

FTDB

DWDI Backward-curved Centrifugal Fan

ELTA

AMCA APPROVED



Description

FTDB DWDI backward-curved centrifugal fans

Licensed to bear the AMCA Seal for Sound and Air performance and Fan Efficiency Grade (FEG)

15 models ranging from 200mm to 1000mm

Air volume flow rates from 1000m³/h to 120,000m³/h

Total pressure from 200 Pa to 3000 Pa

Belt driven

Operating ambient temperature of up to +40°C

Available in 4 versions: Standard base (SB), Standard (S), Heavy duty (H) and Super Heavy duty (HS)

Also available in twin-fan configuration for selected sizes

Each fan comprises a housing unit, impeller, bearing and shaft

If motor is required IP55 protection is standard, Class F insulation with Class B temperature rise

Features

Housing is made of galvanised steel

Backward-curved impeller is made of high-grade cold-rolled steel

Inlet cones are fitted to side plates

Designed to achieve highly aerodynamic inlet conditions

Frames for S version are made of galvanised angled iron

H version has additional steel plates welded to angled iron frames for enhanced rigidity and strength

HS version uses thicker gauge materials

Fan shaft is made of carbon steel and coated to resist corrosion

Bearings are of high quality to minimise fan noise

High efficiency & low power consumption

Outlet flange and thermal protection for motors are available upon request

Construction

Scroll is joint to the side plates through spot welds or Pittsburgh seam

Impellers are welded using high precision machine and balanced to ANSI/AMCA 204-05

Shafts undergo stress relief and heat treatment process and are designed to operate at 1.4 times the fan maximum running speed

Frames for H and HS version are finished in polyester coating

Bearings are either sealed and maintenance free or have lubrication fittings

Can be built to suit one of the four discharge positions



Product Coding

Code	Reference
FTDB	DWDI backward curved centrifugal fan
560	Nominal Diameter (mm)
-	
ACW	Direction of rotation (see Fig.1)
90	Discharge position (see Fig.1)
-	
HS	Type of construction: SB : Standard base S : Standard H : Heavy Duty HS : Super - heavy duty
e.g.	FTDB560-ACW90-HS

Typical applications

Central air-conditioning system

Air purification systems and a variety of ventilation applications

Not suitable for corrosive, inflammable, toxic or explosive environments

Product Overview

Elta Malaysia Sdn Bhd certifies that the FTDB fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. All the Centrifugal Fans described herein are licensed to bear the AMCA Seal, and their certified ratings are shown on pages 5 through 19.



Fig 1: Discharge positions and Direction of rotation

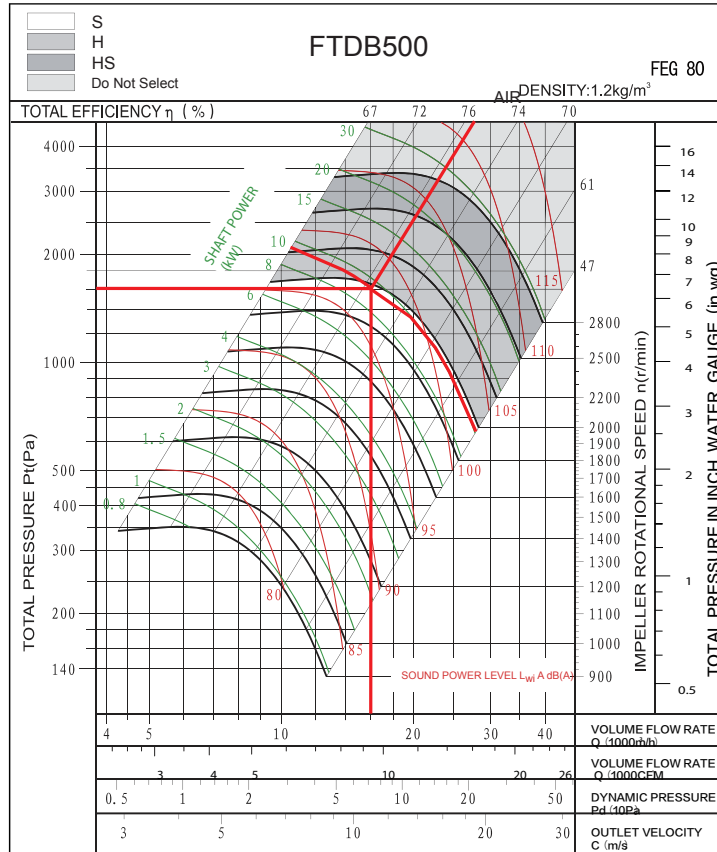
	0 °	90 °	180 °	270 °
ACW Anticlockwise				
CW Clockwise				

Note: Direction of rotation is determined from the drive side

Fig 2: Types of construction

Version	Fan Size	Fan Diagram	
SB	200-250		
S	200-250		
S	280-710		
H, HS	280-1000		
S2	280-500		
H2	355-560		

Model	FTDB500H
Volume	$q_v=16000\text{m}^3/\text{h}$
Total Pressure	$P_{tF}=1600\text{Pa}$
Dynamic Pressure	$P_{dF}=71\text{Pa}$
Outlet Velocity	$C=10.92\text{m/s}$
Fan Speed	$n=1977\text{r/min}$
Shaft Power	$P_{sh}=9.43\text{kW}$
A Sound Power Level	$L_{wA}=97\text{dB(A)}$
Total Efficiency	$\eta_F=75.4\%$



The power (P_{sh}) on the performance chart refers to the shaft power of the fan.
 The rated power of the drive motor equals the total required shaft input multiplied by the safety factor : $P_{sh.p}=P_{sh} \times K + \eta_{me}$
 The value of mechanical drive efficiency can be obtained from Table 1.
 The required safety factors is provided in Table 2.

(Table 1)

Drive Type	η_{me}
Motor Direct	1
Coupling direct	0.98
Belt	0.95

(Table 2)

Power of electric motor (Kw)	Value k
$\leq 2.2\text{Kw}$	1.2
$\leq 7.5\text{Kw}$	1.15
$\geq 11\text{Kw}$	1.1

The twin fans' performance calculation is the double fan performance calculation formula:

$$\begin{array}{l|l|l|l} \text{Volume} & \times 2 & \text{RPM} & \times 1.05 \\ \hline \text{Shaft Power} & \times 2.15 & \text{Noise} & +3 \text{ dB} \end{array}$$

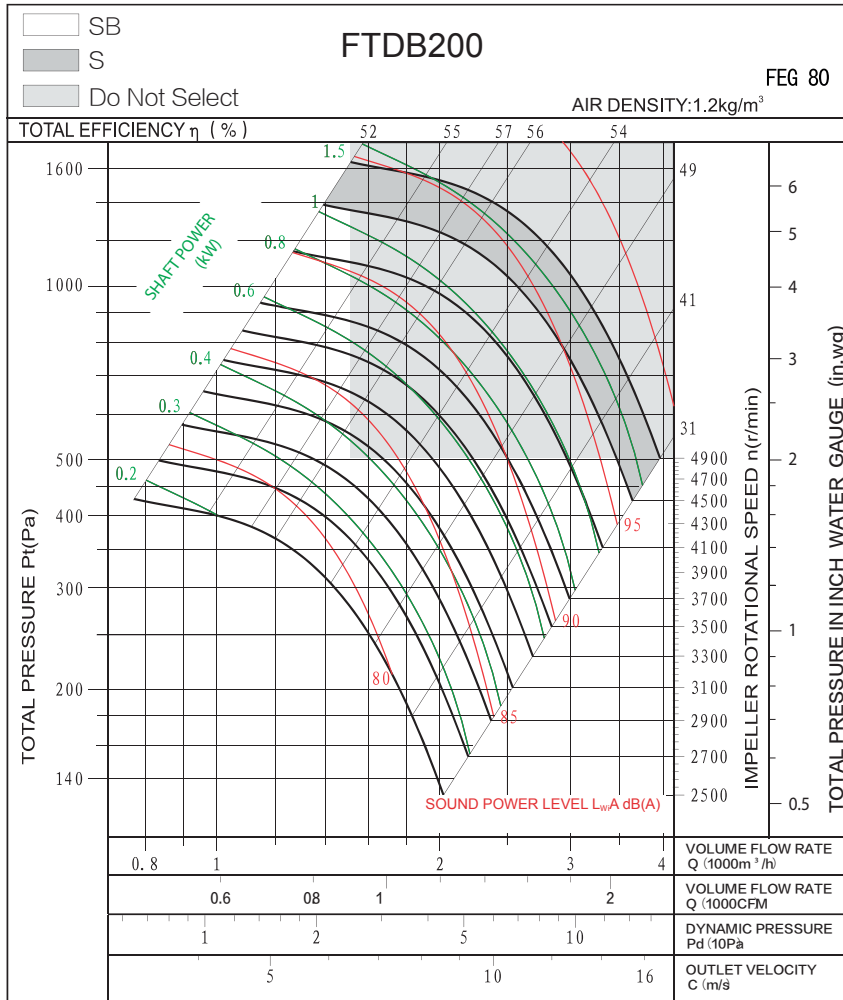
Performance of twin fans are not licensed by AMCA International.

FTDB200 FEG80

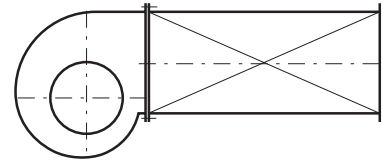
Technical Data & Performance Curve

Wheel diameter	D = 200 mm	Fan weight	m = 10 kg
Moment of inertia	J = 0.006 kgm ²	Speed limit	n _{max} = 4900 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

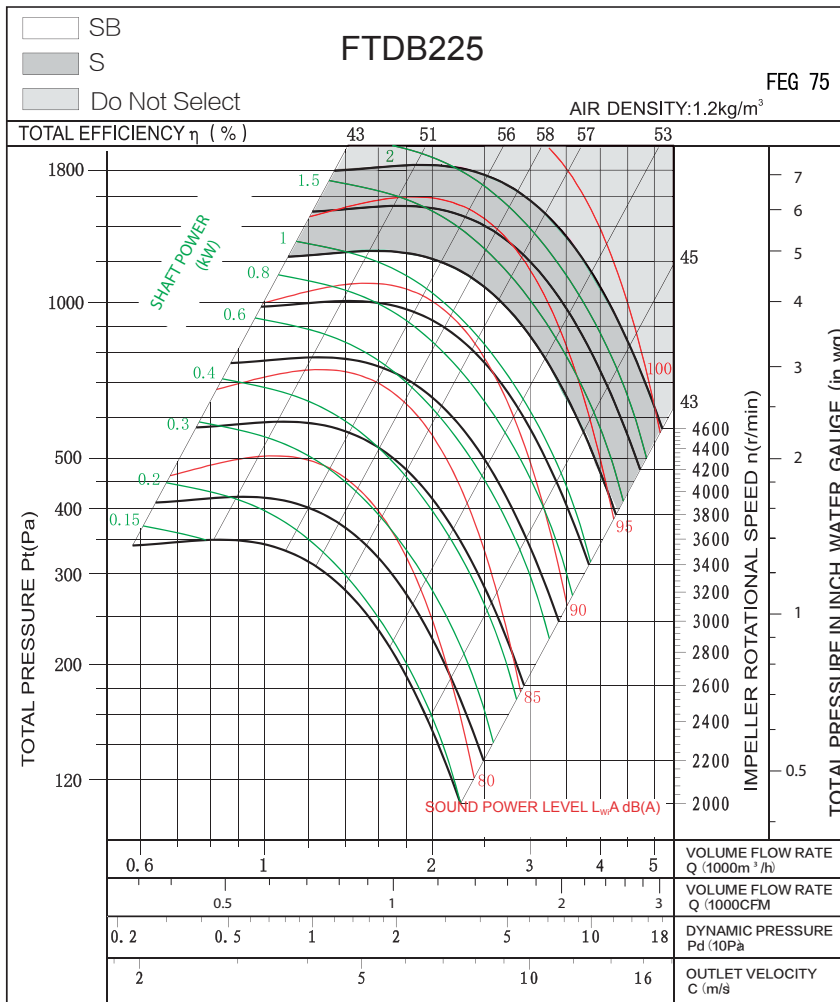


FTDB225 FEG75

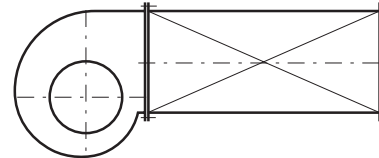
Technical Data & Performance Curve

Wheel diameter	D = 225 mm	Fan weight	m = 12 kg
Moment of inertia	J = 0.012kg ·m ²	Speed limit	n _{max} = 4600 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

