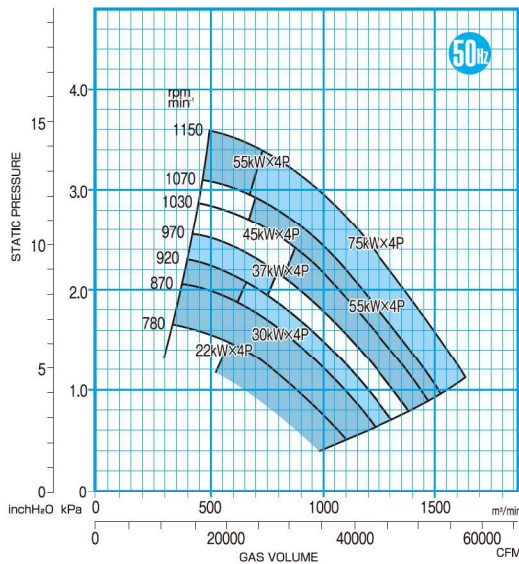


SOUND LEVEL

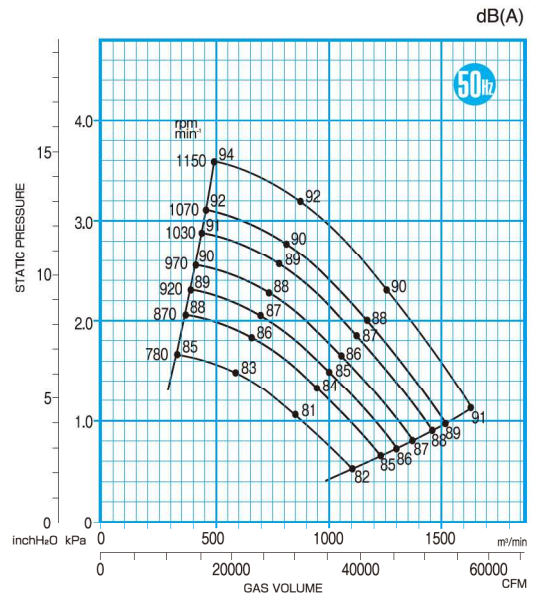


# FTF803

CAPACITY RANGE CHART

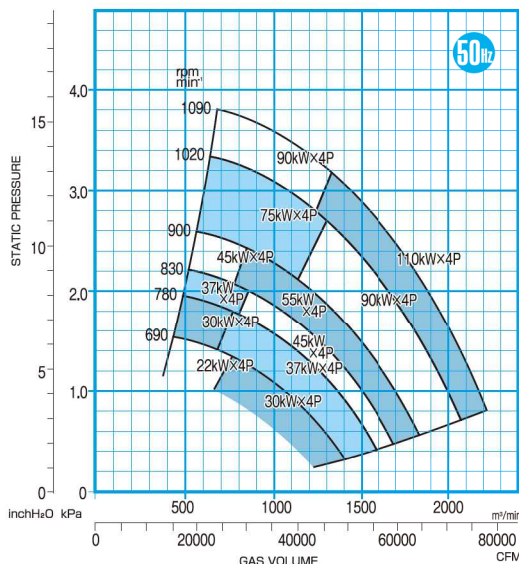


SOUND LEVEL

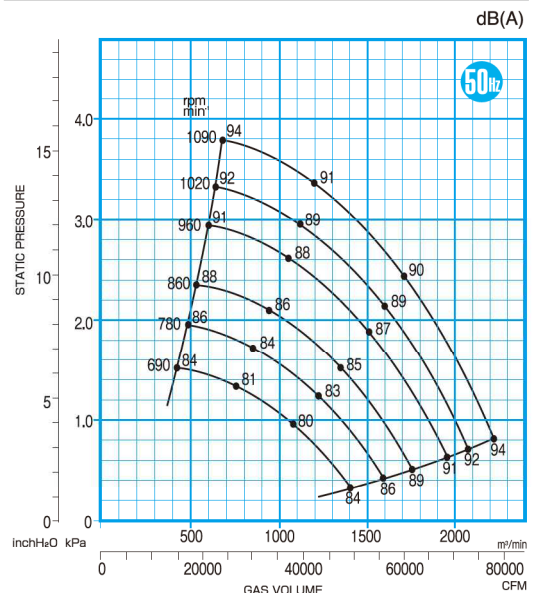


# FTF903

CAPACITY RANGE CHART



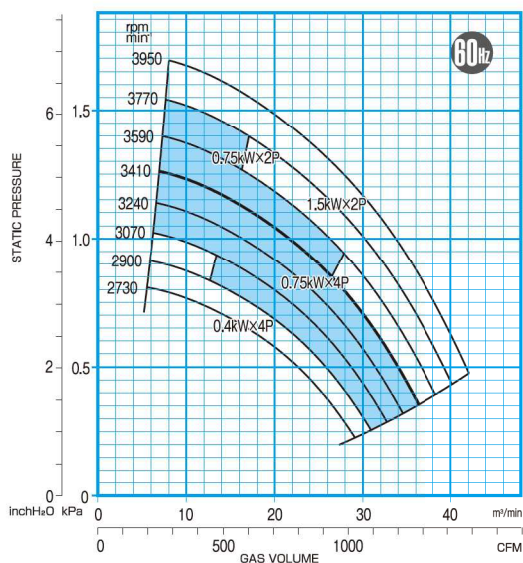
SOUND LEVEL



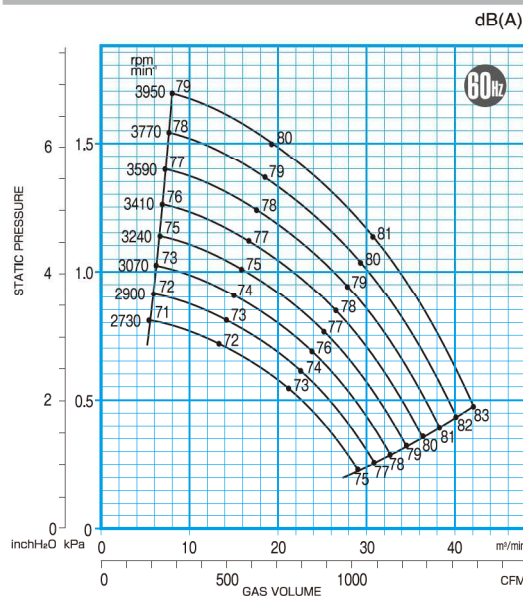
# CTF/FTF 60Hz CAPACITY RANGE CHART

**CTF151**

**CAPACITY RANGE CHART**

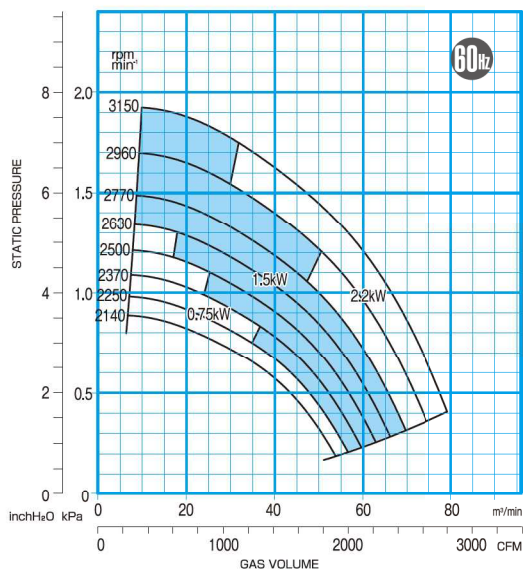


**SOUND LEVEL**

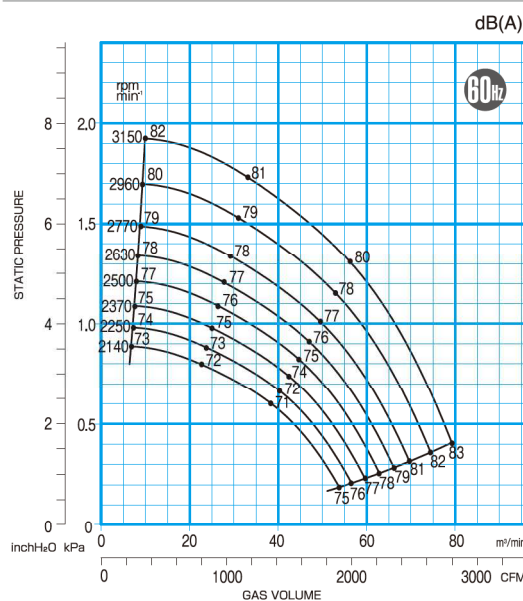


**CTF201**

**CAPACITY RANGE CHART**

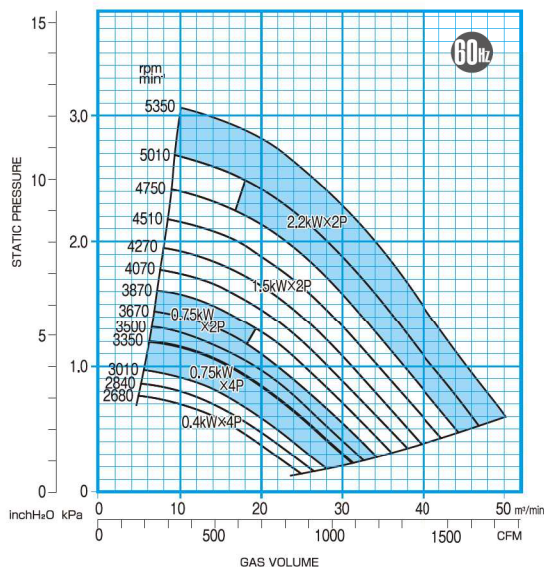


**SOUND LEVEL**

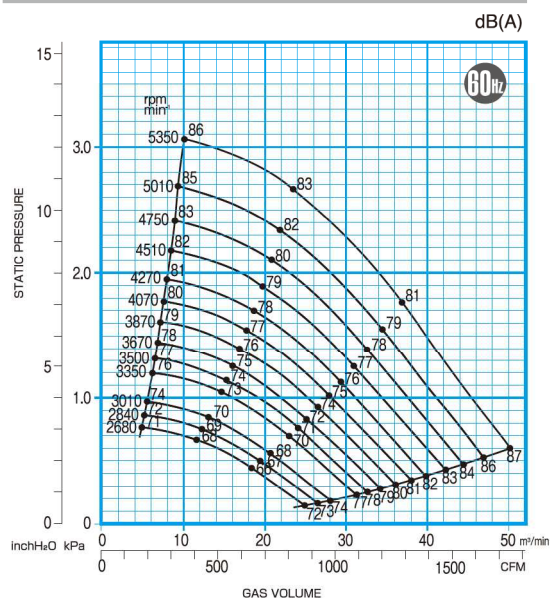


