VLF-BS SERIES

Insulated box axial smoke extract fans

VLF-BS

F300/F400°C 2h



ADJUSTABLE-PITCH AIRFOIL BLADES

INSULATED GALVANIZED CASING

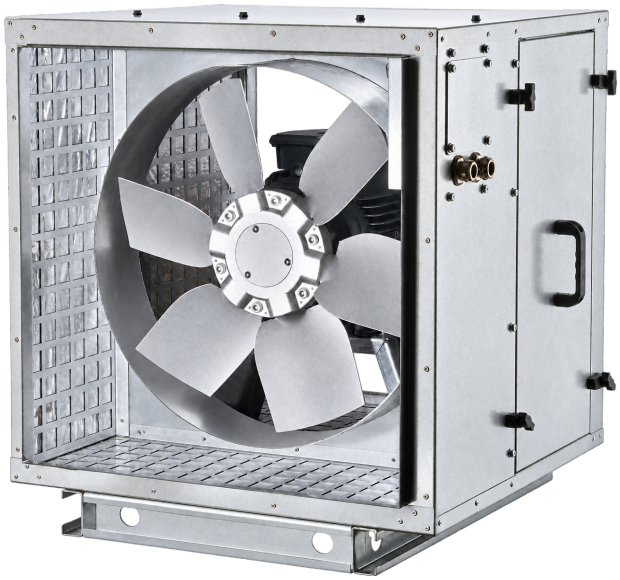
F300°C / F400°C

120-minute smoke duty options

400-1250	50	50 Hz
Fan diameter / mm	Main configurations	Three-phase AC

01 / PRODUCT OVERVIEW

One range. Two smoke-duty options.



01 Adjustable-pitch impeller

Aluminium alloy airfoil blades. The reference range includes 3, 6 and 9 blades, with performance selected by blade angle and motor poles.

02 Insulated box casing

A double-skin galvanized steel cabinet incorporates glass-wool insulation. The access panel supports inspection and maintenance.

03 Shared aerodynamic data

F300°C and F400°C options share the product image, dimensional data and performance curves in this catalogue.

F300

300°C / 120 minutes

F400

400°C / 120 minutes

COMMON PERFORMANCE & DIMENSIONS

50 main configurations and 626 listed blade-angle curves. Select the final blade angle and motor at the required duty. F300°C and F400°C are alternative smoke-duty specifications; state the required class when ordering.

Selection parameter	Catalogue basis
Fan diameter / blade counts	400-1250 mm / 3, 6 and 9 blades
Reference electrical supply	400 V / 3 phase / 50 Hz
Pole configurations	2P, 4P, 6P, 2-4P and 4-8P
Smoke-duty specification	F300°C / 120 min or F400°C / 120 min
Final motor and classification	As specified for the supplied unit

Performance curves use the listed 20°C reference basis. Fire-class selection does not change these curves. Final motor specification and classification follow the supplied unit documentation.

02 / TECHNICAL DATA / 01

Compare the configurations.

SHARED F300°C / F400°C SELECTION DATA / 400 V / 50 Hz

Configuration diameter/blades/poles	Angles deg.	Reference motor range / kW	Reference airflow envelope / m³/h	Reserve %	Curve page
VLF-BS 400/6/2P	8-34	0.75-5.5	1 330-9 950	10	06
VLF-BS 400/6/4P	8-34	0.37-0.37	665-4 975	10	06
VLF-BS 400/6/6P	8-34	0.18-0.18	443-3 317	10	06
VLF-BS 400/6/2-4P	8-34	0.75-5.5	1 330-9 950	10	06
VLF-BS 450/6/2P	8-28	1.1-4	2 400-13 500	10	07
VLF-BS 450/6/4P	8-38	0.37-0.55	1 200-8 212	7	07
VLF-BS 450/6/6P	8-38	0.18-0.18	800-5 475	10	07
VLF-BS 450/6/2-4P	8-28	1.1-4	2 400-13 500	10	07
VLF-BS 500/6/2P	8-28	2.2-5.5	3 500-18 300	10	08
VLF-BS 500/6/4P	8-36	0.55-1.1	1 750-11 800	10	08
VLF-BS 500/6/6P	8-36	0.37-0.37	1 167-7 867	10	08
VLF-BS 500/6/2-4P	8-28	2.2-5.5	3 500-18 300	10	08
VLF-BS 560/6/2P	8-22	4-7.5	4 000-24 000	6	09
VLF-BS 560/6/4P	8-36	0.55-2.2	2 000-17 140	10	09
VLF-BS 560/6/6P	8-36	0.37-0.55	1 333-11 427	7	09
VLF-BS 560/6/2-4P	8-22	4-7.5	4 000-24 000	6	09
VLF-BS 630/6/2P	8-20	5.5-11	7 000-31 320	0	10

Airflow envelope: minimum and maximum listed curve-domain endpoints across blade angles, rounded to whole m³/h. This is a reference envelope; select the operating point, blade angle and motor for the required duty.

Motor range: listed product motor-power limits. Reference selection uses absorbed power and the configuration-specific motor reserve. Final smoke-duty motor selection and nameplate data follow the supplied unit specification.

For two-speed configurations, these curves describe the supplied high-speed condition only. Low-speed curves are not inferred. F300°C / F400°C classification is a separate specification from the ordinary operating-temperature limits of the listed records.

02 / TECHNICAL DATA / 02

Compare the configurations.