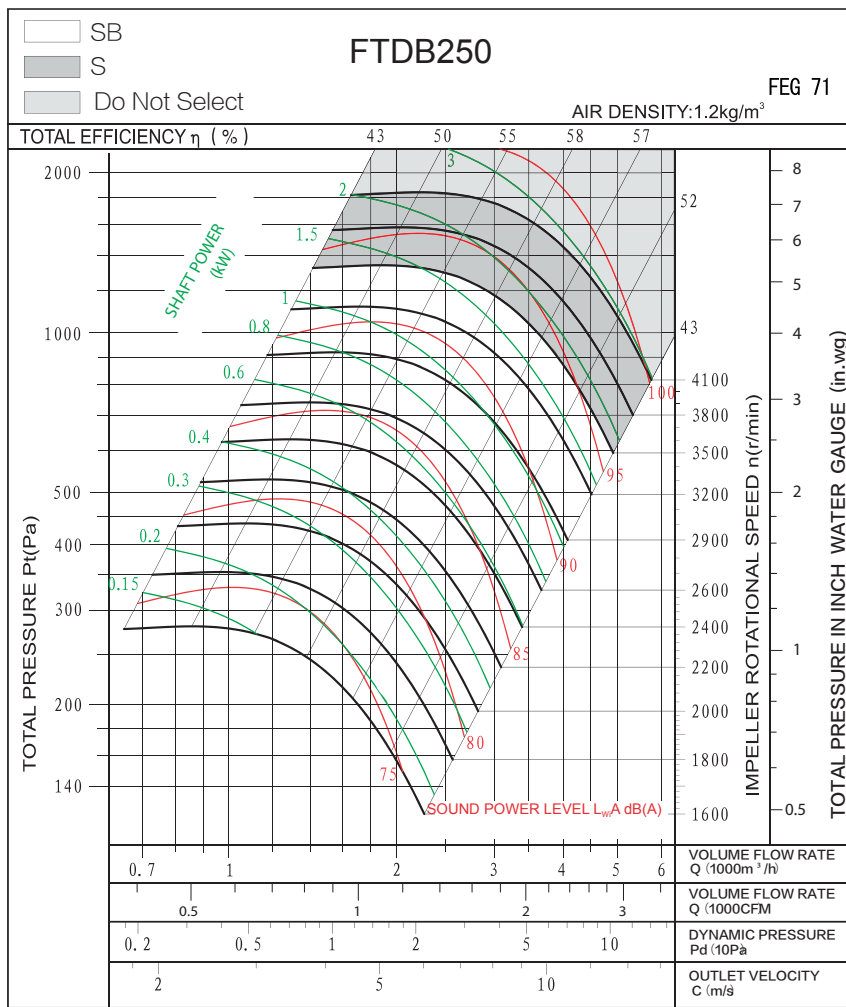


FTDB250 FEG71

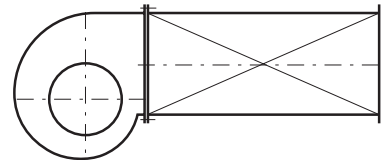
Technical Data & Performance Curve

Wheel diameter	D = 250mm	Fan weight	m = 18 kg
Moment of inertia	J = 0.044kg · m ²	Speed limit	n _{max} = 4100 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

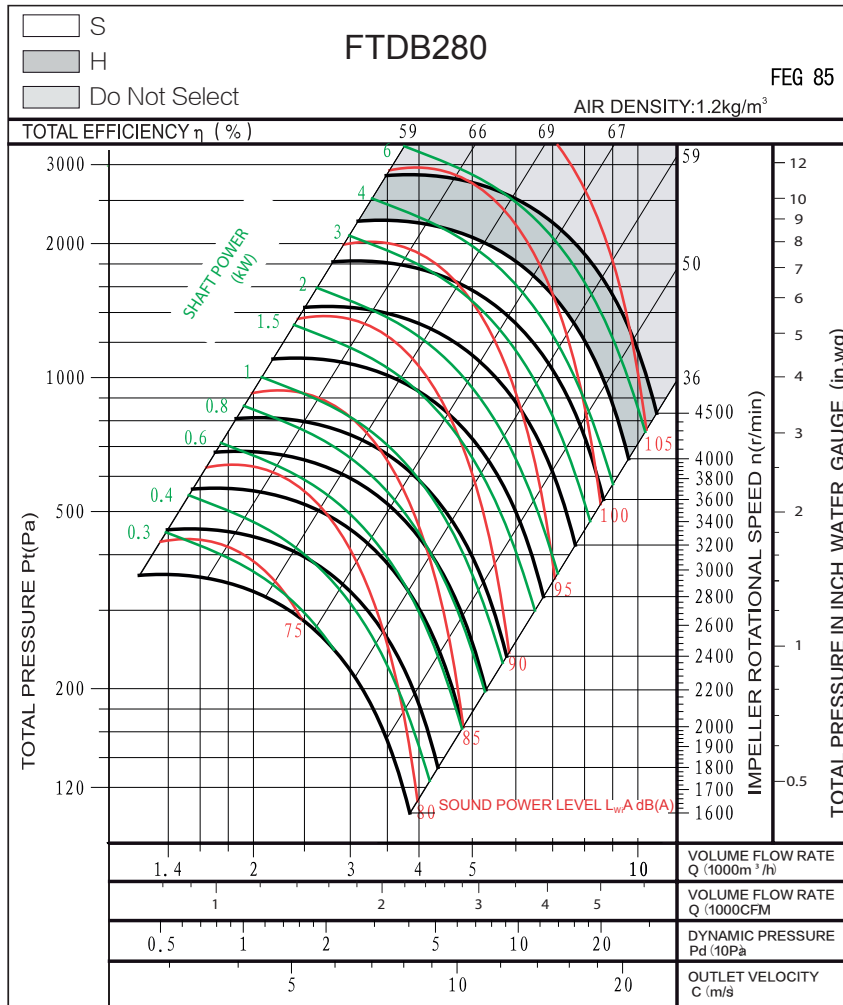


FTDB280 FEG85

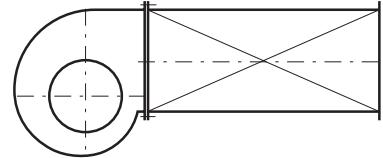
Technical Data & Performance Curve

Wheel diameter	D = 280 mm	Fan weight	m = 32 kg
Moment of inertia	J = 0.069kg · m ²	Speed limit	n _{max} = 4500 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

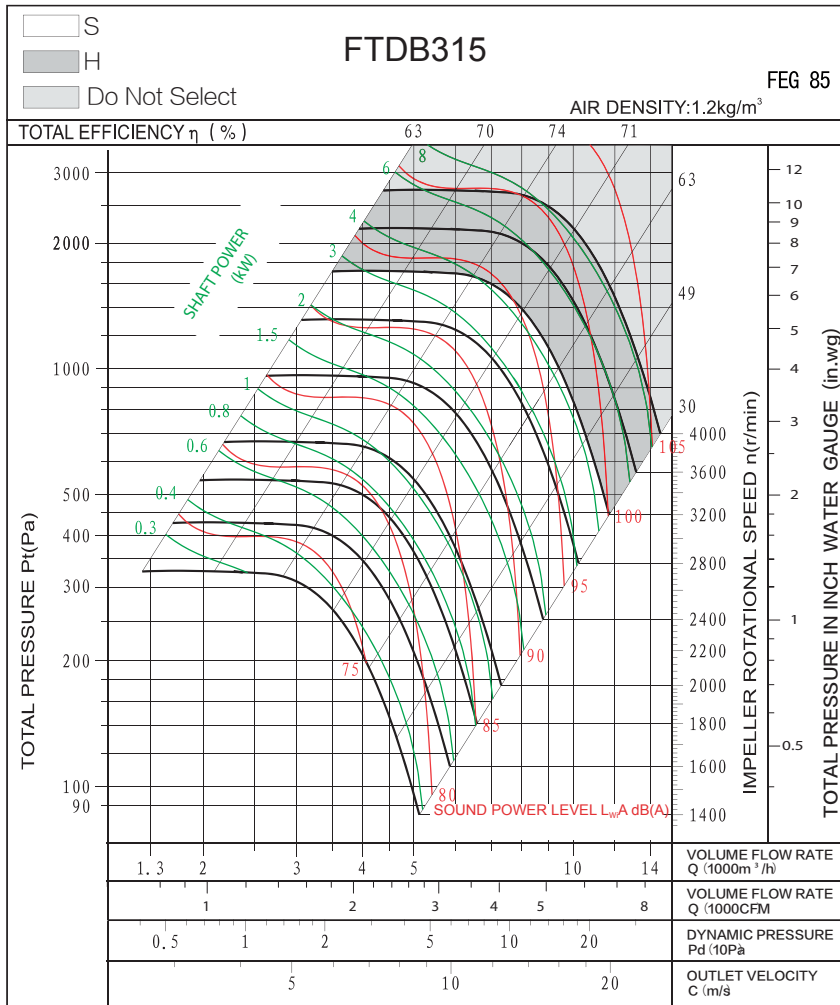


FTDB315 FEG85

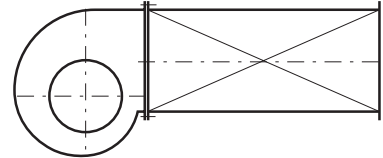
Technical Data & Performance Curve

Wheel diameter	D = 315 mm	Fan weight	m = 42.6 kg
Moment of inertia	J = 0.11kg · m ²	Speed limit	n _{max} = 4000 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