**FTF153**

**CAPACITY RANGE CHART**

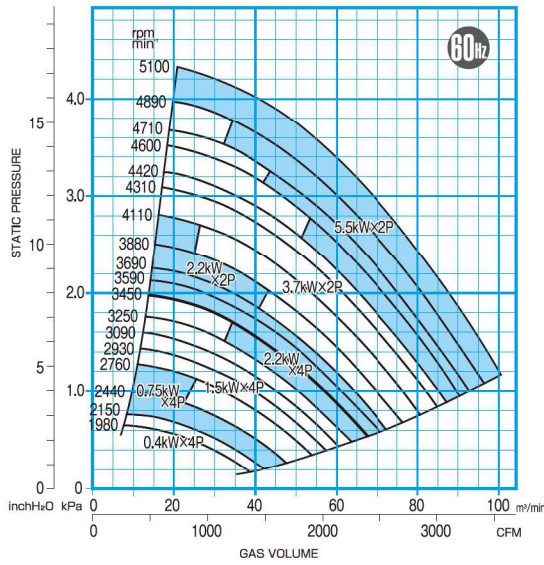


**SOUND LEVEL**

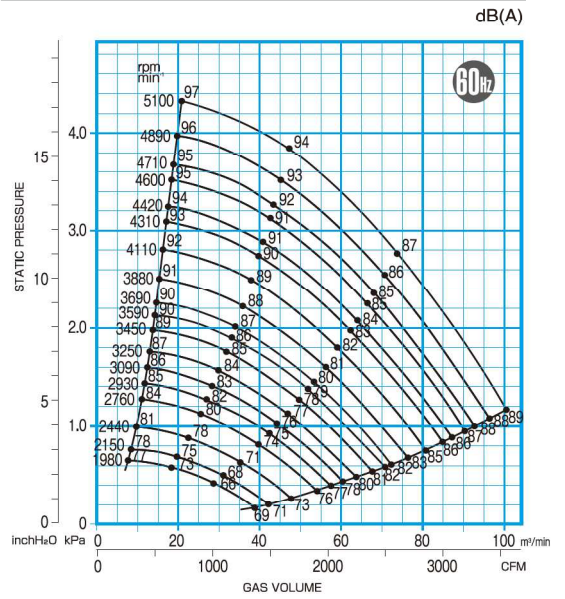


# FTF203

CAPACITY RANGE CHART

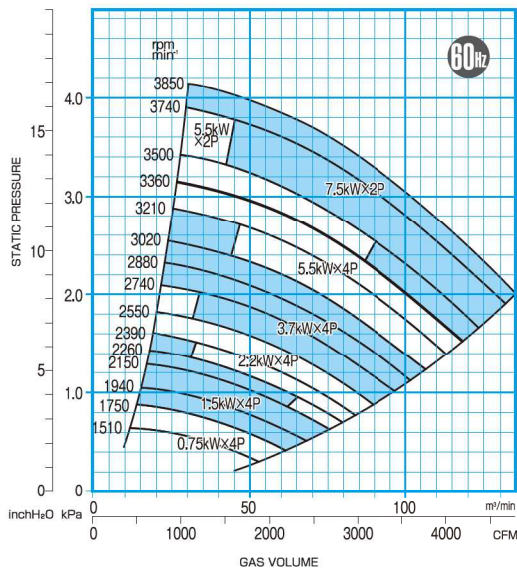


SOUND LEVEL

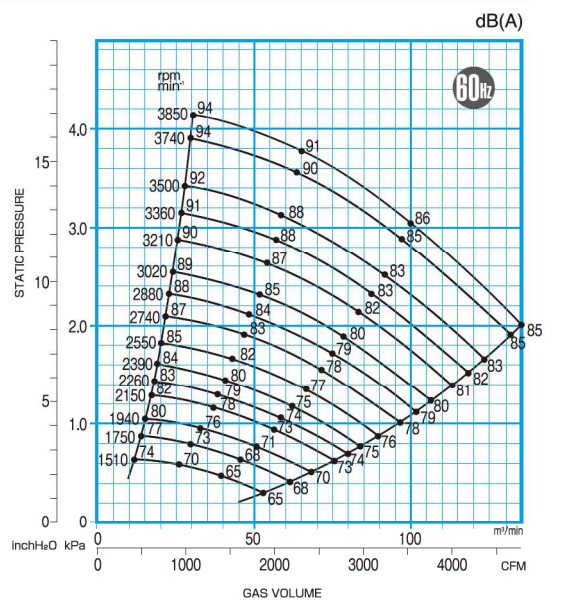


# FTF253

CAPACITY RANGE CHART

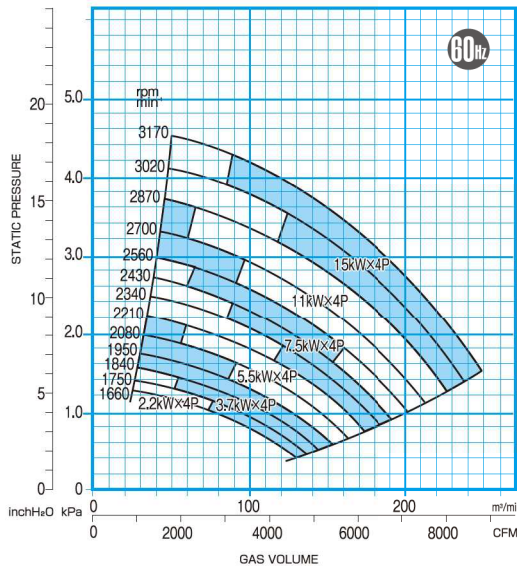


SOUND LEVEL

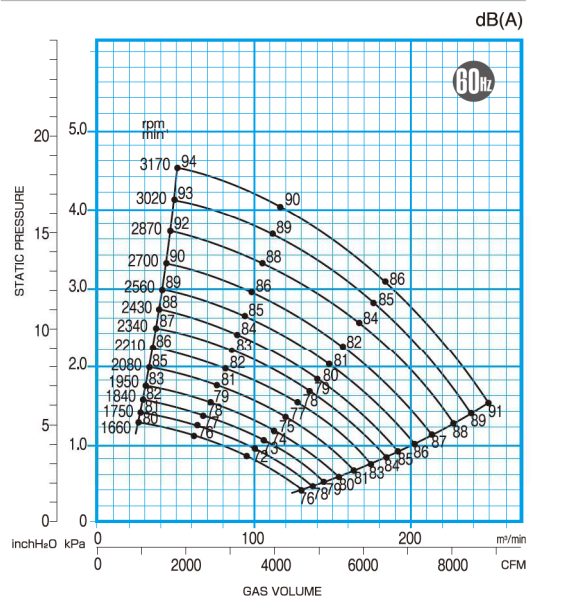


# FTF303

CAPACITY RANGE CHART



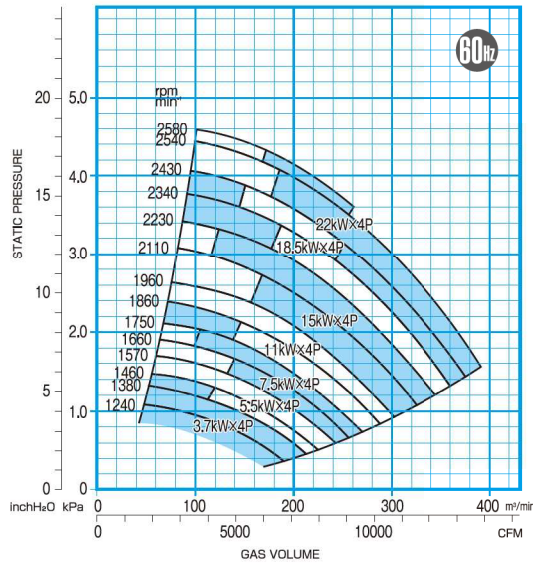
SOUND LEVEL



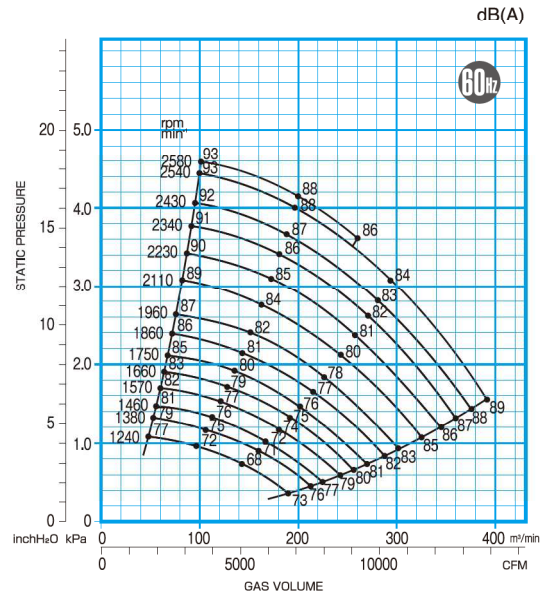
# FTF 60Hz CAPACITY RANGE CHART

**FTF403**

**CAPACITY RANGE CHART**

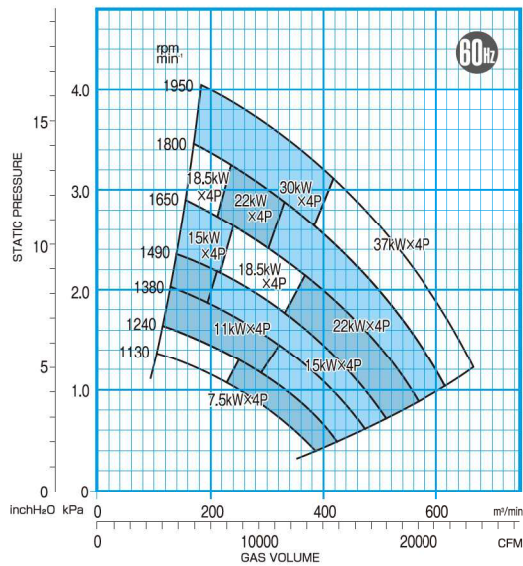


