



INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

TURBO PRESSURE BLOWERS

TBNA | TBNS



Overview

TBNA | TBNS



Arrangement 8
with Punched
Outlet Flange

The TBN series of fans are low volume, high-pressure blowers designed for stable operation throughout their operating range. Multiple outlet sizes and impeller diameters allow the most efficient selections across a wide range of operating points. These units incorporate a high efficiency impeller design at an economical price.

Typical Applications

- Pneumatic conveying
- Exhausting
- Combustion air
- Air knives
- Chemical processes
- Thermal oxidation
- Aeration
- Seal air

Capabilities

- Static pressures to 32,000 Pa
- Airflow capabilities to 9.4 m³/sec
- High temperature applications to 315°C
- For higher performance requirements, see below.

Housing Construction

All TBN fans come standard with heavy gauge, continuously welded steel housings for rugged, heavy duty, long term service. Size 14 to 26 housings are reversible and rotatable. Size 14 to 26 TBN fans come standard with an inlet venturi with screen. All TBN fans come standard with a round punched flanged outlet connection.



TBNA
Aluminum Impeller



TBNS
Steel Impeller

Impeller Types

TBNA Aluminum Impeller - The TBNA offers a radial air handling impeller of riveted aluminium construction. This impeller is available in both narrow "N" and wide "W" widths for up to size 26 for optimum performance and high efficiency. The TBNA is designed to handle clean air applications with temperatures up to 100°C. The TBNA impeller is a non-reversible design.

TBNS Steel Impeller - The TBNS is an all welded radial design steel impeller that is available in a variety of special materials. This impeller is available in both narrow "N" and wide "W" widths for up to size 26 to meet specific performance requirements. The TBNS is designed to handle fumes, light particulates, and temperatures up to 315°C. The TBNS impeller is a reversible design. Performance for the TBNS is available in Fan Selector.

Arrangements

TBNA | TBNS

Arrangement 1 (Belt Driven)

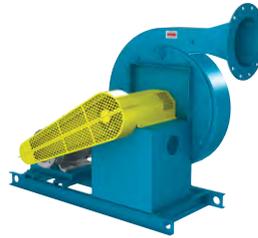
The fan impeller on an Arrangement 1 is overhung on the shaft, i.e., mounted at the end of the shaft. The motor can be mounted in any of the four AMCA standard motor positions, W, X, Y or Z. The two fan bearings are mounted on the bearing pedestal, out of the airstream.

Arrangement 4 (Direct Drive)

The fan impeller on an Arrangement 4 is mounted directly on the motor shaft with the motor mounted on a pedestal. An Arrangement 4 offers a compact, low maintenance design, as there are no fan bearings, fan shaft or drive parts to maintain. Variations of Arrangement 4 include 4 Standard (Pedestal Mount), 4HI (Horizontal Inlet Mount) and 4VI (Vertical Inlet Mount).

Arrangement 8 (Direct Drive)

An Arrangement 8 is a modified version of an Arrangement 1 used for direct drive. The bearing pedestal is extended to accommodate the motor. A flexible coupling connects the fan and motor shaft.



Arrangement 1



Arrangement 4



Arrangement 8

ARRANGEMENT	MAXIMUM TEMP (°C)		
	TBNA	TBNS	
		STD	HIGH TEMP CONSTRUCTION
ARR. 1	95	150	315
ARR. 4	80	80	N/A
ARR. 8	95	150	315



Optional Construction

Spark Resistant Construction

Available for Model TBNA only. Fan applications may involve the handling of fumes or vapours. Such applications require careful consideration by the system designer to insure the safe handling of such gases. Twin City Fan & Blower offers the following classifications of spark resistant construction per AMCA Standard 99-0401-86. It is the specifier or the user's responsibility to specify the type of spark resistant construction with full recognition of the potential hazards and the degree of protection required. (For ATEX, please enquire).

Construction

Type A - All parts of the fan in contact with the airstream must be made of nonferrous material — usually aluminium and limited to 100°C.

Type B - The fan shall have a nonferrous impeller and nonferrous rub ring about the opening through which the shaft passes — usually aluminium impeller and rub ring and limited to 100°C.

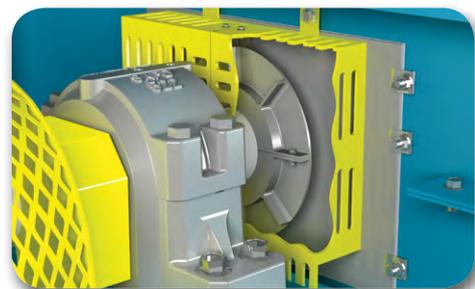
Type C - Not available.

High Temperature Construction (TBNS Only)

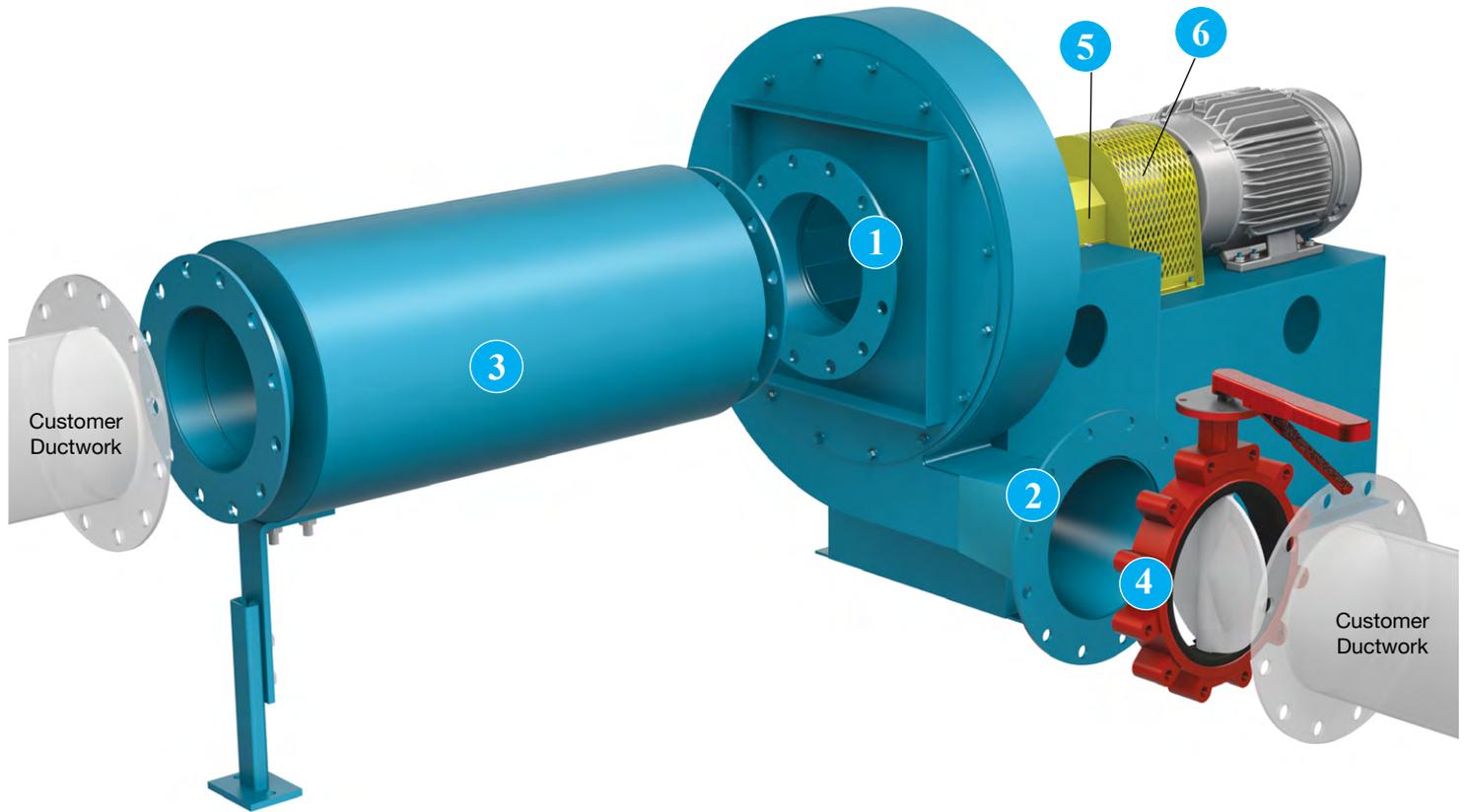
150 to 250°C - Package includes shaft seal, shaft cooler with guard, high temperature grease, and standard enamel paint.

251 to 315°C - Package includes shaft seal, shaft cooler with guard, high temperature grease, and high temperature aluminium paint.

Special Materials - Stainless steel and other special alloys are available in the type TBNS radial design.



Shaft Cooler & Safety Guard



1 Flanged Inlet For bolted pipe or duct connections. Flanged inlet is punched to ANSI 125/150 hole pattern.

2 Flanged Outlet punched to ANSI 125/150 hole pattern for bolted connection is standard.

3 Inlet Silencer with Support Leg Welded steel construction with acoustical absorption material to reduce noise emanating from fan inlet. Flanged connection is suggested for mounting to the inlet of the fan. The opposite end of the silencer can be furnished with an inlet venturi, inlet flange, or inlet pipe assembly. Unless otherwise specified, the silencer will be furnished with flanges (punched) at both ends.

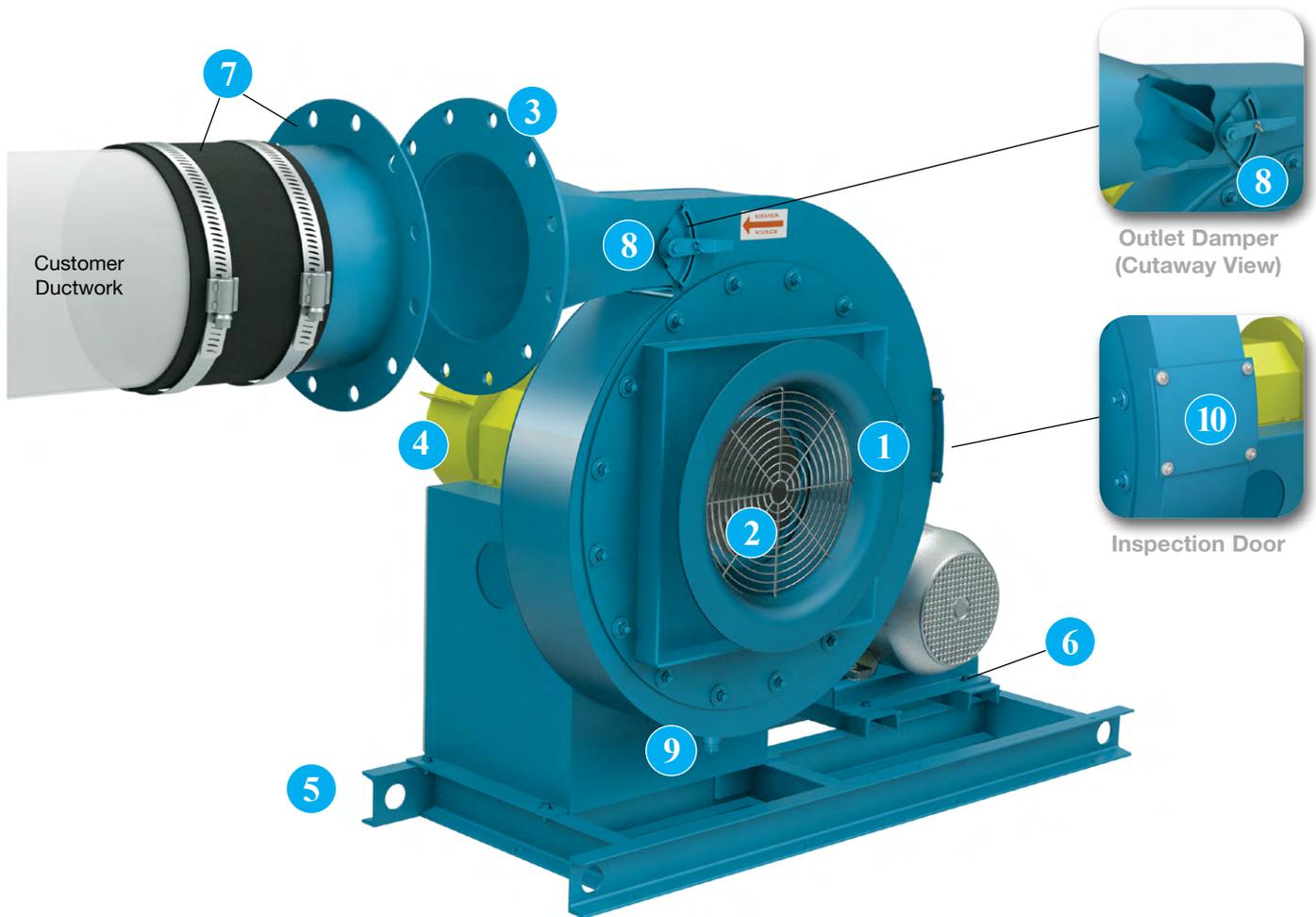
4 Blast Gate with Handle A wafer-type butterfly valve for mounting to outlet flange allows controlling flow to full shutoff. Available for automatic control. Maximum temperature 120°C.

5 Shaft & Bearing Guard OSHA style to enclose the shaft and bearings. Painted safety yellow.

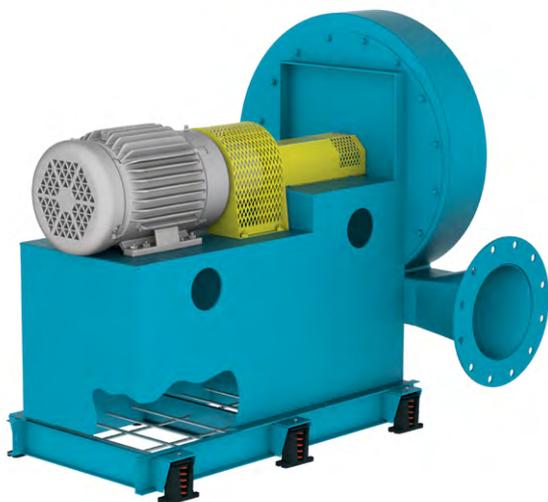
6 Coupling Guard OSHA style to enclose the coupling. Painted safety yellow.

Other Accessories Include:

- Inlet Pipe Assembly (for slip-on pipe or duct connections)
- Plain Pipe Outlet (for slip type connections)
- Inlet Filter (non-ducted inlet installations)
- Inlet Filter w/ Hood (non-ducted inlet installations)
- Flanged Outlet Flex Connector
- Plain Pipe Outlet Flex Connector
- Outlet Silencer
- Shaft Closure Plate
- Isolation Base (Arrangements 1 & 4)
- Inertia Base
- Vibration Rails (Arrangements 4)
- Cast Motors
- Extended Lube Lines
- Insulated Housings (Steel Wall or Aluminium Clad)
- Insulation Pins



- 1 Inlet Venturi** allows for smooth air entry on non-ducted fans.
- 2 Inlet Screen** Recommended for all non-ducted inlet installations to obtain catalogue performance.
- 3 Flanged Outlet** punched to ANSI 125/150 hole pattern for bolted connection is standard.
- 4 Belt Guard** OSHA style to enclose the V-belt drive. Painted safety yellow.
- 5 Unitary Base** Steel structural base for mounting fan and motor on common structure. Allows for complete assembly of fan, motor, and v-belt drive (Arrangement 1). Must be bolted to a rigid support structure. (See page 6 for additional fan mounting.)
- 6 Motor Slide Base** for positioning motors and adjusting belt tension during installation and maintenance.
- 7 Companion Flange with Rubber Sleeve & Clamps** offers flexible connection between the fan and outlet ductwork. Flexible rubber sleeve is good to 100°C operation.
- 8 Built-In Outlet Damper** offers a low cost single blade damper installed near the discharge of the fan housing for volume control where moderate leakage can be allowed. Available for manual control only.
- 9 Drain** Standard 20 mm half coupling located at the lowest point of the housing. Available with or without plug.
- 10 Inspection Door** Heavy-duty bolted panel provides access for impeller inspection.



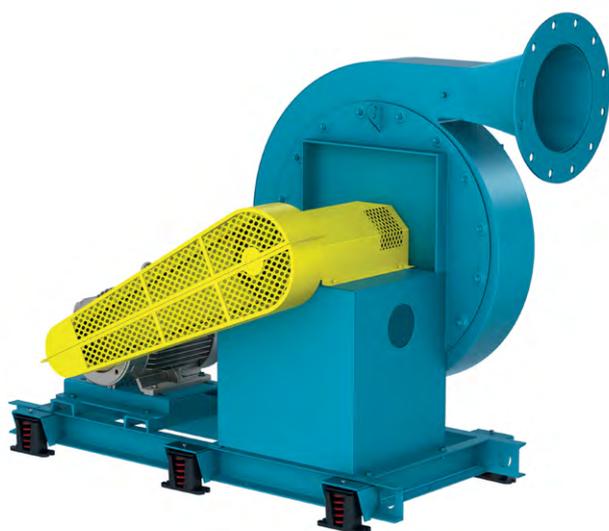
Inertia Bases

Inertia Bases provide a common support to fan, motor and drive including guards and utilize heavy duty structural channel with spring isolators. Inertia bases incorporate reinforcing rods and require customer supplied concrete. Inertia bases are typically used on longer, direct drive fans to mitigate assembly deflection, maintaining proper alignment between the motor, coupling, shaft and bearings. Flexible connectors at inlet and outlet are required.



Vibration Rails with RIS Isolators (Sizes 14 to 26, Arr. 4 only)

Vibration Rails with RIS Isolators are designed to limit forces transmitted to the support structure of an operating fan. Constructed of structural angle, the rails extend the distance between mounting points distributing a more even load to the isolators. Rubber-in-shear type isolators and flexible connectors at inlet and outlet are required.



Vibration Isolation Bases

Vibration Isolation Bases provide a common support to fan, motor and drive including guards and utilize heavy duty structural channel. Vibration isolation bases require spring or rubber-in-shear type isolators that are designed to limit forces transmitted to the support structure of an operating fan.