SHARED F300°C / F400°C SELECTION DATA / 400 V / 50 Hz

Configuration diameter/blades/poles	Angles deg.	Reference motor range / kW	Reference airflow envelope / m³/h	Reserve %	Curve page
VLF-BS 630/6/4P	8-38	0.75-4	3 500-25 200	10	10
VLF-BS 630/6/6P	8-38	0.37-1.1	2 333-16 800	10	10
VLF-BS 630/6/2-4P	8-20	5.5-11	7 000-31 320	0	10
VLF-BS 710/3/4P	8-32	0.75-3	1 600-27 500	10	11
VLF-BS 710/3/6P	8-32	0.37-1.1	1 067-18 333	10	11
VLF-BS 710/3/4-8P	8-32	0.75-3	1 600-27 500	10	11
VLF-BS 710/6/4P	8-32	1.1-4	1 800-31 200	1	11
VLF-BS 710/6/6P	8-32	0.75-1.5	1 200-20 800	10	12
VLF-BS 710/6/4-8P	8-32	1.1-4	1 800-31 200	1	12
VLF-BS 800/6/4P	8-32	2.2-11	4 500-42 500	3	12
VLF-BS 800/6/6P	8-32	0.55-3	3 000-28 333	3	12
VLF-BS 800/6/4-8P	8-32	2.2-11	4 500-42 500	3	13
VLF-BS 800/9/4P	8-30	2.2-11	7 500-43 000	10	13
VLF-BS 800/9/6P	8-30	0.75-3	5 000-28 667	10	13
VLF-BS 800/9/4-8P	8-30	2.2-11	7 500-43 000	10	13
VLF-BS 900/6/4P	8-32	4-15	6 000-60 800	10	14
VLF-BS 900/6/6P	8-32	1.1-4	4 000-40 533	5	14

Airflow envelope: minimum and maximum listed curve-domain endpoints across blade angles, rounded to whole m³/h. This is a reference envelope; select the operating point, blade angle and motor for the required duty.

Motor range: listed product motor-power limits. Reference selection uses absorbed power and the configuration-specific motor reserve. Final smoke-duty motor selection and nameplate data follow the supplied unit specification.

For two-speed configurations, these curves describe the supplied high-speed condition only. Low-speed curves are not inferred. F300°C / F400°C classification is a separate specification from the ordinary operating-temperature limits of the listed records.

02 / TECHNICAL DATA / 03

Compare the configurations.

SHARED F300°C / F400°C SELECTION DATA / 400 V / 50 Hz

Configuration diameter/blades/poles	Angles deg.	Reference motor range / kW	Reference airflow envelope / m³/h	Reserve %	Curve page
VLF-BS 900/6/4-8P	8-32	4-15	6 000-60 800	10	14
VLF-BS 900/9/4P	8-32	4-18.5	11 000-63 300	10	14
VLF-BS 900/9/6P	8-32	1.5-5.5	7 333-42 200	10	15
VLF-BS 900/9/4-8P	8-32	4-18.5	11 000-63 300	10	15
VLF-BS 1000/6/4P	8-32	5.5-22	14 000-82 600	3	15
VLF-BS 1000/6/6P	8-32	1.5-7.5	9 333-55 067	10	15
VLF-BS 1000/6/4-8P	8-32	5.5-22	14 000-82 600	3	16
VLF-BS 1000/9/4P	8-32	7.5-30	15 000-86 000	10	16
VLF-BS 1000/9/6P	8-32	2.2-11	10 000-57 333	10	16
VLF-BS 1000/9/4-8P	8-32	7.5-30	15 000-86 000	10	16
VLF-BS 1250/6/4P	8-32	15-55	25 000-155 000	1	17
VLF-BS 1250/6/6P	8-32	4-15	16 667-103 333	10	17
VLF-BS 1250/6/4-8P	8-32	15-55	25 000-155 000	1	17
VLF-BS 1250/9/4P	8-24	18.5-55	21 300-138 000	1	17
VLF-BS 1250/9/6P	8-24	7.5-15	14 200-92 000	10	18
VLF-BS 1250/9/4-8P	8-24	18.5-55	21 300-138 000	1	18

Airflow envelope: minimum and maximum listed curve-domain endpoints across blade angles, rounded to whole m³/h. This is a reference envelope; select the operating point, blade angle and motor for the required duty.

Motor range: listed product motor-power limits. Reference selection uses absorbed power and the configuration-specific motor reserve. Final smoke-duty motor selection and nameplate data follow the supplied unit specification.

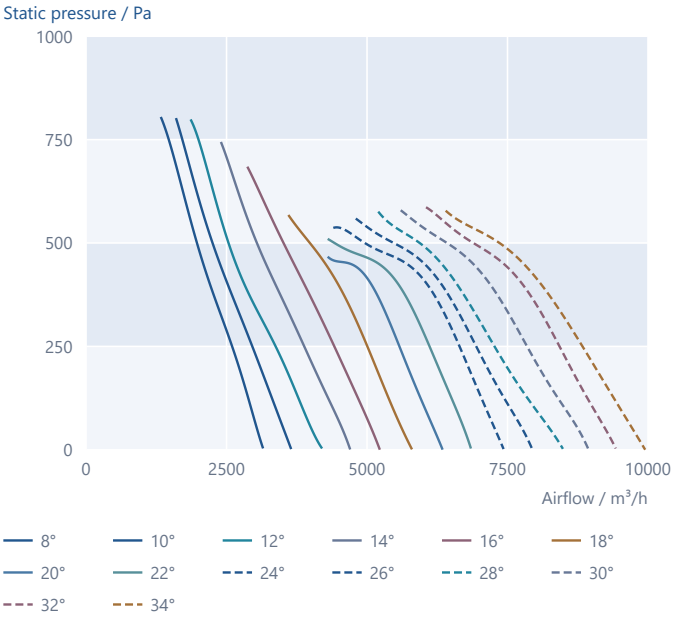
For two-speed configurations, these curves describe the supplied high-speed condition only. Low-speed curves are not inferred. F300°C / F400°C classification is a separate specification from the ordinary operating-temperature limits of the listed records.