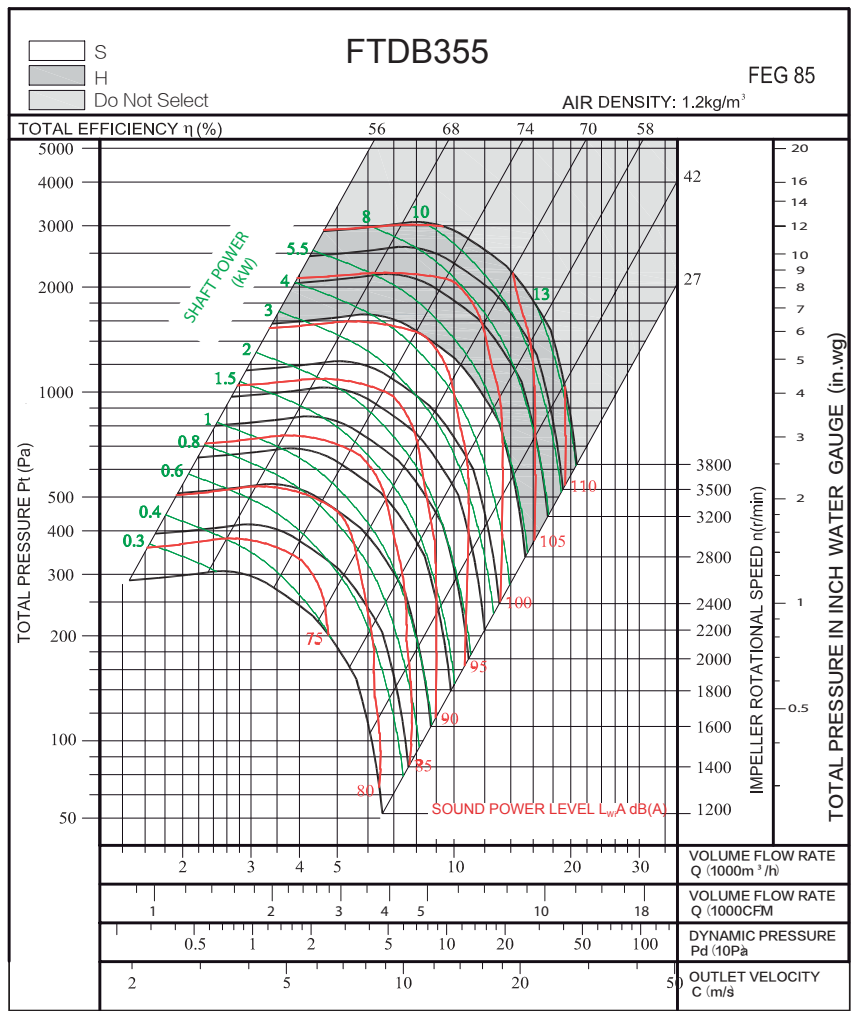


FTDB355 FEG85

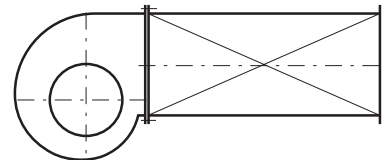
Technical Data & Performance Curve

Wheel diameter	D = 355 mm	Fan weight	m = 54.7 kg
Moment of inertia	J = 0.2kg · m ²	Speed limit	n _{max} = 3800 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

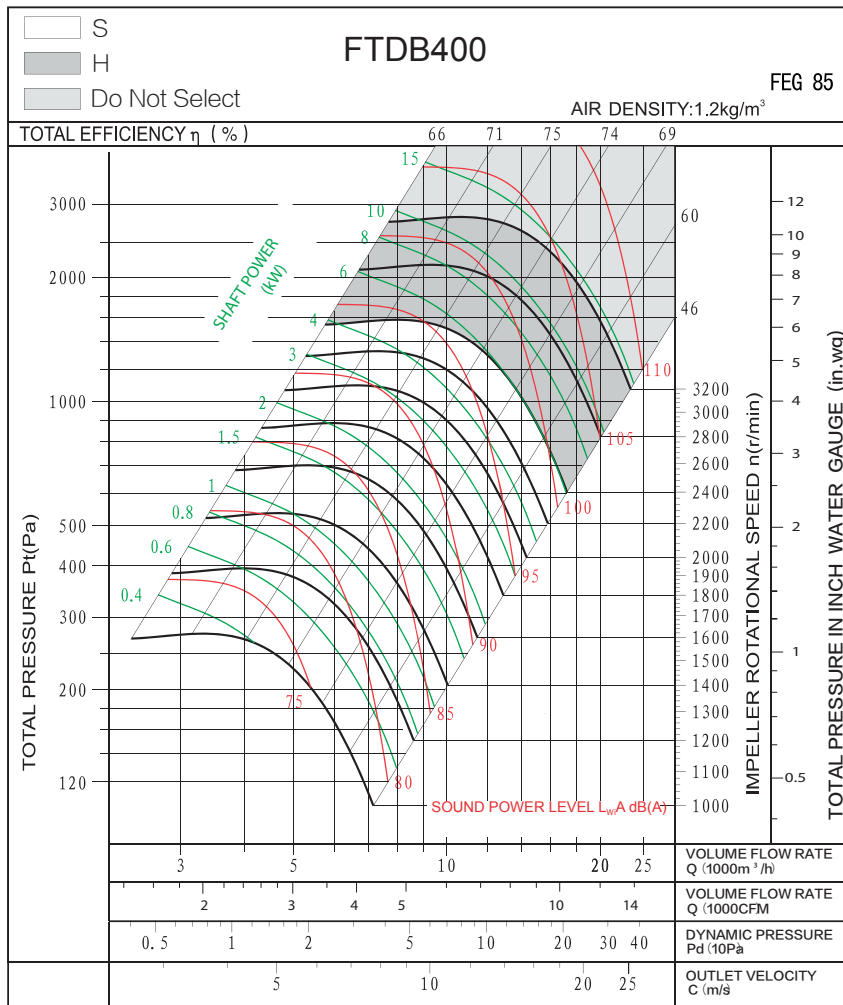


FTDB400 FEG85

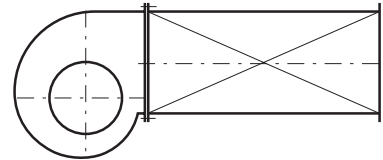
Technical Data & Performance Curve

Wheel diameter	D = 400mm	Fan weight	m = 63.6 kg
Moment of inertia	J = 0.34kg · m ²	Speed limit	n _{max} = 3200 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

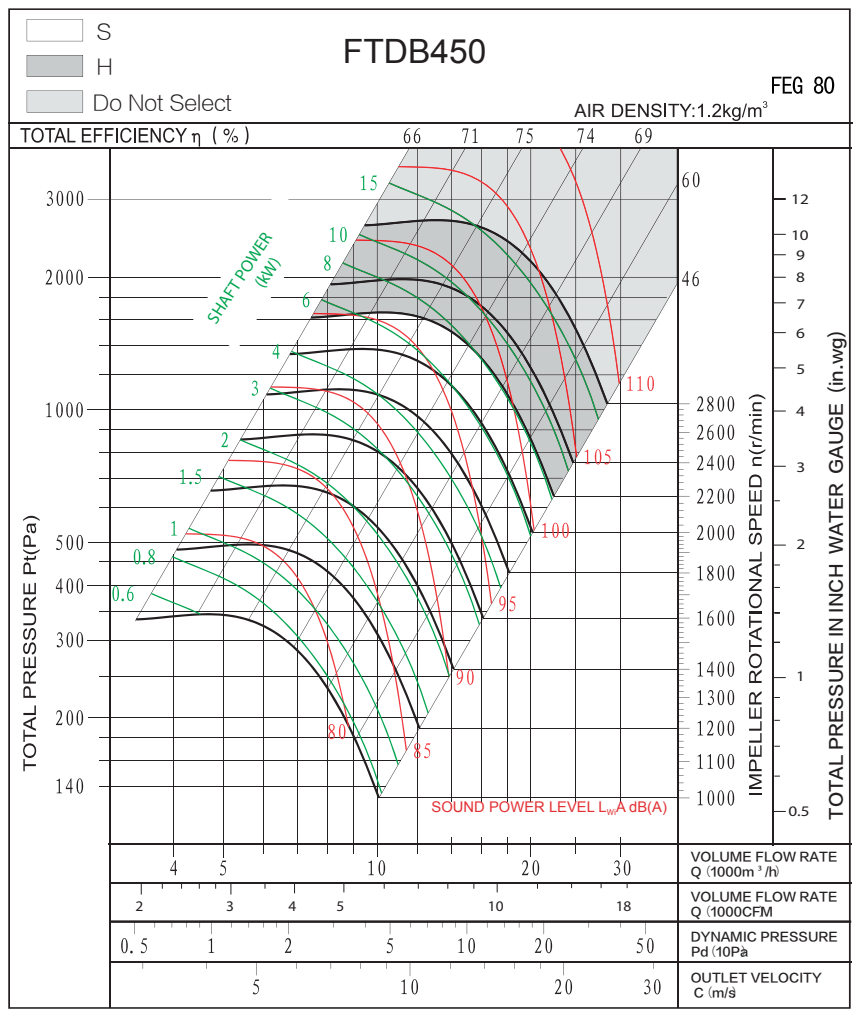


FTDB450 FEG80

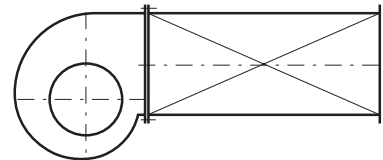
Technical Data & Performance Curve

Wheel diameter	D = 450 mm	Fan weight	m = 82.5 kg
Moment of inertia	J = 0.51kg · m ²	Speed limit	n _{max} = 2800 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

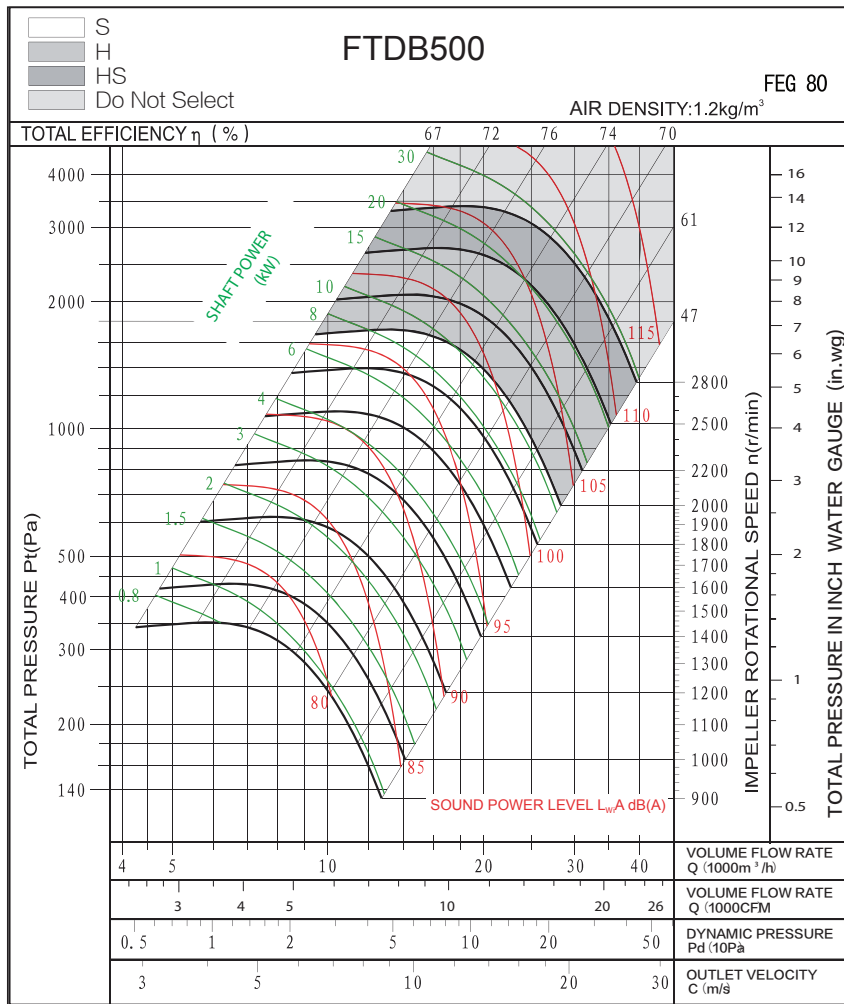


FTDB500 FEG80

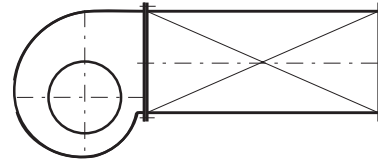
Technical Data & Performance Curve

Wheel diameter	D = 500mm	Fan weight	m = 104.2kg
Moment of inertia	J = 0.88kg · m ²	Speed limit	n _{max} = 2800 r/min