Shaft & Bearings

SIZE	SHAFT DIA. (MM)				BEARING TYPE		
	TBNA		TBNS		TBNA/S	TBNA	TBNS
	ARR. 1	ARR. 8	ARR. 1	ARR. 8	ARR. 1	ARR. 8	ARR. 8
14 to 18	30	30	30	30	HSHDB	SDB-C	SDB-C
19 to 22	35	35	35	35	RB	SDB-C	SDB-C
23 to 26	35	35	35	35	RB	SDB-C	SDB-C
27006	42	42	42	30	RB-C	SDB-C	HDB-C
27008	50	30	50	35	RB-C	HDB-C	RB-C
27010	55	42	55	35	RB-C	SDB-C	RB-C
27012	60	55	60	42	RB-C	HDB-C	RB-C
27506	42	30	50	30	RB-C	SDB-C	HDB-C
27508	50	30	50	35	RB-C	HDB-C	RB-C
27510	55	42	55	35	RB-C	HDB-C	RB-C
27512	60	55	60	42	RB-C	HDB-C	RB-C
28006	50	30	50	30	RB-C	SDB-C	HDB-C
28008	50	30	50	35	RB-C	HDB-C	RB-C
28010	55	42	60	35	RB-C	HDB-C	RB-C
28012	60	55	60	42	RB-C	HDB-C	RB-C
28506	50	30	50	35	RB-C	SDB-C	HDB-C
28508	50	35	55	35	RB-C	HDB-C	RB-C
28510	60	50	60	42	RB-C	HDB-C	RB-C
28512	60	42	60	50	RB-C	SDB-C	RB-C
29006	50	30	50	35	RB-C	SDB-C	HDB-C
29008	55	35	55	35	RB-C	HDB-C	RB-C
29010	60	50	60	42	RB-C	HDB-C	RB-C
29012	60	42	60	50	RB-C	SDB-C	RB-C
30008	55	35	55	35	RB-C	HDB-C	RB-C
30010	60	55	60	35	RB-C	HDB-C	RB-C
30012	60	42	60	42	RB-C	SDB-C	RB-C
30014	70	50	70	60	RB-C	HDB-C	RB-C
30508	55	35	55	35	RB-C	HDB-C	RB-C
30510	60	55	60	42	RB-C	HDB-C	RB-C
30512	60	42	60	50	RB-C	SDB-C	RB-C
30514	70	55	70	60	RB-C	HDB-C	RB-C
31008	55	35	55	35	RB-C	HDB-C	RB-C
31010	60	55	60	42	RB-C	HDB-C	RB-C
31012	60	42	70	50	RB-C	HDB-C	RB-C
31014	70	50	70	60	RB-C	RB-C	RB-C
31508	55	35	55	35	RB-C	HDB-C	RB-C
31510	60	55	60	42	RB-C	HDB-C	RB-C
31512	60	42	70	55	RB-C	RB-C	RB-C
31514	70	50	70	70	RB-C	RB-C	HSHDB

SIZE	SHAFT DIA. (MM)				BEARING TYPE		
	TBNA		TBNS		TBNA/S	TBNA	TBNS
	ARR. 1	ARR. 8	ARR. 1	ARR. 8	ARR. 1	ARR. 8	ARR. 8
32008	55	42	55	35	RB-C	SDB-C	RB-C
32010	60	55	60	42	RB-C	HDB-C	RB-C
32012	70	50	70	55	RB-C	HDB-C	RB-C
32014	70	50	70	70	RB-C	RB-C	HSHDB
33008	55	42	55	42	RB-C	HDB-C	RB-C
33010	60	42	70	50	RB-C	RB-C	RB-C
33012	70	50	70	55	RB-C	HDB-C	RB-C
33014	75	55	90	75	RB-C	HSHDB	HSHDB
33508	55	42	60	50	RB-C	HDB-C	RB-C
33510	70	50	70	55	RB-C	RB-C	RB-C
33512	70	50	70	55	RB-C	RB-C	RB-C
33514	90	55	90	75	RB-C	RB-C	HSHDB
34008	60	42	60	50	RB-C	HDB-C	RB-C
34010	70	50	70	55	RB-C	RB-C	RB-C
34012	70	50	70	60	RB-C	RB-C	RB-C
34014	90	55	90	75	RB-C	RB-C	HSHDB
34508	60	42	60	50	RB-C	RB-C	RB-C
34510	70	50	70	55	RB-C	RB-C	RB-C
34512	70	55	75	70	RB-C	RB-C	HSHDB
34514	90	55	90	75	RB-C	RB-C	HSHDB
35008	60	42	60	50	RB-C	RB-C	RB-C
35010	70	50	70	55	RB-C	RB-C	RB-C
35012	75	55	75	75	RB-C	HDB-C	HSHDB
35014	90	55	90	75	RB-C	RB-C	HSHDB
36010	70	50	70	55	RB-C	RB-C	RB-C
36012	75	55	75	75	RB-C	HDB-C	HSHDB
36014	90	55	90	75	RB-C	RB-C	HSHDB
36016	90	55	90	90	RB-C	RB-C	HSHDB
36510	70	50	70	55	RB-C	RB-C	RB-C
36512	75	55	75	60	RB-C	RB-C	RB-C
36514	90	55	90	75	RB-C	RB-C	HSHDB
36516	90	55	90	90	RB-C	RB-C	HSHDB
37010	70	50	70	55	RB-C	RB-C	RB-C
37012	75	55	90	60	RB-C	RB-C	RB-C
37014	90	55	90	75	RB-C	RB-C	HSHDB
37016	90	55	90	90	RB-C	HSHDB	HSHDB
37510	70	50	70	70	RB-C	RB-C	HSHDB
37512	75	55	90	60	RB-C	RB-C	RB-C
37514	90	55	90	90	RB-C	RB-C	HSHDB
37516	90	55	90	90	RB-C	HSHDB	HSHDB
38010	75	50	75	55	RB-C	SRB	RB-C
38012	90	55	90	60	RB-C	RB-C	RB-C
38014	90	55	90	90	RB-C	RB-C	HSHDB
38016	90	60	90	90	RB-C	RB-C	HSHDB

SDB: Standard Duty Ball Bearing
 HDB: Heavy Duty Ball Bearing
 RB: Roller Bearing
 SRB: Roller Bearing with Split Pillow Block Housing
 HSHDB: High Speed Heavy Duty Ball Bearing
 SDB-C: Concentric Standard Duty Ball Bearing
 HDB-C: Concentric Heavy Duty Ball Bearing
 RB-C: Concentric Roller Bearing

Bare Fan Weights (kg)

SIZE	ARRANGEMENT 1		ARRANGEMENT 4		ARRANGEMENT 8	
	TBNA	TBNS	TBNA	TBNS	TBNA	TBNS
14N to 18N	91.8	96.4	84.1	88.6	128	133
14W to 18W	99.1	105	91.4	96.8	136	141
19N to 22N	126	133	115	121	180	186
19W to 22W	152	160	141	148	206	213
23N to 26N	178	196	166	185	238	256
23W to 26W	202	215	191	203	262	275
270xx	338	355	329	346	488	505
275xx	338	356	329	347	488	506
280xx	338	362	330	353	489	512
285xx	336	360	330	355	486	511
290xx	336	361	331	356	486	512
300xx	408	436	380	407	572	599
305xx	412	439	381	409	576	603
310xx	411	439	382	411	575	603
315xx	410	446	381	417	574	610
320xx	414	448	386	419	578	611
330xx	469	506	411	447	629	666
335xx	474	520	414	460	642	688
340xx	475	522	415	462	642	690
345xx	477	524	418	465	646	692
350xx	478	527	419	467	646	695
360xx	546	593	464	511	718	766
365xx	546	596	465	514	719	768
370xx	547	598	466	516	720	771
375xx	548	601	466	519	721	773
380xx	549	603	468	521	722	776

Note: Weights provided above are for the largest inlet/outlet size available on the housing.

Housing Thickness

SIZE	HOUSING THICKNESS	
	SIDES	SCROLL
14 to 26	3.15 mm	3.15 mm
27 to 38	6 mm	6 mm

Temperature Derate

AIRSTREAM TEMP (°C)	TBNA	TBNS							
		SIZES 14-26		SIZES 27-32		SIZES 33-35		SIZES 36-38	
		STEEL	STAIN-LESS	STEEL	2205	STEEL	2205	STEEL	2205
21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	0.90
150	N/A	1.00	1.00	1.00	1.00	1.00	0.93	1.00	0.87
200	N/A	1.00	1.00	1.00	1.00	1.00	0.92	1.00	0.85
260	N/A	1.00	1.00	1.00	0.97	1.00	0.89	1.00	0.83
315	N/A	1.00	1.00	1.00	0.94	1.00	0.86	0.96	0.80

Inlet Suction Pressure Correction

If the inlet pressure is suction or negative, the static pressure required must be corrected by the inlet density ratio.

Example: Operating conditions: 21°C at sea level. System resistance at the inlet of the fan is 10000 Pa.

The correction factor from the table on the right is 0.902, or it can be calculated as follows:

$$(407.5 - 40) \div 407.5 = 0.902$$

Equivalent static pressure to be used for selection from the standard performance curves:

$$10000 \div 0.902 = 44.36"$$

Actual air density at the inlet of the fan:

$$0.075 \text{ lb/ft}^3 \times 0.902 = 0.0676 \text{ lb/ft}^3$$

Inlet Suction Pressure Correction Factors

INLET SUCTION PRESSURE (kPa)	CORRECTION FACTOR	INLET SUCTION PRESSURE (kPa)	CORRECTION FACTOR
1.25	0.988	17.50	0.828
2.50	0.975	18.75	0.816
3.75	0.963	20.00	0.804
5.00	0.951	21.25	0.791
6.25	0.939	22.50	0.779
7.50	0.926	23.75	0.767
8.75	0.914	25.00	0.755
10.00	0.902	26.25	0.742
11.25	0.89	27.50	0.73
12.50	0.877	28.75	0.718
13.75	0.865	30.00	0.706
15.00	0.853	31.25	0.693
16.25	0.84	32.50	0.681

$$\text{Correction Factor} = (407.5 - \text{Inlet Suction Pressure}) \div 407.5$$



Maximum RPM, Impeller Weights and WR² (moment of inertia in kg-m²)

SIZE	IMPELLER					
	TBNA (ALUMINUM)			TBNS (STEEL)		
	MAX. RPM	WT. (kg)	WR ² (kg-m ²)	MAX. RPM	WT. (kg)	WR ² (kg-m ²)
14N	4000	4.77	0.14	4000	5.95	0.08
14W	4000	4.77	0.17	4000	5.82	0.08
15N	4000	4.82	0.14	4000	6.64	0.11
15W	4000	4.82	0.17	4000	6.64	0.11
16N	4000	4.86	0.15	4000	7.36	0.13
16W	4000	4.86	0.18	4000	7.50	0.14
17N	4000	4.91	0.16	4000	8.18	0.17
17W	4000	4.95	0.19	4000	8.41	0.18
18N	4000	5.00	0.16	4000	9.00	0.21
18W	4000	5.05	0.20	4000	9.32	0.23
19N	3900	6.68	0.34	3900	9.86	0.26
19W	3900	6.77	0.41	3900	10.00	0.27
20N	3900	6.73	0.35	3900	10.77	0.31
20W	3900	6.91	0.43	3900	10.95	0.33
21N	3900	6.82	0.37	3900	11.73	0.38
21W	3900	7.05	0.45	3900	12.00	0.40
22N	3900	6.91	0.39	3900	12.73	0.45
22W	3900	7.18	0.47	3900	13.09	0.48
23N	3800	9.00	0.71	3600	19.64	0.81
23W	3800	9.59	0.91	3600	19.95	0.86
24N	3800	9.14	0.74	3600	21.27	0.96
24W	3800	9.77	0.95	3600	21.73	1.02
25N	3800	9.23	0.77	3600	23.00	1.12
25W	3800	9.95	0.99	3600	23.59	1.19
26N	3800	9.32	0.80	3600	24.77	1.31
26W	3800	10.14	1.03	3600	25.50	1.39
27006	3600	17.77	0.72	3600	34.64	2.14
27008	3600	16.27	0.75	3600	33.59	2.20
27010	3600	19.09	0.80	3600	36.95	2.29
27012	3600	21.23	0.90	3600	39.50	2.44
27506	3600	18.09	0.77	3600	35.68	2.29
27508	3600	16.64	0.80	3600	34.64	2.35
27510	3600	19.45	0.86	3600	38.05	2.44
27512	3600	21.64	0.95	3600	40.14	2.59
28006	3600	18.45	0.82	3600	42.55	2.90
28008	3600	17.00	0.85	3600	41.27	2.96
28010	3600	19.86	0.91	3600	44.41	3.05
28012	3600	22.23	1.01	3600	47.36	3.22
28506	3600	18.82	0.88	3600	43.77	3.10
28508	3600	17.41	0.91	3600	42.55	3.16
28510	3600	20.23	0.97	3600	45.73	3.26
28512	3600	22.45	1.07	3600	47.59	3.41
29006	3600	19.18	0.93	3600	45.09	3.31
29008	3600	17.82	0.97	3600	43.86	3.38
29010	3600	20.64	1.03	3600	47.05	3.48
29012	3600	22.82	1.13	3600	49.00	3.64
30008	3600	19.95	1.21	3600	50.82	4.28
30010	3600	22.82	1.28	3600	54.09	4.40
30012	3600*	25.18	1.38	3600*	56.00	4.58
30014	3600*	31.32	1.63	3600*	62.00	4.91
30508	3600	20.91	1.29	3600	52.95	4.56
30510	3600	25.95	1.38	3600	58.55	4.71
30512	3600*	29.36	1.50	3600*	61.55	4.93
30514	3600*	31.77	1.72	3600*	63.23	5.10
31008	3600	21.41	1.37	3600	54.45	4.85
31010	3600	26.41	1.46	3600	60.09	5.00
31012	3600*	29.82	1.58	3600*	63.14	5.23
31014	3600*	32.27	1.80	3600*	65.27	5.52

SIZE	IMPELLER					
	TBNA (ALUMINUM)			TBNS (STEEL)		
	MAX. RPM	WT. (kg)	WR ² (kg-m ²)	MAX. RPM	WT. (kg)	WR ² (kg-m ²)
31508	3600	23.90	1.61	3600	62.20	5.76
31510	3600	28.80	1.72	3600	67.60	5.91
31512	3600*	32.20	1.85	3600*	70.40	6.14
31514	3600*	34.70	2.09	3600*	72.30	6.44
32008	3600	24.40	1.71	3600	64.50	6.11
32010	3600	29.30	1.81	3600	69.40	6.27
32012	3600*	32.80	1.96	3600*	72.20	6.51
32014	3600*	35.30	2.19	3600*	74.20	6.82
33008	3600*	26.30	1.97	3600*	69.50	7.00
33010	3600*	31.10	2.08	3600*	74.60	7.19
33012	3600*	33.90	2.17	3600*	76.00	7.30
33014	3600*	36.50	2.42	3600*	78.10	7.64
33508	3600*	29.40	2.34	3600*	81.60	8.63
33510	3600*	34.00	2.45	3600*	86.90	8.87
33512	3600*	36.60	2.54	3600*	88.00	8.99
33514	3600*	39.10	2.79	3600*	90.50	9.42
34008	3600*	31.80	2.48	3600*	83.70	9.13
34010	3600*	34.60	2.58	3600*	89.00	9.37
34012	3600*	37.30	2.68	3600*	90.20	9.50
34014	3600*	39.80	2.93	3600*	92.80	9.95
34508	3600*	32.40	2.62	3600*	85.90	9.64
34510	3600*	35.30	2.72	3600*	91.30	9.89
34512	3600*	37.90	2.81	3600*	92.20	10.02
34514	3600*	40.50	3.08	3600*	95.10	10.50
35008	3600*	33.00	2.76	3600*	88.20	10.19
35010	3600*	35.90	2.87	3600*	93.60	10.45
35012	3600*	38.60	3.11	3600*	94.90	10.59
35014	3600*	41.10	3.23	3600*	97.60	11.08
36010	3600*	37.60	3.20	3600*	96.30	11.41
36012	3600*	40.80	3.35	3600*	98.90	11.70
36014	3600*	42.90	3.64	3600*	101.40	12.17
36016	3600*	45.10	3.87	3600*	101.40	12.39
36510	3600*	38.30	3.36	3600*	98.60	12.02
36512	3600*	41.50	3.52	3600*	101.20	12.32
36514	3600*	44.00	3.81	3600*	103.90	12.81
36516	3600*	45.90	4.04	3600*	103.80	13.03
37010	3600*	39.00	3.54	3600*	101.00	12.67
37012	3600*	42.20	3.70	3600*	103.70	12.98
37014	3600*	44.80	3.99	3600*	106.40	13.49
37016	3600*	46.60	4.22	3600*	106.40	13.72
37510	3600*	39.80	3.71	3600*	103.40	13.32
37512	3600*	42.90	3.87	3600*	106.10	13.64
37514	3600*	45.50	4.18	3600*	108.90	14.18
37516	3600*	47.40	4.41	3600*	108.90	14.42
38010	3600*	40.50	3.89	3600*	105.80	14.01
38012	3600*	43.60	4.06	3600*	108.50	14.34
38014	3600*	46.30	4.37	3600*	111.00	14.88
38016	3600*	48.10	4.61	3600*	111.40	15.14

* Arrangement 1, sizes 300xx - 320xx with 12 and 14 outlet and 330 - 380 with all outlet sizes are limited to 3200 RPM and 300 BHP maximum.



Selection

The performance curves shown are for Model TBNA and are based on standard air density: 21°C at sea level (1.201 kg/m³). For Model TBNS performance, see Fan Selector.

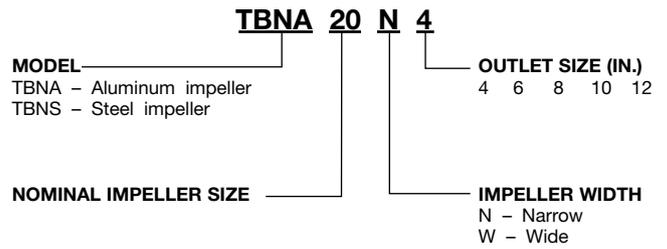
Selection Steps

1. Locate the volume flow required on the horizontal axis.
2. Follow a vertical line up to the fan curve closest to the required Static Pressure. This will determine the fan size. The dotted lines represent system characteristic curves.
3. Interpolate Power (kW).

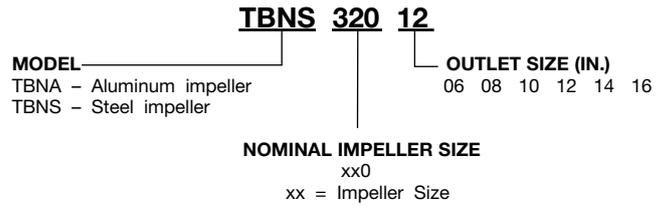
Selection Example:

Size = 22N4 RPM = 3500
 Density = 1.201 kg/m³ Outlet Velocity = 29 m/sec
 Volume Flow = 0.24 m³/sec Power (TBNA) = 3.62 kW
 Static Pressure = 8420 Pa

Model Nomenclature (Size 14 — Size 26)



Model Nomenclature (Size 27 — Size 38)