03 / AIR PERFORMANCE / 01

Fan Performance Curves

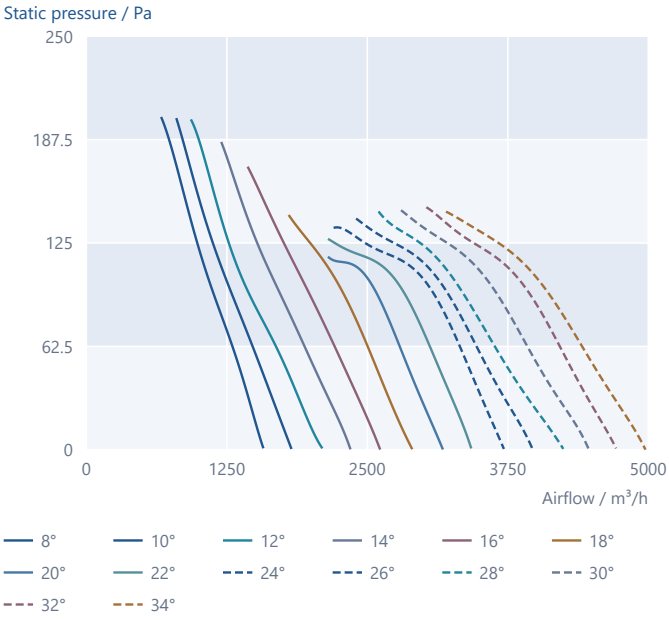
VLF-BS 400/6/2P

14 blade angles / 400 V / 50 Hz



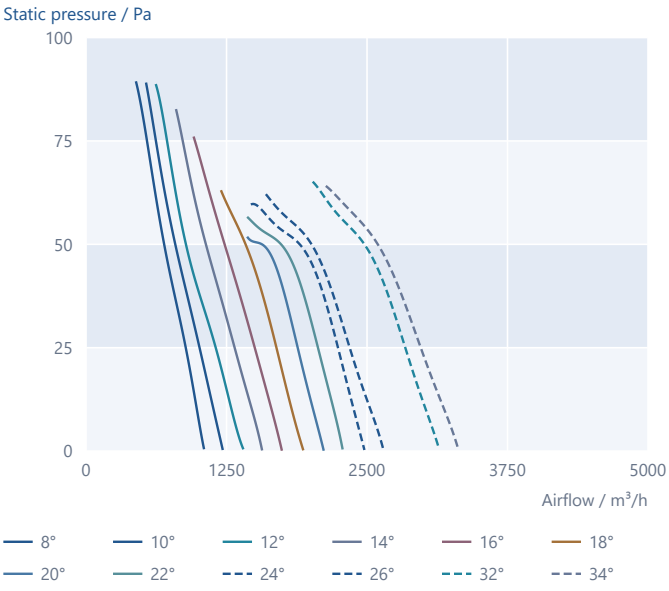
VLF-BS 400/6/4P

14 blade angles / 400 V / 50 Hz



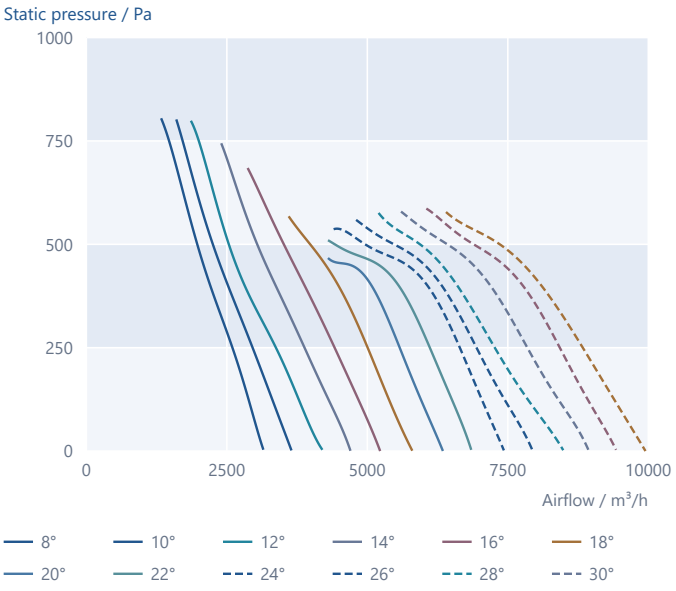
VLF-BS 400/6/6P

12 blade angles / 400 V / 50 Hz



VLF-BS 400/6/2-4P

14 blade angles / 400 V / 50 Hz



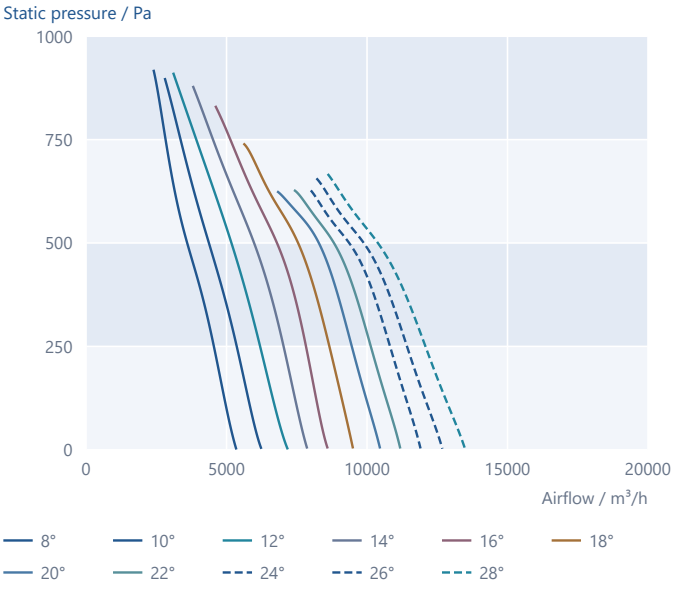
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 02

