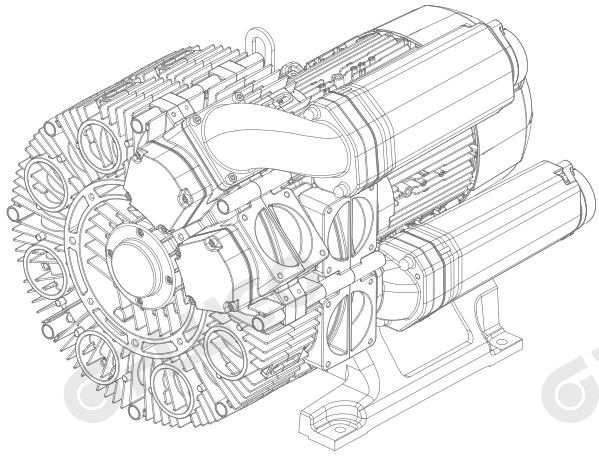
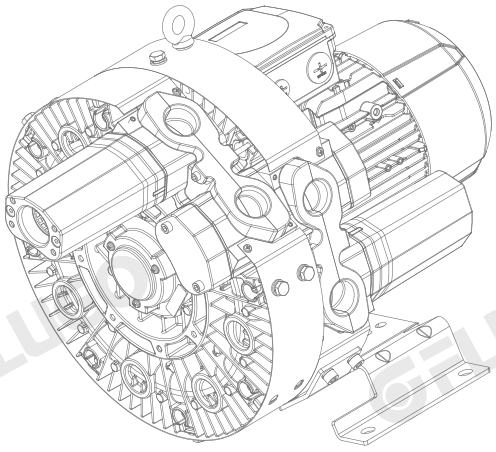
FLUGO

Technical Catalogue

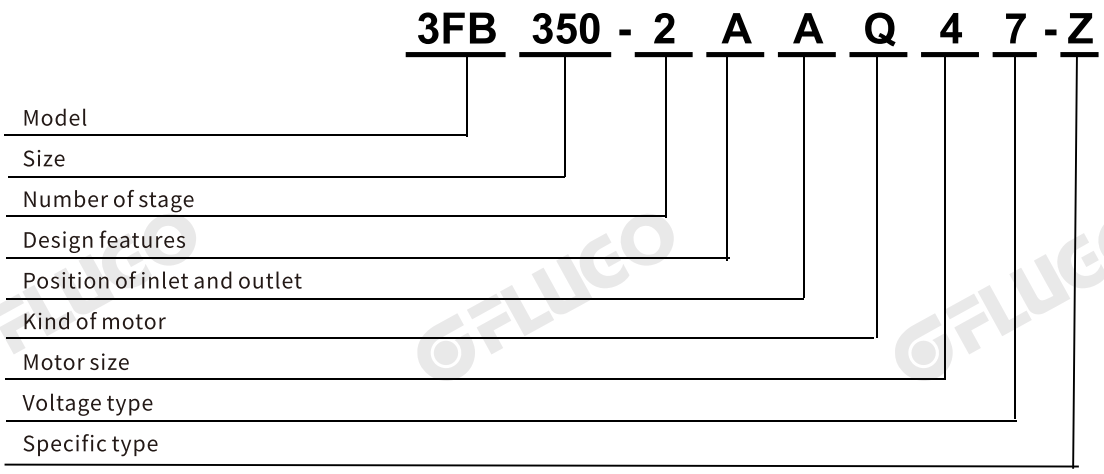




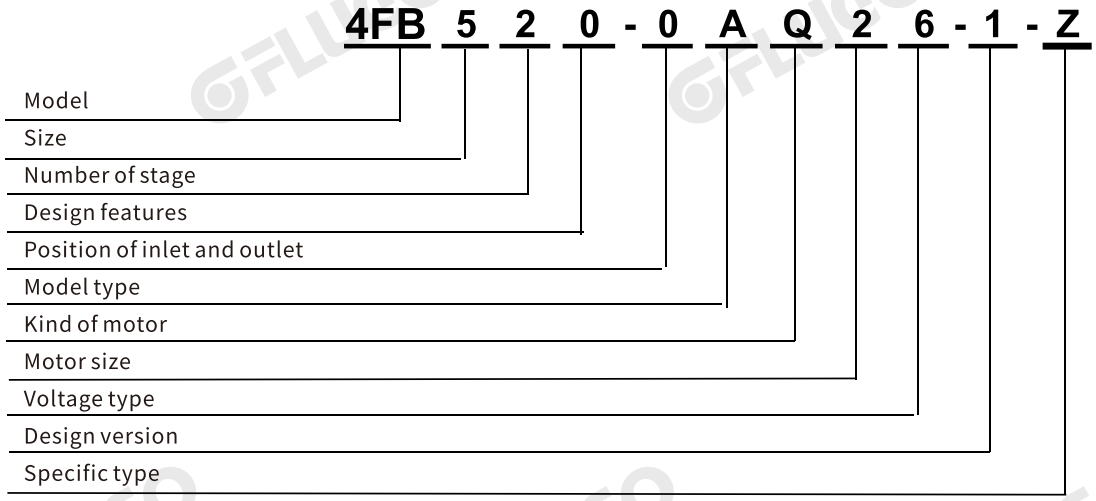
3FB/4FB

Side channel blower
with high efficiency motor

Order Model System and Specification



*Model: 2FB, 3FB, 4FB
*Size:250,350,550,750
*Number of stage:1 single stage，2 double stage，3 three stage
*Desig features:A with electric motor Y wthout electric motor
*Position of inlet and outlet: A inlet and outlet are parallel B suction port at cover
*Kind of motor: Q with 6 wiring terminal P with 9 wiring terminal
*Motor size:The sequence of motor power sizes
*Voltage： For more detail see page14
Specific type: Z thermal protector S Long shaft T teflon coating
N nickel coating A anodizing



*Model: 2FB, 3FB, 4FB
*Size: 2,3,4,5,6
*Number of stage:1 single stage，2 double stage，3 three stage
*Desig features:0 with Electric motor 3 without electric motor
*Position of inlet and outlet: A inlet and outlet are parallel B suction port at cover
*Kind of motor: Q with 6 wiring terminal P with 9 wiring terminal
*Voltage： For more detail see page14
*Motor size:The sequence of motor power sizes
*Design version: 8 old version 1 new version
*Specific type: Z thermal protector S Long shaft T teflon coating
N nickel coating A anodizing F explosion-proof

3FB

Selection and ordering data for side channel blowers in vacuum and pressure operation.