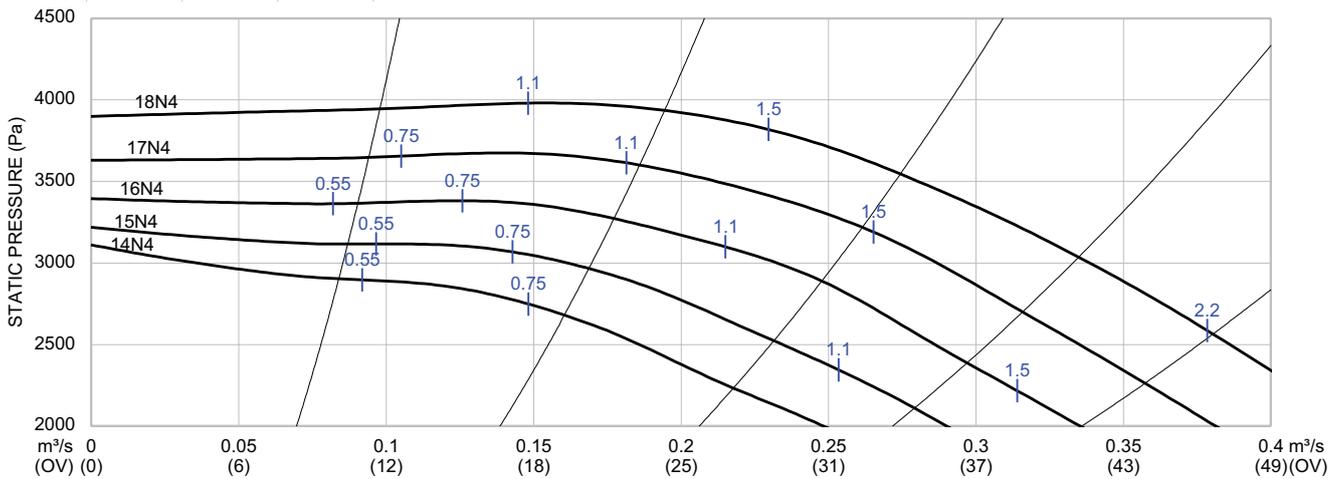


TBNA 4 (100 mm) Outlet

Outlet Area: 0.008 m²

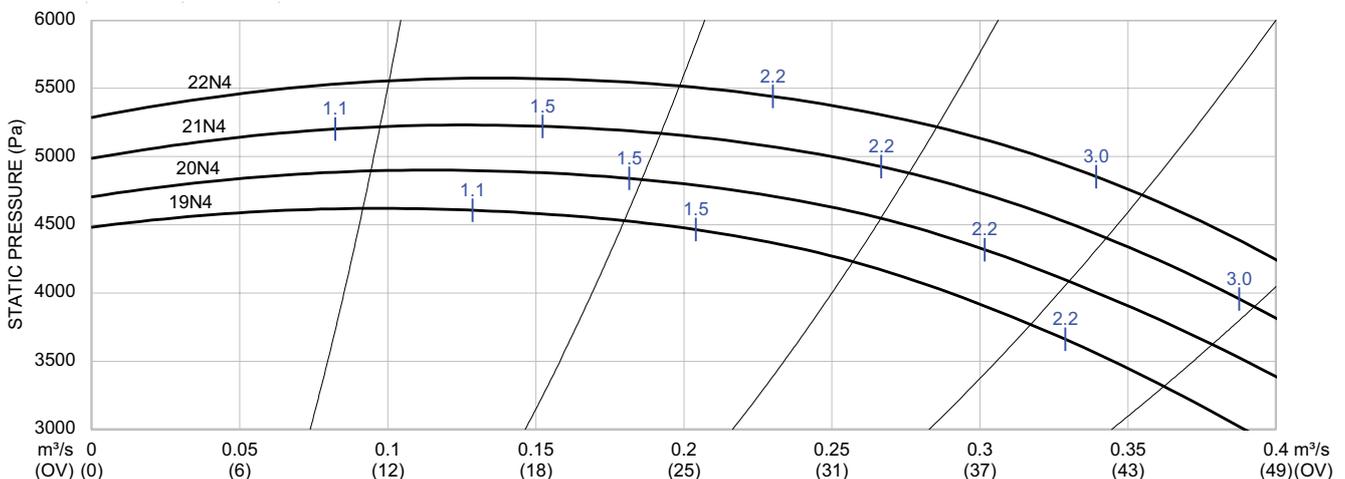
14N4, 15N4, 16N4, 17N4, 18N4

2850 RPM



19N4, 20N4, 21N4, 22N4

2850 RPM



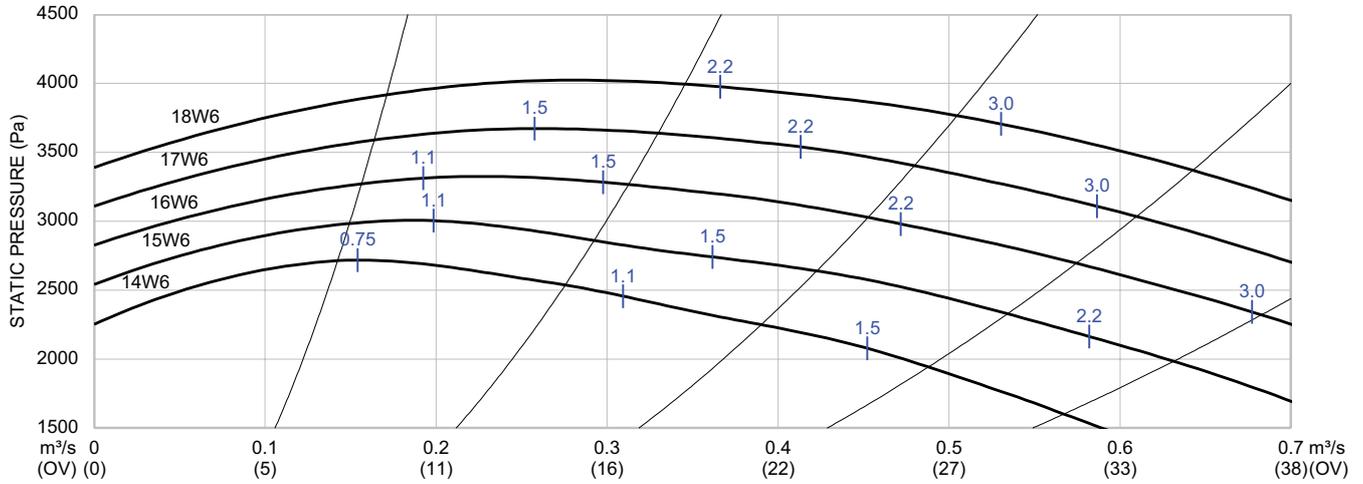
Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

TBNA 6 (150 mm) Outlet

Outlet Area: 0.019 m²

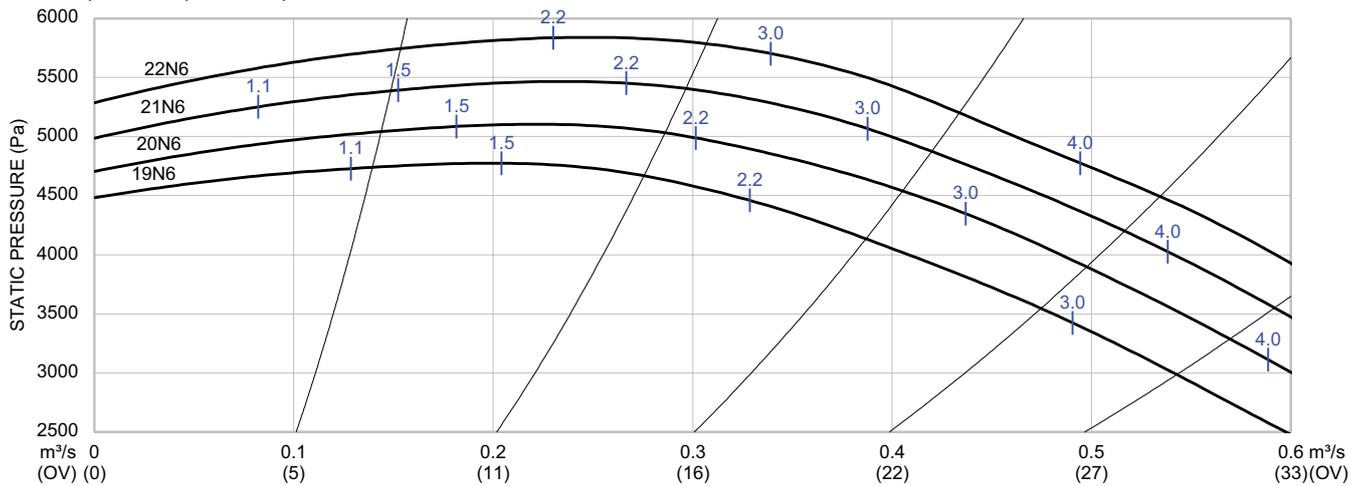
14W6, 15W6, 16W6, 17W6, 18W6

2850 RPM



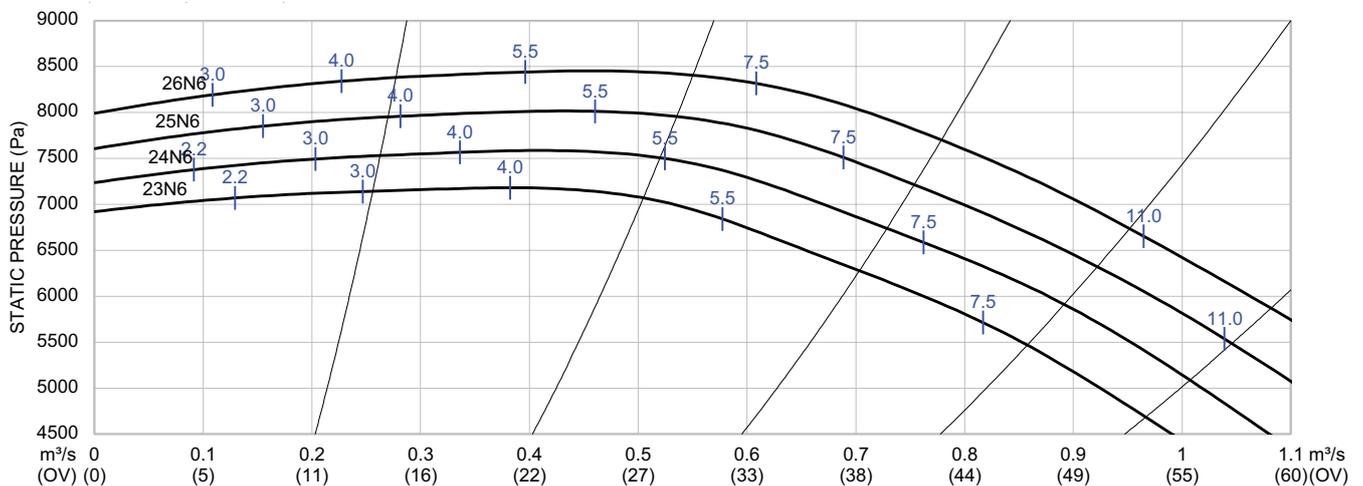
19N6, 20N6, 21N6, 22N6

2850 RPM



23N6, 24N6, 25N6, 26N6

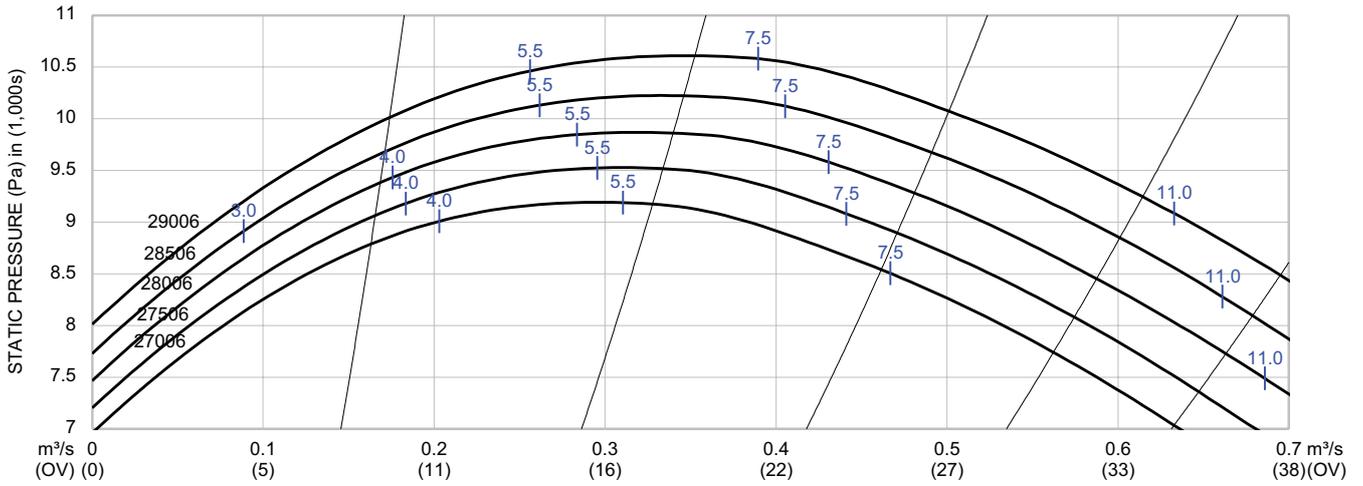
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

27006, 27506, 28006, 28506, 29006

2850 RPM

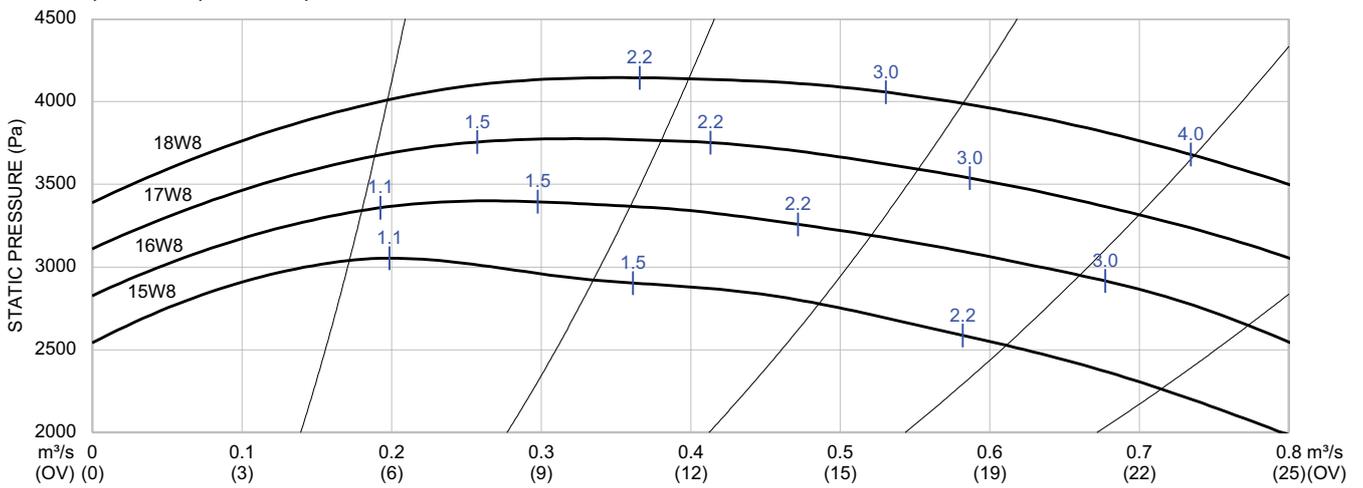


TBNA 8 (200 mm) Outlet

Outlet Area: 0.033 m²

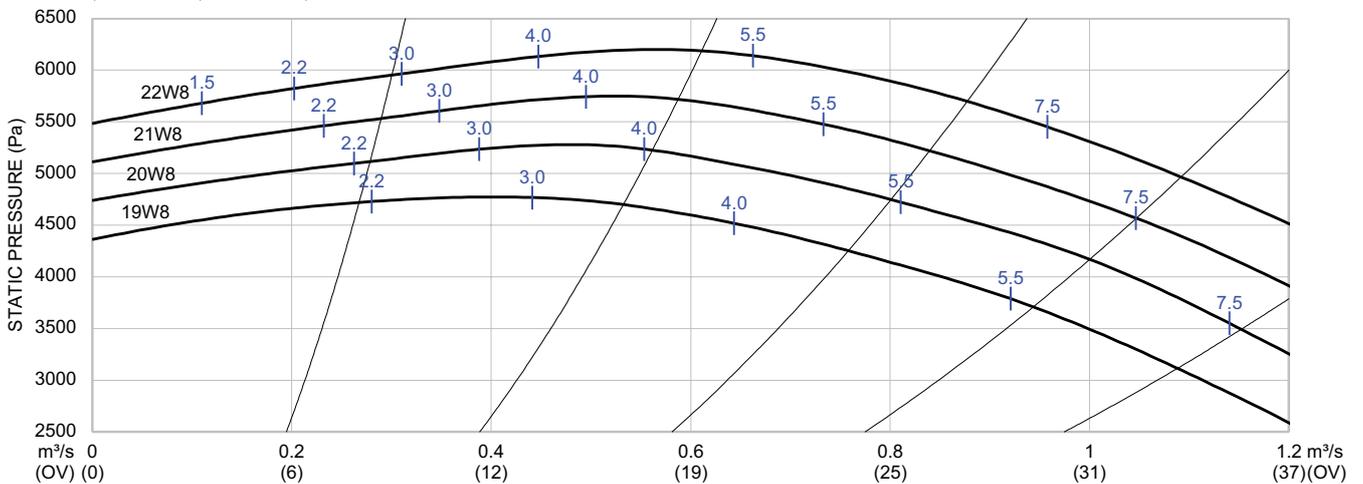
15W8, 16W8, 17W8, 18W8

2850 RPM



19W8, 20W8, 21W8, 22W8

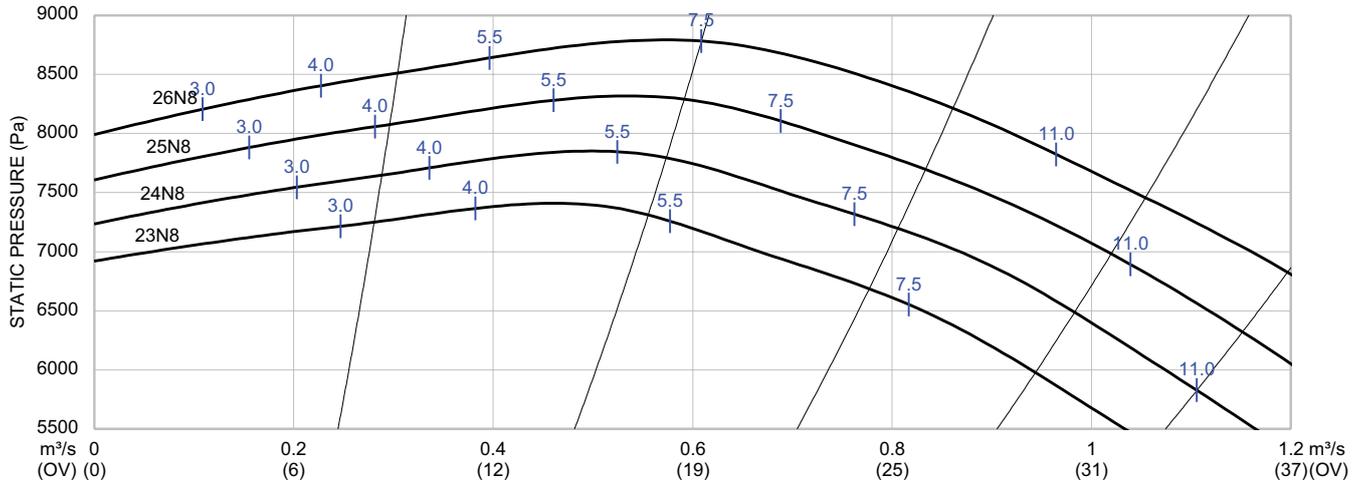
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

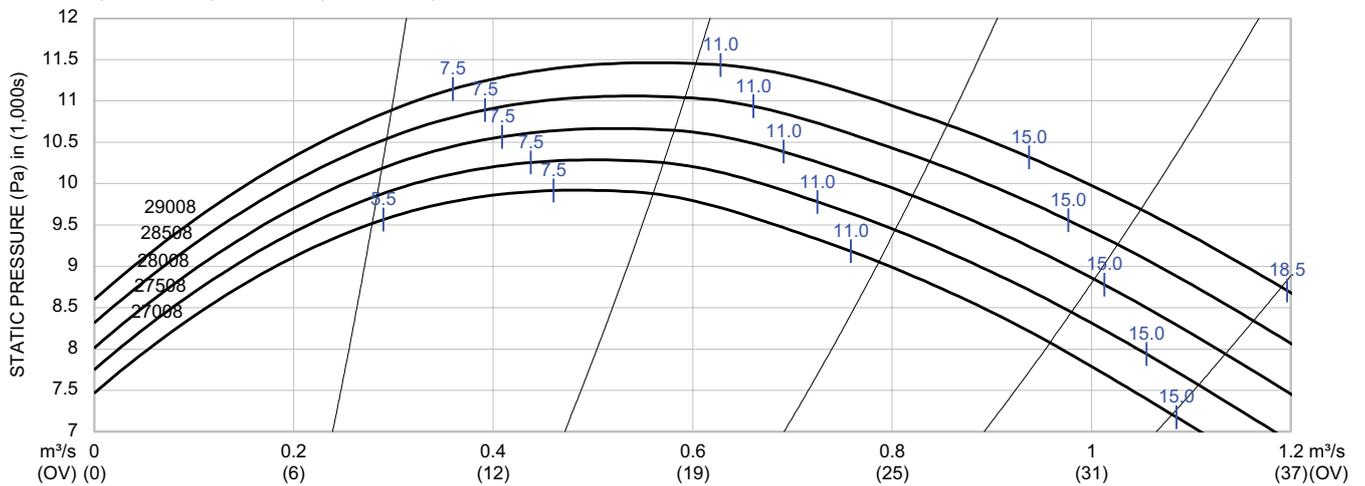
23N8, 24N8, 25N8, 26N8

2850 RPM



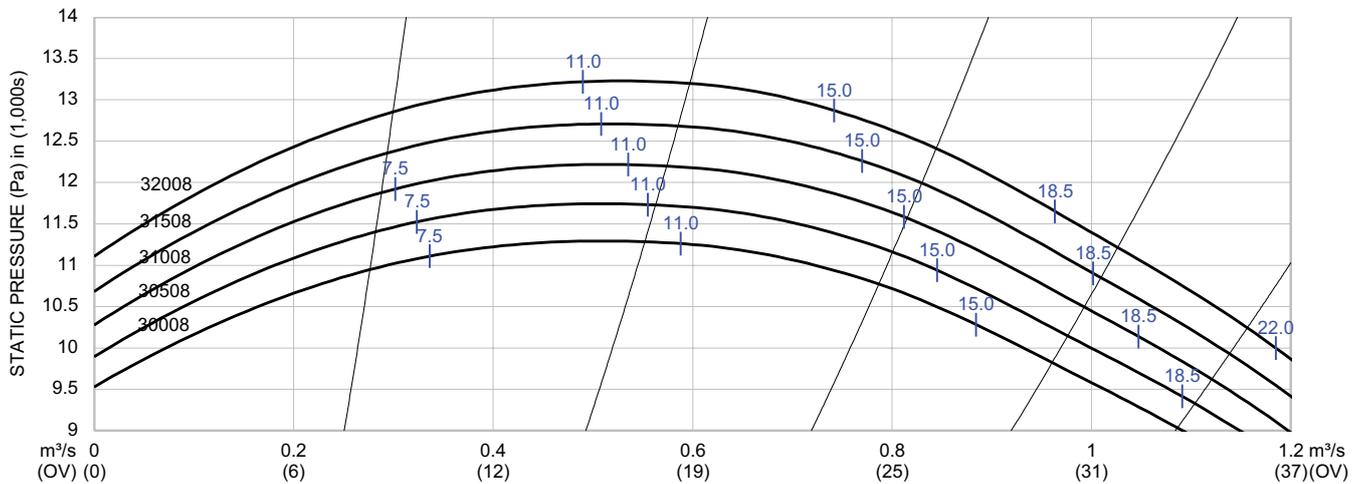
27008, 27508, 28008, 28508, 29008

2850 RPM



30008, 30508, 31008, 31508, 32008

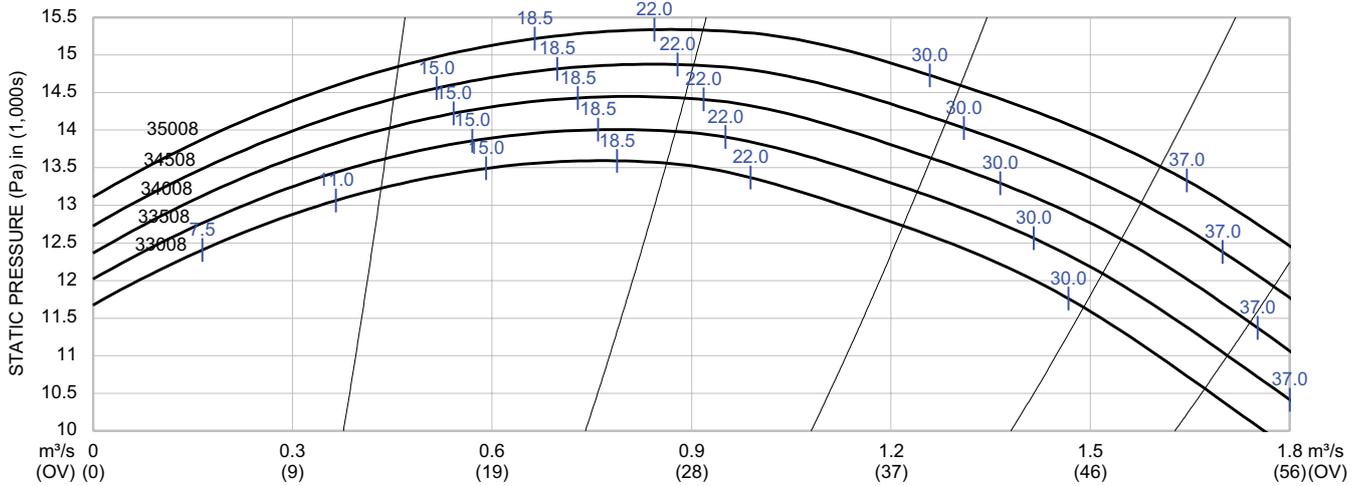
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