Fan Performance Curves

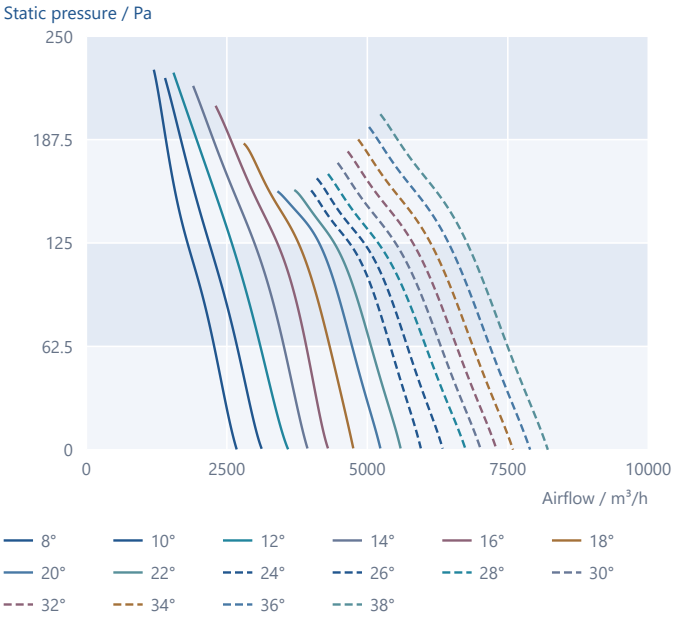
VLF-BS 450/6/2P

11 blade angles / 400 V / 50 Hz



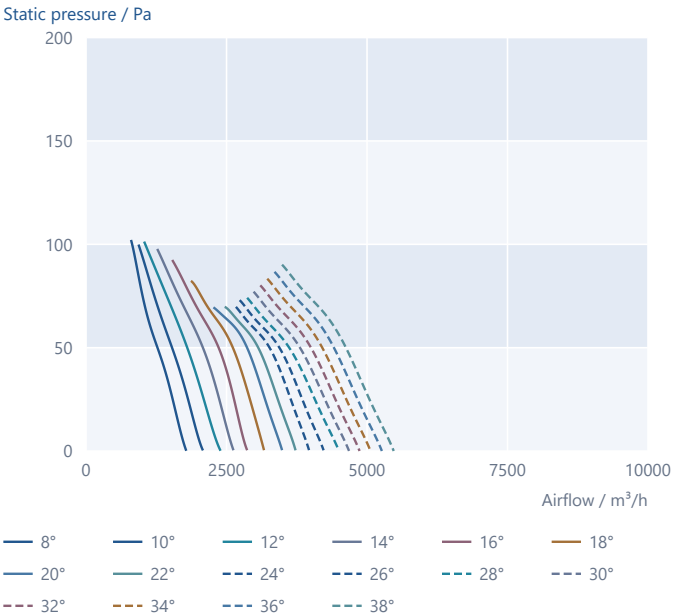
VLF-BS 450/6/4P

16 blade angles / 400 V / 50 Hz



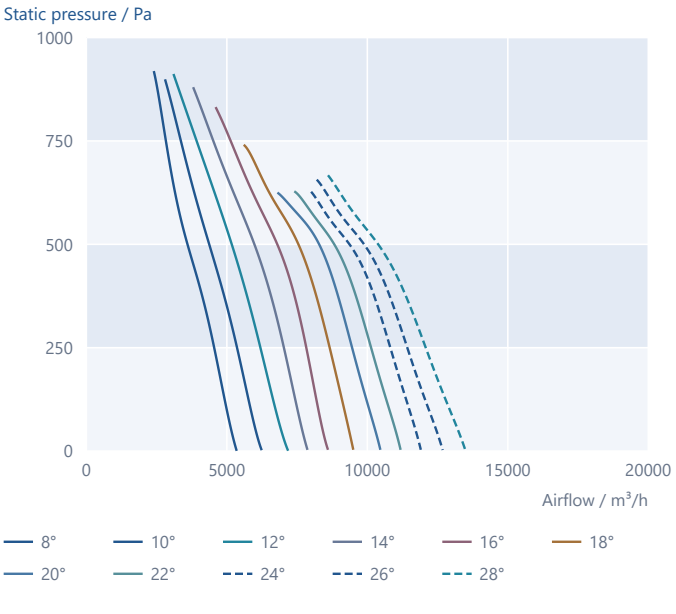
VLF-BS 450/6/6P

16 blade angles / 400 V / 50 Hz



VLF-BS 450/6/2-4P

11 blade angles / 400 V / 50 Hz



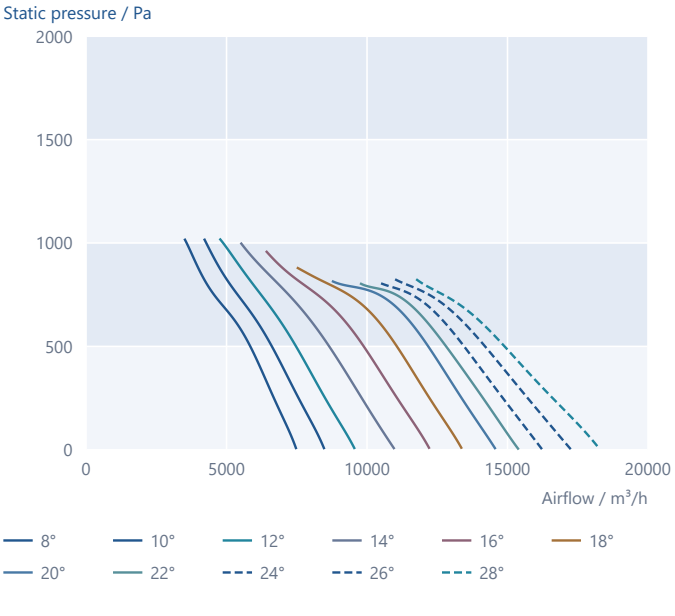
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 03