MODEL · In stock	IE3 Power Kw	Freq Hz	Output power Kw	Voltage V	Current A	Max airflow m^3/h	Max static vacuum mbar	Max static pressure mbar	Net.W Kg	Size Inch
3FB 250-2AAQ26	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	230	-300	260	82	G 2'
		60	4.0	440-480Y	6.7Y	280	-280	250		
3FB 250-2AAQ37	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	230	-430	420	88	G 2'
		60	5.3	440-480Δ	8.50Δ	280	-460	460		
3FB 250-2AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	230	-530	720	97	G 2'
		60	7.3	440-480Δ	12,0Δ	280	-580	700		
3FB 250-2AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	230	-530	900	108	G 2'
		60	9.9	440-480Δ	15,3Δ	280	-580	880		
3FB 250-3AAQ37	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	230	-420	430	107	G 2'
		60	5.3	440-480Δ	8.50Δ	280	-550	450		
3FB 250-3AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	230	-650	850	116	G 2'
		60	7.3	440-480Δ	12,0Δ	280	-650	820		
3FB 250-3AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	230	-650	1020	124	G 2'
		60	9.9	440-480Δ	15,3Δ	280	-650	1020		
3FB 350-1AAQ26	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	315	-320	310	76	G 2'1/2
		60	4.0	440-480Y	6.7Y	370	-320	270		
3FB 350-1AAQ37	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	315	-350	440	82	G 2'1/2
		60	5.3	440-480Δ	8.50Δ	370	-390	410		
3FB 350-1AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	315	-350	500	88	G 2'1/2
		60	7.3	440-480Δ	12,0Δ	370	-390	510		
3FB 350-2AAQ37	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	320	-420	370	114	G 2'1/2
		60	5.3	440-480Δ	8.50Δ	380	-360	290		
3FB 350-2AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	320	-530	550	120	G 2'1/2
		60	7.3	440-480Δ	12,0Δ	380	-580	470		
3FB 350-2AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	320	-530	820	126	G 2'1/2
		60	9.9	440-480Δ	15,3Δ	380	-580	730		
3FB 350-2AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	320	-420	870	142	G 2'1/2
		60	14.5	440-480Δ	23,0Δ	380	-360	930		
3FB 350-3AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	320	-590	480	146	G 2'1/2
		60	7.3	440-480Δ	12,0Δ	380	-530	380		
3FB 350-3AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	320	-650	750	152	G 2'1/2
		60	9.9	440-480Δ	15,3Δ	380	-650	630		
3FB 350-3AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	320	-650	1020	178	G 2'1/2
		60	14.5	440-480Δ	23,0Δ	380	-650	1050		
3FB 550-1AAQ37	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	480	-270	240	92	G 3'
		60	5.3	440-480Δ	8.50Δ	565	-210	170		
3FB 550-1AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	480	-380	400	98	G 3'
		60	7.3	440-480Δ	12,0Δ	565	-400	340		
3FB 550-1AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	480	-380	550	104	G 3'
		60	9.9	440-480Δ	15,3Δ	565	-410	520		
3FB 550-2AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	480	-530	450	159	G 3'
		60	9.9	440-480Δ	15,3Δ	580	-460	350		
3FB 550-2AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	480	-530	760	175	G 3'
		60	14.5	440-480Δ	23,0Δ	580	-540	640		
3FB 550-2AAQ77	15	50	17.3	380-420Δ/660-725Y	31,7 Δ/ 18,3 Y	480	-530	890	185	G 3'
		60	19.9	440-480Δ	31,4Δ	580	-540	920		
3FB 550-3AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	480	-610	640	208	G 3'
		60	14.5	440-480Δ	23,0Δ	580	-590	500		
3FB 550-3AAQ77	15	50	17.3	380-420Δ/660-725Y	31,7 Δ/ 18,3 Y	480	-610	980	217	G 3'
		60	19.9	440-480Δ	31,4Δ	580	-590	870		
3FB 550-3AAQ87	18.5	50	21.3	380-420Δ/660-725Y	38,3 Δ/ 22,1 Y	480	-610	1020	230	G 3'
		60	24.5	440-480Δ	38,0Δ	580	-590	1020		

3FB

Selection and ordering data for side channel blowers in vacuum and pressure operation.

MODEL · In stock	IE3 Power Kw	Freq Hz	Output power Kw	Voltage V	Current A	Max airflow m^3/h	Max static vacuum mbar	Max static pressure mbar	Net.W Kg	Size Inch
3FB 750-1AAQ47	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	750	-220	200	120	G 4'
		60	7.3	440-480Δ	12,0Δ	880	-150	120		
3FB 750-1AAQ57	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	750	-360	330	132	G 4'
		60	9.9	440-480Δ	15,3Δ	880	-300	250		
3FB 750-1AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	750	-380	540	148	G 4'
		60	14.5	440-480Δ	23,0Δ	880	-410	470		
3FB 750-1AAQ77	15	50	17.3	380-420Δ/660-725Y	31,7 Δ/ 18,3 Y	740	-380	550	160	G 4'
		60	19.9	440-480Δ	31,4Δ	880	-410	590		
3FB 750-2AAQ67	11	50	12.6	380-420Δ/660-725Y	23,3 Δ/ 13,4 Y	720	-530	420	192	G 4'
		60	14.5	440-480Δ	23,0Δ	840	-450	320		
3FB 750-2AAQ77	15	50	17.3	380-420Δ/660-725Y	31,7 Δ/ 18,3 Y	720	-530	670	204	G 4'
		60	19.9	440-480Δ	31,4Δ	840	-530	560		
3FB 750-2AAQ87	18.5	50	21.3	380-420Δ/660-725Y	38,3 Δ/ 22,1 Y	720	-530	750	228	G 4'
		60	24.5	440-480Δ	38,0Δ	840	-530	750		
3FB 750-2AAQ97	22.0	50	25.3	380-420Δ/660-725Y	79,7 Δ/ 46,0 Y	720	-530	860	260	G 4'
		60	28.5	440-480Δ	45,0Δ	840	-530	900		
3FB 750-3AAQ77	15	50	17.3	380-420Δ/660-725Y	31,7 Δ/ 18,3 Y	690	-600	590	242	G 4'
		60	19.9	440-480Δ	31,4Δ	795	-590	450		
3FB 750-3AAQ87	18.5	50	21.3	380-420Δ/660-725Y	38,3 Δ/ 22,1 Y	690	-600	800	254	G 4'
		60	24.5	440-480Δ	38,0Δ	795	-590	640		
3FB 750-3AAQ97	22.0	50	25.3	380-420Δ/660-725Y	79,7 Δ/ 46,0 Y	690	-600	980	302	G 4'
		60	28.5	440-480Δ	45,0Δ	795	-590	820		