33008, 33508, 34008, 34508, 35008

2850 RPM

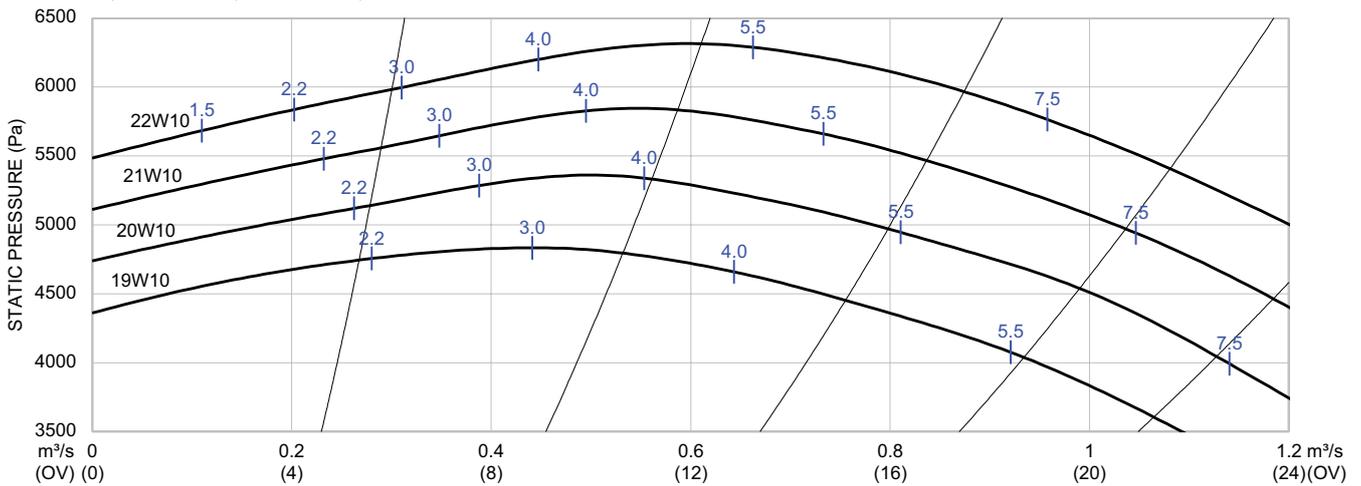


TBNA 10 (250 mm) Outlet

Outlet Area: 0.051 m²

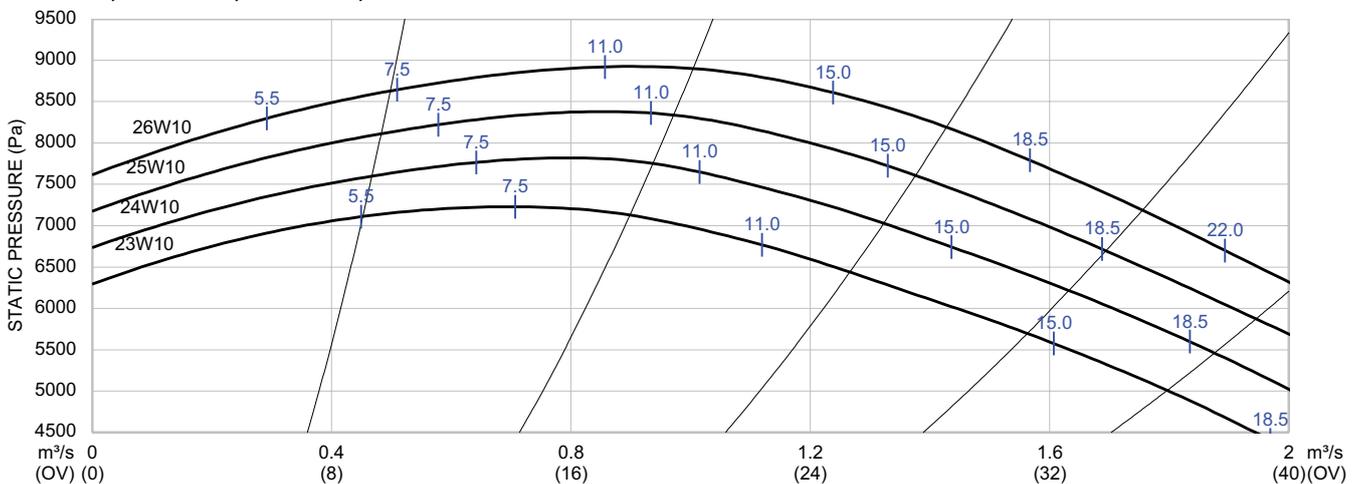
19W10, 20W10, 21W10, 22W10

2850 RPM



23W10, 24W10, 25W10, 26W10

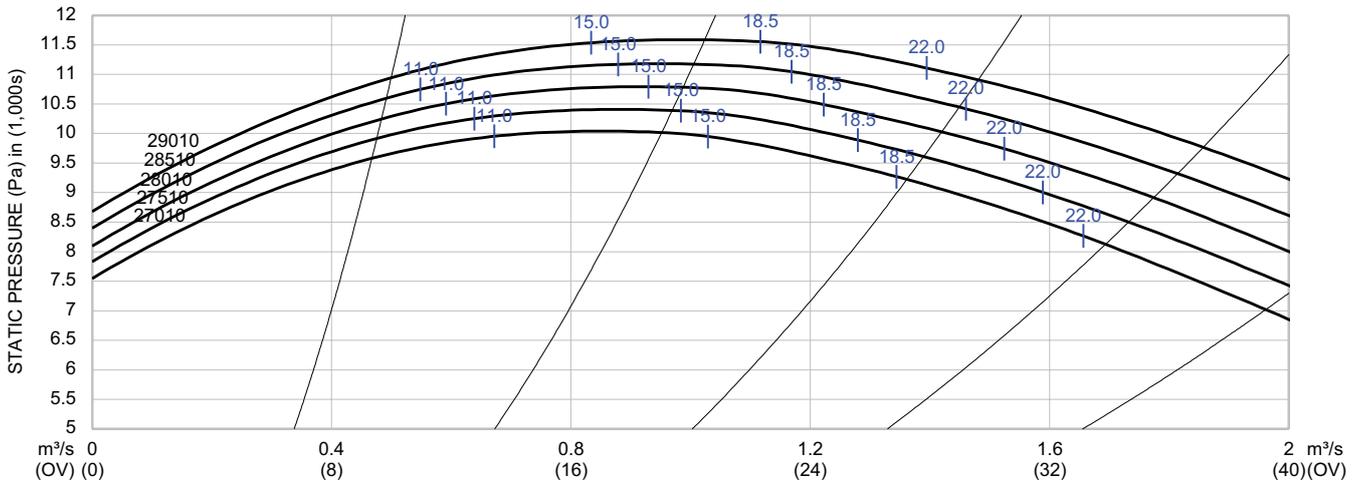
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

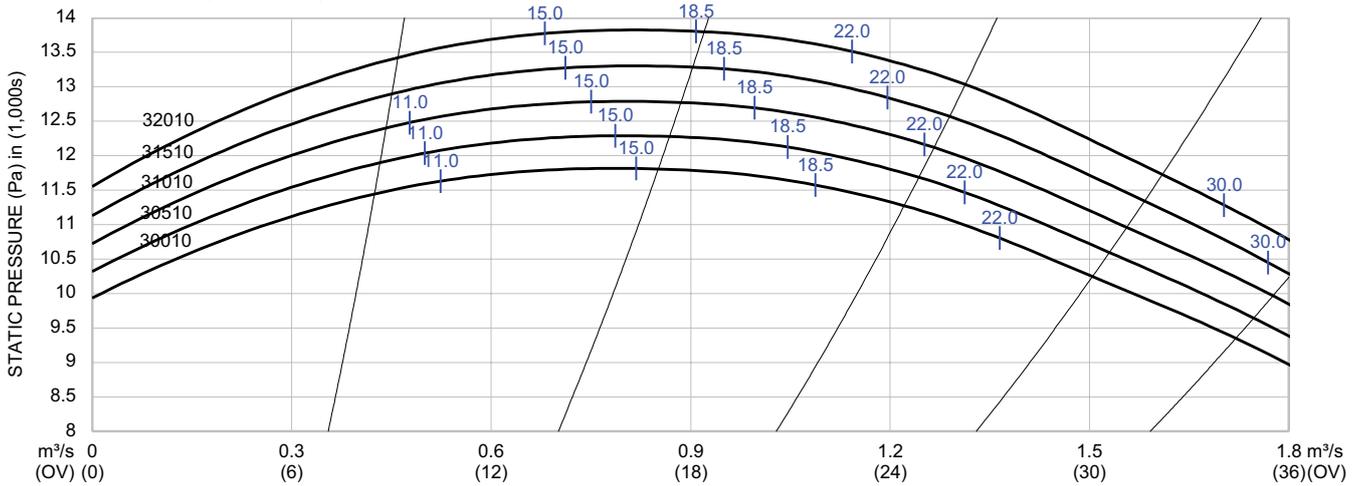
27010, 27510, 28010, 28510, 29010

2850 RPM



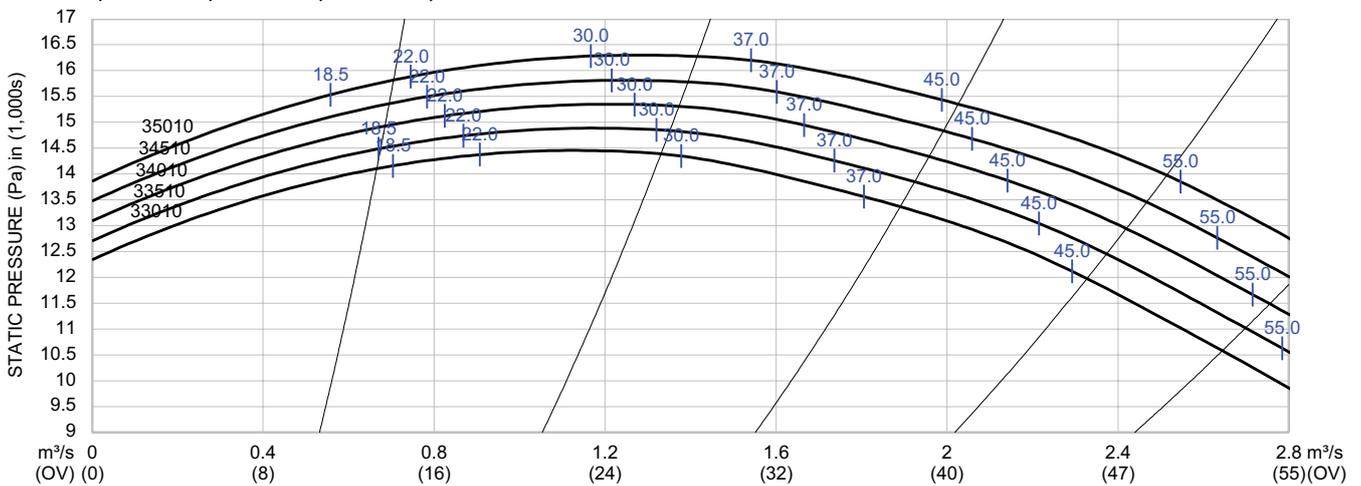
30010, 30510, 31010, 31510, 32010

2850 RPM



33010, 33510, 34010, 34510, 35010

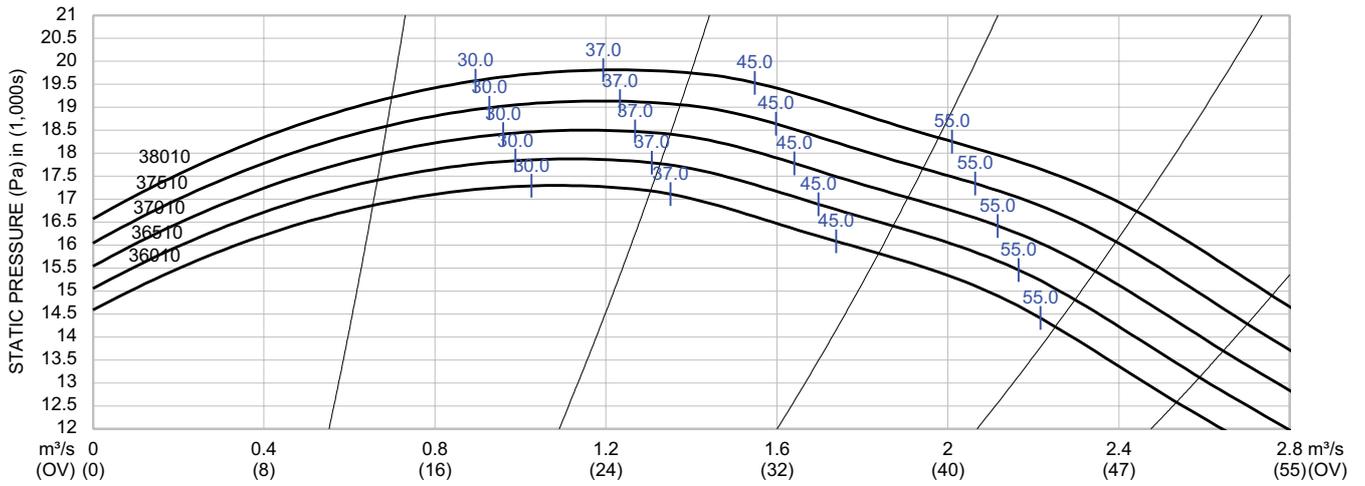
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