**SOUND LEVEL**

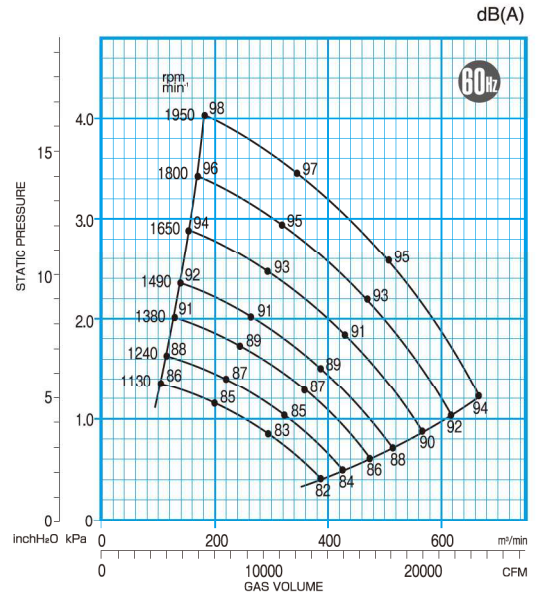


**FTF503**

**CAPACITY RANGE CHART**

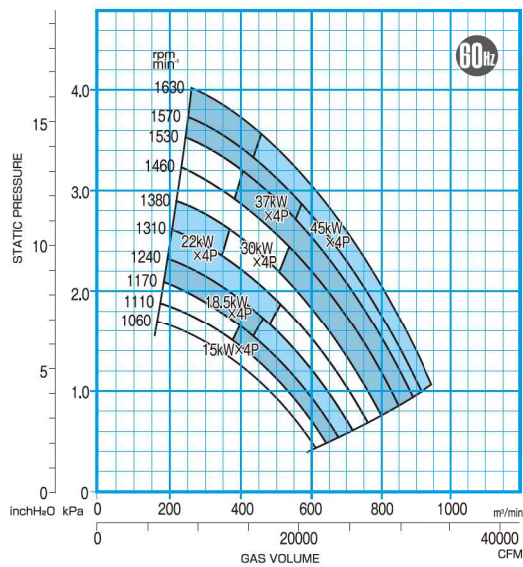


**SOUND LEVEL**

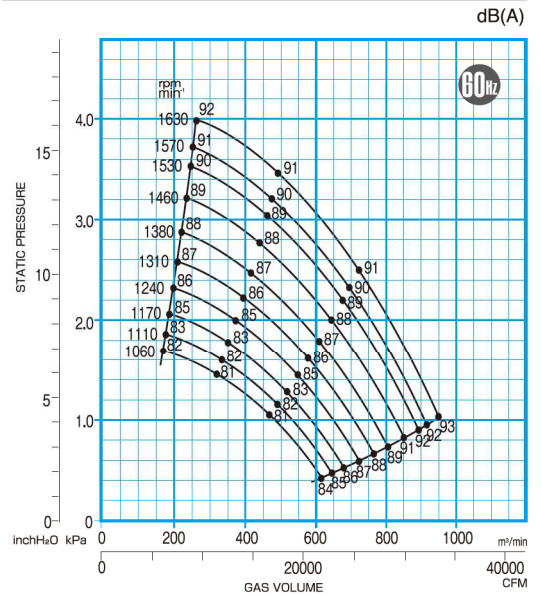


**FTF603**

**CAPACITY RANGE CHART**



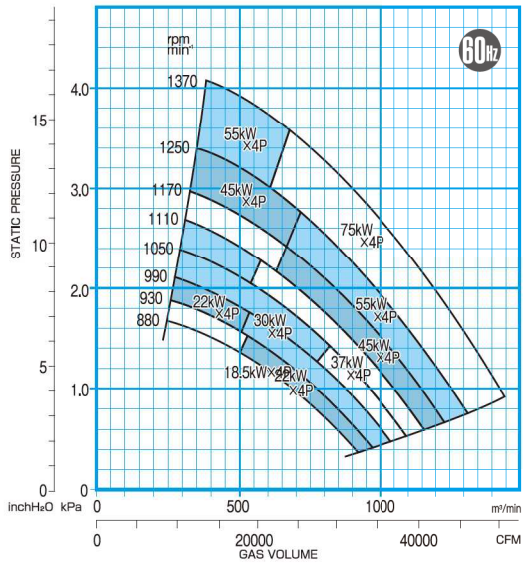
**SOUND LEVEL**



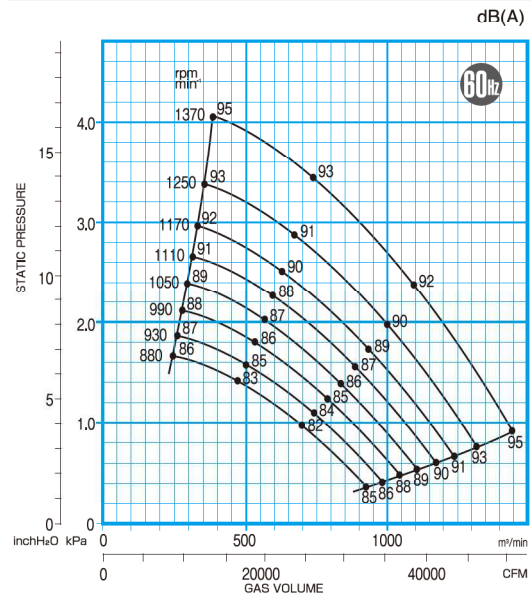


# FTF703

**CAPACITY RANGE CHART**

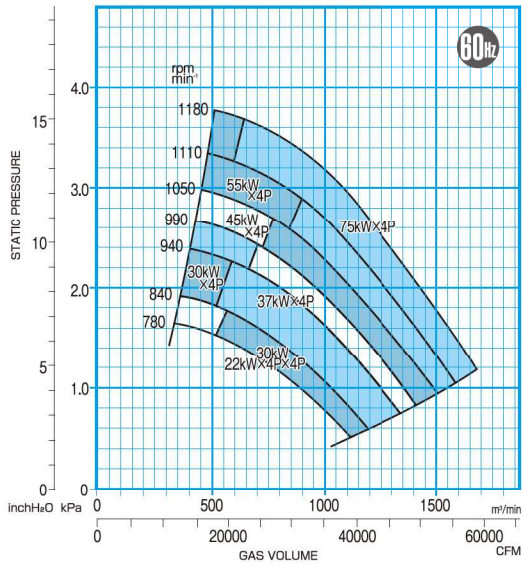


**SOUND LEVEL**

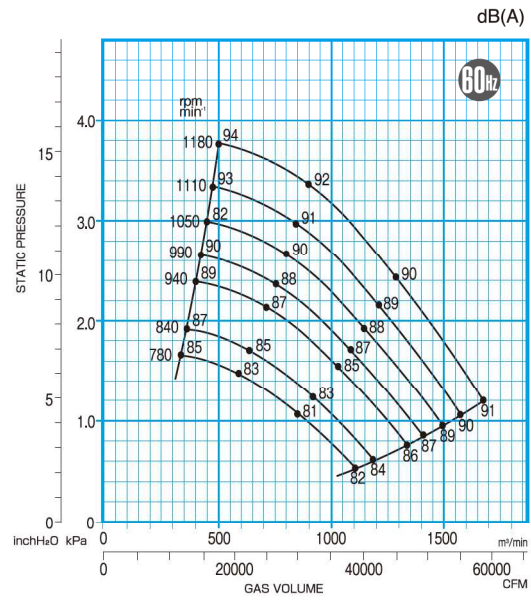


# FTF803

**CAPACITY RANGE CHART**

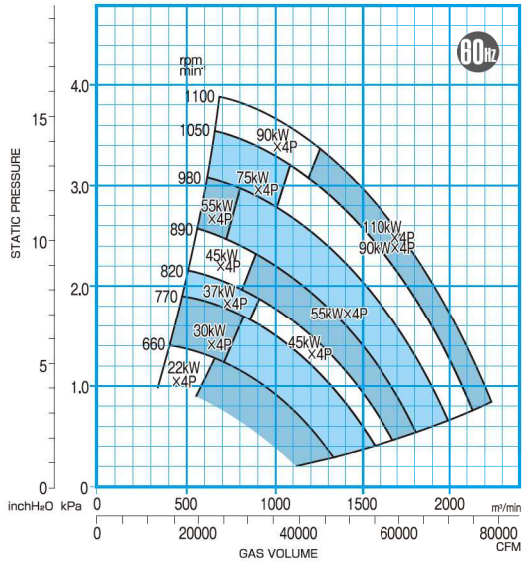


**SOUND LEVEL**

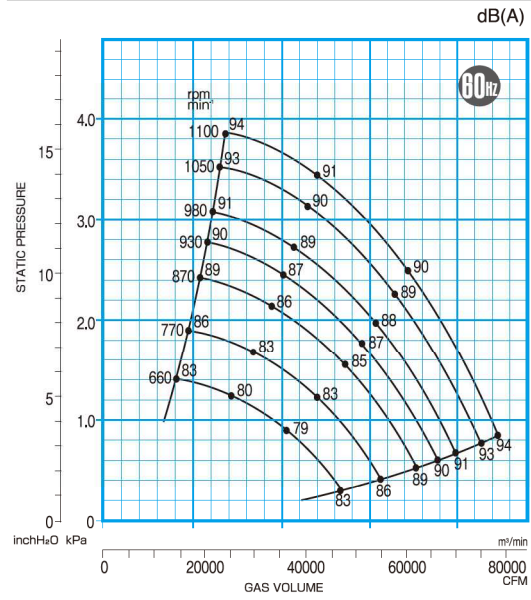