MODEL · In stock	IE3 Power Kw	Freq Hz	Output power Kw	Voltage V	Current A	Max airflow m^3/h	Max static vacuum mbar	Max static pressure mbar	Net.W Kg	Size Inch
4FB 210-0AQ36-1	0.75	50	0.95	220-240Δ/380-420Y	3.6Δ/2.1Y	47	-230	290	21	G 1'1/4
		60	1.1	440-480Y	2.1Y	57	-300	420		
4FB 220-0AQ36-1	0.75	50	0.95	220-240Δ/380-420Y	3.6Δ/2.1Y	47	-370	490	25	G 1'1/4
		60	1.1	440-480Y	2.1Y	60	-480	480		
4FB 220-0AQ56-1	1.5	50	1.75	220-240Δ/380-420Y	4.9Δ/2.85Y	47	-370	650	30	G 1'1/4
		60	2.0	440-480Y	2.75Y	60	-500	860		
4FB 310-0AQ36-1	0.75	50	0.95	220-240Δ/380-420Y	3.6Δ/2.1Y	65	-280	350	22	G 1'1/4
		60	1.1	440-480Y	2.1Y	76	-340	340		
4FB 310-0AQ46-1	1.1	50	1.3	220-240Δ/380-420Y	4.9Δ/2.85Y	65	-280	350	25	G 1'1/4
		60	1.6	440-480Y	2.75Y	76	-340	460		
4FB 320-0AQ46-1	1.1	50	1.3	220-240Δ/380-420Y	4.9Δ/2.85Y	65	-440	480	29	G 1'1/4
		60	1.6	440-480Y	2.75Y	76	-510	480		
4FB 320-0AQ56-1	1.5	50	1.75	220-240Δ/380-420Y	6.0 Δ / 3.45 Y	65	-440	660	33	G 1'1/4
		60	2.0	440-480Y	3.4Y	76	-540	630		
4FB 320-0AQ66-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	65	-440	750	39	G 1'1/4
		60	3.0	440-480Y	5.2Y	76	-540	890		

4FB

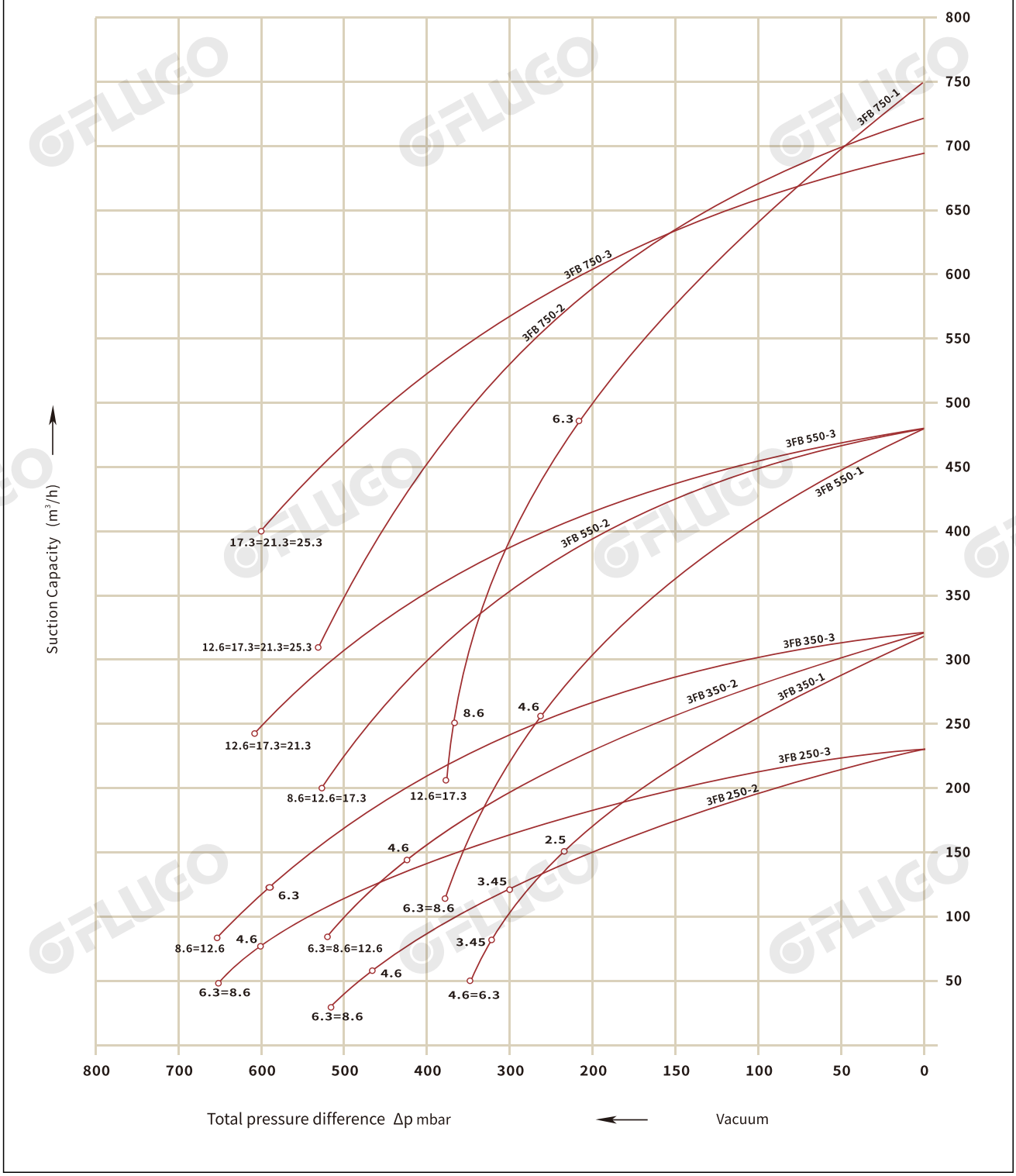
Selection and ordering data for side channel blowers in vacuum and pressure operation.