36010, 36510, 37010, 37510, 38010

2850 RPM

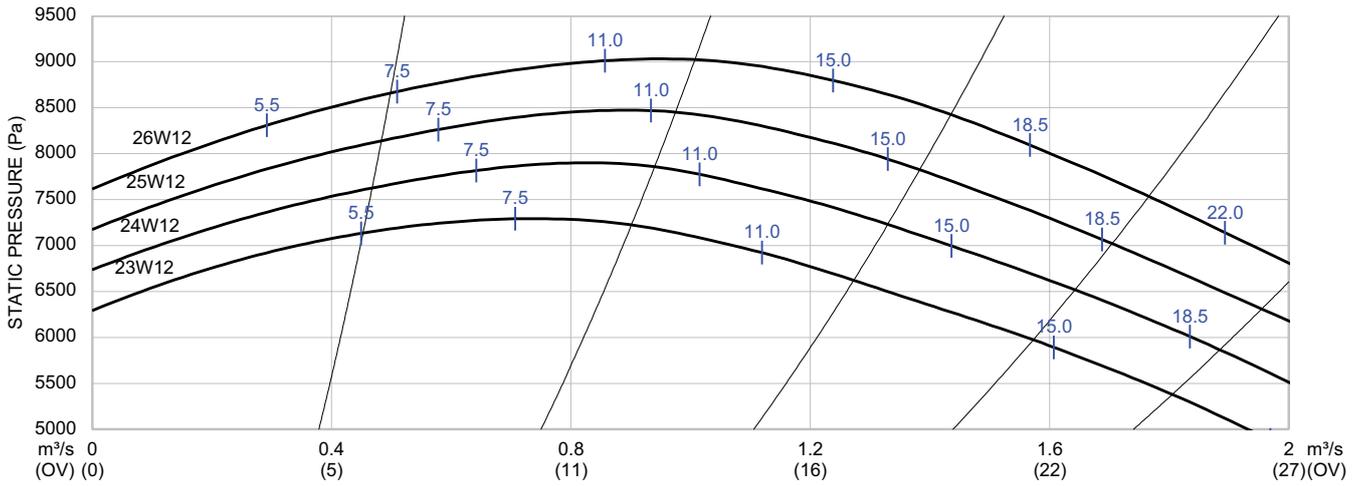


TBNA 12 (305 mm) Outlet

Outlet Area: 0.073 m²

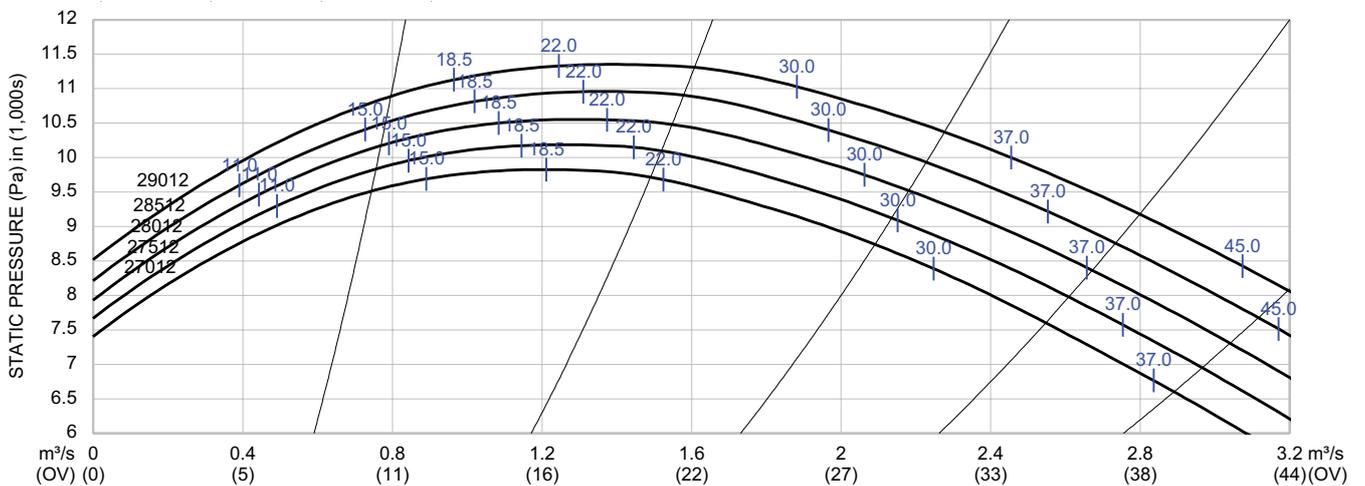
23W12, 24W12, 25W12, 26W12

2850 RPM



27012, 27512, 28012, 28512, 29012

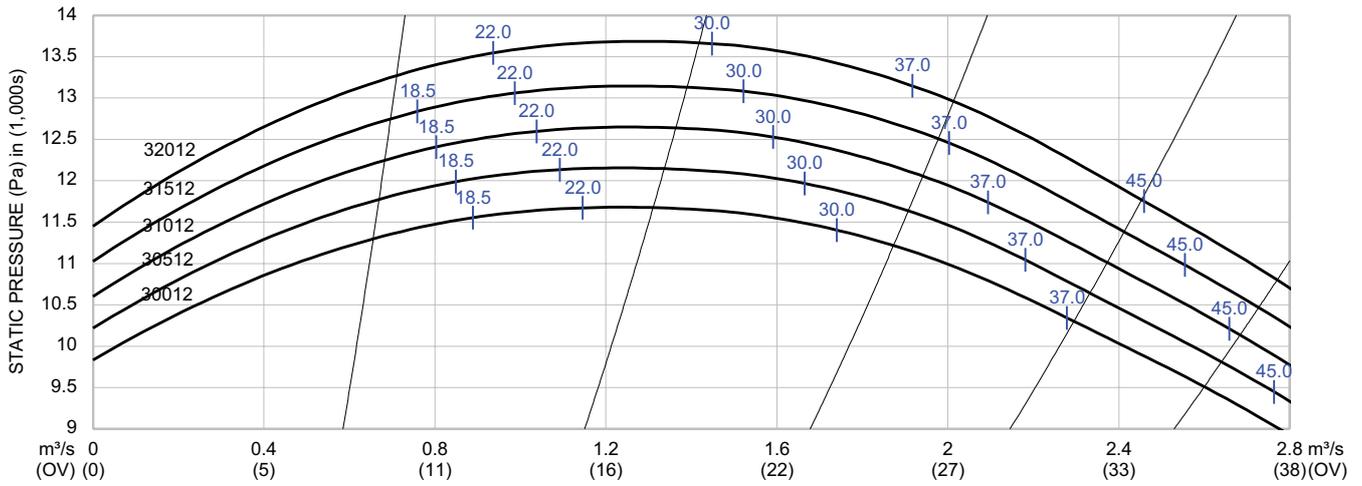
2850 RPM



Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

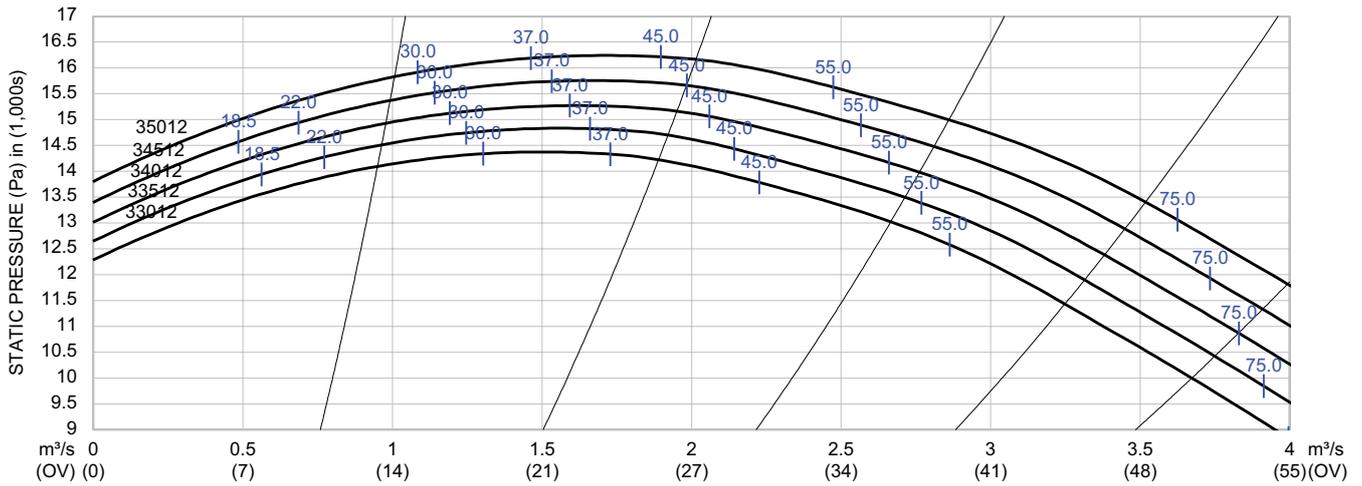
30012, 30512, 31012, 31512, 32012

2850 RPM



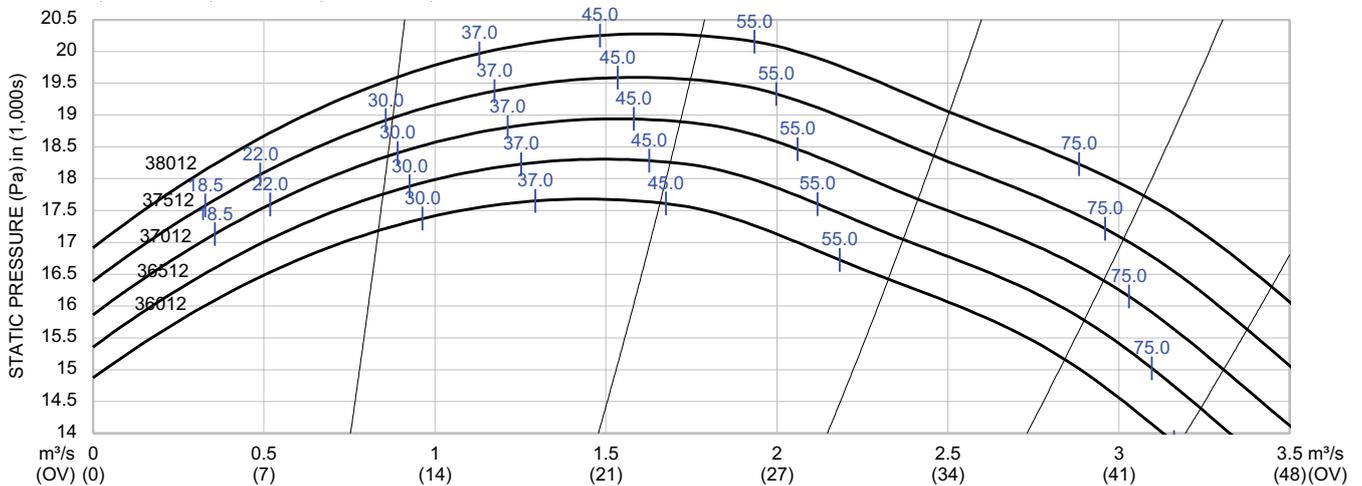
33012, 33512, 34012, 34512, 35012

2850 RPM



36012, 36512, 37012, 37512

2850 RPM



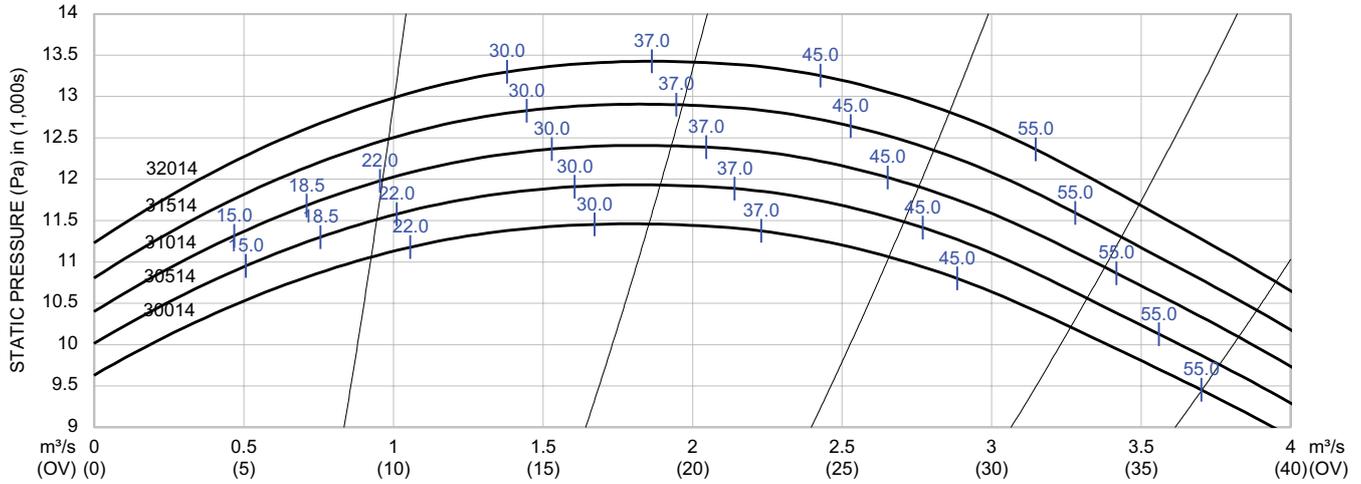
Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

TBNA 14 (355 mm Outlet)

Outlet Area: 0.099 m²

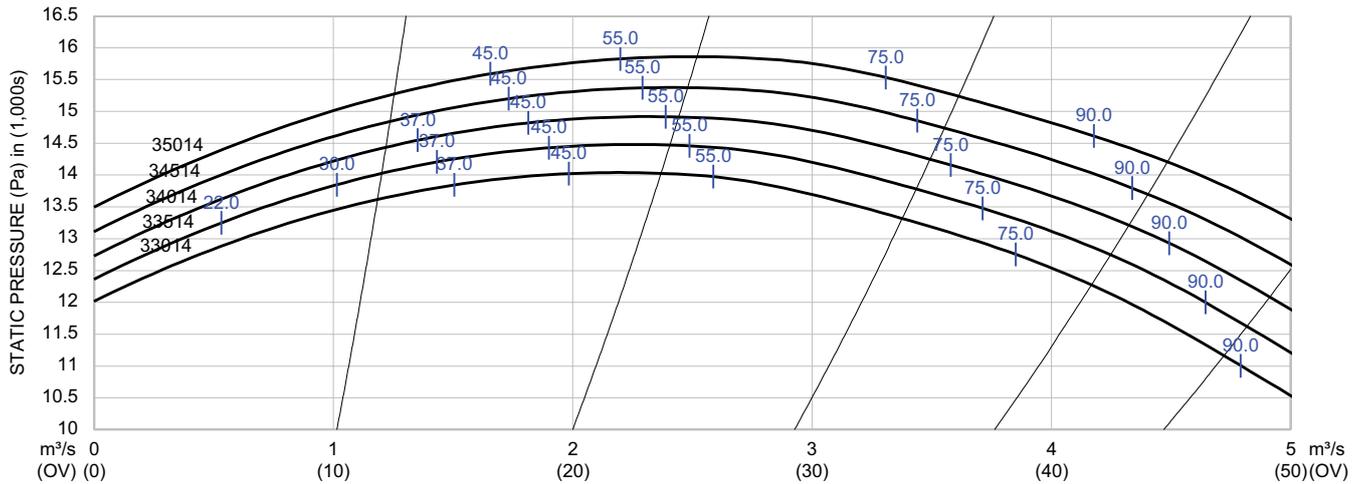
30014, 30514, 31014, 31514, 32014

2850 RPM



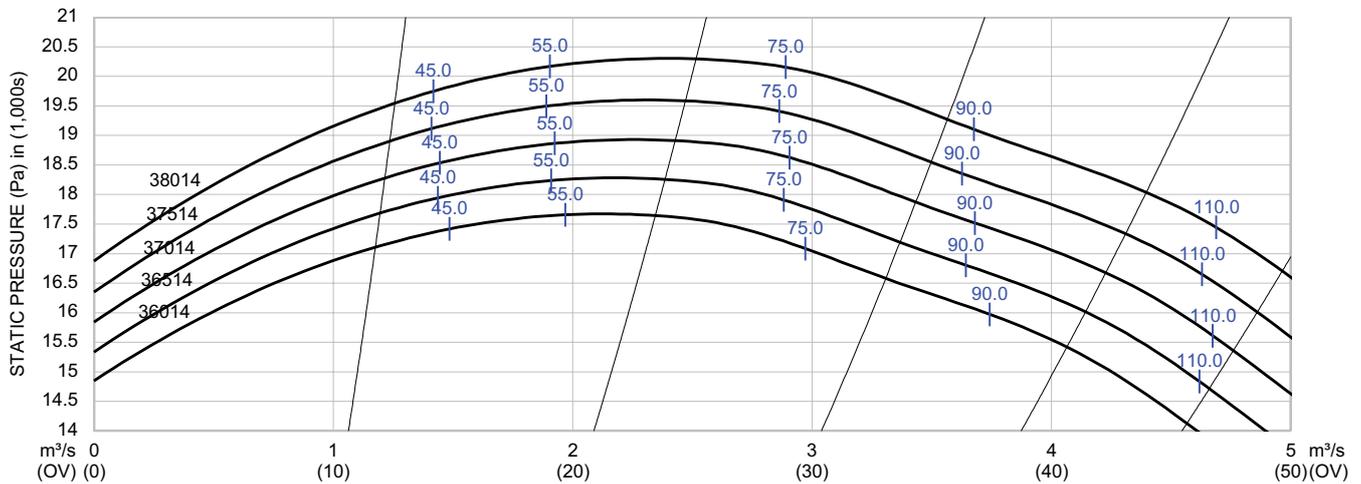
33014, 33514, 34014, 34514, 35014

2850 RPM



36014, 36514, 37014, 37514, 38014

2850 RPM



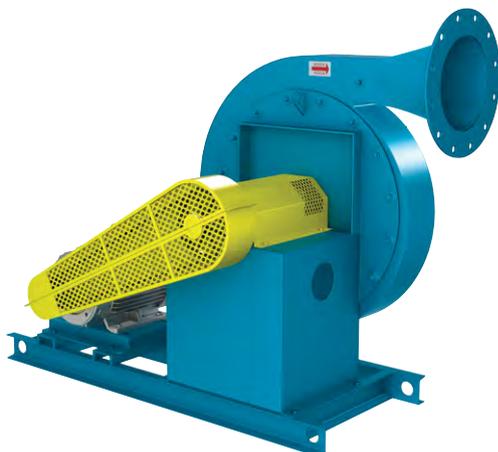
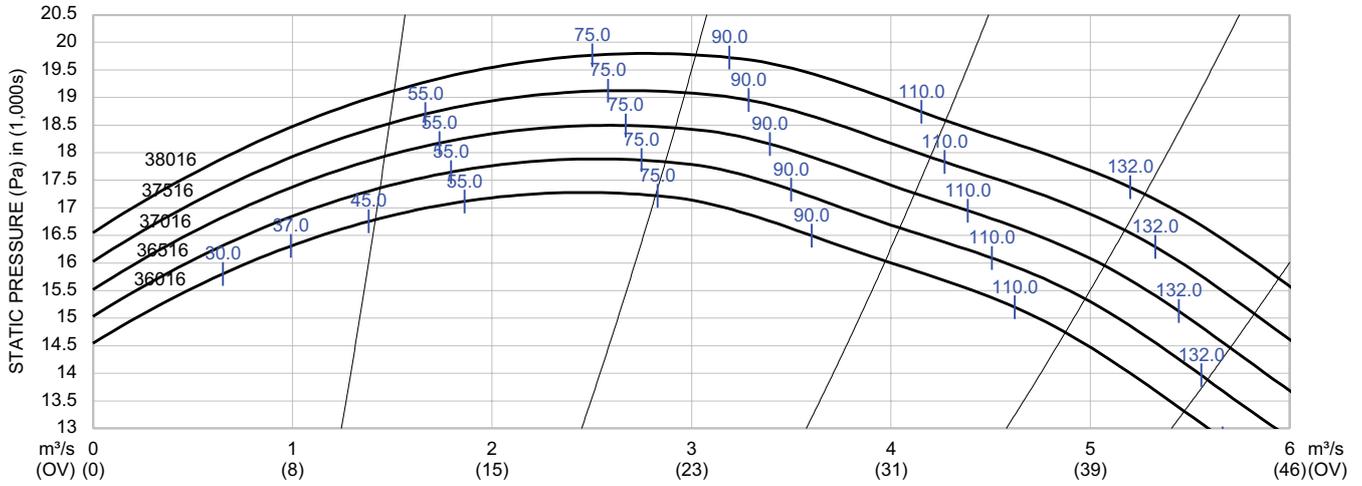
Performance shown is with a ducted outlet, and a ducted inlet or inlet with venturi.

TBNA 16 (405 mm) Outlet

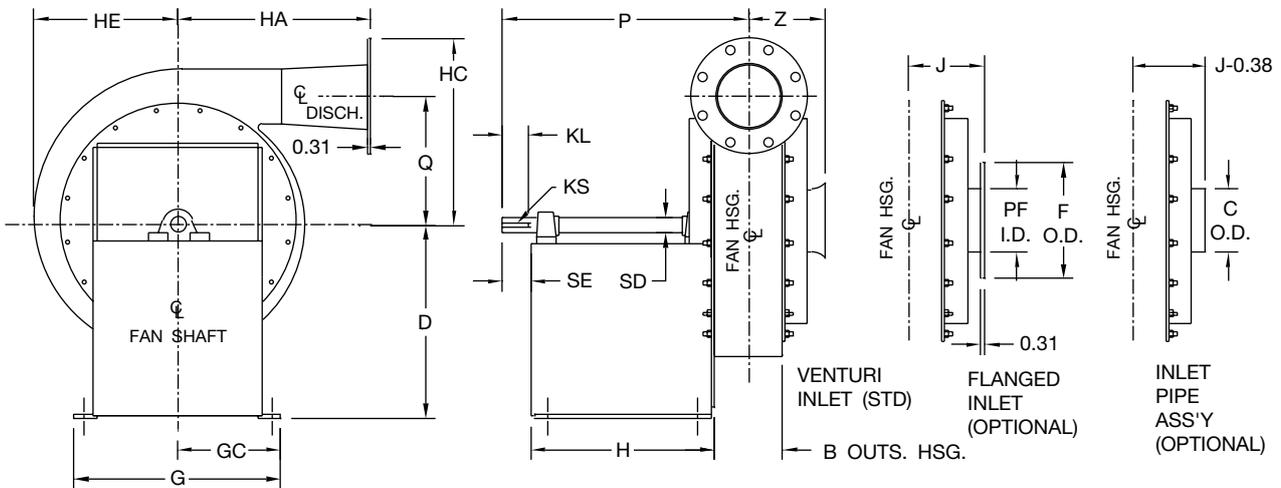
Outlet Area: 0.130 m²

36016, 36516, 37016, 37516, 38016

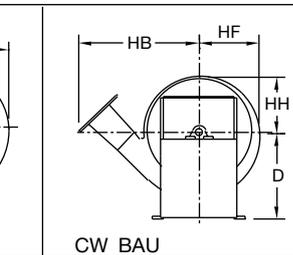
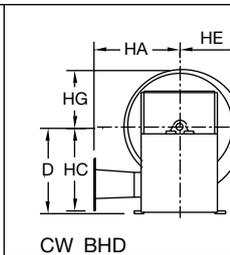
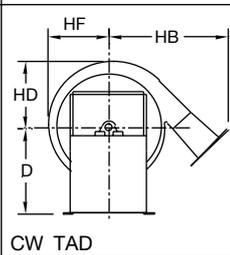
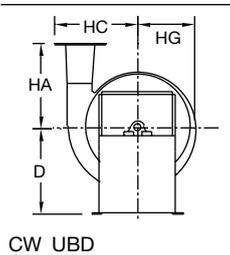
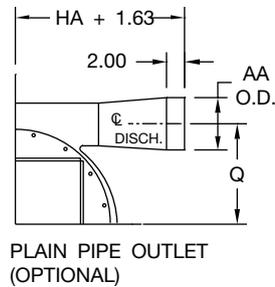
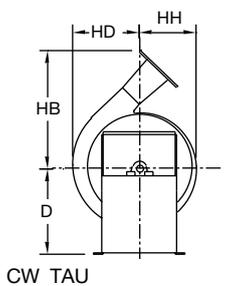
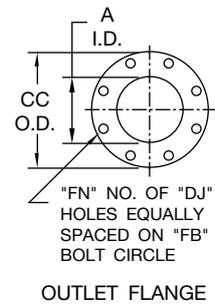
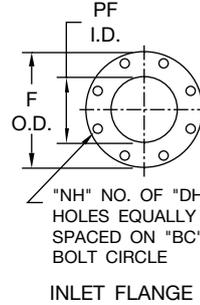
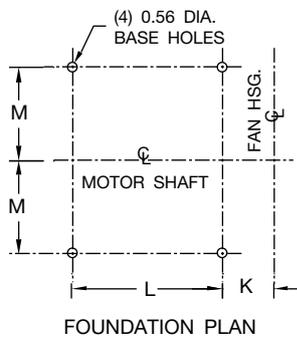
2850 RPM



Arrangement 1 (Sizes 14 – 26)



CLOCKWISE ROTATION
TOP HORIZONTAL DISCHARGE
'CW THD'
WITH STD. FLANGED OUTLET



Notes:

1. CW rotation shown, CCW rotation similar but opposite.
2. Bolt patterns on inlet and outlet flanges straddle centreline.
3. Inlet screen included with venturi inlet.