Fan Performance Curves

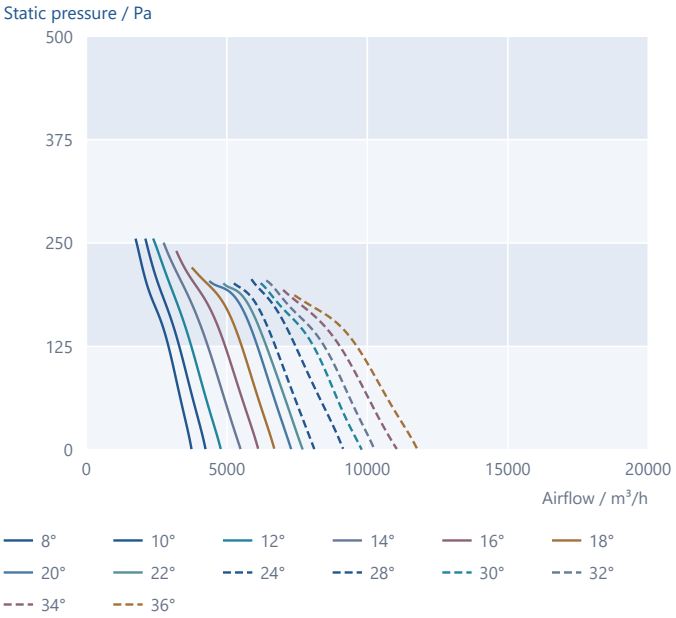
VLF-BS 500/6/2P

11 blade angles / 400 V / 50 Hz



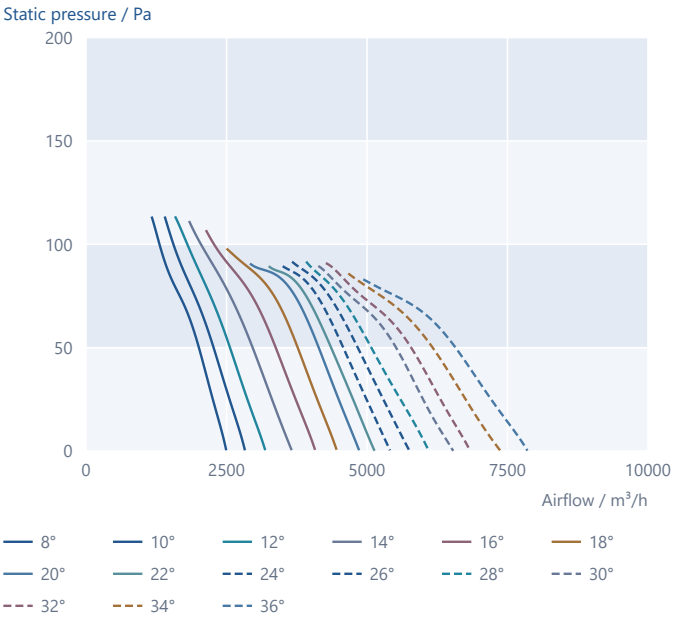
VLF-BS 500/6/4P

14 blade angles / 400 V / 50 Hz



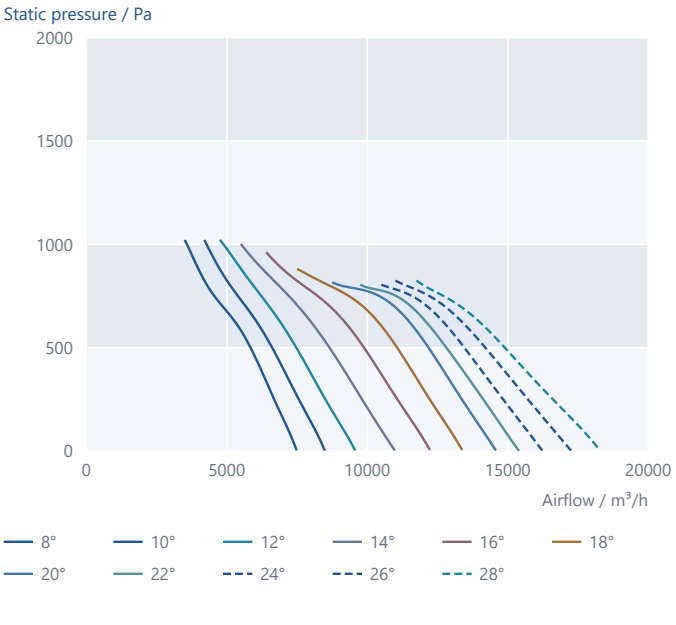
VLF-BS 500/6/6P

15 blade angles / 400 V / 50 Hz



VLF-BS 500/6/2-4P

11 blade angles / 400 V / 50 Hz



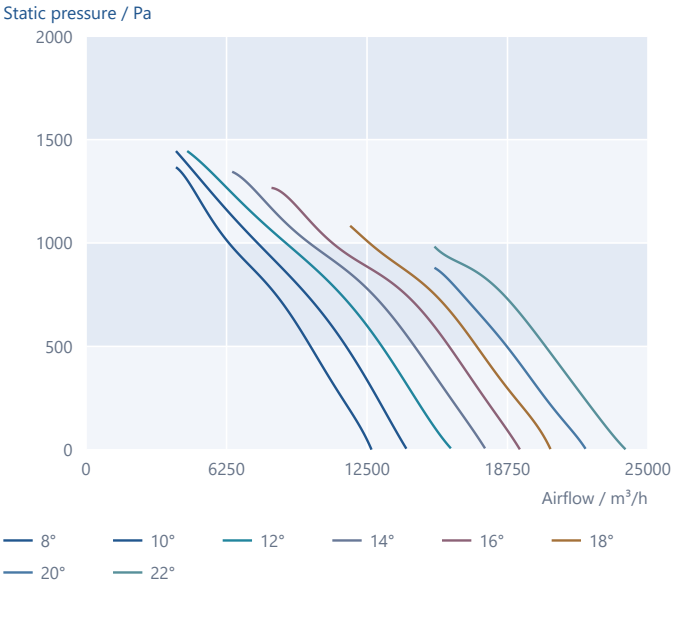
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 04