MODEL · In stock	IE3 Power Kw	Freq Hz	Output power Kw	Voltage V	Current A	Max airflow m^3/h	Max static vacuum mbar	Max static pressure mbar	Net.W Kg	Size Inch
4FB 330-0AQ56-1	1.5	50	1.75	220-240Δ/380-420Y	6.0 Δ / 3.45 Y	65	-650	730	38	G 1'1/4
		60	2.0	440-480Y	3.4Y	76	-680	780		
4FB 330-0AQ66-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	65	-650	980	43	G 1'1/4
		60	3.0	440-480Y	5.2Y	76	-680	1000		
4FB 410-0AQ16-1	1.1	50	1.3	220-240Δ/380-420Y	4.9Δ/2.85Y	87	-300	390	24	G 1'1/4
		60	1.6	440-480Y	2.75Y	105	-350	370		
4FB 410-0AQ26-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	87	-310	430	30	G 1'1/4
		60	3.0	440-480Y	5.2Y	105	-370	510		
4FB 420-0AQ26-1	1.5	50	1.75	220-240Δ/380-420Y	6.0 Δ / 3.45 Y	87	-500	460	36	G 1'1/4
		60	2.0	440-480Y	3.4Y	105	-500	410		
4FB 420-0AQ36-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	87	-500	730	41	G 1'1/4
		60	3.0	440-480Y	5.2Y	105	-550	700		
4FB 420-0AQ46-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	87	-500	830	46	G 1'1/4
		60	4.0	440-480Y	6.7Y	105	-560	950		
4FB 430-0AQ36-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	87	-650	680	48	G 1'1/4
		60	3.0	440-480Y	5.2Y	105	-680	700		
4FB 430-0AQ46-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	87	-650	1000	54	G 1'1/4
		60	4.0	440-480Y	6.7Y	105	-680	980		
4FB 510-0AQ16-1	1.5	50	1.75	220-240Δ/380-420Y	6.0 Δ / 3.45 Y	120	-310	360	30	G 1'1/4
		60	2.0	440-480Y	3.4Y	145	-340	330		
4FB 510-0AQ26-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	120	-310	420	35	G 1'1/4
		60	3.0	440-480Y	5.2Y	145	-370	490		
4FB 520-0AQ26-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	120	-490	540	46	G 1'1/4
		60	3.0	440-480Y	5.2Y	145	-520	500		
4FB 520-0AQ56-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	120	-500	730	51	G 1'1/4
		60	4.0	440-480Y	6.7Y	145	-560	680		
4FB 520-0AQ77-1	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	120	-500	820	56	G 1'1/4
		60	5.3	440-480Δ	8.50Δ	145	-560	900		
4FB 530-0AQ66-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	120	-680	680	63	G 1'1/4
		60	4.0	440-480Y	6.7Y	145	-690	620		
4FB 530-0AQ77-1	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	120	-680	950	68	G 1'1/4
		60	5.3	440-480Δ	8.50Δ	145	-690	900		
4FB 610-0AQ16-1	2.2	50	2.5	220-240Δ/380-420Y	8.6 Δ / 5.0 Y	165	-370	400	39	G 1'1/4
		60	3.0	440-480Y	5.2Y	195	-370	350		
4FB 610-0AQ26-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	165	-370	480	44	G 1'1/4
		60	4.0	440-480Y	6.7Y	195	-410	510		
4FB 620-0AQ26-1	3.0	50	3.45	220-240Δ/380-420Y	12.0 Δ/ 6.9Y	165	-570	480	59	G 1'1/4
		60	4.0	440-480Y	6.7Y	195	-510	420		
4FB 620-0AQ47-1	4.0	50	4.6	380-420Δ/660-725Y	8.6Δ/ 5.0Y	165	-660	690	64	G 1'1/4
		60	5.3	440-480Δ	8.50Δ	195	-630	620		
4FB 620-0AQ77-1	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	165	-660	1000	74	G 1'1/4
		60	7.3	440-480Δ	12,0Δ	195	-630	930		
4FB 630-0AQ57-1	5.5	50	6.3	380-420Δ/660-725Y	11,8Δ / 6,8 Y	170	-680	950	88	G 1'1/4
		60	7.3	440-480Δ	12,0Δ	200	-640	840		
4FB 630-0AQ67-1	7.5	50	8.6	380-420Δ/660-725Y	15,5Δ / 8,9Y	170	-680	1050	94	G 1'1/4
		60	9.9	440-480Δ	15,3Δ	200	-650	1080		

3FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

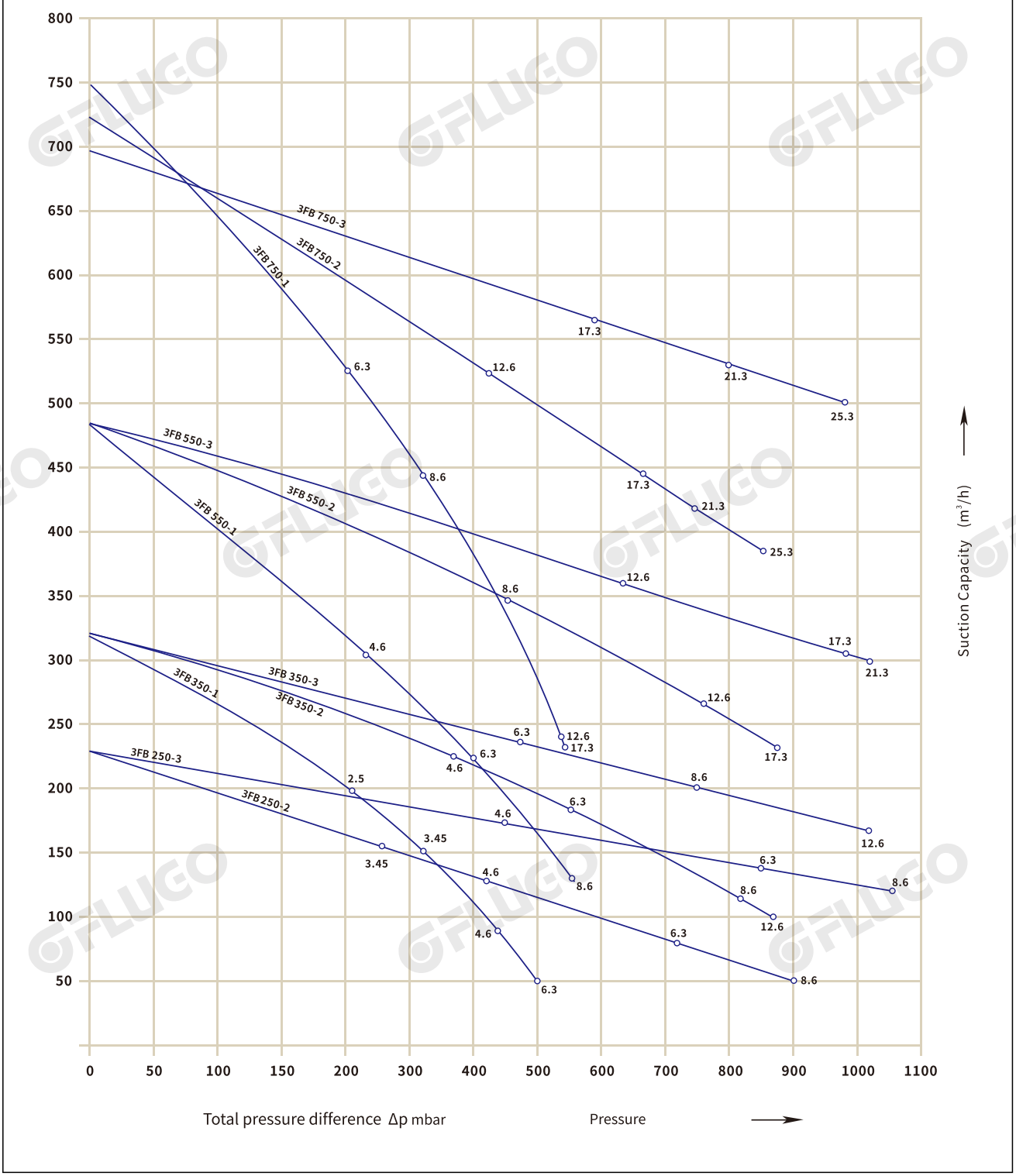
Vacuum Selection diagram 50Hz—



3FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

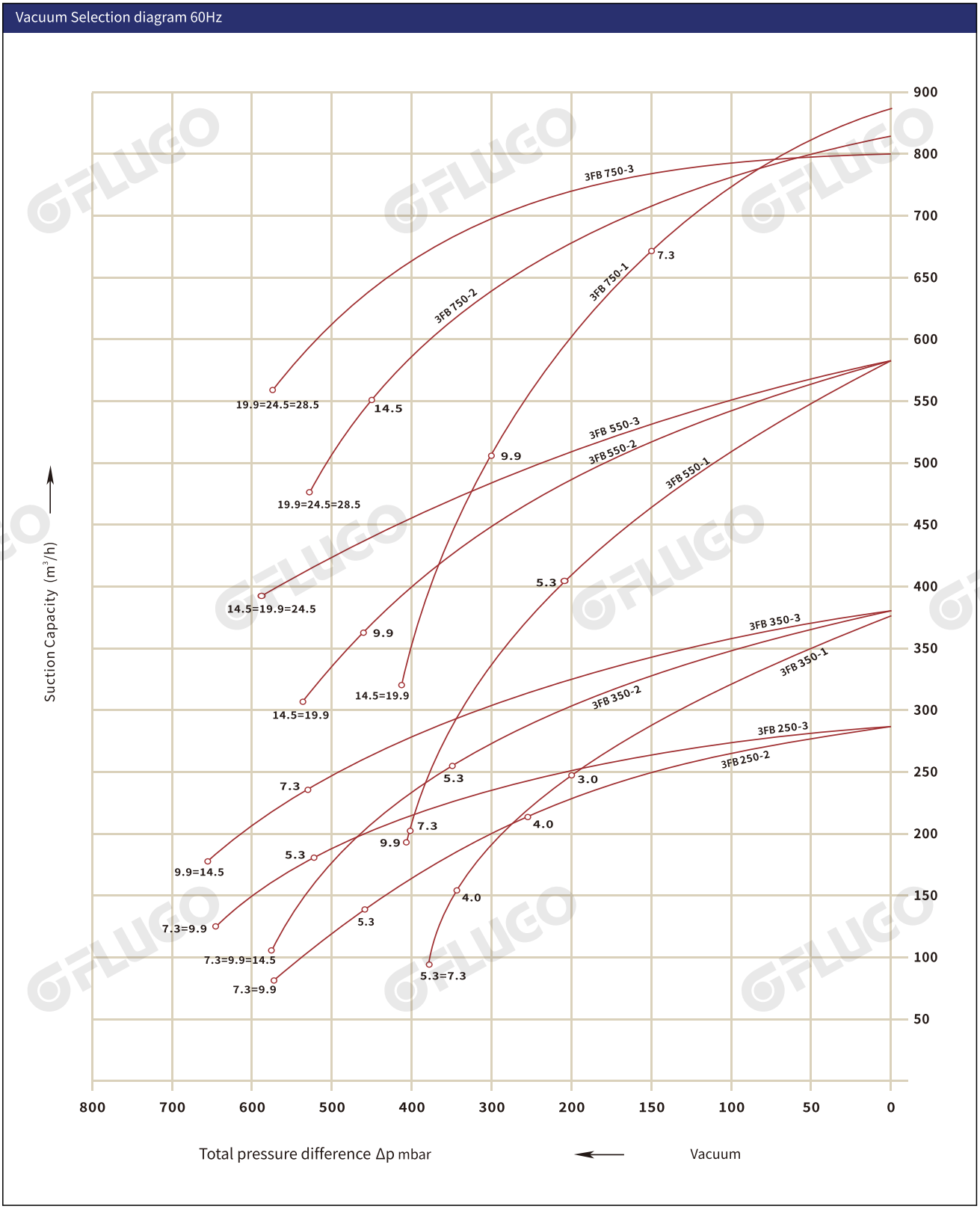
Pressure Selection diagram 50Hz



3FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

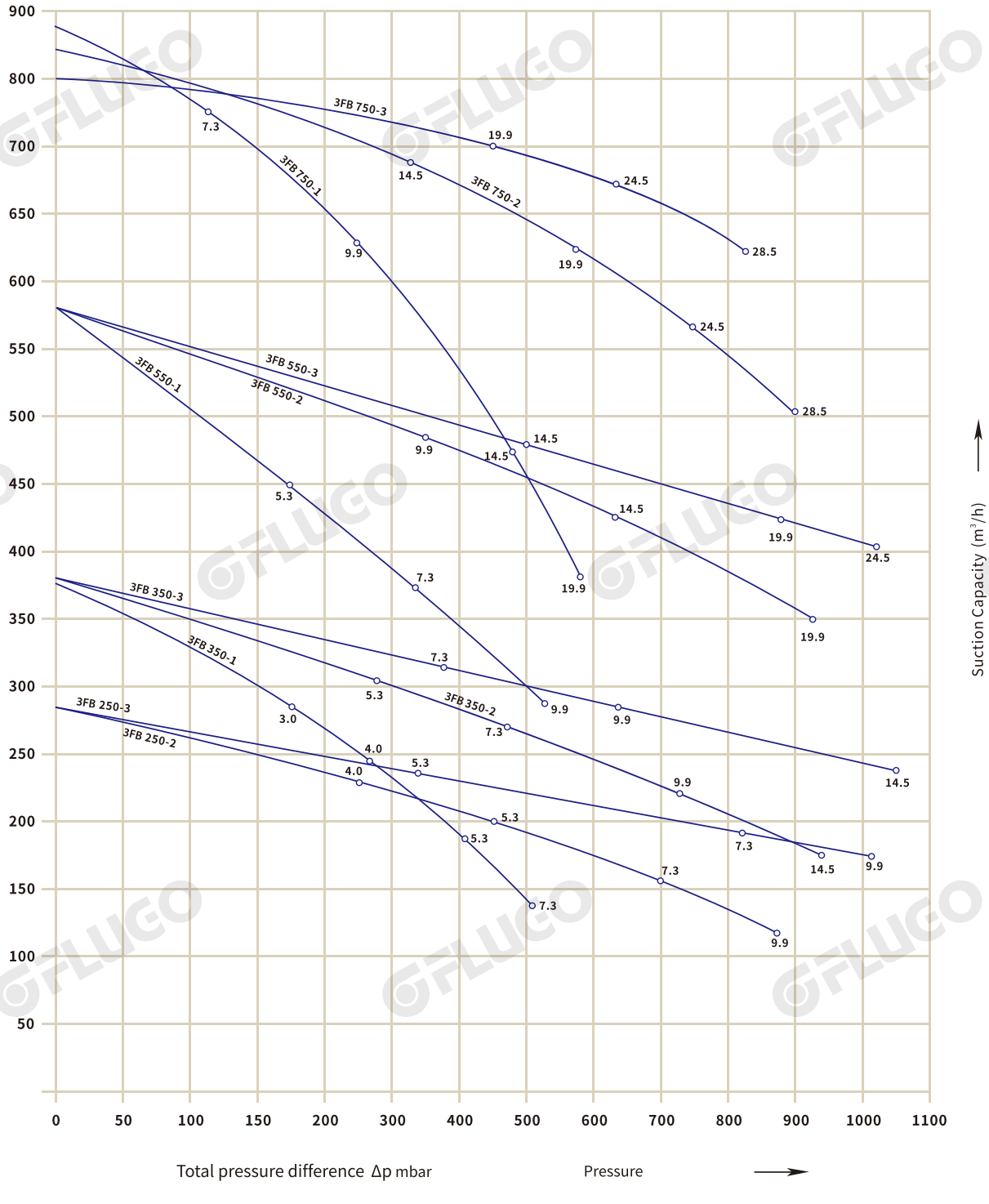
Vacuum Selection diagram 60Hz



3FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

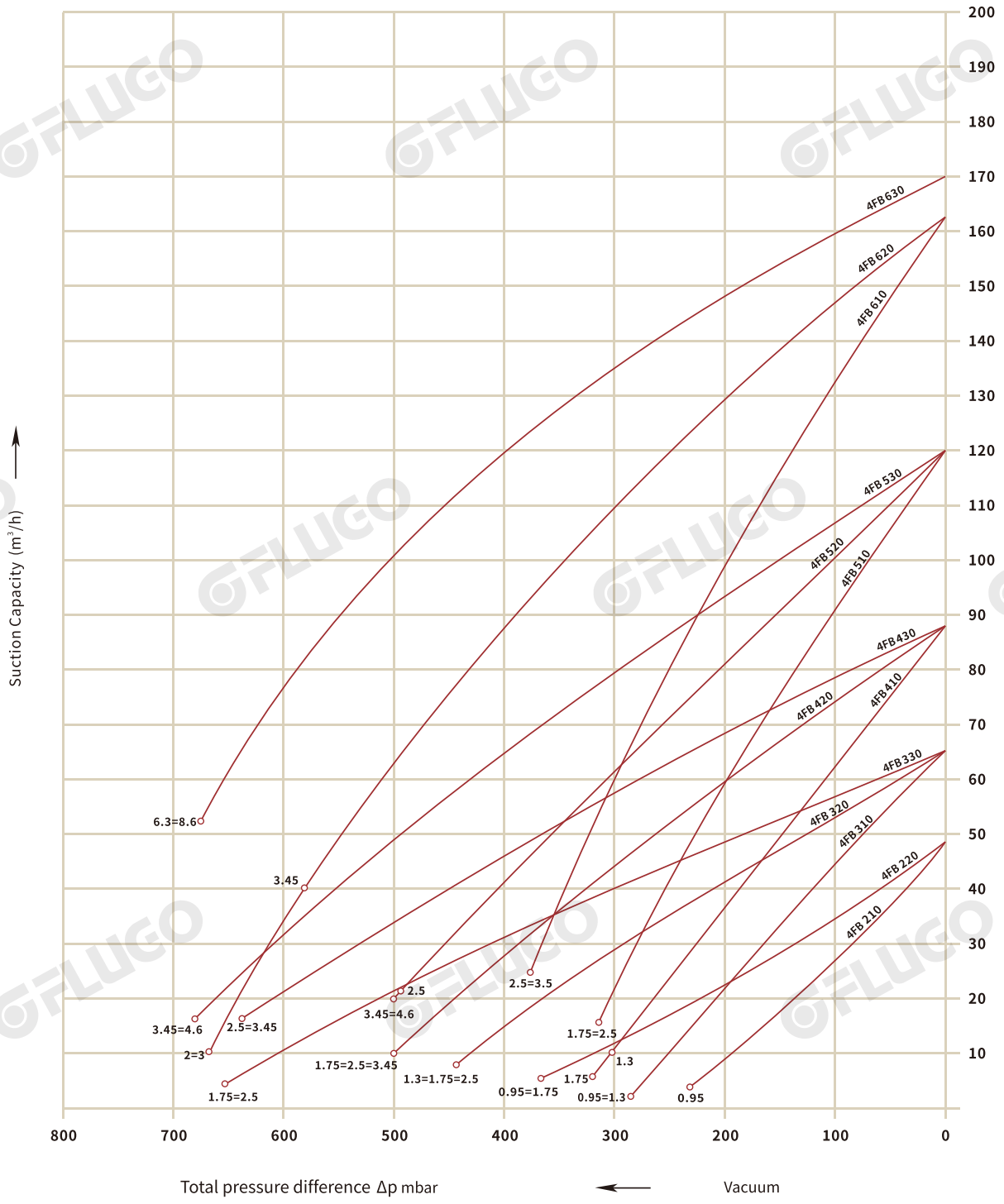
Pressure Selection diagram 60Hz



4FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

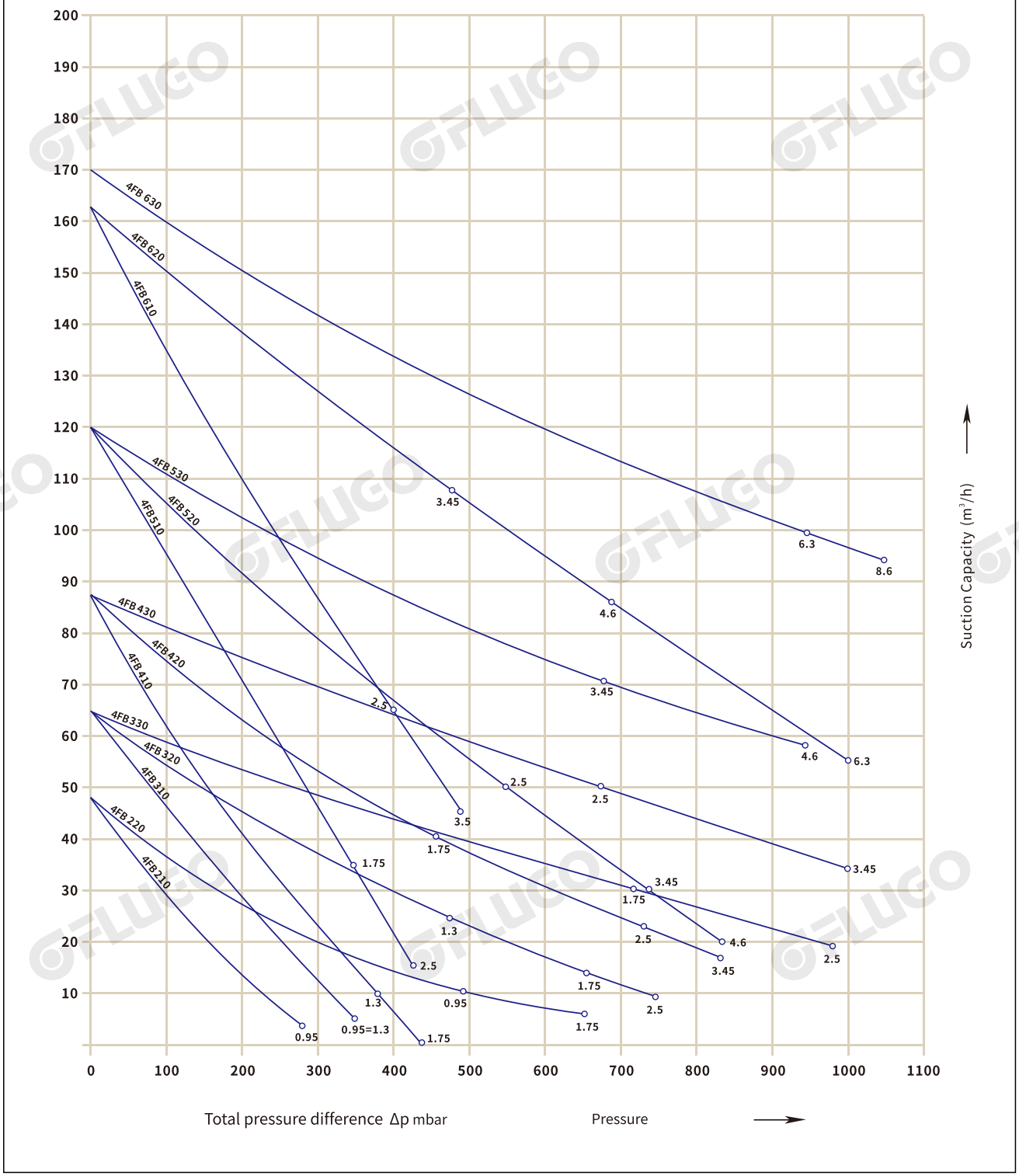
Vacuum Selection diagram 50Hz



4FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

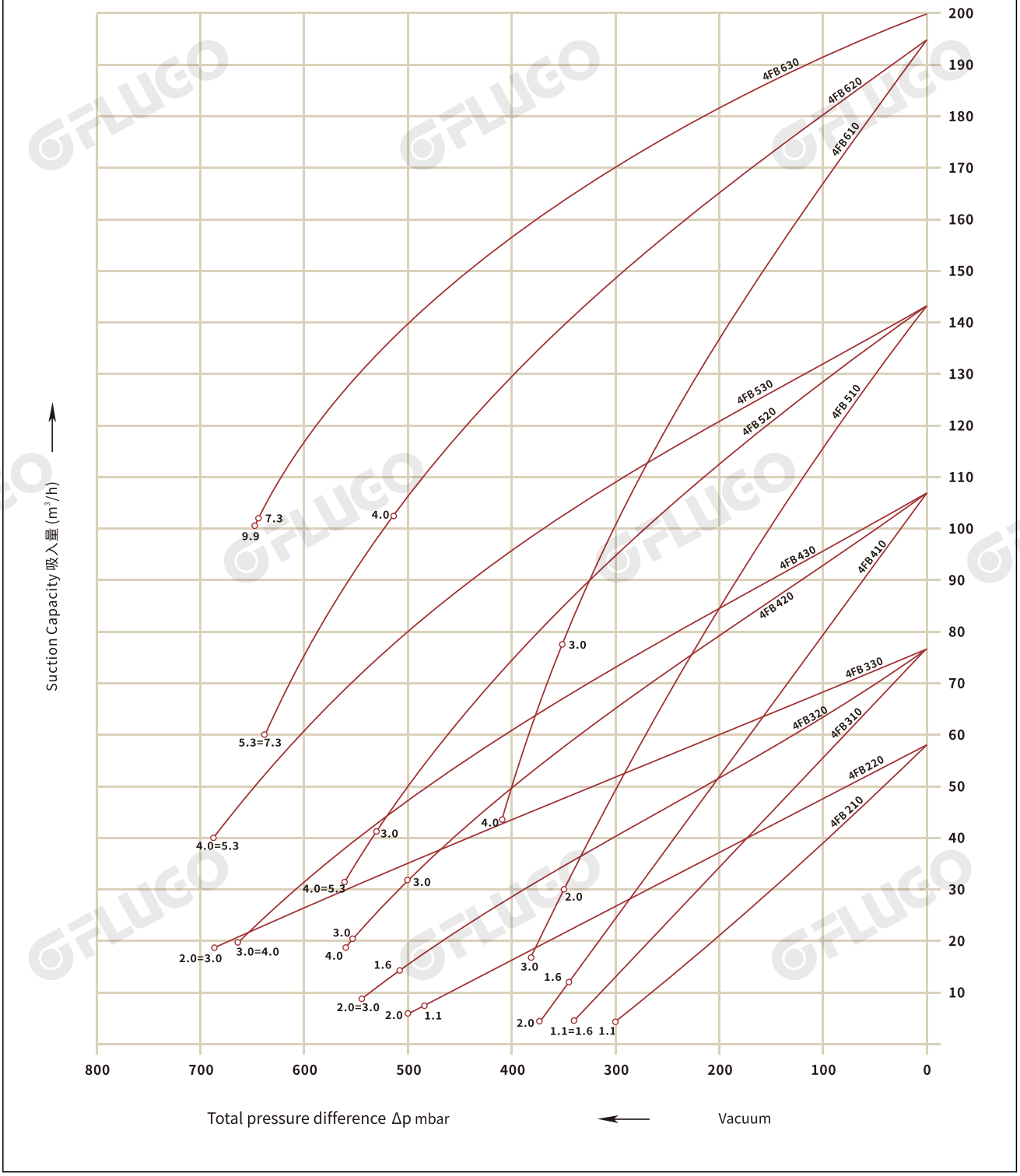
Pressure Selection diagram 50Hz



4FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

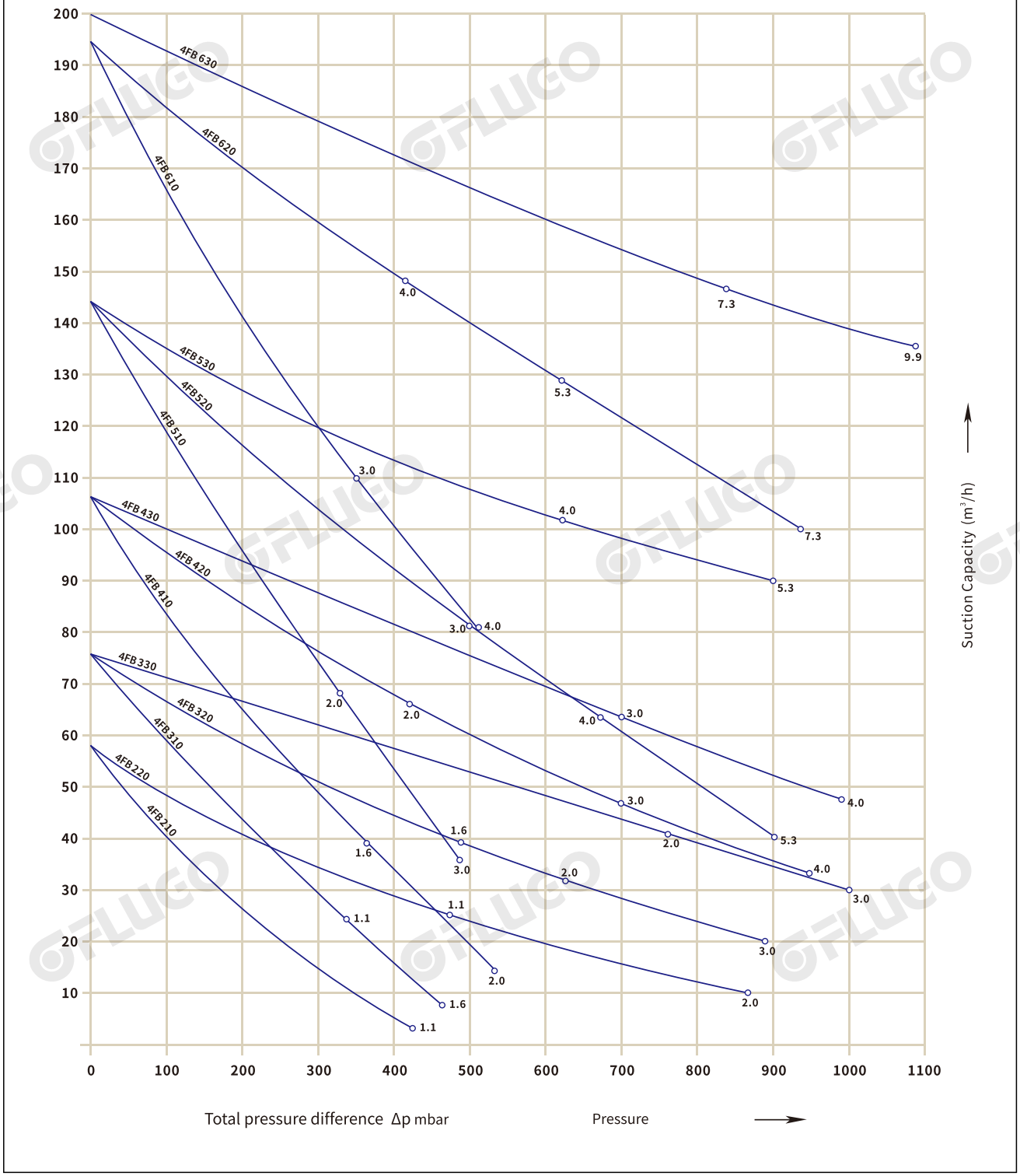
Vacuum Selection diagram 60Hz



4FB

The performance curves are valid for pumping air at 15°C at the inlet flanges with an air pressure of 1.013mbar and a tolerance of ±10%.The total pressure differences are valid up to an intake and ambient temperatrue of 25°C .