# FTF903

**CAPACITY RANGE CHART**



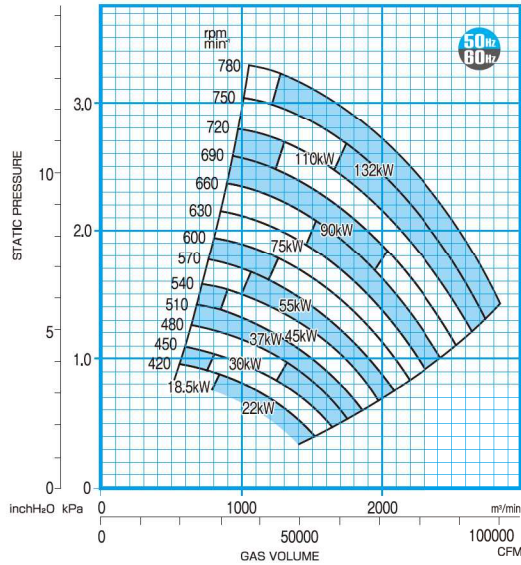
**SOUND LEVEL**



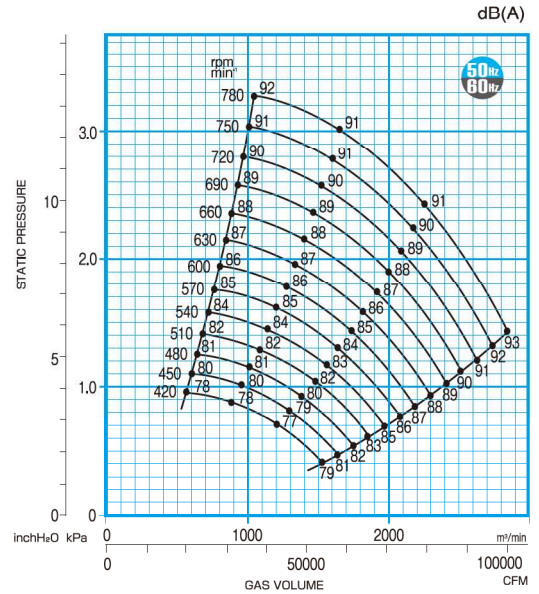
# FTF 50/60Hz CAPACITY RANGE CHART

**FTF1201**

**CAPACITY RANGE CHART**

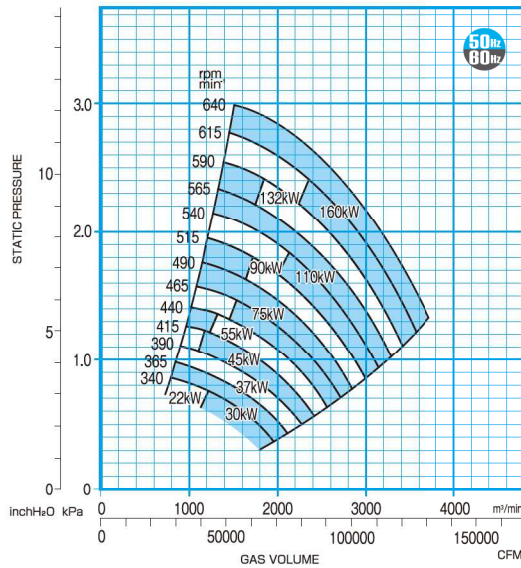


**SOUND LEVEL**

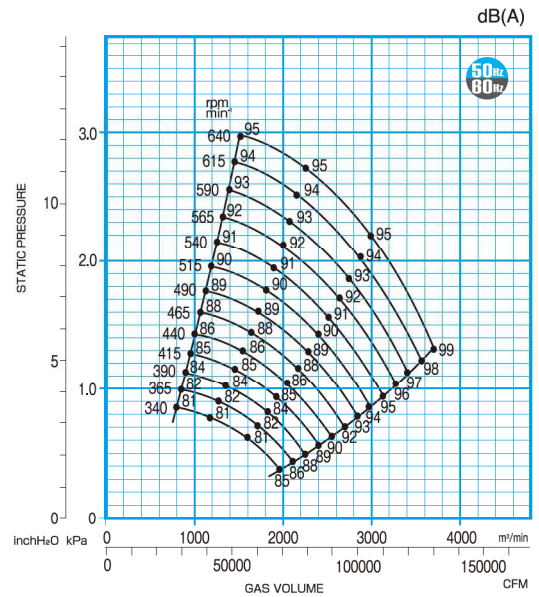


**FTF1401**

**CAPACITY RANGE CHART**

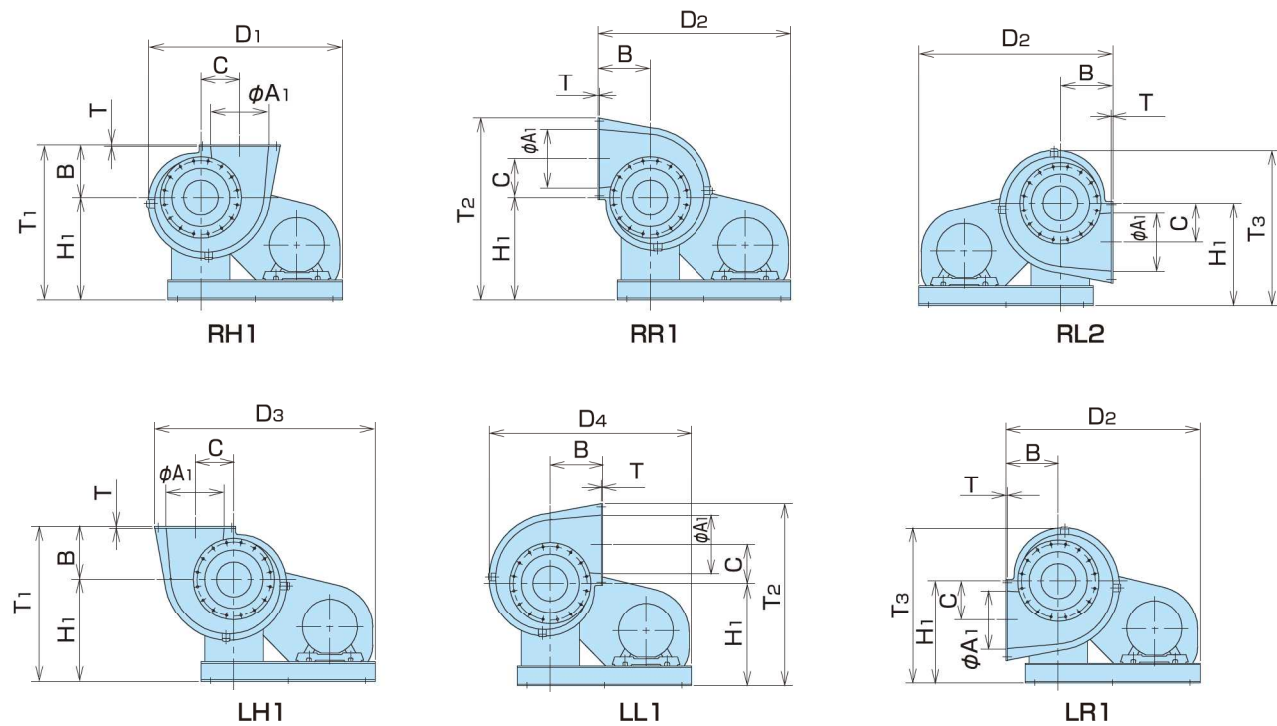
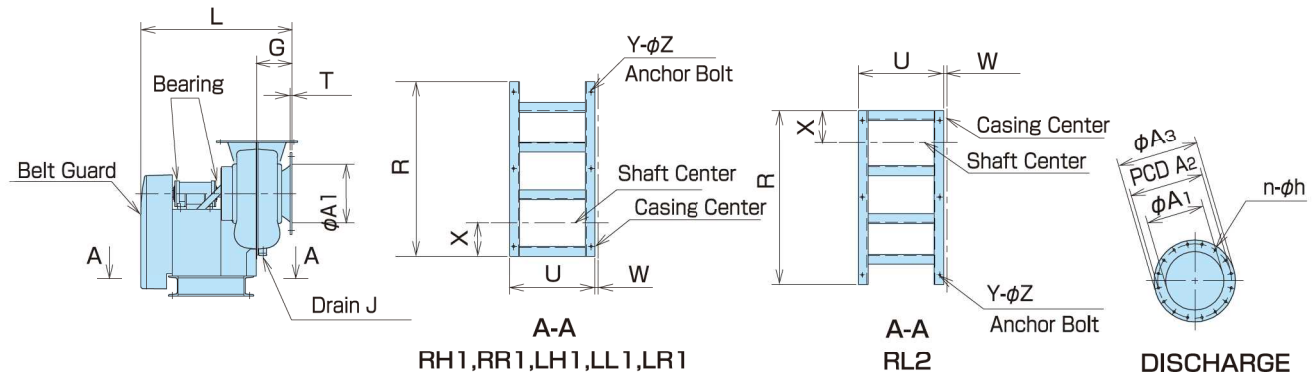


**SOUND LEVEL**



# DIMENSIONS

## FTF153·203·253/FTE151·201·251

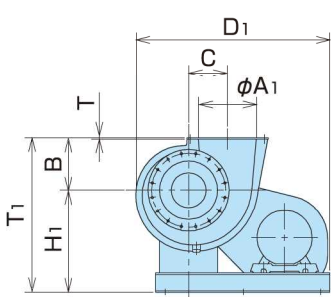
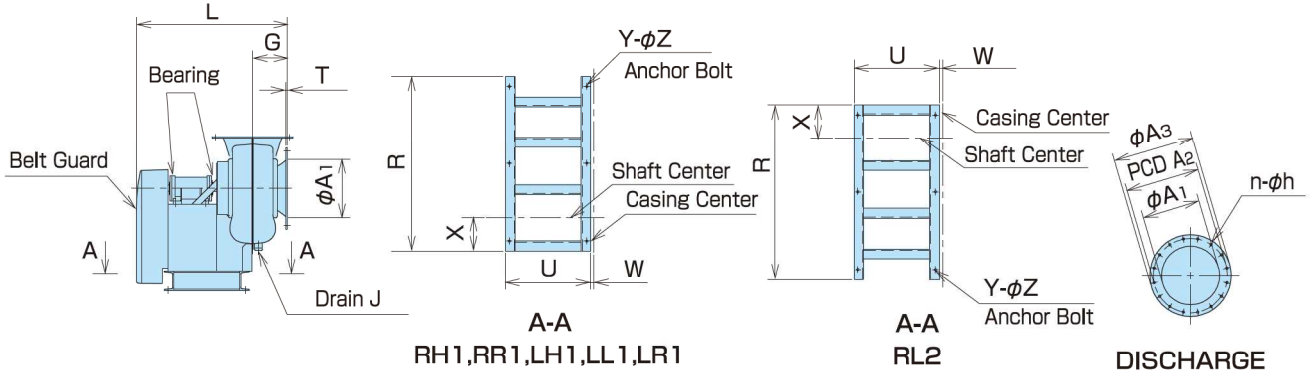


MODEL	CASING BODY											FLANGES							
	L	H <sub>1</sub>	B	C	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	G	$\phi A_1$	PCD $A_2$	$\phi A_3$	n	h	T	
FTF153 FTE151	595	400	200	150	819	800	906	852	600	706	619	135	225	264	297	12	10	6	
FTF203 FTE201	780	525	270	200	1013	1000	1145	1056	795	940	808	180	300	382	419	16	12	8	
FTF253 FTE251	855	600	340	250	1237	1235	1411	1291	940	1116	942	225	375	482	521	20	14	8	

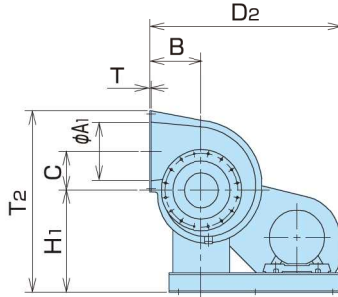
MODEL	DRAIN	BASE							BODY WEIGHT(Kg)		BEARING	
	J	R	U	W	X	Y	Z	STANDARD	IMPELLER	PULLEY		
FTF153 FTE151	PF3/4"	740	325	26	140	6	12	58	6306	6305		
FTF203 FTE201	PF3/4"	900	440	17	170	6	12	95	6308	6307		
FTF253 FTE251	PF3/4"	1100	460	20	205	6	14	118	6308	6307		

※BODY WEIGHT : Not Including Motor Weight.