Performance certified is for installation type B: free inlet, ducted outlet. rating (kW) does not include transmission losses. Performance ratings include the effects of appurtenances (accessories). The A-weighted sound shown have been calculated per AMCA International Standard 301. Values are for inlet L_w A sound power levels for installation type B: free inlet, ducted



Measured in installation B according to AMCA Standard 210

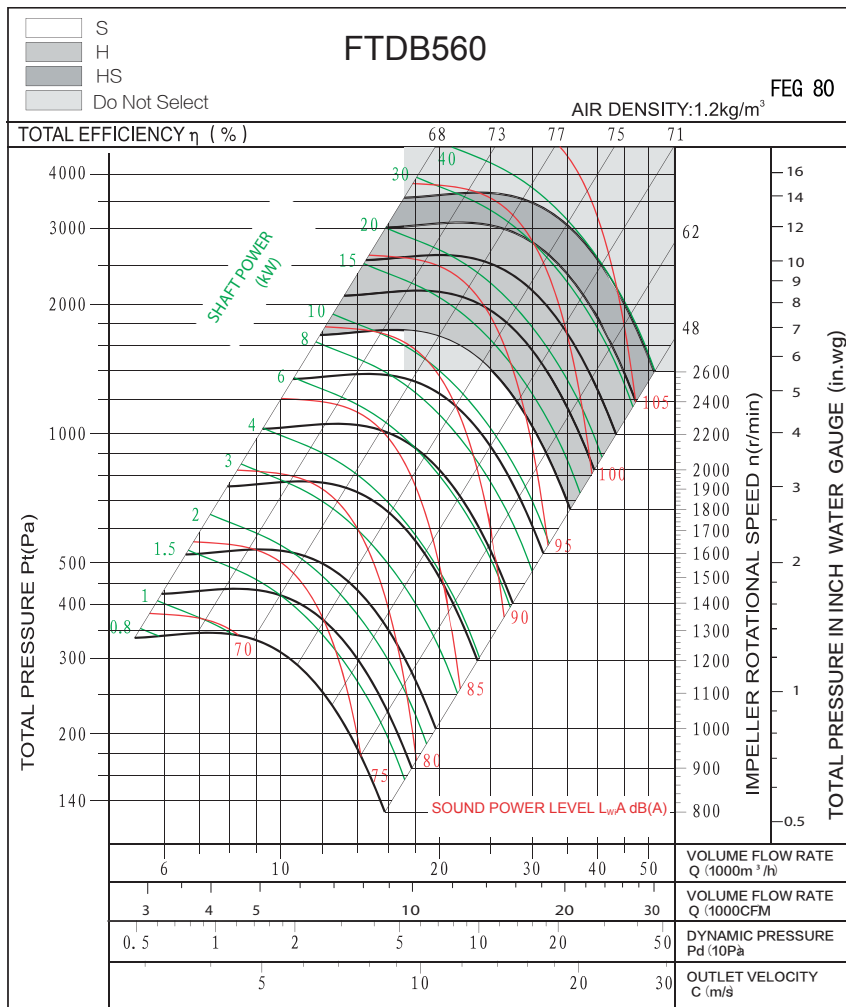


FTDB560 FEG80

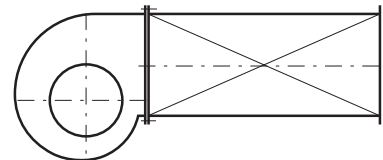
Technical Data & Performance Curve

Wheel diameter	D = 560 mm	Fan weight	m = 171 kg
Moment of inertia	J = 1.42kg · m ²	Speed limit	n _{max} =2600 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

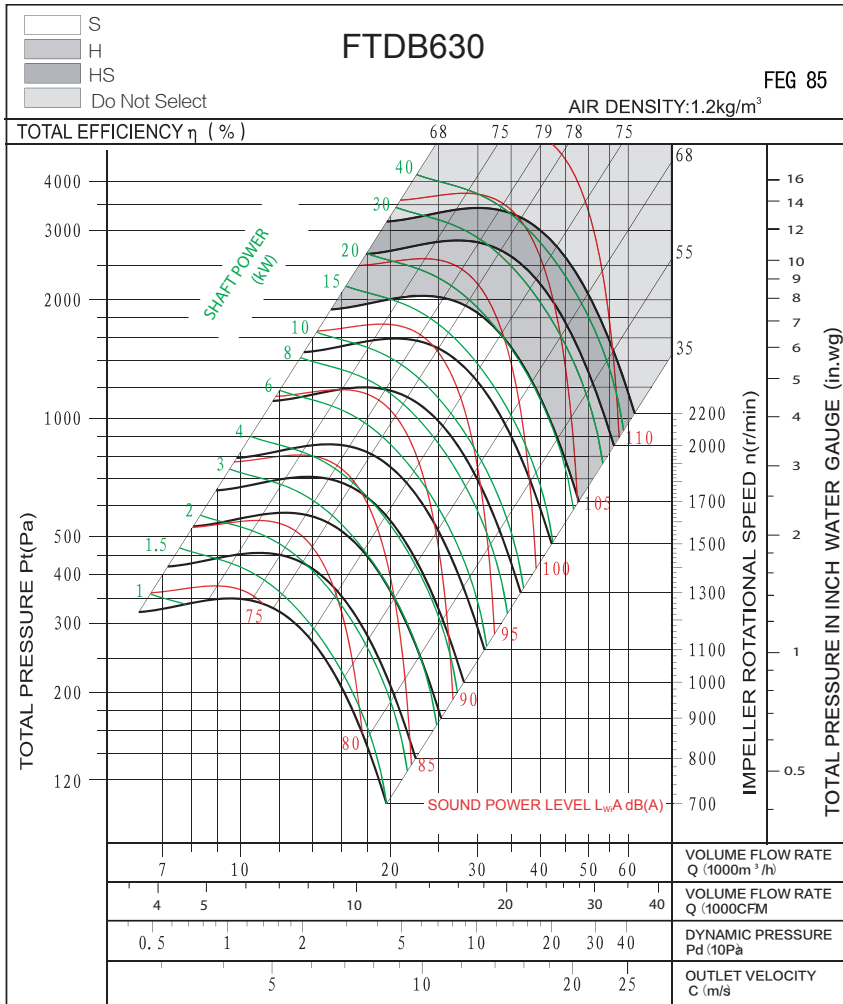


FTDB630 FEG85

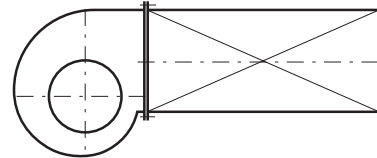
Technical Data & Performance Curve

Wheel diameter	D = 630 mm	Fan weight	m = 197kg
Moment of inertia	J = 2.32kg · m ²	Speed limit	n _{max} =2200 r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

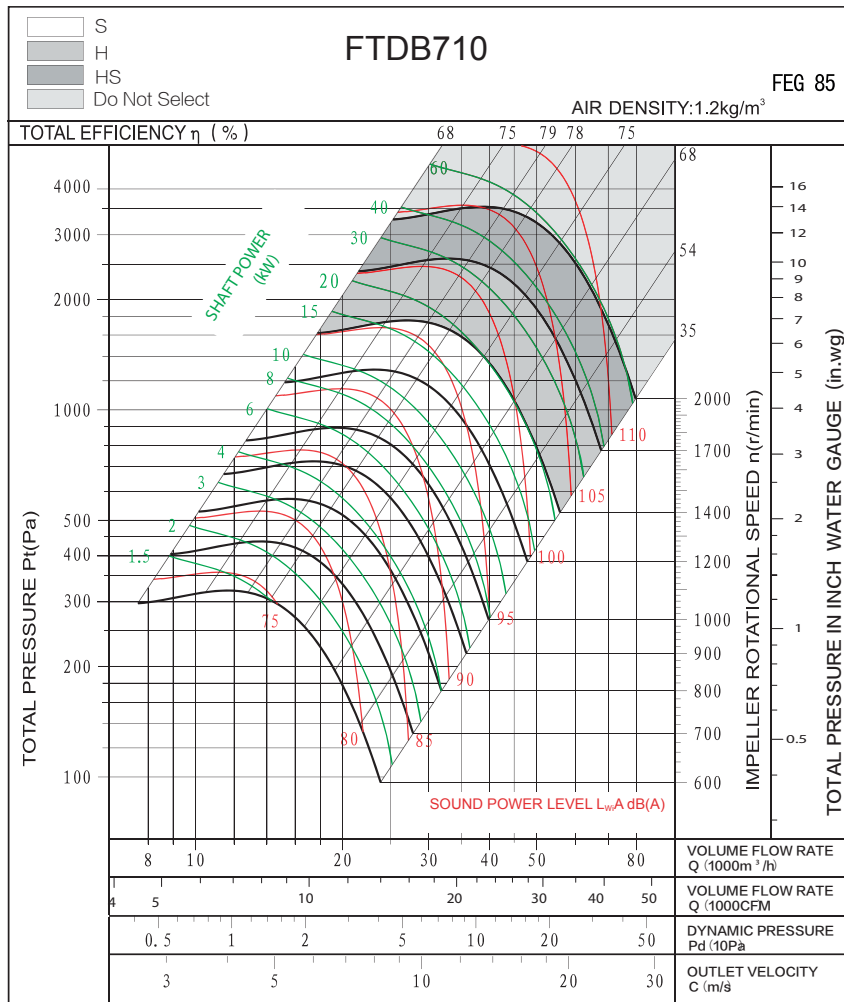


FTDB710 FEG85

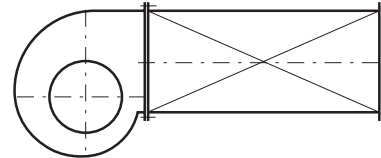
Technical Data & Performance Curve

Wheel diameter	D = 710mm	Fan weight	m = 271kg
Moment of inertia	J = 4.75kg · m ²	Speed limit	n _{max} =2000r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