Fan Performance Curves

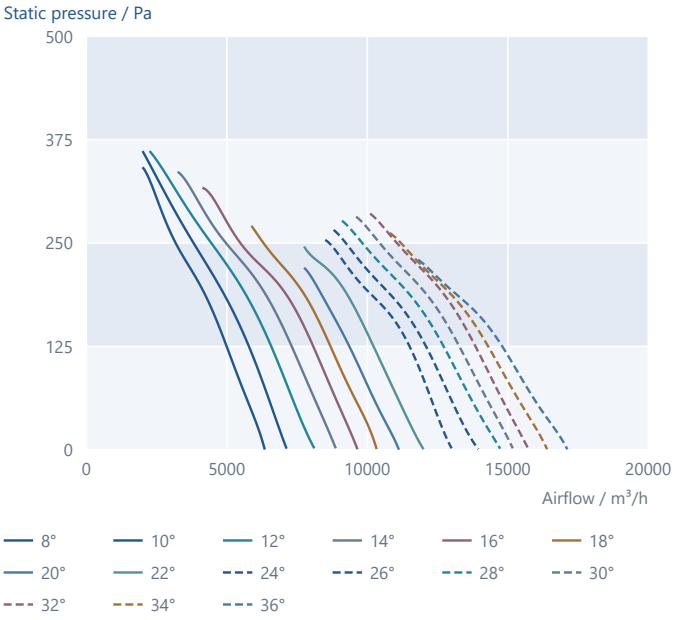
VLF-BS 560/6/2P

8 blade angles / 400 V / 50 Hz



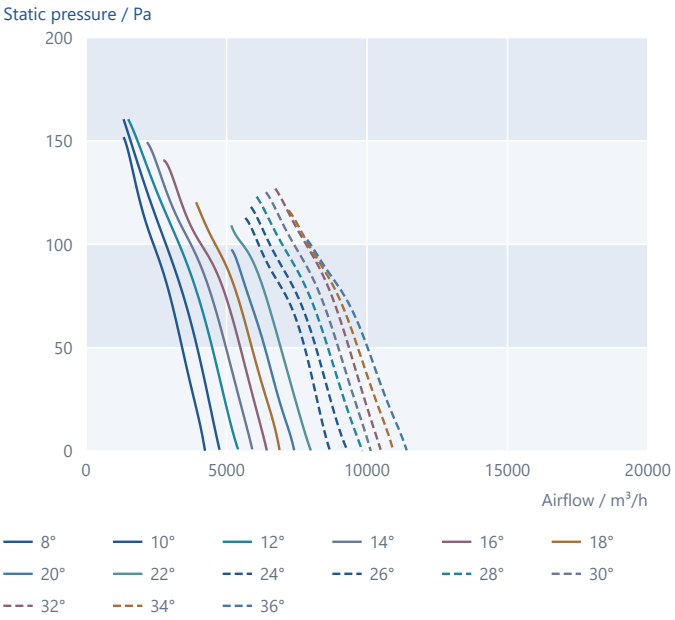
VLF-BS 560/6/4P

15 blade angles / 400 V / 50 Hz



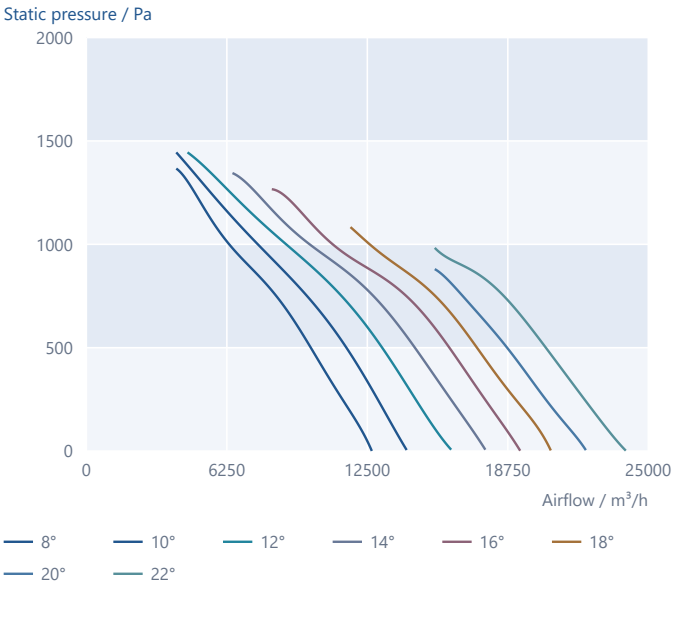
VLF-BS 560/6/6P

15 blade angles / 400 V / 50 Hz



VLF-BS 560/6/2-4P

8 blade angles / 400 V / 50 Hz



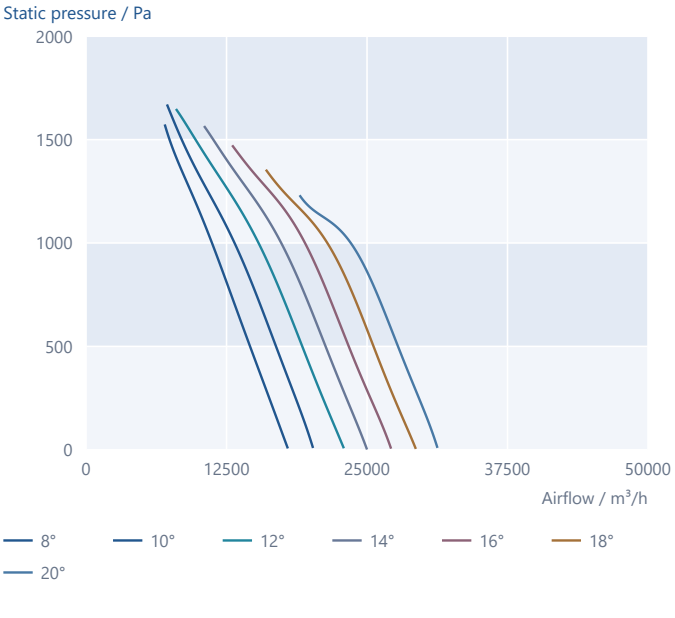
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 05