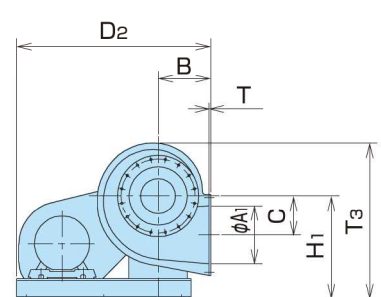
# FTF303·403/FTE301·401



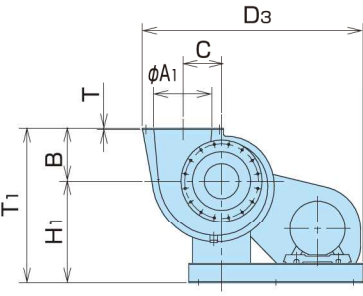
RH1



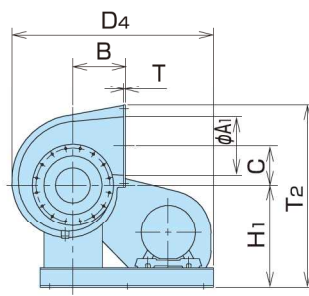
RR1



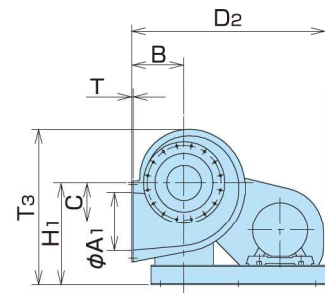
RL2



LH1



LL1



LR1

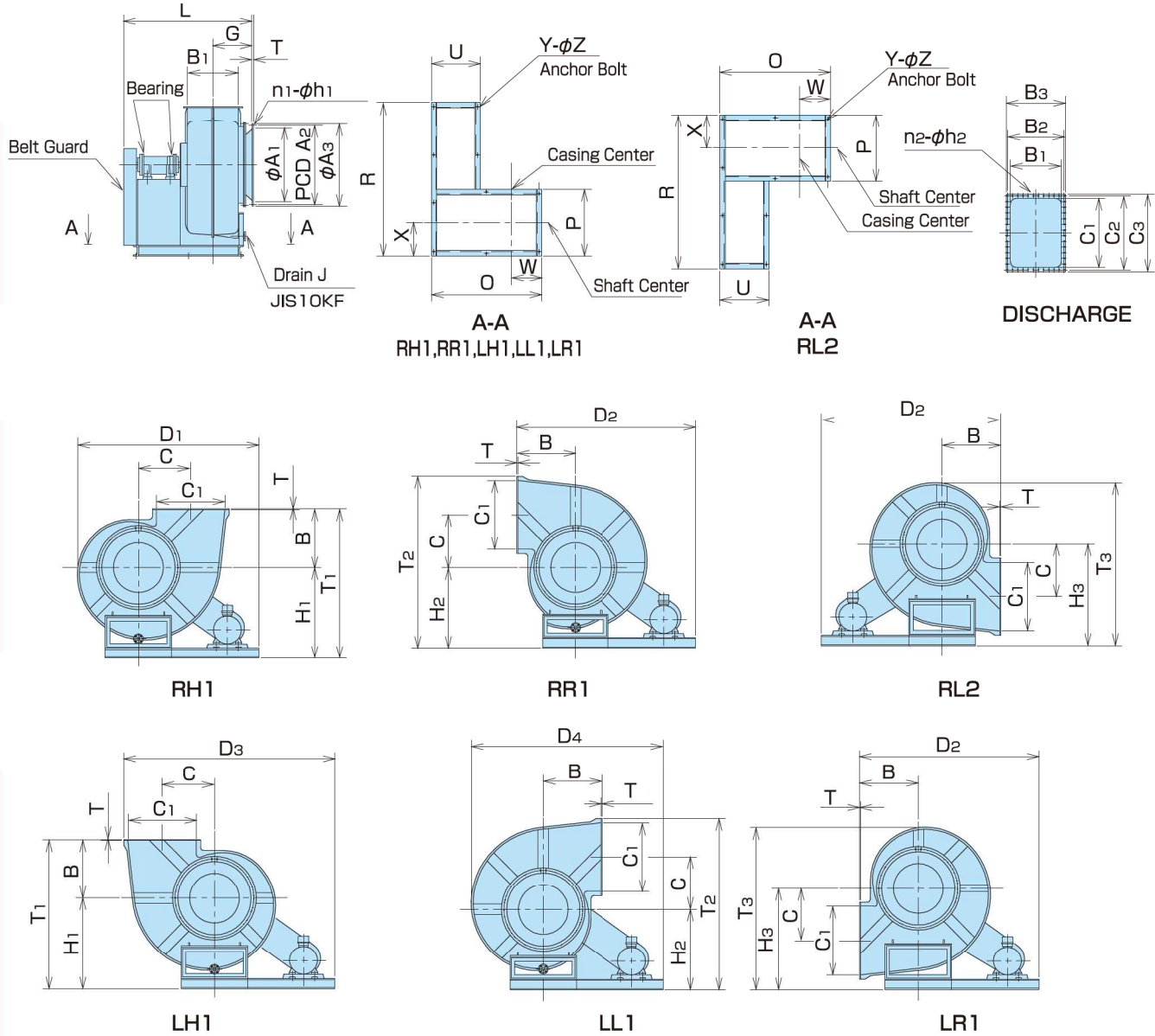
MODEL	CASING BODY												FLANGES						
	L	H <sub>1</sub>	B	C	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	G	φA <sub>1</sub>	PCD A <sub>2</sub>	φA <sub>3</sub>	n	h	T	
FTF303	FTE301	1056	725	400	300	1481	1450	1646	1542	1125	1321	1131	326	450	540	591	24	14	10
FTF403	FTE401	1230	850	530	400	1800	1740	1960	1920	1380	1600	1381	380	600	660	700	28	14	10

MODEL	DRAIN	BASE							BODY WEIGHT(Kg)		BEARING	
		J	R	U	W	X	Y	Z	STANDARD	IMPELLER	PULLEY	
FTF303	FTE301	PF3/4"	1300	560	5	250	6	14	180	6310	6308	
FTF403	FTE401	PF3/4"	1500	640	14	290	6	18	260	6312	6310	

※BODY WEIGHT : Not Including Motor Weight.