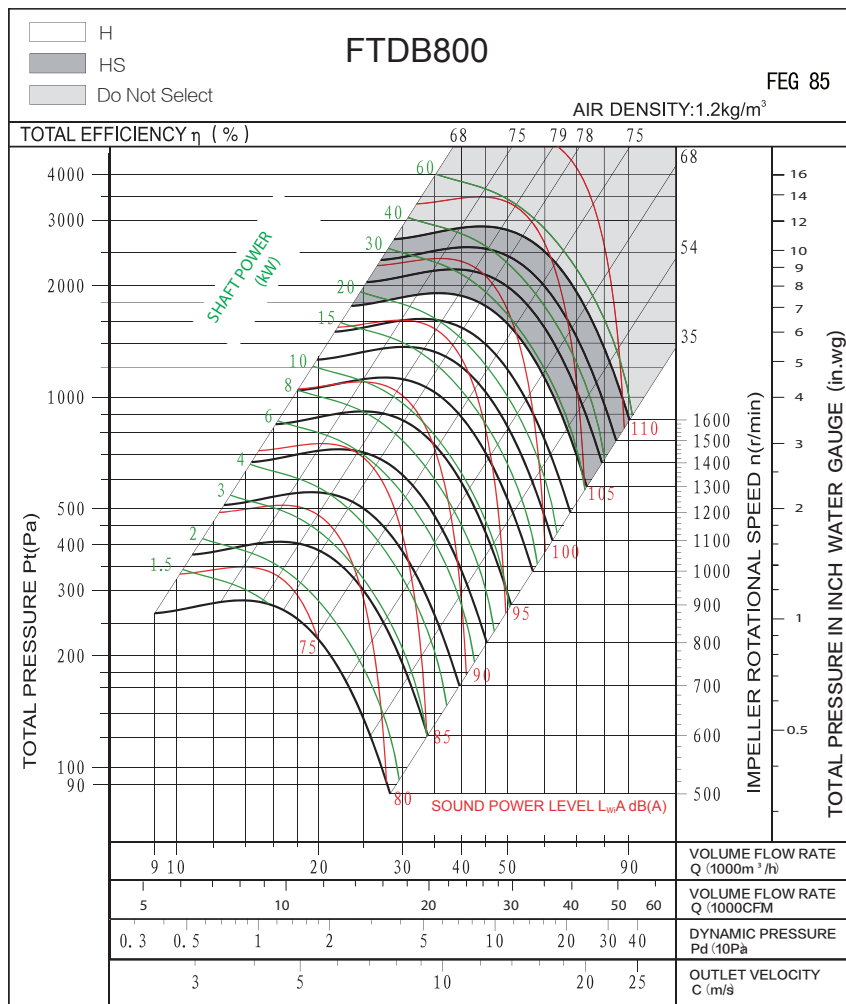


FTDB800 FEG85

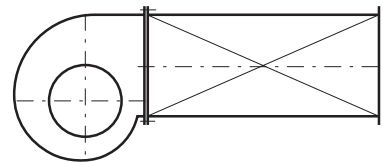
Technical Data & Performance Curve

Wheel diameter	D = 800mm	Fan weight	m = 300kg
Moment of inertia	J = 9.25 kg · m ²	Speed limit	n _{max} =1600r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

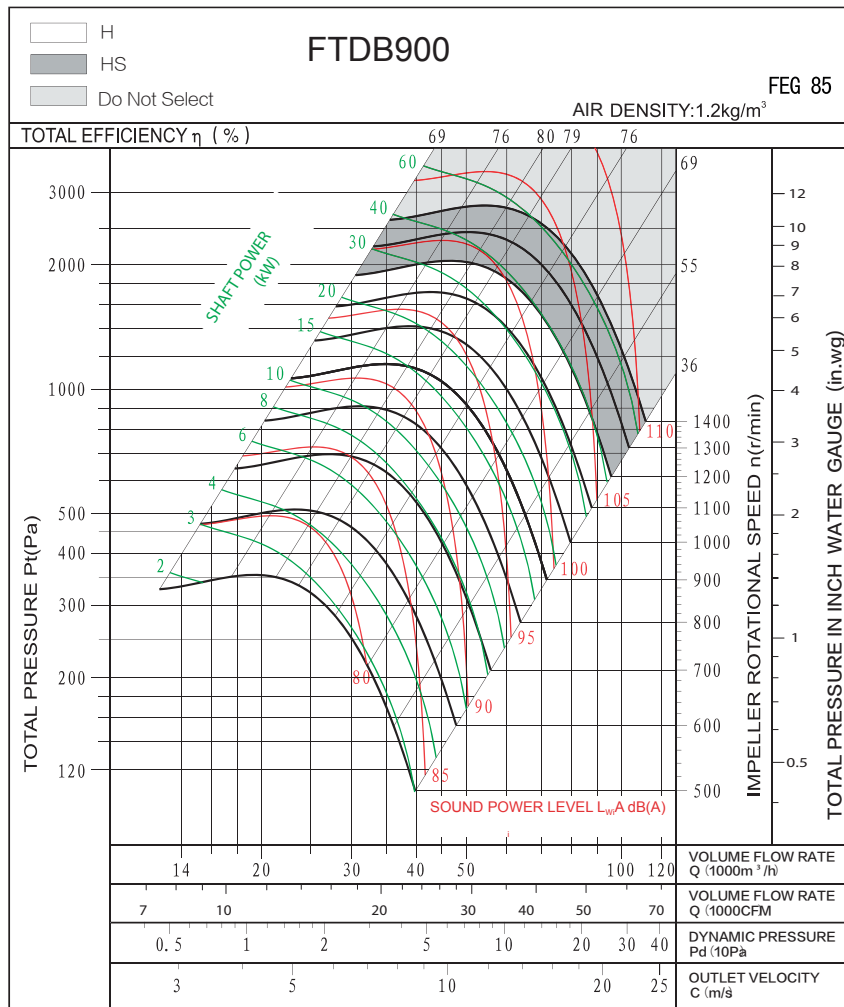


FTDB900 FEG85

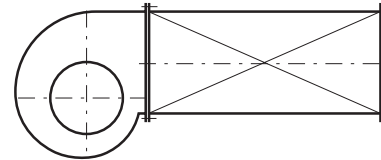
Technical Data & Performance Curve

Wheel diameter	D = 900mm	Fan weight	m = 530kg
Moment of inertia	J = 13.8kg · m ²	Speed limit	n _{max} =1300r/min

Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_{wA} sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:

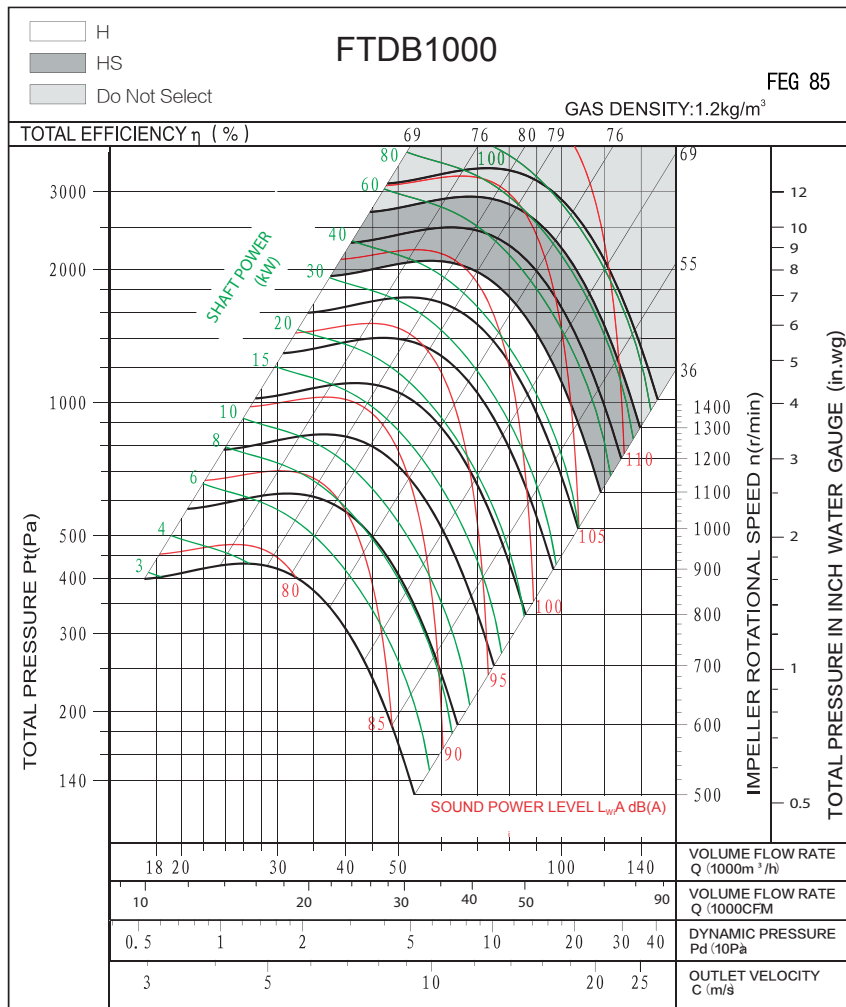


FTDB1000 FEG85

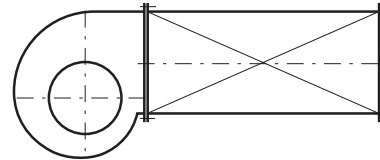
Technical Data & Performance Curve

Wheel diameter	D = 1000 mm	Fan weight	m =530kg
Moment of inertia	J = 24.8kg · m ²	Speed limit	n _{max} =1300 r/min

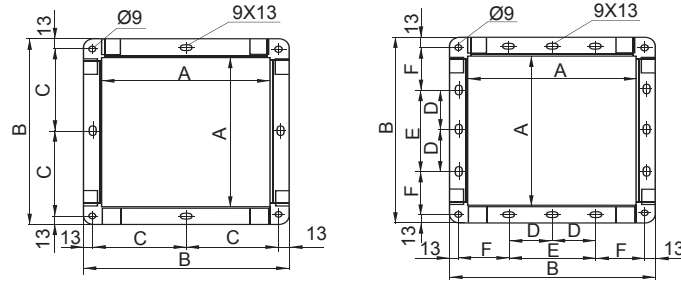
Performance certified is for installation type B: free inlet, ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet L_wA sound power levels for installation type B: free inlet, ducted outlet.



Measured in installation B according to AMCA Standard 210:



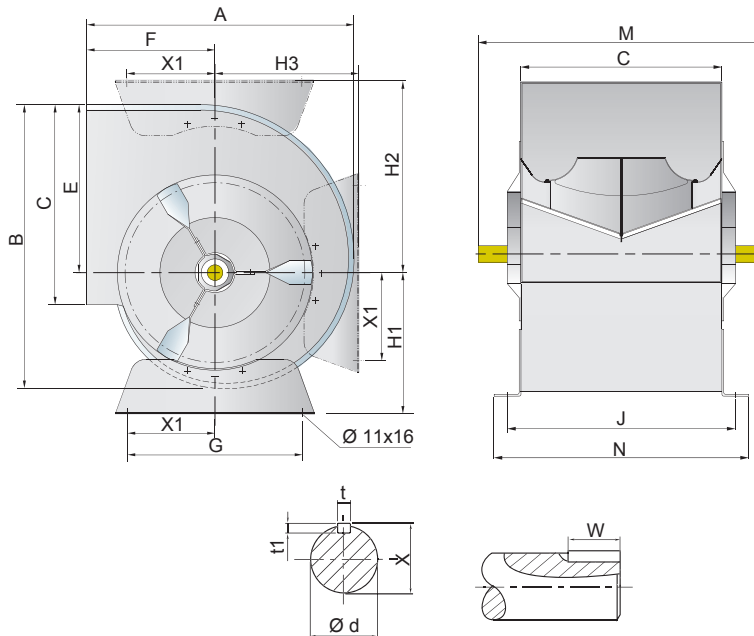
Outlet Flange (Ancillary)



Unit : mm

Dim \ Size	200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
A	256	288	322	361	404	453	507	569	638	715	801	898	1007	1130	1267
B	296	328	362	417	460	509	563	625	694	771	857	954	1063	1186	1323
C	138	154	171	196	217	242	-	-	-	-	-	-	-	-	-
D				-	-	-	-	-	-	-	-	200	250	300	350
E		-	-	-	-	-	200	200	250	250	300	400	500	600	700
F				-	-	-	169	200	209	248	266	264	269	280	299