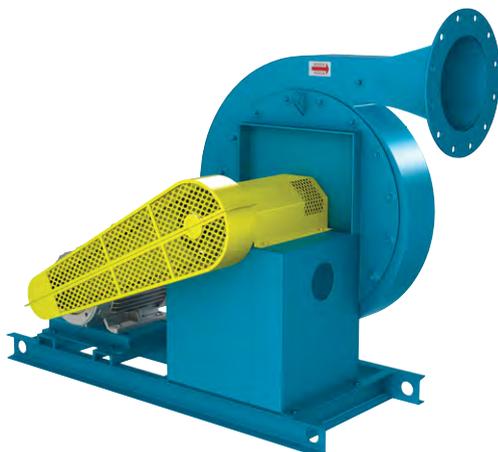
Arrangement 1 (Sizes 14 – 26)

FAN SIZE	A	AA	B	BC	C	CC	D	DH	DJ	F	FB	FN	G	GC	H	HA	HB	HC
14N4, 15N4, 16N4, 17N4, 18N4	102	114	99	241	168	229	451	22	19	279	191	8	495	248	295	464	621	414
14W6, 15W6, 16W6, 17W6, 18W6	152	168	159	298	219	279	451	22	22	343	241	8	495	248	295	464	638	440
15W8, 16W8, 17W8, 18W8	203	219	159	298	219	343	451	22	22	343	298	8	495	248	295	464	660	471
19N4, 20N4, 21N4, 22N4	102	114	99	241	168	229	584	22	19	279	191	8	597	298	435	451	667	492
19N6, 20N6, 21N6, 22N6	152	168	99	241	168	279	584	22	22	279	241	8	597	298	435	451	684	518
19W8, 20W8, 21W8, 22W8	203	219	159	298	219	343	584	22	22	343	298	8	597	298	435	451	708	549
19W10, 20W10, 21W10, 22W10	254	273	159	362	219	406	584	25	25	406	362	12	597	298	435	552	802	581
23N6, 24N6, 25N6, 26N6	152	168	127	298	219	279	610	22	22	343	241	8	597	298	435	483	757	588
23N8, 24N8, 25N8, 26N8	203	219	127	298	219	343	610	22	22	343	298	8	597	298	435	483	780	619
23W10, 24W10, 25W10, 26W10	254	273	184	362	273	406	610	25	25	406	362	12	597	298	435	584	873	651
23W12, 24W12, 25W12, 26W12	305	324	184	432	273	483	610	25	25	483	432	12	597	298	435	584	900	689

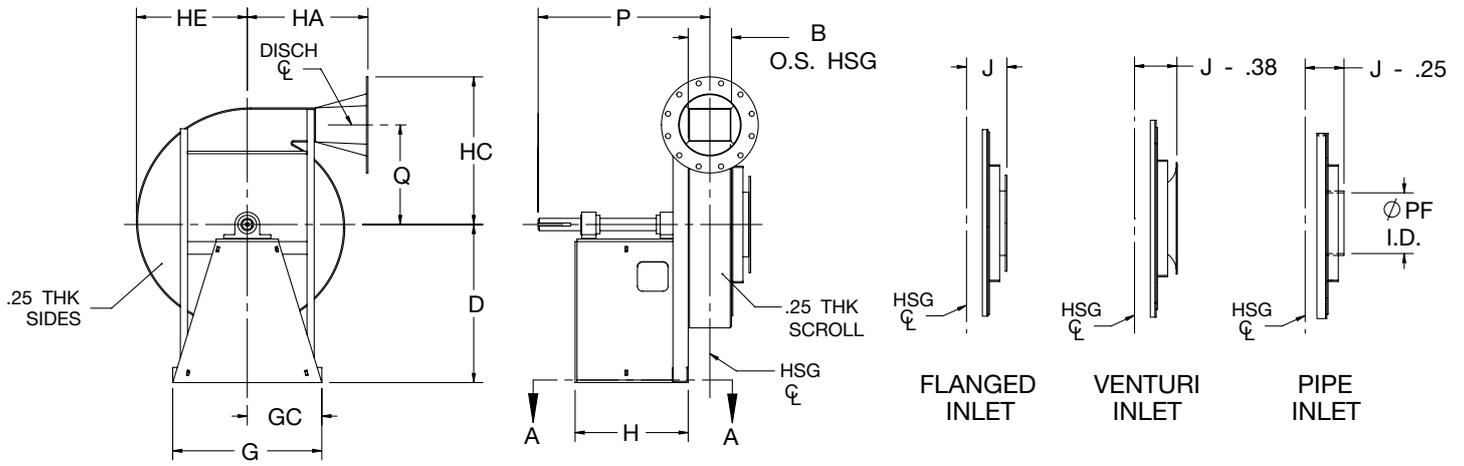
FAN SIZE	HD	HE	HF	HG	HH	J	K	KL	KS	L	M	NH	P	PF	Q	SD	SE	Z
14N4, 15N4, 16N4, 17N4, 18N4	356	346	335	324	313	141	86	60	8 x 3.5	16	226	8	411	152	298	30	67	116
14W6, 15W6, 16W6, 17W6, 18W6	356	346	335	324	313	170	114	60	8 x 3.5	16	226	8	441	203	298	30	67	162
15W8, 16W8, 17W8, 18W8	356	346	335	324	313	170	114	60	8 x 3.5	16	226	8	441	203	298	30	67	162
19N4, 20N4, 21N4, 22N4	432	419	406	394	381	154	86	83	10 x 4	359	276	8	586	152	378	37	102	116
19N6, 20N6, 21N6, 22N6	432	419	406	394	381	154	86	83	10 x 4	359	276	8	586	152	378	37	102	116
19W8, 20W8, 21W8, 22W8	432	419	406	394	381	170	114	83	10 x 4	359	276	8	613	203	378	37	99	162
19W10, 20W10, 21W10, 22W10	432	419	406	394	381	170	114	83	10 x 4	359	276	12	613	254	378	37	99	162
23N6, 24N6, 25N6, 26N6	508	495	480	464	449	176	99	99	10 x 4	359	276	8	613	203	448	37	114	133
23N8, 24N8, 25N8, 26N8	508	495	480	464	449	176	99	99	10 x 4	359	276	8	613	203	448	37	114	133
23W10, 24W10, 25W10, 26W10	508	495	480	464	449	183	127	99	10 x 4	359	276	12	641	254	448	37	114	175
23W12, 24W12, 25W12, 26W12	508	495	480	464	449	183	127	99	10 x 4	359	276	12	641	305	448	37	114	175

BC16177D

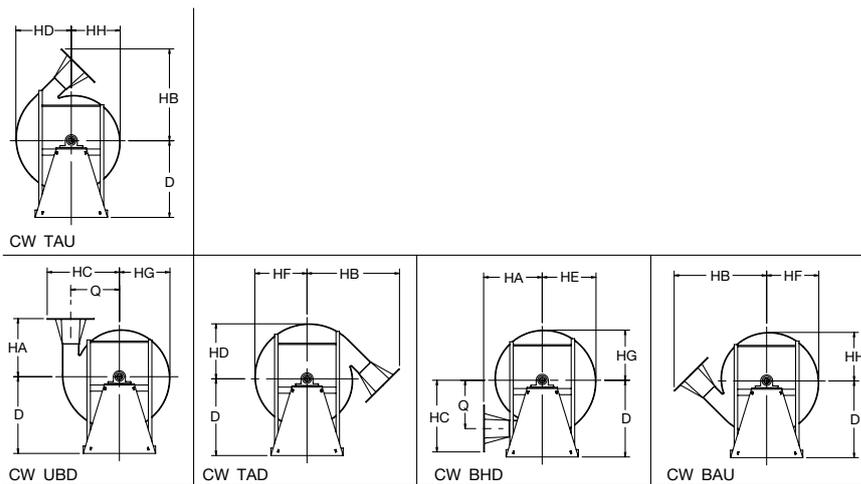
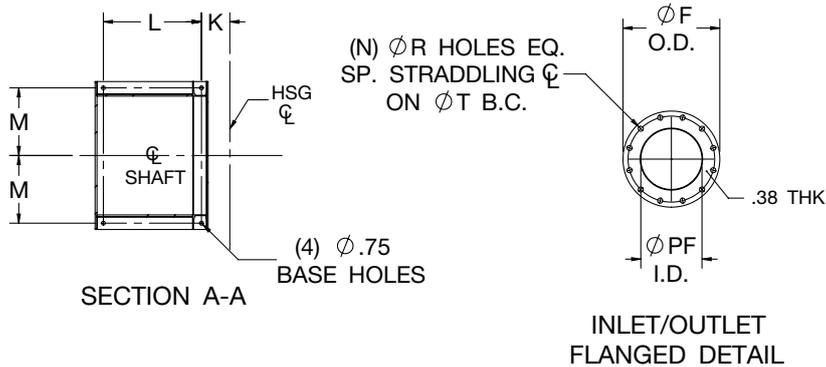
DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.



Arrangement 1 (Sizes 27 – 38)



DRIVE SIDE VIEW
CW THD



Notes:
1. CW rotation shown, CCW rotation similar but opposite.

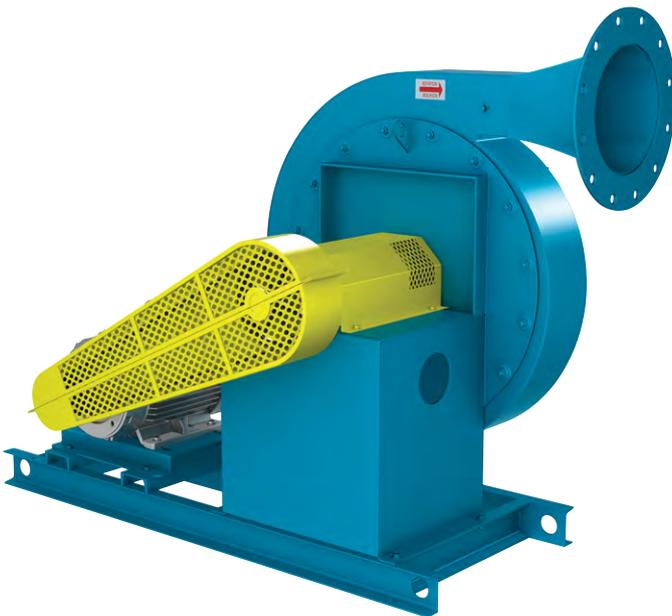
Arrangement 1 (Sizes 27 – 38)

FAN SIZE	D	HD	HE	HF	HG	HH	G	GC	L	M	Q
270xx – 290xx	794	570	552	537	519	503	743	372	489	340	502
300xx – 320xx	876	629	610	591	573	554	743	372	540	340	552
330xx – 350xx	933	697	676	656	635	614	743	372	591	365	613
360xx – 380xx	1016	756	734	711	691	667	794	397	641	365	660

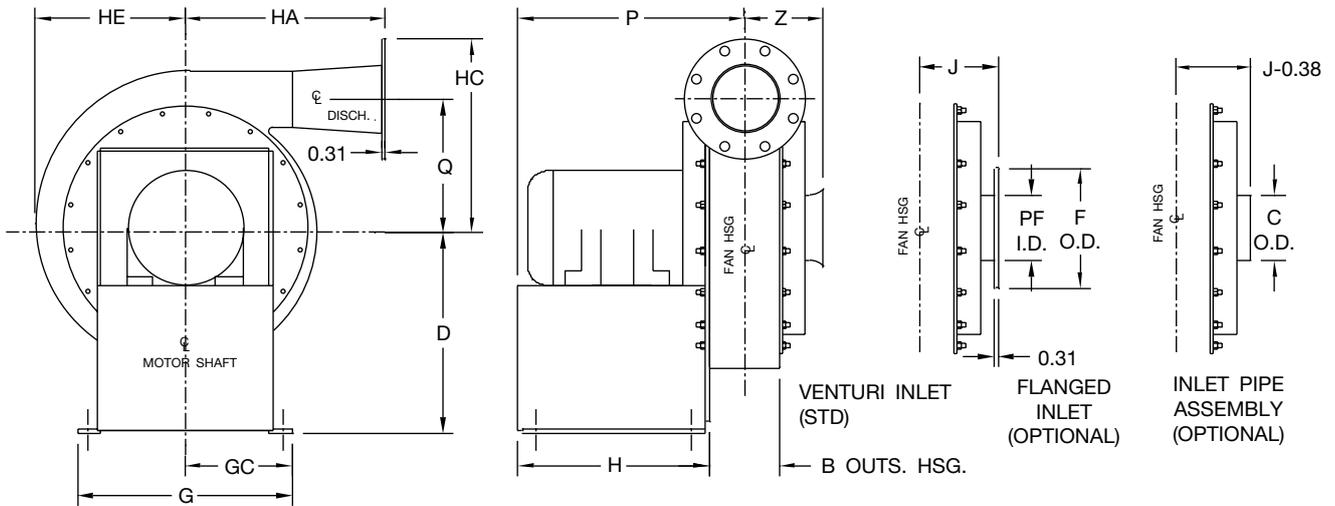
FAN SIZE	OUTLET SIZE	B	F	H	HA	HB	HC	J	K	N	P	PF	R	T
270xx – 290xx	xxx06	124	279	557	502	802	632	152	89	8	803	152	22	241
	xxx08	149	343	557	502	826	664	165	102	8	816	203	22	298
	xxx10	165	406	562	603	919	695	178	114	12	829	254	25	362
300xx – 320xx	xxx12	216	483	562	603	946	734	203	140	12	854	305	25	432
	xxx08	127	343	607	514	876	724	152	89	8	880	203	22	298
	xxx10	152	406	607	616	970	756	178	102	12	892	254	25	362
330xx – 350xx	xxx12	181	483	614	616	997	794	187	124	12	914	305	25	432
	xxx14	238	533	614	718	1087	819	216	152	12	943	356	29	476
	xxx08	152	343	657	730	1072	784	165	102	8	937	203	22	298
360xx – 380xx	xxx10	168	406	662	730	1094	816	178	114	12	951	254	25	362
	xxx12	181	483	665	730	1121	854	187	124	12	959	305	25	432
	xxx14	238	533	665	730	1140	880	216	152	12	988	356	29	476
360xx – 380xx	xxx10	156	406	706	743	1137	864	165	102	12	988	254	25	362
	xxx12	171	483	716	743	1164	902	181	118	12	1005	305	25	432
	xxx14	222	533	716	743	1181	927	207	143	12	1030	356	29	476
	xxx16	241	597	715	743	1205	959	216	152	16	1038	406	29	540

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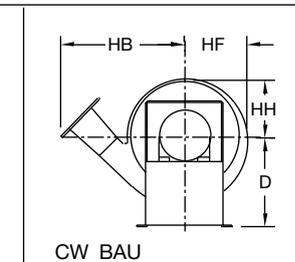
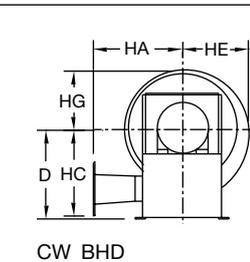
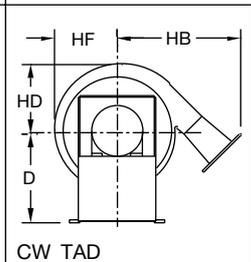
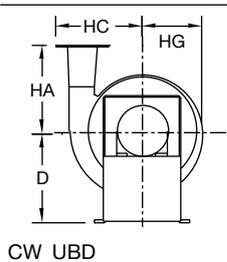
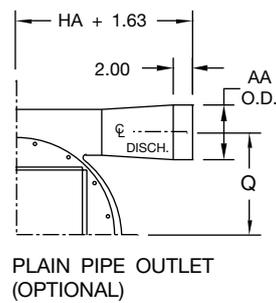
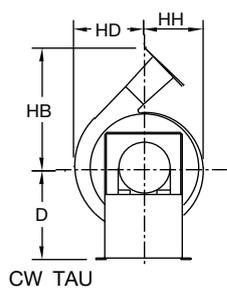
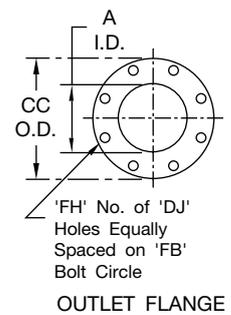
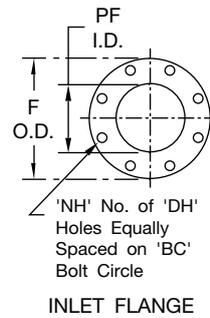
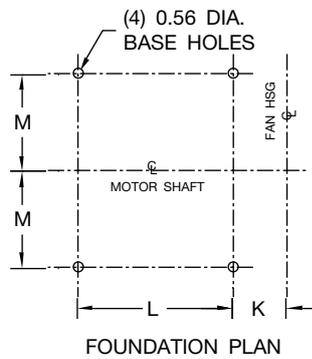
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Arrangement 4 (Sizes 14 – 26)



CLOCKWISE ROTATION
TOP HORIZONTAL DISCHARGE
'CW THD'
WITH STD. FLANGED OUTLET



Notes:

1. CW rotation shown, CCW rotation similar but opposite.
2. Bolt patterns on inlet and outlet flanges straddle centreline.
3. Inlet screen included with venturi inlet.