# DIMENSIONS

## FTF503·603·703·803·903

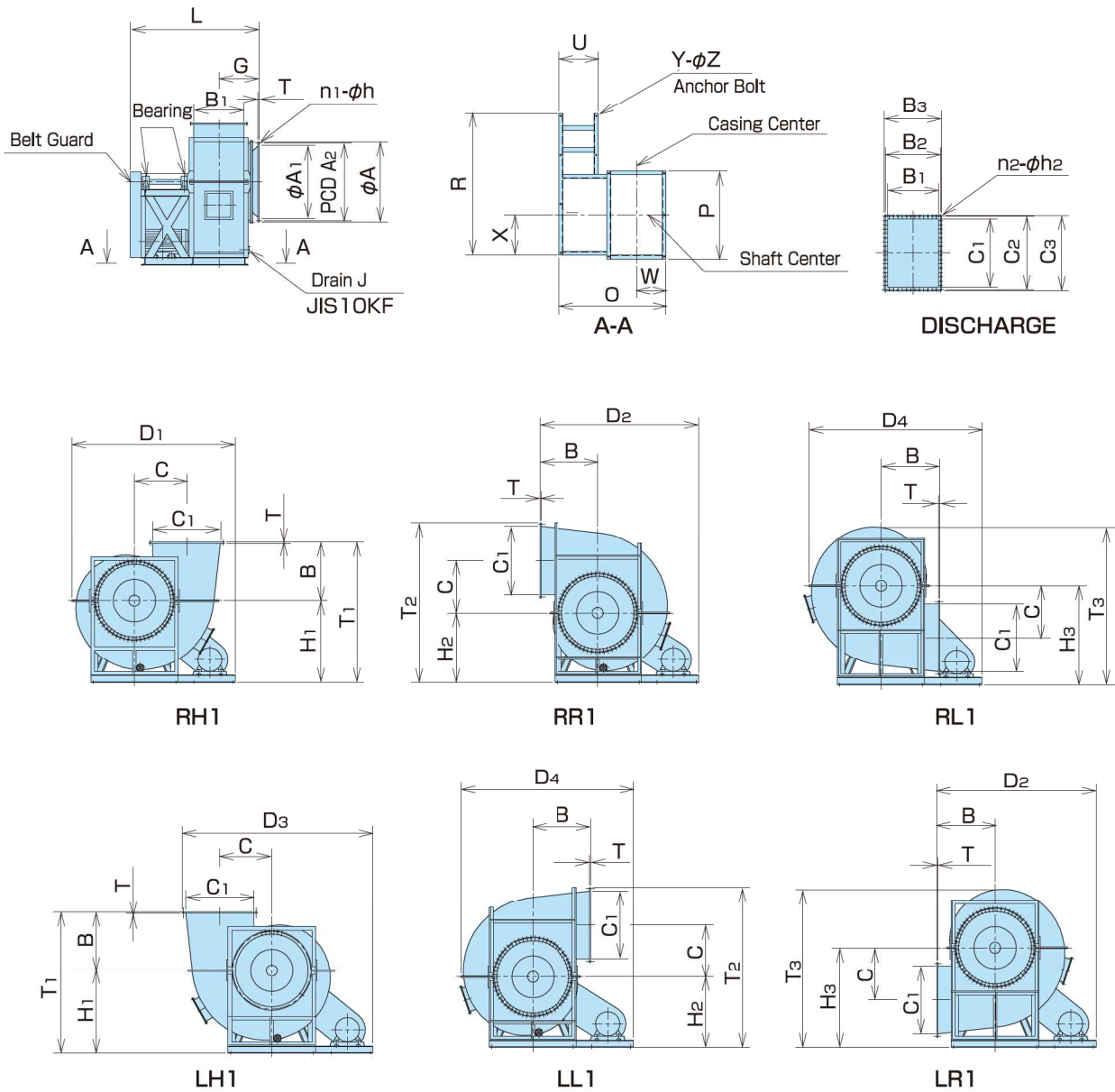


MODEL	CASING BODY														FLANGES				
	L	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	B	C	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	G	φA <sub>1</sub>	PCD A <sub>2</sub>	φA <sub>3</sub>	n <sub>1</sub>	h <sub>1</sub>
FTF503	1467	950	950	1100	600	540	2030	2000	2345	2145	1550	1895	1730	450	750	810	850	32	12
FTF603	1570	1100	1100	1300	720	645	2325	2295	2700	2465	1820	2225	2050	500	900	980	1020	40	14
FTF703	1860	1300	1150	1450	840	750	2595	2565	3025	2755	2140	2450	2320	580	1050	1130	1170	44	14
FTF803	2000	1450	1300	1650	960	860	2940	2910	3430	3125	2410	2780	2640	650	1200	1280	1320	48	14
FTF903	2340	1550	1350	1850	1080	970	3145	3055	3645	3355	2630	3020	2940	780	1350	1450	1490	56	14

MODEL	FLANGES						DRAIN		BASE								BODY WEIGHT(Kg)		BEARING		
	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	n <sub>2</sub>	h <sub>2</sub>	T	J	R	U	O	P	W	X	Y	Z	STANDARD	IMPELLER	PULLEY
FTF503	520	595	630	700	765	810	32	12	12	40A	1750	300	1220	700	336	350	8	18	400	6315	6313
FTF603	624	702	750	840	913	960	40	14	13	40A	2000	350	1330	850	393	425	10	18	500	6315	6313
FTF703	730	814	850	980	1053	1100	48	14	14	40A	2200	700	1580	950	439	475	10	22	810	6320	6318
FTF803	830	913	950	1120	1190	1240	50	14	15	50A	2500	720	1690	1100	489	550	10	22	900	6320	6318
FTF903	940	1044	1080	1260	1360	1400	56	14	15	50A	2800	300	1840	1650	545	825	11	22	1440	6324	6320

※BODY WEIGHT : Not Including Motor Weight.

# FTF1201·1401



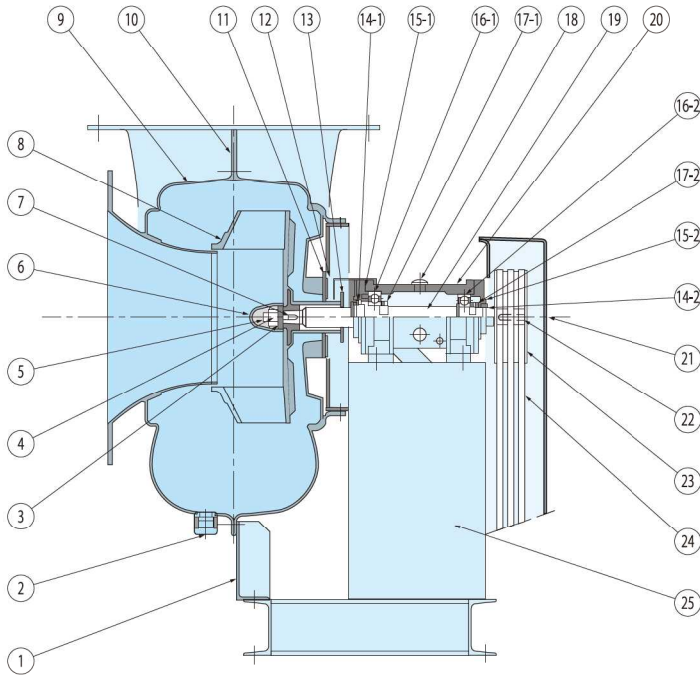
MODEL	CASING BODY													FLANGES					
	L	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	B	C	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	G	φA <sub>1</sub>	PCD A <sub>2</sub>	φA <sub>3</sub>	n <sub>1</sub>	h <sub>1</sub>
FTF1201	3110	2000	1700	2400	1440	1290	3770	3680	4440	4000	3440	3900	3850	950	1800	1900	1940	72	14
FTF1401	3400	2350	2000	2750	1680	1505	4030	3940	4815	4352	4030	4555	4440	1200	2100	2190	2240	84	14

MODEL	FLANGES						DRAIN		BASE								BODY WEIGHT(Kg)		BEARING		
	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	n <sub>2</sub>	h <sub>2</sub>	T	J	R	U	O	P	W	X	Y	Z	STANDARD	IMPELLER	PULLEY
FTF1201	1250	1350	1390	1680	1764	1820	72	14	18	50A	3250	1000	2650	2200	724	1100	11	22	2460	6222	NU319
FTF1401	1740	1826	1880	1960	2040	2100	92	14	18	50A	3400	1000	3140	2460	972	1140	11	22	3800	6324	6322

※BODY WEIGHT : Not Including Motor Weight.

# STRUCTURE

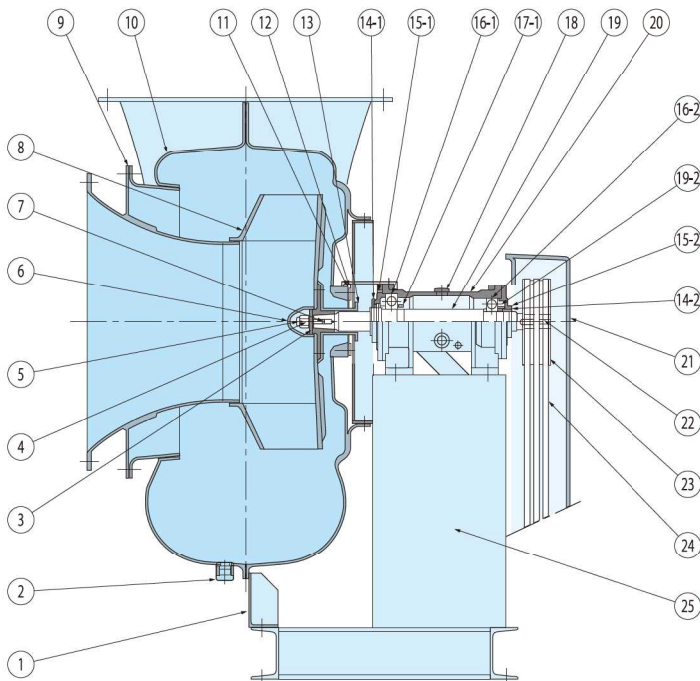
## FTF153·203·253/FTE151·201·251



No.	NAME OF PART	MATERIALS	QTY	
1	Casing Support	FRP	1	*No Casing Support for model FTF153.
2	Drain Plug	FRP	2	
3	Impeller Washer	SS400	1	
4	Impeller Nut	S25C	1	
5	Split Pin	SWRM6	1	
6	Nut Cover	FRP	1	
7	Impeller Key	S45C	1	
8	Impeller	FRP	1	
9	Casing	FRP	1	
10	Casing Gasket	EPT	1	
11	Seal Plate	PE	1	
12	Gland	FRP	1	
13	Gas Separator	HTPVC	1	
14-1	V-Ring (Front)	NBR	1	
14-2	V-Ring (Rear)	NBR	1	
15-1	Bearing Cover(Front)	FC200	1	
15-2	Bearing Cover (Rear)	FC200	1	
16-1	Bearing(Front)	SUJ2	1	
16-2	Bearing (Rear)	SUJ2	1	
17-1	Adapter Nut & Washer (Front)	SS400	1set	
17-2	Adapter Nut & Washer (Rear)	SS400	1set	
18	Oil Supply Plug	PP	1	
19	Shaft	S35C	1	
20	Bearing Housing	FCD450	1	
21	Belt Guard	FRP	1	
22	V-Pulley Key	S45C	1	
23	V-Pulley	—	1set	
24	V-Belt	—	1set	
25	Bracket	SS400	1	

Note: No drain plug on RL and LR types. Number of belts may vary from that shown in this drawing.