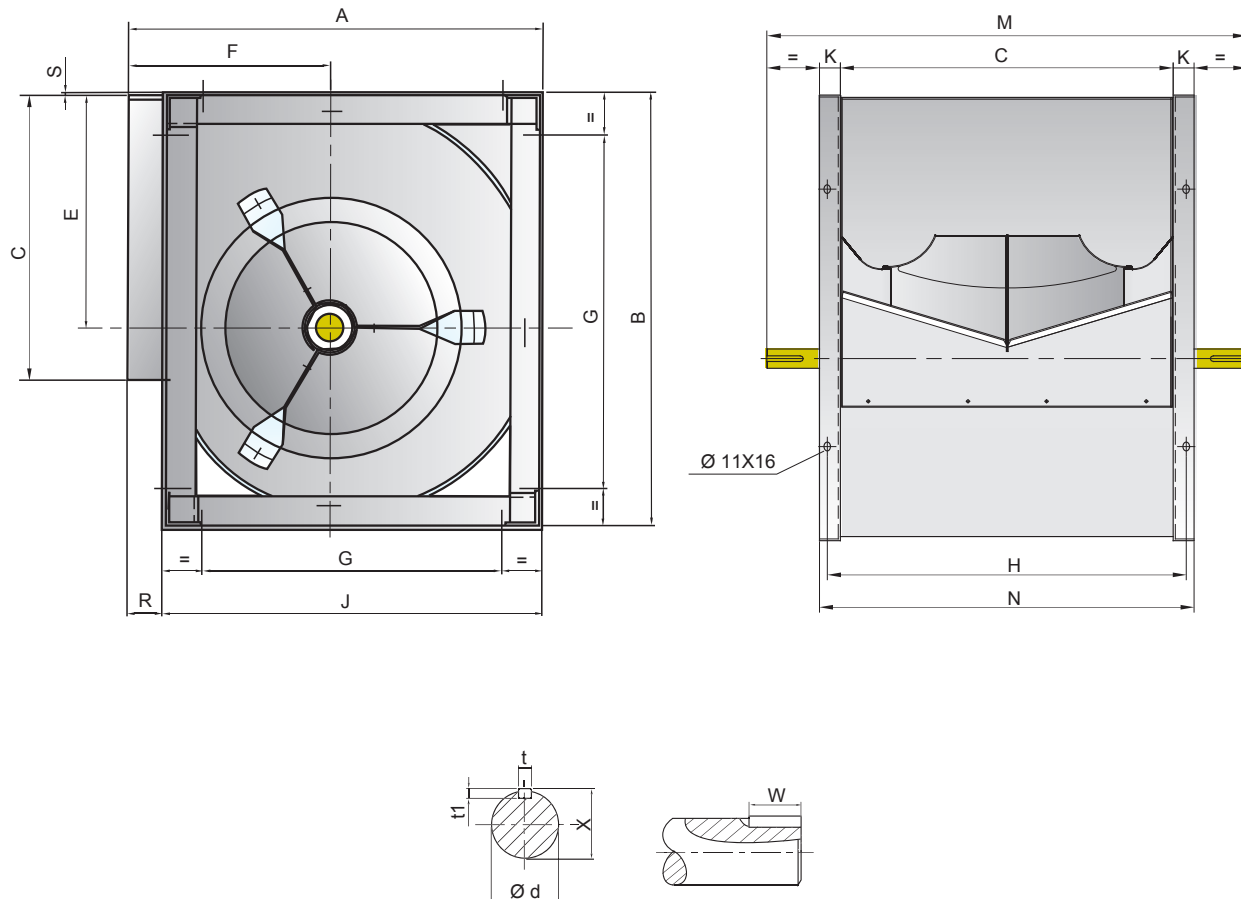
FTDB-SB



Unit : mm

Dim \ Size	A	B	C	E	F	G	J	M	N	X1	H1	H2	H3	t	t1	X	W	φd
200	342	364	256	215	164	224	281	420	306	112	181	245	184	6	6	22.5	40	20
225	380	408	288	243	180	224	313	460	338	112	197	274	204	6	6	22.5	50	20
250	417	454	322	270	195	224	347	490	372	112	212	299	227	6	6	22.5	55	20

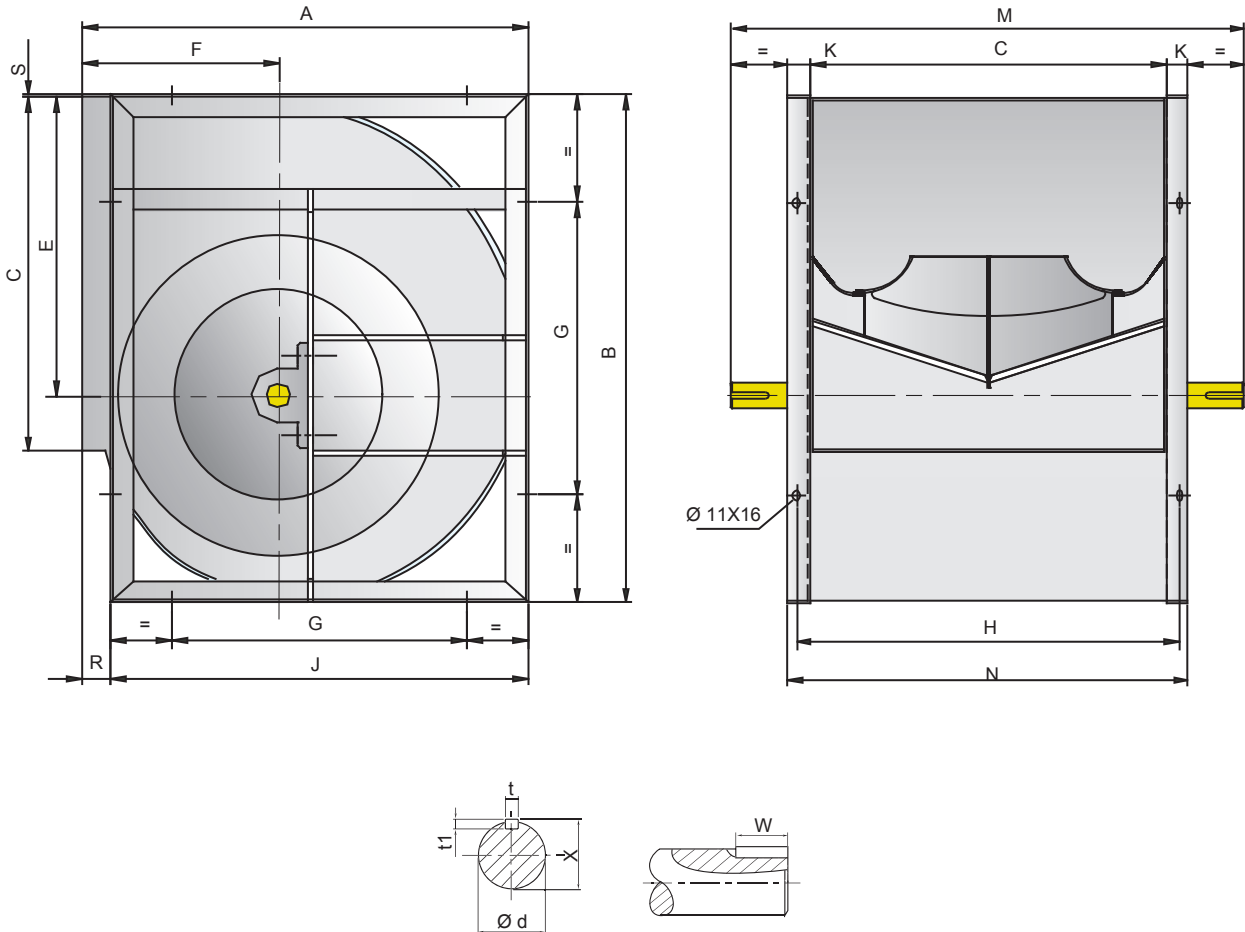
FTDB-S (200-250)



Unit : mm

Size	Dim	A	B	C	E	F	G	H	J	K	M	N	R	S	t	t1	X	W	φd
200		343	370	256	215	164	224	281	306	25	420	306	37	4	6	6	22.5	40	20
225		383	415	288	243	180	224	313	348	25	460	338	35	3	6	6	22.5	50	20
250		419	461	322	270	195	224	347	384	25	490	372	35	4	6	6	22.5	55	20

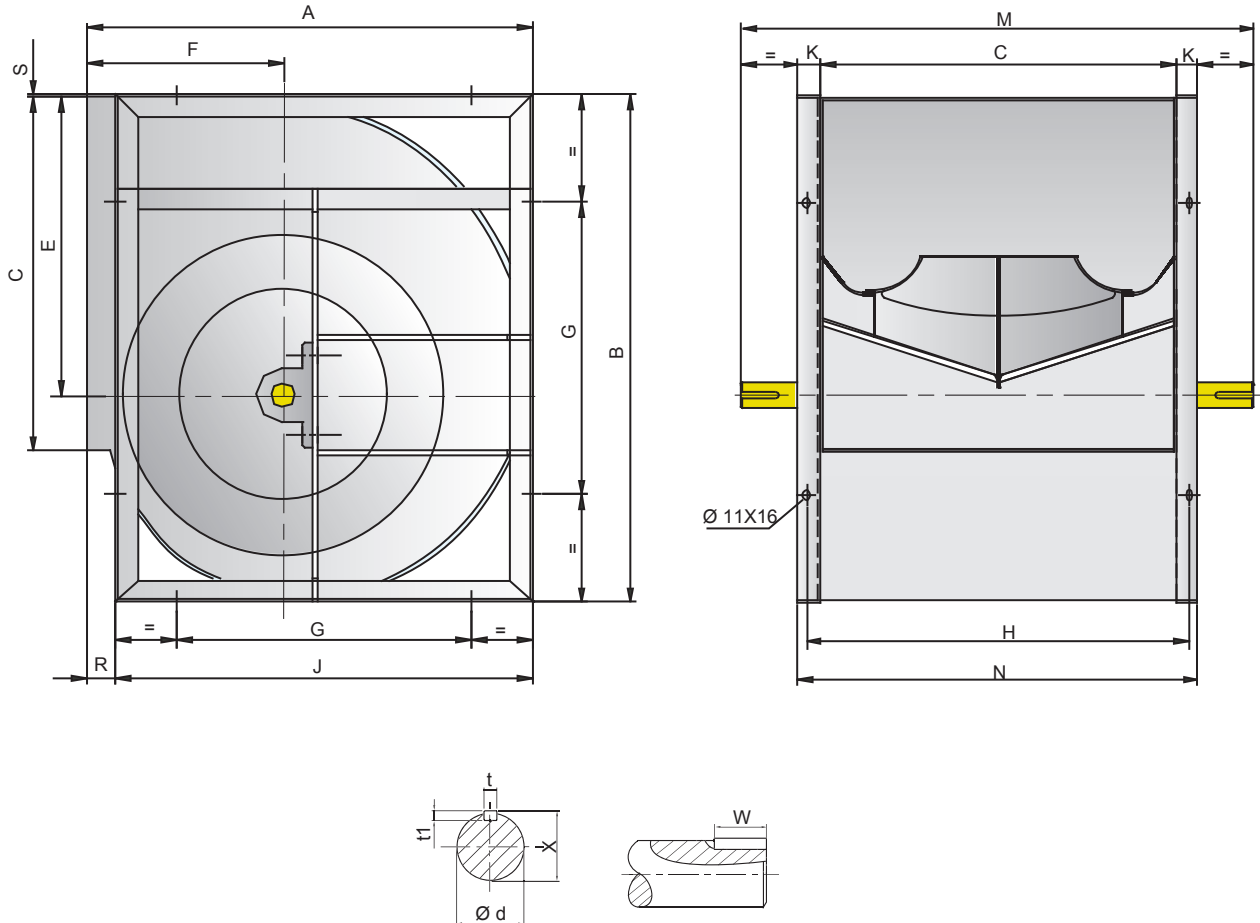
FTDB-S (280-710)