Pressure Selection diagram 60Hz

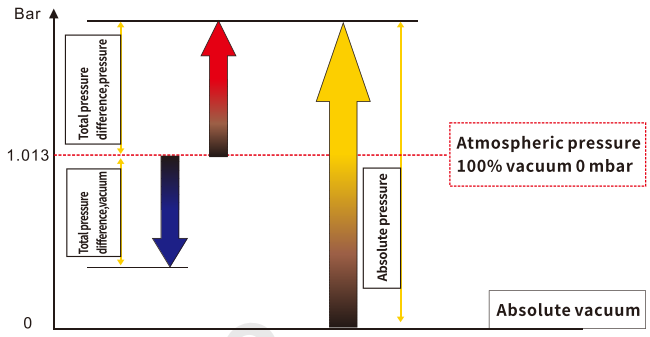


Conversion tables

Pressure		
Beginning units	**Conversion factor**	**Resulting units**
Pa	0.01	Mbar
hPa	1.0	mbar
kPa	10.0	mbar
mm H_2O	0.098	mbar
m H_20	98.07	mbar
at	980.7	mbar
inch H_2O	2.491	mbar
PSI lpt/in^2	68.948	mbar
mbar	100	Pa
mbar 1	10.2	mm H2O
mbar	10.2·10-3	m H2O
mbar	1.02·10-3	at
mbar	0.4016	inch H2O
mbar	14.505·10-3	PSI lpt/in2

Example of conversion
250[inch H2O]2·491=622.5[mbar]
The following formula is used to convert values from “inches of mercury vacuum” to “mbar abs”
1013-x[inches of mercury vacuum]·33·8≈Y[mbar abs.]

Absolute pressure
The pressure measured from absolute zero,using ideal vacuum as the datum.The measured pressure is always greater than the reference pressure.
Total pressure difference,pressure
The pressure measured above the prevailing atmospheric pressure.The datum is the prevailing atmospheric pressure and the measured pressure is always higher than the datum.
Total pressure difference,vacuum