Arrangement 4 (Sizes 14 – 26)

FAN SIZE	MOTOR FRAME	A	AA	B	BC	C	CC	D	DH	DJ	F	FB	FN	G	GC	H	HA
14N4, 15N4 16N4, 17N4, 18N4	90S & 90L	102	114	99	241	168	229	451	22	19	279	191	8	495	248	295	464
	483							435									
14W6, 15W6 16W6, 17W6, 18W6	90S & 90L	152	168	159	298	219	279	451	22	22	343	241	8	495	248	295	464
	483							435									
15W8, 16W8 17W8, 18W8	112S & 112M	203	219	159	298	219	343	483	22	22	343	298	8	495	248	435	464
	502							435									
19N4, 20N4 21N4, 22N4	90L	102	114	99	241	168	229	584	22	19	279	191	8	597	298	435	451
	610							435									
19N6, 20N6 21N6, 22N6	112S & 112M	152	168	99	241	168	279	610	22	22	279	241	8	597	298	435	451
	629							435									
19W8, 20W8 21W8, 22W8	112S & 112M	203	219	159	298	219	343	610	22	22	343	298	8	597	298	435	451
	629							435									
19W10, 20W10 21W10, 22W10	132S & 132M	254	273	159	362	219	406	660	25	25	406	362	12	597	298	572	552
	679							572									
23N6, 24N6 25N6, 26N6	112M	152	168	127	298	219	279	610	22	22	343	241	8	597	298	435	483
	629							435									
23N8, 24N8 25N8, 26N8	132S & 132M	203	219	127	298	219	343	660	22	22	343	298	8	597	298	572	483
	660							572									
23W10, 24W10 25W10, 26W10	160M & 160L	254	273	184	362	273	406	660	25	25	406	362	12	597	298	572	584
	679							572									
23W12, 24W12 25W12, 26W12	180L	305	324	184	432	273	483	718	25	25	483	432	12	597	298	673	584
	743							673									

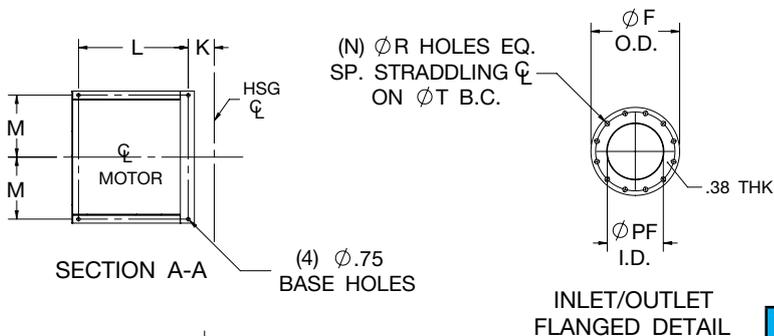
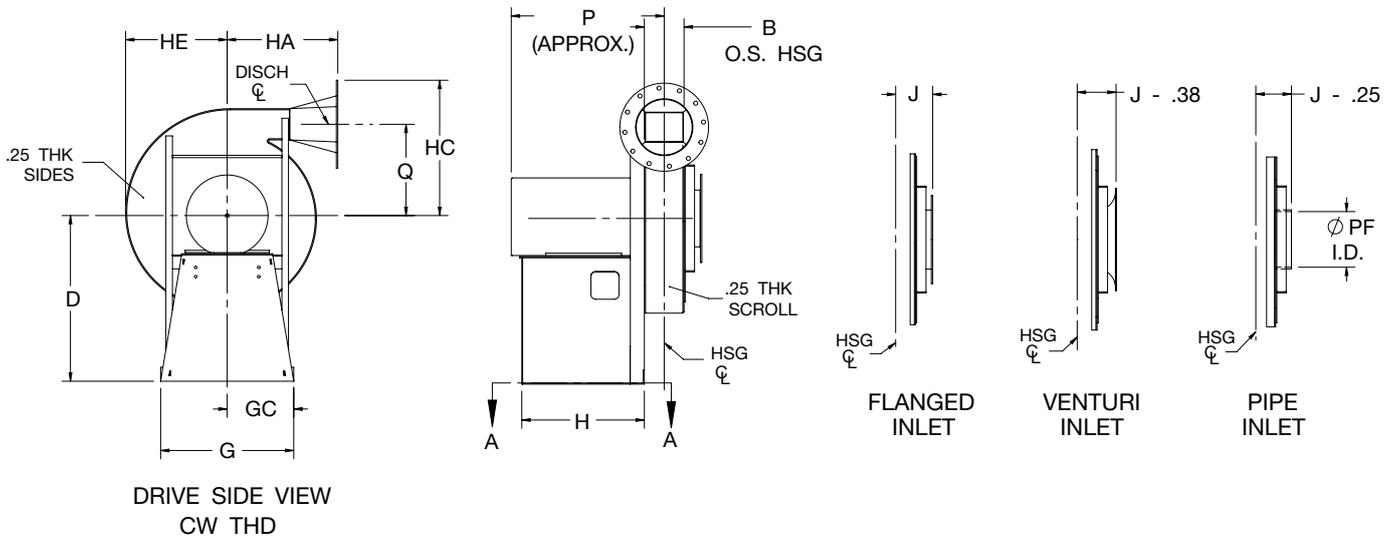
FAN SIZE	MOTOR FRAME	HB	HC	HD	HE	HF	HG	HH	J	K	L	M	NH	P	PF	Q	Z
14N4, 15N4 16N4, 17N4, 18N4	90S & 90L	621	414	356	346	335	324	313	141	86	219	226	8	344	152	298	116
	359										484						
14W6, 15W6 16W6, 17W6, 18W6	90S & 90L	638	440	356	346	335	324	313	170	114	219	226	8	375	203	298	162
	359										514						
15W8, 16W8 17W8, 18W8	112S & 112M	660	471	356	346	335	324	313	170	114	359	226	8	514	203	298	162
	359										514						
19N4, 20N4 21N4, 22N4	90L	667	492	432	419	406	394	381	154	86	359	276	8	484	152	378	116
	359										484						
19N6, 20N6 21N6, 22N6	112S & 112M	684	518	432	419	406	394	381	154	86	359	276	8	484	152	378	116
	359										484						
19W8, 20W8 21W8, 22W8	112S & 112M	708	549	432	419	406	394	381	170	114	359	276	8	514	203	378	162
	359										514						
19W10, 20W10 21W10, 22W10	132S & 132M	802	581	432	419	406	394	381	170	114	359	276	12	514	254	378	162
	495										651						
23N6, 24N6 25N6, 26N6	112M	757	588	508	495	480	464	449	176	99	359	276	8	499	203	448	133
	359										499						
23N8, 24N8 25N8, 26N8	132S & 132M	780	619	508	495	480	464	449	176	99	359	276	8	499	203	448	133
	495										635						
23W10, 24W10 25W10, 26W10	160M & 160L	873	651	508	495	480	464	449	183	127	495	276	12	664	254	448	175
	495										765						
23W12, 24W12 25W12, 26W12	180L	900	689	508	495	480	464	449	183	127	597	276	12	765	305	448	175
	597										765						

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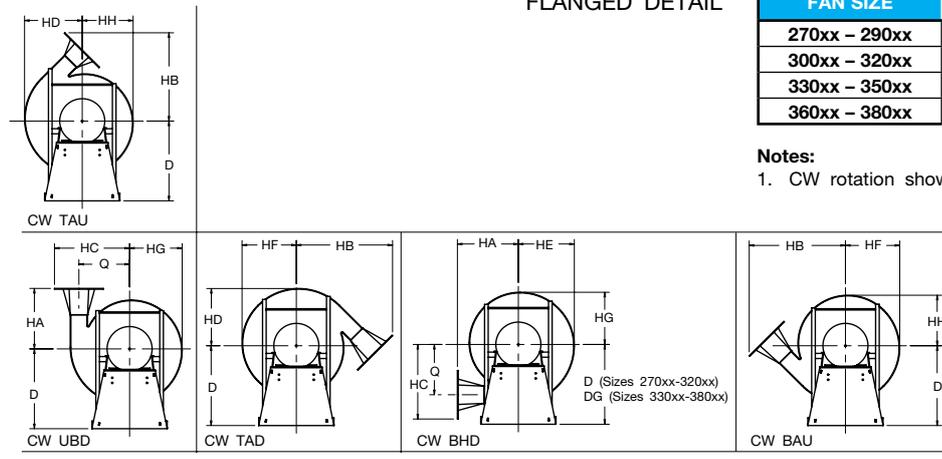


Arrangement 4 (Sizes 27 – 38)



FAN SIZE	HD	HE	HF	HG	HH	Q
270xx – 290xx	570	552	537	519	503	502
300xx – 320xx	629	610	591	573	554	552
330xx – 350xx	697	676	656	635	614	613
360xx – 380xx	756	734	711	691	667	660

Notes:
1. CW rotation shown, CCW rotation similar but opposite.



FAN SIZE	OUTLET SIZE	B	F	HA	HB	HC	J	N	PF	R	T
270xx – 290xx	xxx06	124	279	502	802	632	152	8	152	22	241
	xxx08	149	343	502	826	664	165	8	203	22	298
	xxx10	165	406	603	919	695	178	12	254	25	362
	xxx12	216	483	603	946	734	203	12	305	25	432
300xx – 320xx	xxx08	127	343	514	876	724	152	8	203	22	298
	xxx10	152	406	616	970	756	178	12	254	25	362
	xxx12	181	483	616	997	794	187	12	305	25	432
	xxx14	216	533	718	1087	819	216	12	356	29	476
330xx – 350xx	xxx08	152	343	730	1072	784	165	8	203	22	298
	xxx10	168	406	730	1094	816	178	12	254	25	362
	xxx12	181	483	730	1121	854	187	12	305	25	432
	xxx14	238	533	730	1140	880	216	12	356	29	476
360xx – 380xx	xxx10	156	406	743	1137	864	165	12	254	25	362
	xxx12	171	483	743	1164	902	181	12	305	25	432
	xxx14	222	533	743	1181	927	207	12	356	29	476
	xxx16	241	597	743	1205	959	216	16	406	29	540

Arrangement 4 (Sizes 27 – 38)



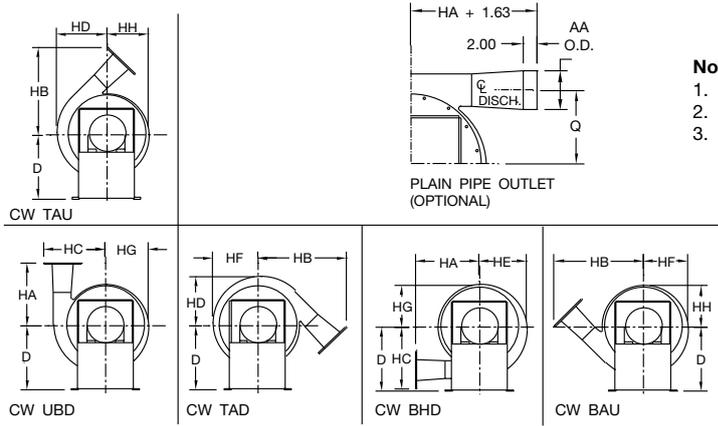
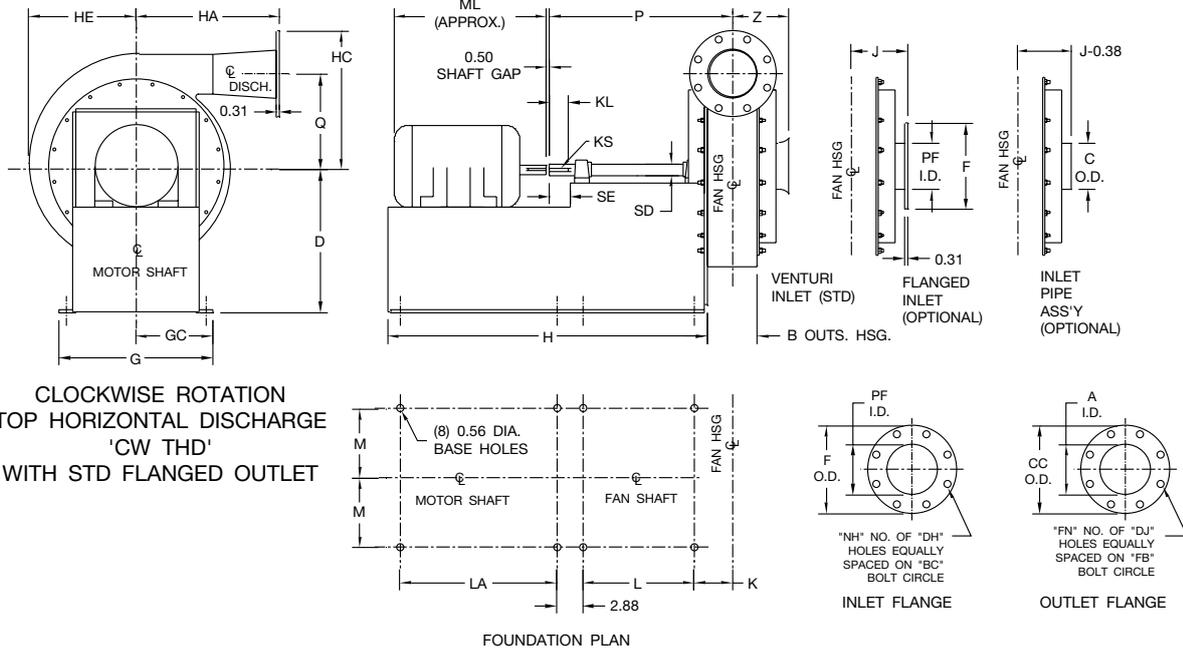
FAN SIZE	MOTOR FRAME	D	DG	G	GC	L	M
270xx – 290xx	160M & 160L	864	–	724	362	597	340
	180M & 180L	883	–	724	362	597	340
	200M & 200L	908	–	724	362	597	340
	225S & 225M	876	–	743	372	800	340
	250M	902	–	743	372	800	340
300xx – 320xx	160M & 160L	864	–	724	362	597	340
	180M & 180L	883	–	724	362	597	340
	200M & 200L	908	–	724	362	597	340
	225S & 225M	876	–	743	372	800	340
	250M	902	–	743	372	800	340
	280S & 280M	876	–	794	397	1105	365
Enquire	876	–	794	397	1105	365	
330xx – 350xx	160M & 160L	902	902	794	397	521	365
	180M & 180L	921	921	794	397	584	365
	200M & 200L	946	946	794	397	654	365
	225S & 225M	829	997	794	397	800	365
	250M	854	1022	794	397	800	365
	280S & 280M	959	994	794	397	1105	365
Enquire	959	994	794	397	1105	365	
360xx – 380xx	160M & 160L	902	902	794	397	521	365
	180M & 180L	921	921	794	397	584	365
	200M & 200L	946	946	794	397	654	365
	225S & 225M	829	997	794	397	800	365
	250M	854	1022	794	397	800	365
	280S & 280M	959	994	794	397	1105	365
Enquire	959	994	794	397	1105	365	

FAN SIZE	MOTOR FRAME	H						K						P					
		xxx06	xxx08	xxx10	xxx12	xxx14	xxx16	xxx06	xxx08	xxx10	xxx12	xxx14	xxx16	xxx06	xxx08	xxx10	xxx12	xxx14	xxx16
270xx – 290xx	160M & 160L	662	662	668	667	–	–	89	102	114	140	–	–	610	673	683	700	–	–
	180M & 180L	662	662	668	667	–	–	89	102	114	140	–	–	673	738	746	764	–	–
	200M & 200L	664	664	670	668	–	–	89	102	114	140	–	–	724	789	799	814	–	–
	225S & 225M	–	868	875	873	–	–	89	102	114	140	–	–	–	843	851	868	–	–
	250M	–	868	875	873	–	–	89	102	114	140	–	–	–	940	951	967	–	–
300xx – 320xx	160M & 160L	–	660	660	668	–	–	89	102	124	152	–	–	–	667	676	689	708	–
	180M & 180L	–	660	660	668	–	–	89	102	124	152	–	–	–	730	740	753	772	–
	200M & 200L	–	662	662	670	–	–	89	102	124	152	–	–	–	781	791	803	822	–
	225S & 225M	–	867	867	875	–	–	89	102	124	152	–	–	–	836	845	857	876	–
	250M	–	867	867	875	–	–	89	102	124	152	–	–	–	933	943	956	975	–
	280S & 280M	–	–	1172	1180	–	–	89	102	124	152	–	–	–	–	1065	1078	1097	–
Enquire	–	–	–	1180	–	–	89	102	124	152	–	–	–	–	–	1322	1340	–	
330xx – 350xx	160M & 160L	–	594	598	602	–	–	111	124	133	162	–	–	–	673	683	687	706	–
	180M & 180L	–	657	662	665	–	–	111	124	133	162	–	–	–	738	746	751	770	–
	200M & 200L	–	729	734	737	–	–	111	124	133	162	–	–	–	787	797	802	821	–
	225S & 225M	–	867	871	875	–	–	102	114	124	152	–	–	–	842	851	856	875	–
	250M	–	867	871	875	–	–	102	114	124	152	–	–	–	940	949	954	973	–
	280S & 280M	–	1172	1176	1180	–	–	102	114	124	152	–	–	–	1062	1072	1076	1096	–
Enquire	–	1172	1176	1180	–	–	102	114	124	152	–	–	–	1305	1314	1319	1338	–	
360xx – 380xx	160M & 160L	–	–	592	600	–	–	–	–	111	127	152	162	–	–	675	684	700	706
	180M & 180L	–	–	656	664	–	–	–	–	111	127	152	162	–	–	738	748	764	770
	200M & 200L	–	–	727	735	–	–	–	–	111	127	152	162	–	–	789	799	814	821
	225S & 225M	–	–	865	873	–	–	–	–	102	118	143	152	–	–	843	852	870	875
	250M	–	–	865	873	–	–	–	–	102	118	143	152	–	–	941	951	967	973
	280S & 280M	–	–	1170	1178	–	–	–	–	102	118	143	152	–	–	1064	1073	1089	1096
Enquire	–	–	1170	1178	–	–	–	–	102	118	143	152	–	–	1307	1316	1332	1340	

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Arrangement 8 (Sizes 14 – 26)



- Notes:**
1. CW rotation shown, CCW rotation similar but opposite.
 2. Bolt patterns on inlet and outlet flanges straddle centreline.
 3. Inlet screen included with venturi inlet.

FAN SIZE	MOTOR FRAME	A	AA	B	BC	C	CC	D	DH	DJ	F	FB	FN	G	GC	H	HA
14N4, 15N4	90S & 90L	102	114	99	241	168	229	451	22	19	279	191	8	495	248	727	464
16N4, 17N4, 18N4	112S & 112M															826	
14W6, 15W6	90S & 90L	152	168	159	298	219	279	451	22	22	343	241	8	495	248	727	464
16W6, 17W6, 18W6	112S & 112M															826	
15W8, 16W8	112S & 112M	203	219	159	298	219	343	451	22	22	343	298	8	495	248	826	464
17W8, 18W8	132S & 132M															826	
19N4, 20N4	90S & 90L	102	114	99	241	168	229	584	22	19	279	191	8	597	298	902	451
21N4, 22N4	112S & 112M															1000	
19N6, 20N6	112S & 112M	152	168	99	241	168	279	584	22	22	279	241	8	597	298	1000	451
21N6, 22N6	132S & 132M															1026	
19W8, 20W8	112S & 112M	203	219	159	298	219	343	584	22	22	343	298	8	597	298	1000	451
21W8, 22W8	132S & 132M															1026	
	160M & 160L															1153	
19W10, 20W10	132S & 132M	254	273	159	362	219	406	584	25	25	406	362	12	597	298	1026	552
21W10, 22W10	160M & 160L															1153	
	180M & 180L															1181	
23N6, 24N6	112S & 112M	152	168	127	298	219	279	610	22	22	343	241	8	597	298	1016	483
25N6, 26N6	132S & 132M															1041	
	160M & 160L															1168	
23N8, 24N8	132S & 132M	203	219	127	298	219	343	610	22	22	343	298	8	597	298	1041	483
25N8, 26N8	160M & 160L															1168	
	160M & 160L															1168	
23W10, 24W10	180M & 180L	254	273	184	362	273	406	610	25	25	406	362	12	597	298	1197	23.00
25W10, 26W10	200M & 200L															1280	
	180M & 180L															1197	
23W12, 24W12	180M & 180L	305	324	184	432	273	483	610	25	25	483	432	12	597	298	1197	584
25W12, 26W12	200M & 200L															1280	

Arrangement 8 (Sizes 14 – 26)

FAN SIZE	MOTOR FRAME	HB	HC	HD	HE	HF	HG	HH	J	K	KL	KS	L	LA	M	ML	NH
14N4, 15N4 16N4, 17N4, 18N4	90S & 90L	621	414	356	346	335	324	313	141	86	60	8.0 x 3.5	219	359	226	365	8
	457													461			
14W6, 15W6 16W6, 17W6, 18W6	90S & 90L	638	440	356	346	335	324	313	170	114	60	8.0 X 3.5	219	359	226	365	8
	457													461			
15W8, 16W8 17W8, 18W8	112S & 112M	660	471	356	346	335	324	313	170	114	60	8.0 X 3.5	219	457	226	461	8
	483													511			
19N4, 20N4 21N4, 22N4	90S & 90L	667	492	432	419	406	394	381	154	86	83	10.0 x 4.0	359	394	276	365	8
	492													461			
19N6, 20N6 21N6, 22N6	112S & 112M	684	518	432	419	406	394	381	154	86	83	10.0 x 4.0	359	492	276	461	8
	518													511			
19W8, 20W8 21W8, 22W8	112S & 112M	708	549	432	419	406	394	381	170	114	83	10.0 x 4.0	359	492	276	461	8
	518													511			
	645													654			
19W10, 20W10 21W10, 22W10	132S & 132M	802	581	432	419	406	394	381	170	114	83	10.0 x 4.0	359	518	276	511	12
	645													654			
	673													699			
23N6, 24N6 25N6, 26N6	112S & 112M	757	588	508	495	480	464	449	176	99	99	10.0 x 4.0	359	508	276	461	8
	533													511			
	660													654			
23N8, 24N8 25N8, 26N8	132S & 132M	780	619	508	495	480	464	449	176	99	99	10.0 x 4.0	359	533	276	511	8
	660													654			
23W10, 24W10 25W10, 26W10	160M & 160L	873	651	508	495	480	464	449	183	127	99	10.0 x 4.0	359	660	276	654	12
	689													699			
	772													775			
23W12, 24W12 25W12, 26W12	180M & 180L	900	689	508	495	480	464	449	183	127	99	10.0 x 4.0	359	689	276	699	12
	772													775			