Unit : mm

Dim Size	A	B	C	E	F	G	H	J	K	M	N	R	S	t	t1	W	X	φd	LxV
280	466	518	361	302	215	280	391	432	30	575	421	34	5	8	7	50	28	25	13x18
315	518	578	404	340	236	280	434	480	30	640	464	38	3	8	7	60	28	25	13x18
355	578	655	453	383	261	355	493	548	40	700	533	30	6	8	7	60	33	30	13x18
400	651	736	507	432	290	355	547	613	40	760	587	38	4.5	8	7	60	33	30	13x18
450	726	827	569	486	322	530	609	681	40	845	649	45	5	10	8	70	38	35	13x18
500	800	918	638	538	352	530	678	750	40	915	718	50	5	10	8	70	38	35	13x18
560	893	1030	715	602	390	530	765	845	50	1000	815	48	8	12	8	70	43	40	13x18
630	999	1157	801	679	434	530	851	946	50	1090	901	53	7	14	9	70	48.5	45	13x18
710	1121	1303	898	765	485	630	948	1058	50	1255	998	63	7	14	9	90	53.5	50	17x22

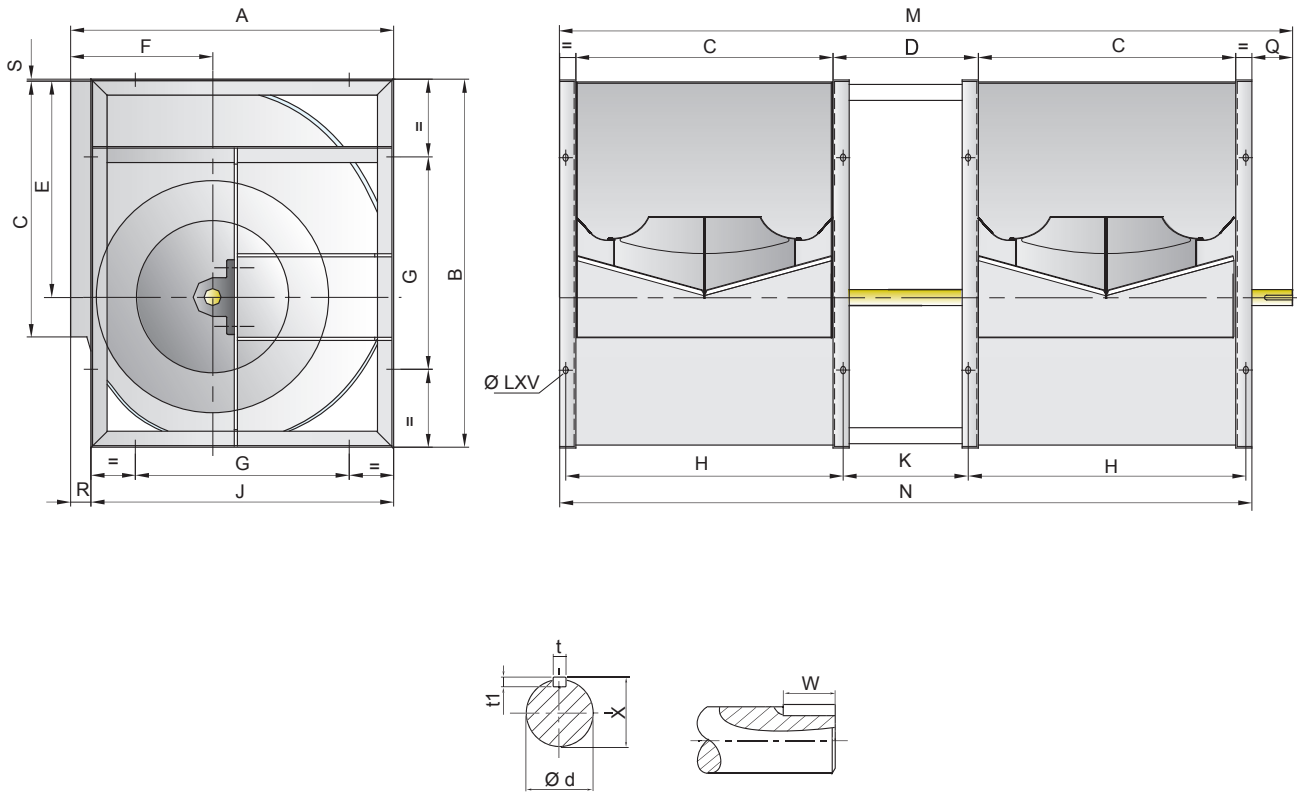
FTDB-H & FTDB-HS



Size : mm

Dim Size	A	B	C	E	F	G	H	J	K	M	N	R	S	t	t1	W	X	φd	LxV
280	466	518	361	302	215	280	391	432	30	600	421	34	5	8	7	60	33	30	13x18
315	518	578	404	340	236	280	434	480	30	665	464	38	3	8	7	70	33	30	13x18
355	578	655	453	383	261	355	493	548	40	725	533	30	6	10	8	70	38	35	13x18
400	651	736	507	432	290	355	547	613	40	790	587	38	4.5	10	8	70	38	35	13x18
450	726	827	569	486	322	530	609	681	40	890	649	45	4.5	12	8	90	43	40	13x18
500	800	918	638	538	352	530	678	750	40	960	718	50	5	12	8	90	43	40	13x18
560	893	1030	715	603	390	530	765	845	50	1070	815	48	8	14	9	90	53.5	50	13x18
630	899	1157	801	679	434	530	851	946	50	1155	901	53	7	14	9	90	53.5	50	13x18
710	1121	1303	898	765	485	630	948	1058	50	1293	998	63	7	18	11	90	64	60	17x22
800	1250	1468	1007	862	535	710	1057	1181	50	1450	1107	69	7	18	11	90	64	60	17x22
900	1408	1648	1130	971	604	800	1180	1319	60	1570	1250	89	7	18	11	100	69	65	17x22
1000	1541	1810	1267	1066	657	900	1317	1462	60	1700	1387	79	9	18	11	100	69	65	17x22

FTDB-S2 & FTDB-H2



FTDB-S2

Unit : mm

Dim Size	A	B	C	D	E	F	G	H	J	K	M	N	Q	R	S	t	t1	W	X	φd	LxV
280	466	518	361	280	302	214	280	391	432	250	1165	1062	103	34	5	8	7	60	28	25	13x18
315	518	578	404	315	340	236	280	434	480	285	1286	1183	103	38	3	8	7	60	33	30	13x18
355	578	654	453	355	383	260	355	493	548	315	1442	1340	101	30	6	10	8	60	38	35	13x18
400	65	736	507	400	432	290	355	547	612	360	1610	1494	116	38	4.5	12	8	60	43	40	13x18
450	726	827	569	450	486	322	530	609	681	410	1782	1668	114	45	5	12	8	70	43	40	13x18
500	800	918	638	500	538	352	530	678	750	460	1165	1062	103	50	5	14	9	70	48.5	45	13x18

FTDB-H2

Unit : mm

Dim Size	A	B	C	D	E	F	G	H	J	K	M	N	Q	R	S	t	t1	W	X	φd	LxV
355	578	654	453	355	383	260	355	493	548	315	1442	1341	101	30	6	12	8	70	43	40	13x18
400	650	736	507	400	432	290	355	547	612	360	1610	1494	116	38	4.5	14	9	70	48.5	45	13x18
450	726	827	569	450	486	322	530	609	681	410	1795	1668	127	45	5	14	9	90	48.5	45	13x18
500	800	918	638	500	538	352	530	678	750	460	1977	1856	121	50	5	14	9	90	53.5	50	13x18
560	893	1030	715	560	602	390	530	765	845	510	2218	2090	128	48	8	14	9	90	53.5	50	13x18

FTDB-SB

		0°		90°		180°	
ACW Anticlockwise							
CW Clockwise							
Size	Motor Frame Size	A	B	A	B	A	B
200	56	730	420	730	348	730	396
	63	730	420	730	348	730	396
	71	730	420	730	348	730	396
	80	730	420	730	348	730	396
225	63	760	460	760	384	760	440
	71	760	460	760	384	760	440
	80	760	460	760	384	760	440
	90	760	460	760	384	760	440
250	63	820	490	820	422	820	482
	71	820	490	820	422	820	482
	80	820	490	820	422	820	482
	90	820	490	820	422	820	482

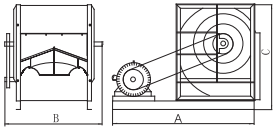
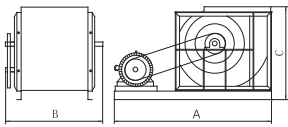
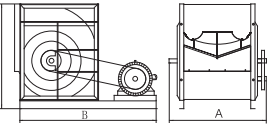
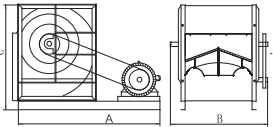
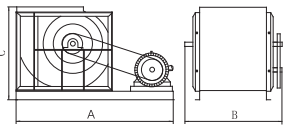
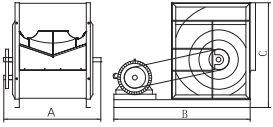
FTDB-S (200-250)

		0°		90°		180°	
ACW Anticlockwise							
CW Clockwise							
Size	Motor Frame Size	A	B	A	B	A	B
200	56	730	420	730	348	730	396
	63	730	420	730	348	730	396
	71	730	420	730	348	730	396
	80	730	420	730	348	730	396
225	63	760	460	760	384	760	440
	71	760	460	760	384	760	440
	80	760	460	760	384	760	440
	90	760	460	760	384	760	440
250	63	820	490	820	422	820	482
	71	820	490	820	422	820	482
	80	820	490	820	422	820	482
	90	820	490	820	422	820	482