The pressure measured lower than the prevailing atmospheric pressure.The datum is the prevailing atmospheric pressure and the measured pressure is always lower than the datum.



Suction capacity		
Beginning units	**Conversion factor**	**Resulting units**
l/min	0.06	m3/h
gal/min	0.227	m3/h
ft3/min	1.699	m3/h
m3/h	16.667	i/min
m3/h	4.403	gal/min
m3/h	0.588	ft3/min

Electrical power		
Beginning units	**Conversion factor**	**Resulting units**
hp	0.746	kW
btu/h	293.1	kW
kW	1.341	hp
kW	3.41·10-3	Btu/h

Weight		
Beginning units	**Conversion factor**	**Resulting units**
lbm	0.454	kg
kg	2.205	lbm

Length		
Beginning units	**Conversion factor**	**Resulting units**
in.	25.4mm	
in.	0.0254	m
ft	305	mm
ft	0.305	m
m	39.37	in.
m	3.28	f

Temperature conversion		
Conversion from	**to**	
°F	K	$T\,[k]=\frac{T[°F]+459.67}{1.8}$
°F	°C	$t\,[°C]=\frac{T[°F]-32}{1.8}$
K	°F	$t[°F]=1.8\cdot T[K]-459.67$
°C	°F	$t[°F]=1.8\cdot t[C]+32$

Motor voltages overview

The motors according to NEMA MG1-12. NP=NEMA Premium;
NEMA Premium includes IE3 and the EN 60034 norm
“Rotating electrical machines”.
Service factor (SF) and motor efficiency according NEMA MG1-12.