Fan Performance Curves

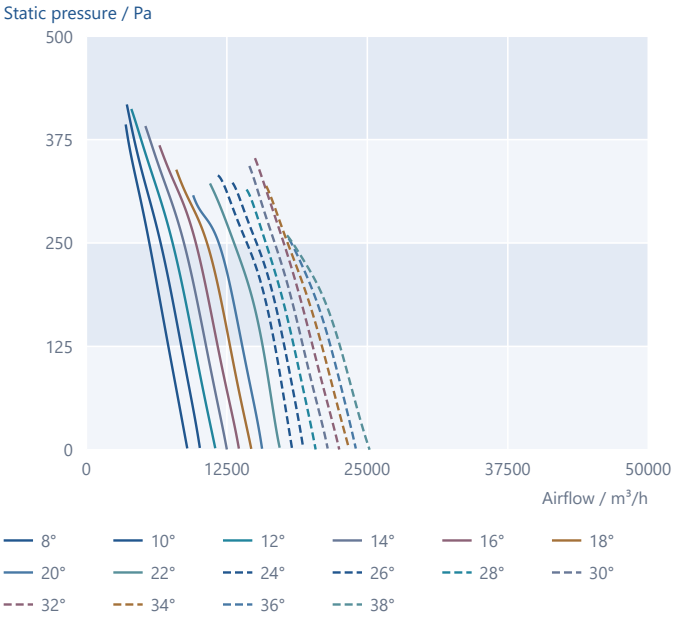
VLF-BS 630/6/2P

7 blade angles / 400 V / 50 Hz



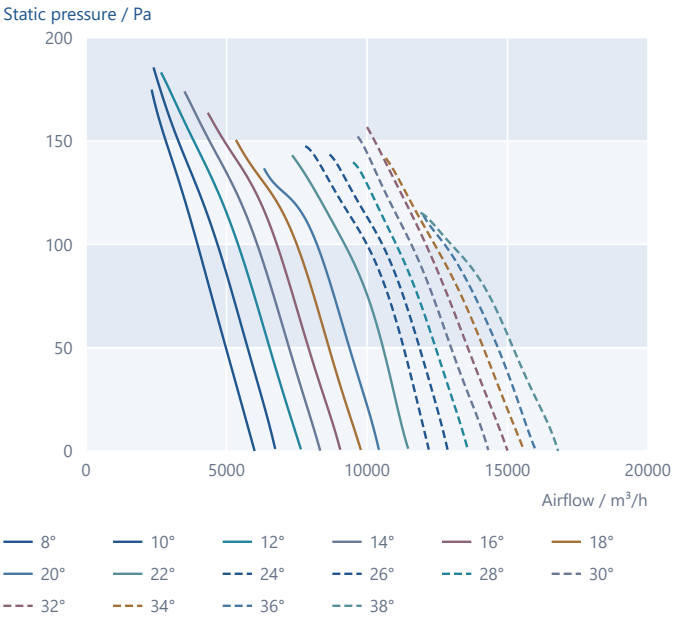
VLF-BS 630/6/4P

16 blade angles / 400 V / 50 Hz



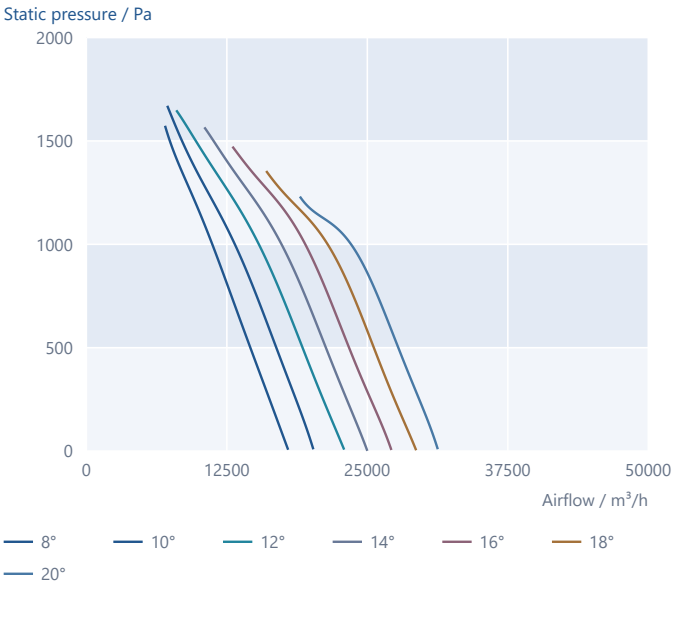
VLF-BS 630/6/6P

16 blade angles / 400 V / 50 Hz