FTDB-S (280-710) & FTDB-H

		0°				90°				180°			
		ACW Anti-clockwise		CW Clockwise		ACW Anti-clockwise		CW Clockwise		ACW Anti-clockwise		CW Clockwise	
Size	Motor Frame Size	A	B		C	A	B		C	A	B		C
			S	H			S	H			S	H	
280	71	940	575	600	568	940	575	600	516	940	575	600	568
	80	940	575	600	568	940	575	600	516	940	575	600	568
	90	940	575	600	568	940	575	600	516	940	575	600	568
	100	940	575	600	568	940	575	600	516	940	575	600	568
	112	940	575	600	568	940	575	600	516	940	575	600	568
	132	940	575	600	568	940	575	600	516	940	575	600	568
315	71	1040	640	665	628	1040	640	665	568	1040	640	665	628
	80	1040	640	665	628	1040	640	665	568	1040	640	665	628
	90	1040	640	665	628	1040	640	665	568	1040	640	665	628
	100	1040	640	665	628	1040	640	665	568	1040	640	665	628
	112	1040	640	665	628	1040	640	665	568	1040	640	665	628
	132	1040	640	665	628	1040	640	665	568	1040	640	665	628
355	80	1110	700	725	705	1110	700	725	628	1110	700	725	705
	90	1110	700	725	705	1110	700	725	628	1110	700	725	705
	100	1110	700	725	705	1110	700	725	628	1110	700	725	705
	112	1110	700	725	705	1110	700	725	628	1110	700	725	705
	132	1110	700	725	705	1110	700	725	628	1110	700	725	705
	160	1110	700	725	705	1110	700	725	628	1110	700	725	705
400	180	1250	700	725	705	1250	700	725	628	1250	700	725	705
	90	1250	760	790	786	1250	760	790	701	1250	760	790	786
	100	1250	760	790	786	1250	760	790	701	1250	760	790	786
	112	1250	760	790	786	1250	760	790	701	1250	760	790	786
	132	1250	760	790	786	1250	760	790	701	1250	760	790	786
	160	1250	760	790	786	1250	760	790	701	1250	760	790	786
450	180	1250	760	790	786	1250	760	790	701	1250	760	790	786
	90	1340	845	890	877	1340	845	890	776	1340	845	890	877
	100	1340	845	890	877	1340	845	890	776	1340	845	890	877
	112	1340	845	890	877	1340	845	890	776	1340	845	890	877
	132	1340	845	890	877	1340	845	890	776	1340	845	890	877
	160	1340	845	890	877	1340	845	890	776	1340	845	890	877
500	180	1340	845	890	877	1340	845	890	776	1340	845	890	877
	200	1340	845	890	877	1340	845	890	776	1340	845	890	877
	90	1420	915	960	981	1420	915	960	863	1420	915	960	981
	100	1420	915	960	981	1420	915	960	863	1420	915	960	981
	112	1420	915	960	981	1420	915	960	863	1420	915	960	981
	132	1420	915	960	981	1420	915	960	863	1420	915	960	981
500	160	1420	915	960	981	1420	915	960	863	1420	915	960	981
	180	1420	915	960	981	1420	915	960	863	1420	915	960	981
	200	1420	915	960	981	1420	915	960	863	1420	915	960	981

FTDB-S (280-710) & FTDB-H

		0°				90°				180°			
													
													
Size	Motor Frame Size	A	B		C	A	B		C	A	B		C
			S	H			S	H			S	H	
560	90	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	100	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	112	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	132	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	160	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	180	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
	200	1580	1000	1070	1093	1580	1000	1070	956	1580	1000	1070	1093
630	100	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
	112	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
	132	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
	160	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
	180	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
	200	1770	1090	1155	1220	1770	1090	1155	1062	1770	1090	1155	1220
710	112	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
	132	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
	160	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
	180	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
	200	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
	225	1950	1255	1290	1366	1950	1255	1290	1184	1950	1255	1290	1366
800	132	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
	160	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
	180	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
	200	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
	225	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
	250	2130	\	1450	1548	2130	\	1450	1330	2130	\	1450	1548
900	132	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	160	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	180	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	200	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	225	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	250	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
	280	2450	\	1570	1748	2450	\	1570	1508	2450	\	1570	1748
1000	132	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	160	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	180	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	200	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	225	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	250	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910
	280	2650	\	1700	1910	2650	\	1700	1641	2650	\	1700	1910

FTDB-H (Alternative motor position)

		0°			90°			180°		
ACW Anti-clockwise										
CW Clockwise										
Size	Motor Frame Size	A	B	C	A	B	C	A	B	C
280	71	840	612	568	840	612	516	840	612	568
	80	840	612	568	840	612	516	840	612	568
	90	840	612	568	840	612	516	840	612	568
	100	840	612	568	840	612	516	840	612	568
	112	840	612	568	840	612	516	840	612	568
	132	840	612	568	840	612	516	840	612	568
315	71	880	617	628	880	617	568	880	617	628
	80	880	617	628	880	617	568	880	617	628
	90	880	617	628	880	617	568	880	617	628
	100	880	617	628	880	617	568	880	617	628
	112	880	617	628	880	617	568	880	617	628
	132	880	617	628	880	617	568	880	617	628
355	71	940	655	705	940	655	628	940	655	705
	80	940	655	705	940	655	628	940	655	705
	90	940	655	705	940	655	628	940	655	705
	100	940	655	705	940	655	628	940	655	705
	112	940	655	705	940	655	628	940	655	705
	132	940	655	705	940	655	628	940	655	705
400	80	1130	736	786	1130	736	613	1130	736	786
	90	1130	736	786	1130	736	613	1130	736	786
	100	1130	736	786	1130	736	613	1130	736	786
	112	1130	736	786	1130	736	613	1130	736	786
	132	1130	736	786	1130	736	613	1130	736	786
	160	1130	736	786	1130	736	613	1130	736	786
450	90	1210	827	877	1210	827	776	1210	827	877
	100	1210	827	877	1210	827	776	1210	827	877
	112	1210	827	877	1210	827	776	1210	827	877
	132	1210	827	877	1210	827	776	1210	827	877
	160	1210	827	877	1210	827	776	1210	827	877
	180	1210	827	877	1210	827	776	1210	827	877
500	90	1290	918	981	1290	918	863	1290	918	981
	100	1290	918	981	1290	918	863	1290	918	981
	112	1290	918	981	1290	918	863	1290	918	981
	132	1290	918	981	1290	918	863	1290	918	981
	160	1290	918	981	1290	918	863	1290	918	981
	180	1290	918	981	1290	918	863	1290	918	981
200	1290	918	981	1290	918	863	1290	918	981	

FTDB-H (Alternative motor position)

		0°			90°			180°		
ACW Anti-clockwise										
CW Clockwise										
Size	Motor Frame Size	A	B	C	A	B	C	A	B	C
560	90	1410	1030	1093	1410	1030	956	1410	1030	1093
	100	1410	1030	1093	1410	1030	956	1410	1030	1093
	112	1410	1030	1093	1410	1030	956	1410	1030	1093
	132	1410	1030	1093	1410	1030	956	1410	1030	1093
	160	1410	1030	1093	1410	1030	956	1410	1030	1093
	180	1410	1030	1093	1410	1030	956	1410	1030	1093
630	200	1410	1030	1093	1410	1030	956	1410	1030	1093
	90	1510	1157	1220	1510	1157	1062	1510	1157	1220
	100	1510	1157	1220	1510	1157	1062	1510	1157	1220
	112	1510	1157	1220	1510	1157	1062	1510	1157	1220
	132	1510	1157	1220	1510	1157	1062	1510	1157	1220
	160	1510	1157	1220	1510	1157	1062	1510	1157	1220
710	180	1510	1157	1220	1510	1157	1062	1510	1157	1220
	200	1510	1157	1220	1510	1157	1062	1510	1157	1220
	100	1730	1303	1366	1730	1303	1491	1730	1303	1366
	112	1730	1303	1366	1730	1303	1491	1730	1303	1366
	132	1730	1303	1366	1730	1303	1491	1730	1303	1366
	160	1730	1303	1366	1730	1303	1491	1730	1303	1366
800	180	1730	1303	1366	1730	1303	1491	1730	1303	1366
	200	1730	1303	1366	1730	1303	1491	1730	1303	1366
	225	1730	1303	1366	1730	1303	1491	1730	1303	1366
	100	1870	1468	1548	1870	1468	1330	1870	1468	1548
	112	1870	1468	1548	1870	1468	1330	1870	1468	1548
	132	1870	1468	1548	1870	1468	1330	1870	1468	1548
900	160	1870	1468	1548	1870	1468	1330	1870	1468	1548
	180	1870	1468	1548	1870	1468	1330	1870	1468	1548
	200	1870	1468	1548	1870	1468	1330	1870	1468	1548
	225	1870	1468	1548	1870	1468	1330	1870	1468	1548
	250	1870	1468	1548	1870	1468	1330	1870	1468	1548
	280	1870	1468	1548	1870	1468	1330	1870	1468	1548
1000	132	2170	1648	1748	2170	1648	1748	2170	1648	1748
	160	2170	1648	1748	2170	1648	1748	2170	1648	1748
	180	2170	1648	1748	2170	1648	1748	2170	1648	1748
	200	2170	1648	1748	2170	1648	1748	2170	1648	1748
	225	2170	1648	1748	2170	1648	1748	2170	1648	1748
	250	2170	1648	1748	2170	1648	1748	2170	1648	1748
1000	280	2170	1648	1748	2170	1648	1748	2170	1648	1748
	132	2300	1810	1910	2300	1810	1641	2300	1810	1910
	160	2300	1810	1910	2300	1810	1641	2300	1810	1910
	180	2300	1810	1910	2300	1810	1641	2300	1810	1910
	200	2300	1810	1910	2300	1810	1641	2300	1810	1910
	225	2300	1810	1910	2300	1810	1641	2300	1810	1910
1000	250	2300	1810	1910	2300	1810	1641	2300	1810	1910
	280	2300	1810	1910	2300	1810	1641	2300	1810	1910

Fan Operating Limits

			200	225	250	280	315	355	400	450	500	560	630	710	800	900	1000
Max. absorbed Power	SB	KW	1.5	1.5	2	/	/	/	/	/	/	/	/	/	/	/	/
	S	KW	2	3	3	5.5	4.8	5.5	6.0	8.0	12	14	20	20	/	/	/
	H	KW	/	/	/	8	8	15	15	15	22	30	35	40	30	43	55
	HS	KW	/	/	/	/	/	/	/	/	30	38.5	40	60	65	65	80
	S2	KW	/	/	/	5.5	6.5	8.5	8.5	12	13	14	18	18	/	/	/
	H2	KW	/	/	/	/	/	13	13	18.5	22	32	34	45	45	45	65
Max.R.P.M	SB	rpm	4500	3700	3500	/	/	/	/	/	/	/	/	/	/	/	/
	S	rpm	4900	4500	4100	4000	3200	2800	2400	2200	2000	1800	1700	1400	/	/	/
	H	rpm	/	/	/	4500	4000	3800	3200	2800	2500	2400	2000	1700	1300	1200	1100
	HS	rpm	/	/	/	/	/	/	/	/	2800	2600	2200	2000	1600	1400	1300
	S2	rpm	/	/	/	3200	2800	2600	2100	1800	1600	1400	1200	1000	/	/	/
	H2	rpm	/	/	/	/	/	3000	2400	2200	2000	1800	1600	1400	1200	1000	900
Air Temperature Limits (Min-20°C)	SB	Max.	85	85	85	/	/	/	/	/	/	/	/	/	/	/	/
	S/S2	°C	85	85	85	85	85	85	85	85	85	85	85	85	/	/	/
	H/H2	Max.	/	/	/	85	85	85	85	85	85	85	85	85	85	85	85
	HS	°C	/	/	/	/	/	/	/	/	85	85	85	85	85	85	85
Fan Weight	SB	Kg	8	10	16	/	/	/	/	/	/	/	/	/	/	/	/
	S	Kg	10	12	18	22	32.6	42.7	50.6	67.5	84.2	142	168	223	/	/	/
	H	Kg	/	/	/	32	42.6	54.7	63.6	82.5	104.2	171	197	271	300	481.5	530
	HS	Kg	/	/	/	/	/	/	/	/	107	174	200	274	304	485	535
	S2	Kg	/	/	/	46	67	91	107	143	176	300	352	462	/	/	/
	H2	Kg	/	/	/	/	/	111	127	173	217	358	410	558	616	989	1086



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