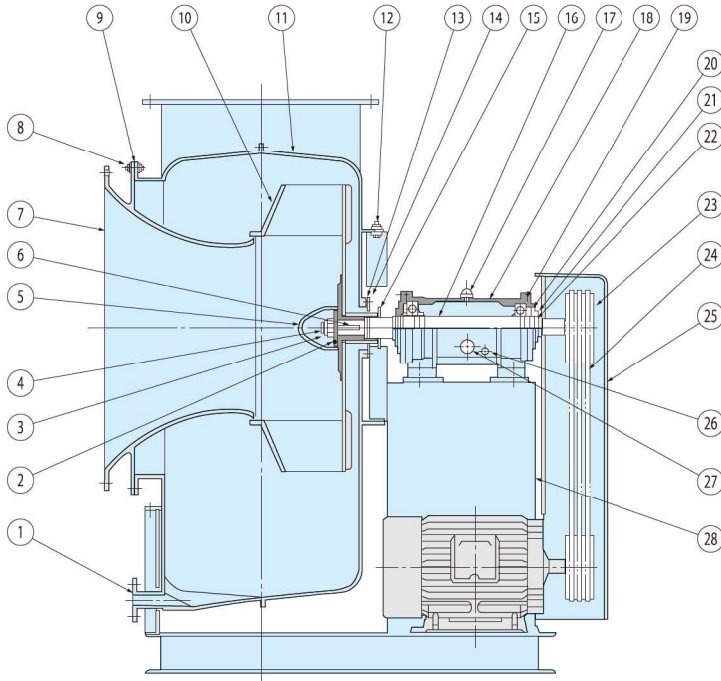
## FTF303·403/FTE301·401



No.	NAME OF PART	MATERIALS	QTY	
1	Casing Support	FRP	1	
2	Drain Plug	FRP	2	
3	Impeller Washer	SS400	1	
4	Impeller Nut	S25C	1	
5	Split Pin	SWRM6	1	
6	Nut Cover	FRP	1	
7	Impeller Key	S45C	1	
8	Impeller	FRP	1	
9	Casing	FRP	1	
10	Casing Gasket	EPT	1	
11	Seal Plate	PE	1	
12	Gland	FRP	1	
13	Gas Separator	HTPVC	1	
14-1	V-Ring (Front)	NBR	1	
14-2	V-Ring (Rear)	NBR	1	
15-1	Bearing Cover(Front)	FC200	1	
15-2	Bearing Cover (Rear)	FC200	1	
16-1	Bearing(Front)	SUJ2	1	
16-2	Bearing (Rear)	SUJ2	1	
17-1	Adapter Nut & Washer (Front)	SS400	1set	
17-2	Adapter Nut & Washer (Rear)	SS400	1set	
18	Oil Supply Plug	PP	1	
19	Shaft	S35C	1	
20	Bearing Housing	FCD450	1	
21	Belt Guard	FRP	1	
22	V-Pulley Key	S45C	1	
23	V-Pulley	—	1set	
24	V-Belt	—	1set	
25	Bracket	SS400	1	

Note: No drain plug on RL and LR types. Number of belts may vary from that shown in this drawing.

# FTF503·603·703·803·903

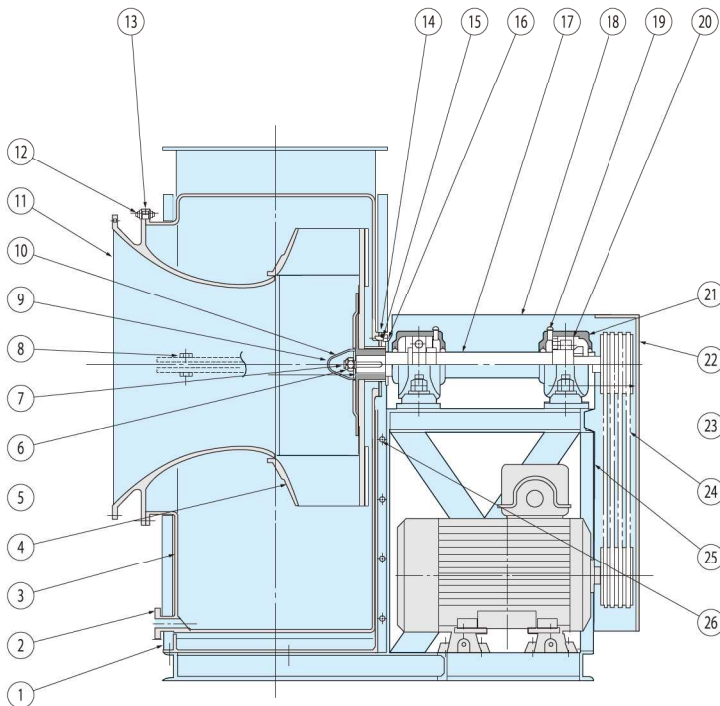


No.	NAME OF PART	MATERIALS	QTY
1	Drain Flange	FRP	1
2	Impeller Washer	SS400	1
3	Impeller Nut	S25C	1
4	Split Pin	SWRM6	1
5	Nut Cover	FRP	1
6	Impeller Key	S45C	1
7	Suction Cone	FRP	1
8	Suction Cone Bolt	SUS304	1set
9	Casing Gasket	EPT	1
10	Impeller	FRP	1
11	Casing	FRP	1
12	Casing Set Bolt	SUS304	1set
13	Seal Plate	PE	1
14	Gland	FRP	1
15	Gas Separator	HTPVC	1
16	Shaft	S45C	1
17	Oil Supply Plug	PP	1
18	Bearing Housing	FCD450	1
19	Bearing	SUJ2	2
20	Adapter Nut & Washer	SS400	2
21	Bearing Cover	FC200	2
22	V-Ring	NBR	2
23	V-Pulley	FC200	1set
24	V- Belt	Rubber	1set
25	Belt Guard	FRP	1
26	Oil Plug	SS400	1
27	Oil Gauge	Brass	1
28	Bracket	SS400	1

※Note: No drain flange on RL and LR types. Number of belts may vary from that shown in this drawing.

※Note for FTF903 : The casing is divide into two, and the Belt gurde is made of SS400.

# FTF1201·1401



No.	NAME OF PART	MATERIALS	QTY
1	Casing Support	SS400	1set
2	Drain Flange	FRP	1
3	Casing	FRP	1
4	Impeller	FRP	1
5	Impeller Washer	SS400	1
6	Impeller Key	S45C	1
7	Split Pin	SWRM6	1
8	Casing Joint Bolt	SUS304	1set
9	Nut Cover	FRP	1
10	Impeller Nut	S25C	1
11	Suction Cone	FRP	1
12	Suction Cone Bolt	SUS304	1set
13	Casing Gasket	EPT	1
14	Seal Plate	PE	1
15	Gland	FRP	1
16	Gas Separator	HTPVC	1
17	Shaft	S45C	1
18	Shaft Guard	SS400	1
19	Grease Nipple	Brass	2
20	Bearing	SUJ2	2
21	Bearing Housing	FC200	2
22	Belt Guard	SS400	1
23	V-Pulley	FC200	1set
24	V-Belt	Rubber	1set
25	Bracket	SS400	1
26	Casing Set Bolt	SS400	1set

※Note: No drain flange on RL and LR types. Number of belts may vary from that shown in this drawing.