Voltage tolerances for three phase motors are +/-10%.
The frequency tolerance is +/- 2 % maximum.

Motor for alternate voltages

Voltage range		Efficiency standard	c UL us	87 Hz	100 Hz			
50 Hz	60Hz		60 Hz	5000rpm	6000rpm	3FB…-1.	□	□
3 Phase								
200 VΔ	200 V YY / 230 VΔ / 400 VY	NEMA Premium	•	345 VΔ	400 VΔ		P	1
190-210 VΔ	190-210 VYY / 220-240 VΔ / 380-420VY	IE3						
200 V YY / 230 VΔ / 400 VY	230 V YY / 460 VY	NEMA Premium	•	400 VΔ	- - - -		P	6
190-210 VYY / 220-240 VΔ / 380-420VY	220-240 VYY / 440-480VY	IE3						
190-210 VΔ	220-240 VΔ / 380-420VY	IE3	•	345 VΔ	400 VΔ		Q	1
475-525 V Y	550-600 V Y	NEMA Premium	•	- - - -	- - - -		Q	3
475-525 VΔ	550-600 VΔ	NEMA Premium	•	- - - -	- - - -		Q	5
220-240 VΔ / 380-420 V Y	440-480VY	IE3	•	400 VΔ	- - - -		Q	6
400 VΔ / 690 V Y	460 VΔ	NEMA Premium	•	- - - -	- - - -		Q	7

Regarding the technical parameters of the side channel blower corresponding to different voltages and frequencies mentioned above, please download the relevant performance curves

FLUGO

3FB Series - blower with high efficiency motor

Authorized Distributor