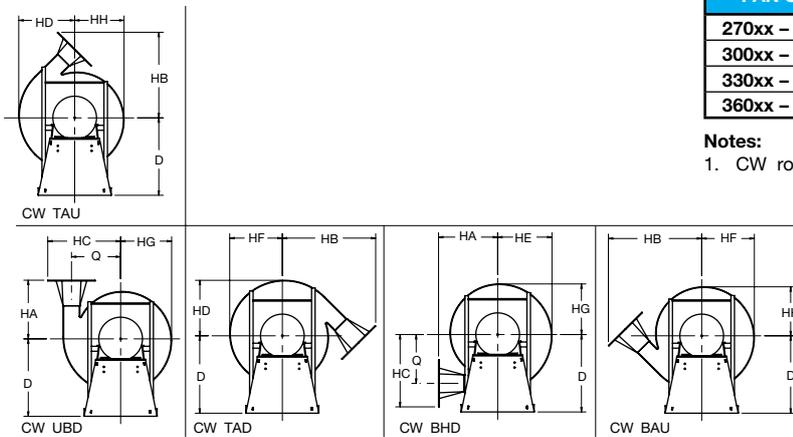
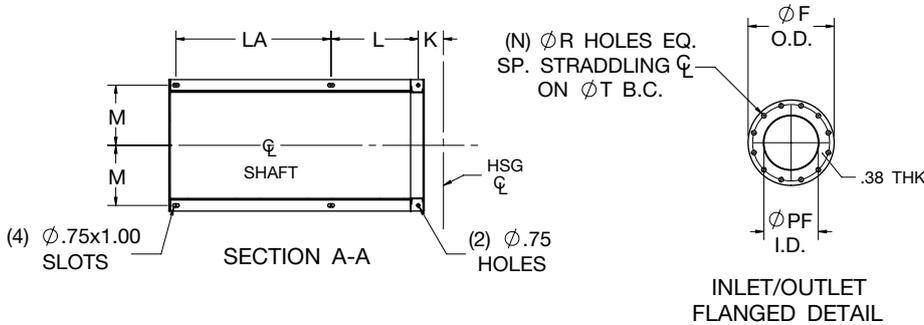
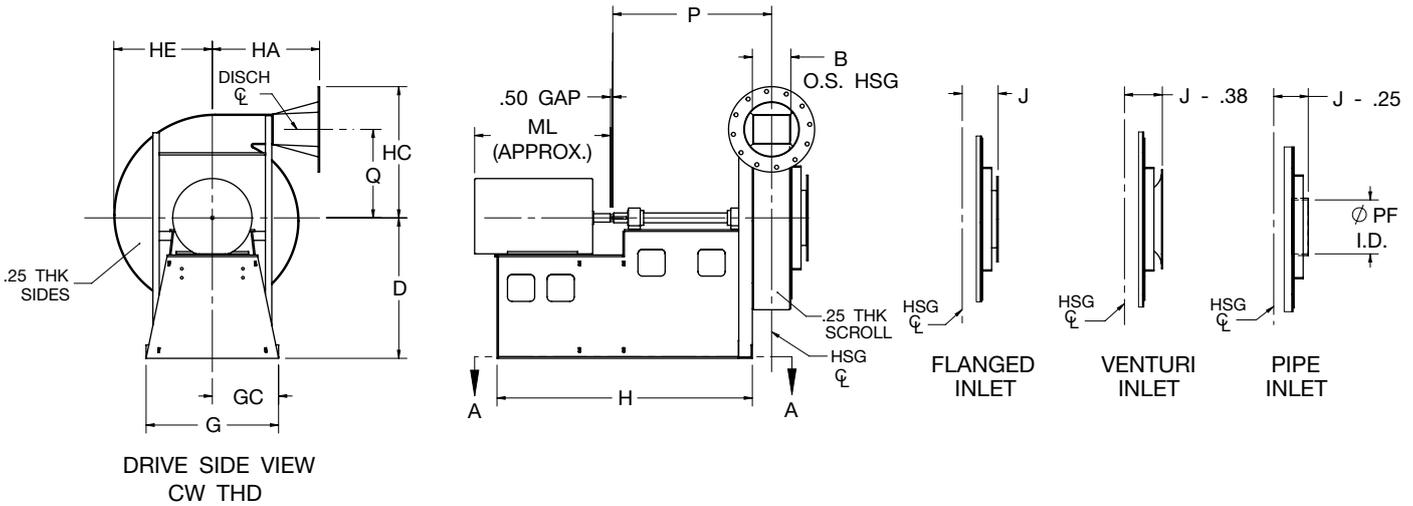
FAN SIZE	MOTOR FRAME	P	PF	Q	SD	SE	Z
14N4, 15N4 16N4, 17N4, 18N4	90S & 90L	411	152	298	30	67	116
	112S & 112M						
14W6, 15W6 16W6, 17W6, 18W6	90S & 90L	441	203	298	30	67	162
	112S & 112M						
15W8, 16W8 17W8, 18W8	112S & 112M	441	203	298	30	67	162
	132S & 132M						
19N4, 20N4 21N4, 22N4	90S & 90L	586	152	378	37	102	116
	112S & 112M						
19N6, 20N6 21N6, 22N6	112S & 112M	586	152	378	37	102	116
	132S & 132M						
19W8, 20W8 21W8, 22W8	112S & 112M	613	203	378	37	99	162
	132S & 132M						
	160M & 160L						
19W10, 20W10 21W10, 22W10	132S & 132M	613	254	378	37	99	162
	160M & 160L						
	180M & 180L						
23N6, 24N6 25N6, 26N6	112S & 112M	613	203	448	37	114	133
	132S & 132M						
	160M & 160L						
23N8, 24N8 25N8, 26N8	132S & 132M	613	203	448	37	114	133
	160M & 160L						
23W10, 24W10 25W10, 26W10	160M & 160L	641	254	448	37	114	175
	180M & 180L						
	200M & 200L						
23W12, 24W12 25W12, 26W12	180M & 180L	641	305	448	37	114	175
	200M & 200L						

BC16341D

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.



Arrangement 8 (Sizes 27 – 38)



FAN SIZE	D	HD	HE	HF	HG	HH	Q
270xx – 290xx	794	570	552	537	519	503	502
300xx – 320xx	876	629	610	591	573	554	552
330xx – 350xx	933	697	676	656	635	614	613
360xx – 380xx	1016	756	734	711	691	667	660

Notes:
1. CW rotation shown, CCW rotation similar but opposite.

FAN SIZE	OUTLET SIZE	B	F	HA	HB	HC	J	K	N	PF	R	T
270xx – 290xx	xxx06	124	279	502	802	632	152	89	8	152	22	241
	xxx08	149	343	502	826	664	165	102	8	203	22	298
	xxx10	165	406	603	919	695	178	114	12	254	25	362
	xxx12	216	483	603	946	734	203	140	12	305	25	432
300xx – 320xx	xxx08	127	343	514	876	724	152	89	8	203	22	298
	xxx10	152	406	616	970	756	178	102	12	254	25	362
	xxx12	181	483	616	997	794	187	124	12	305	25	432
330xx – 350xx	xxx14	238	533	718	1087	819	216	152	12	356	29	476
	xxx08	152	343	730	1072	784	165	102	8	203	22	298
	xxx10	168	406	730	1094	816	178	114	12	254	25	362
360xx – 380xx	xxx12	181	483	730	1121	854	187	124	12	305	25	432
	xxx14	238	533	730	1140	880	216	152	12	356	29	476
	xxx10	156	406	743	1137	864	165	102	12	254	25	362
	xxx12	171	483	743	1164	902	181	118	12	305	25	432
360xx – 380xx	xxx14	222	533	743	1181	927	207	143	12	356	29	476
	xxx16	241	597	743	1205	959	216	152	16	406	29	540

Arrangement 8 (Sizes 27 – 38)

FAN SIZE	MOTOR FRAME	G	GC	L	LA	M	ML
270xx – 290xx	160M & 160L	743	372	489	730	340	654
	180M & 180L	743	372	489	781	340	734
	200M & 200L	743	372	489	870	340	762
	225S & 225M	743	372	705	705	340	816
	250M	743	372	768	768	340	927
300xx – 320xx	160M & 160L	743	372	540	730	340	654
	180M & 180L	743	372	540	781	340	734
	200M & 200L	743	372	540	870	340	762
	225S & 225M	743	372	730	730	340	816
	250M	743	372	794	794	340	927
	280S & 280M	794	397	857	857	365	1062
Enquire	794	397	959	959	365	1305	
330xx – 350xx	160M & 160L	794	397	591	689	365	654
	180M & 180L	794	397	591	740	365	734
	200M & 200L	794	397	591	892	365	762
	225S & 225M	794	397	768	768	365	816
	250M	794	397	826	826	365	927
	280S & 280M	794	397	899	899	365	1062
Enquire	794	397	1007	1007	365	1305	
360xx – 380xx	160M & 160L	794	397	641	689	365	654
	180M & 180L	794	397	641	740	365	734
	200M & 200L	794	397	641	892	365	762
	225S & 225M	794	397	794	794	365	816
	250M	794	397	851	851	365	927
	280S & 280M	794	397	924	924	365	1062
Enquire	794	397	1032	1032	365	1305	



FAN SIZE	MOTOR FRAME	H						P					
		xxx06	xxx08	xxx10	xxx12	xxx14	xxx16	xxx06	xxx08	xxx10	xxx12	xxx14	xxx16
270xx – 290xx	160M & 160L	1284	1284	50.75	-	-	-	781	794	806	832	-	-
	180M & 180L	1335	1335	52.75	-	-	-	806	819	819	857	-	-
	200M & 200L	1426	1426	56.31	-	-	-	838	851	864	889	-	-
	225S & 225M	-	1478	58.38	-	-	-	-	873	886	911	-	-
	250M	-	1605	63.38	-	-	-	-	930	943	969	-	-
300xx – 320xx	160M & 160L	-	1334	1341	-	-	-	832	845	867	895	-	-
	180M & 180L	-	1384	1392	-	-	-	857	870	892	921	-	-
	200M & 200L	-	1475	1483	-	-	-	889	902	924	953	-	-
	225S & 225M	-	1527	1535	-	-	-	911	924	946	975	-	-
	250M	-	1654	1662	-	-	-	969	981	1003	1032	-	-
	280S & 280M	-	1781	1789	-	-	-	991	1003	1026	1054	-	-
Enquire	-	1985	1992	-	-	-	988	1000	1022	1051	-	-	
330xx – 350xx	160M & 160L	-	1343	1348	1351	-	-	854	867	876	905	-	-
	180M & 180L	-	1394	1399	1402	-	-	880	892	902	930	-	-
	200M & 200L	-	1548	1553	1556	-	-	975	988	997	1026	-	-
	225S & 225M	-	1604	1608	1611	-	-	1000	1013	1022	1051	-	-
	250M	-	1718	1722	1726	-	-	1045	1057	1067	1096	-	-
	280S & 280M	-	1864	1868	1872	-	-	1086	1099	1108	1137	-	-
Enquire	-	2080	2084	2088	-	-	1096	1108	1118	1146	-	-	
360xx – 380xx	160M & 160L	-	-	1392	1402	1400	-	-	905	922	948	956	
	180M & 180L	-	-	1443	1453	1451	-	-	930	948	973	981	
	200M & 200L	-	-	1597	1607	1605	-	-	1026	1043	1068	1076	
	225S & 225M	-	-	1653	1662	1661	-	-	1051	1068	1094	1102	
	250M	-	-	1767	1776	1775	-	-	1096	1113	1138	1146	
	280S & 280M	-	-	1913	1923	1921	-	-	1137	1154	1180	1187	
Enquire	-	-	2129	2138	2137	-	-	1146	1164	1189	1197		

BC1005392A

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.



Model TBNA

Fans shall be Model TBNA Turbo Pressure Blowers as manufactured by Twin City Fan Companies.

PERFORMANCE — Fans shall be tested and rated in accordance with industry accepted test codes and shall be guaranteed by the manufacturer to deliver rated published performance levels.

HOUSING — Fan housings shall be constructed of continuously welded heavy gauge steel. Sizes 14 to 26 shall be rotatable and reversible. A choice of inlet connections at no additional charge shall include an inlet venturi with screen, an inlet pipe assembly and a punched flange to ANSI 125/150. The outlet connection shall be flanged and punched to ANSI 125/150 with the option of a plain pipe assembly on Sizes 14 - 26.

IMPELLER — Model TBNA impellers shall be constructed of aluminium alloy with riveted construction. Impellers shall be statically and dynamically balanced. The complete fan assembly shall be test balanced at the operating speed prior to shipment.

SHAFT (ARR. 1 & 8 ONLY) — Shafts shall be AISI 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

BEARINGS (ARR 1, 8 ONLY) — Bearings shall be heavy duty, grease lubricated, anti-friction ball or roller, self-aligning, pillow block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM.

FINISH AND COATING — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and de-burred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant. Aluminium components shall be unpainted.

ACCESSORIES — When specified, accessories such as inlet filters, inlet filters with hoods, inlet and outlet silencers, flexible connectors for flanged outlet and plain pipe outlets, outlet blast gates, built-in outlet dampers, shaft closure plates, shaft seals, drains, inspection ports, shaft and bearing guards, belt guards, couplings, coupling guards, unitary bases, isolation bases, inertia bases, and vibration rails shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced to in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

GUARANTEE — Manufacturer shall guarantee the workmanship and materials for its Turbo Pressure Blowers for at least one (1) year from start-up or eighteen (18) months from shipment, whichever occurs first.



Model TBNS

Fans shall be Model TBNS Turbo Pressure Blowers as manufactured by Twin City Fan Companies.

PERFORMANCE — Fans shall be tested and rated in accordance with industry accepted test codes and shall be guaranteed by the manufacturer to deliver rated published performance levels.

HOUSING — Fan housings shall be constructed of continuously welded heavy gauge steel. Sizes 14 to 26 shall be rotatable and reversible. A choice of inlet connections at no additional charge shall include an inlet venturi with screen, an inlet pipe assembly and a punched flange to ANSI 125/150. The outlet connection shall be flanged and punched to ANSI 125/150 with the option of a plain pipe assembly on Sizes 14 - 26.

IMPELLER — Model TBNS impellers shall be constructed of continuously welded heavy gauge steel or from a variety of special materials. Impellers shall be statically and dynamically balanced. The complete fan assembly shall be test balanced at the operating speed prior to shipment.

SHAFT (ARR. 1 & 8 ONLY) — Shafts shall be AISI 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

BEARINGS (ARR 1, 8 ONLY) — Bearings shall be heavy duty, grease lubricated, anti-friction ball or roller, self-aligning, pillow block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM.

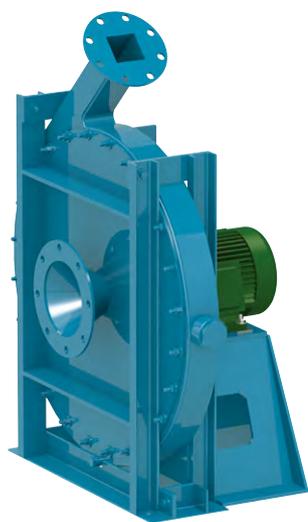
FINISH AND COATING — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and de-burred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant. Aluminium components shall be unpainted.

ACCESSORIES — When specified, accessories such as inlet filters, inlet filters with hoods, inlet and outlet silencers, flexible connectors for flanged outlet and plain pipe outlets, outlet blast gates, built-in outlet dampers, shaft closure plates, shaft seals, drains, inspection ports, shaft and bearing guards, belt guards, couplings, coupling guards, unitary bases, isolation bases, inertia bases, and vibration rails shall be provided by Twin City Fan & Blower to maintain one source responsibility.

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GUARANTEE — Manufacturer shall guarantee the workmanship and materials for its Turbo Pressure Blowers for at least one (1) year from start-up or eighteen (18) months from shipment, whichever occurs first.

ALTERNATIVE PRESSURE BLOWERS



HRO Impeller



HRS Impeller

Models

HRO | HRS

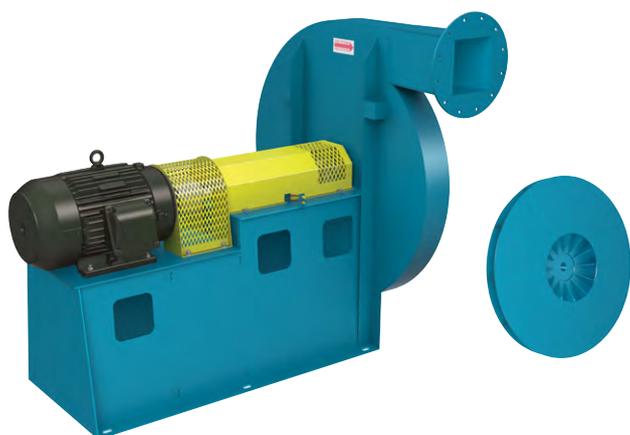
Sizes

500 to 1550 mm impeller diameters

Performance

Airflow up to 4.7 m³/sec

Static pressures up to 3000 Pa



Model

TBR

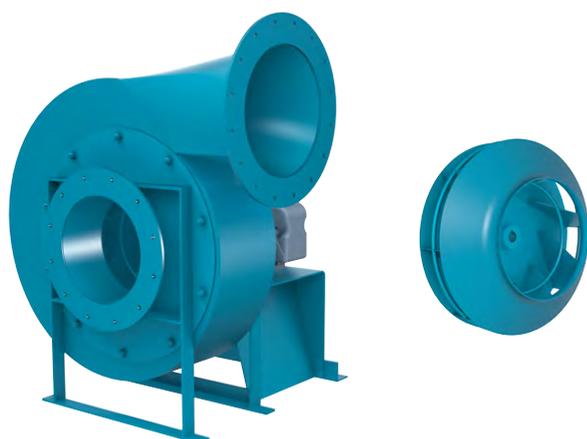
Sizes

275 to 895 mm impeller diameters

Performance

Airflow up to 4.75 m³/sec

Static pressures up to 25900 Pa



Model

TBA

Sizes

285 to 815 mm impeller diameters

Performance

Airflow up to 13.55 m³/sec

Static pressures 17400 Pa

Models

MBO | MBR | MBW

Sizes

500 to 1500 mm impeller diameters

MBO Performance

Airflow up to 8.5 m³/sec
Static pressures over 42000 Pa

MBR Performance

Airflow up to 8.5 m³/sec
Static pressures over 45000 Pa

MBW Performance

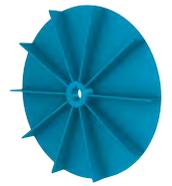
Airflow up to 9.4 m³/sec
Static pressures over 40000 Pa



MBO Impeller



MBR Impeller



MBW Impeller

Model

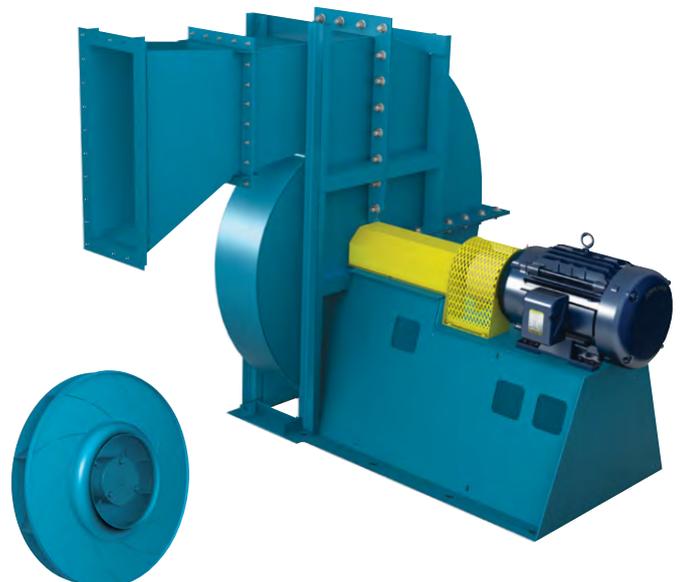
BCN

Sizes

685 to 1855 mm impeller diameters

Performance

Airflow up to 35.4 m³/sec
Static pressures up to 24900 Pa



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RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS
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