VLF-BS 630/6/2-4P

7 blade angles / 400 V / 50 Hz



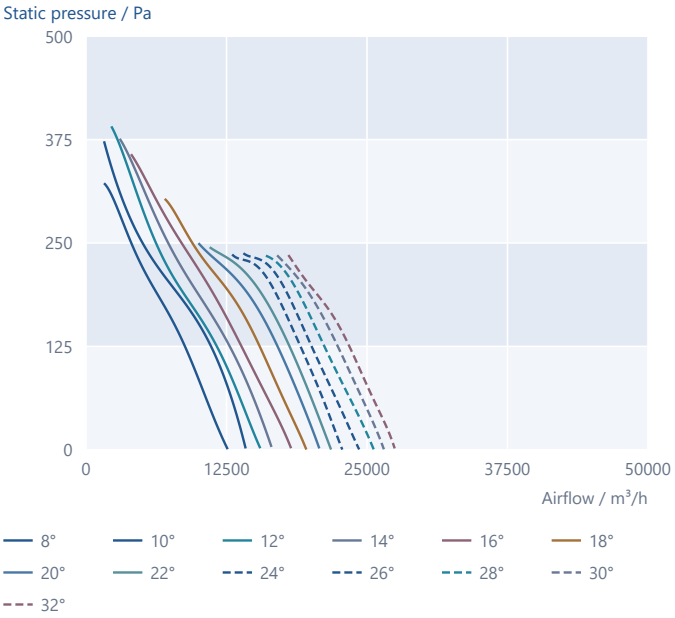
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 06

Fan Performance Curves

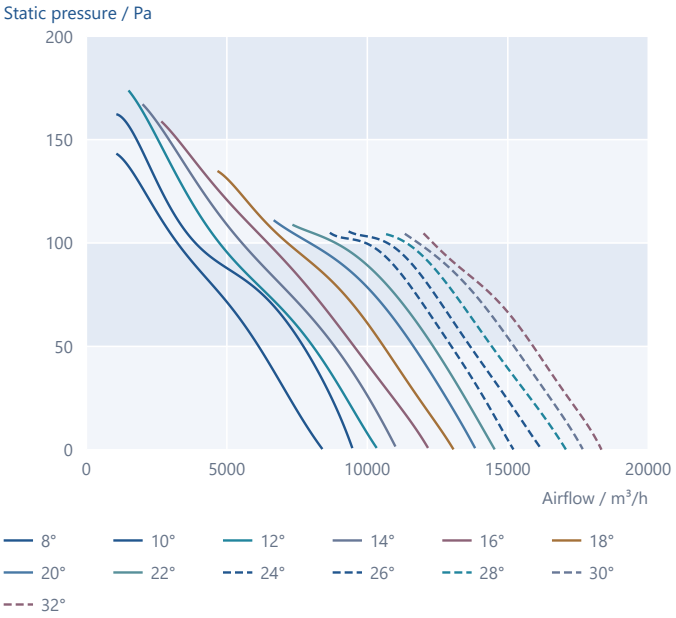
VLF-BS 710/3/4P

13 blade angles / 400 V / 50 Hz



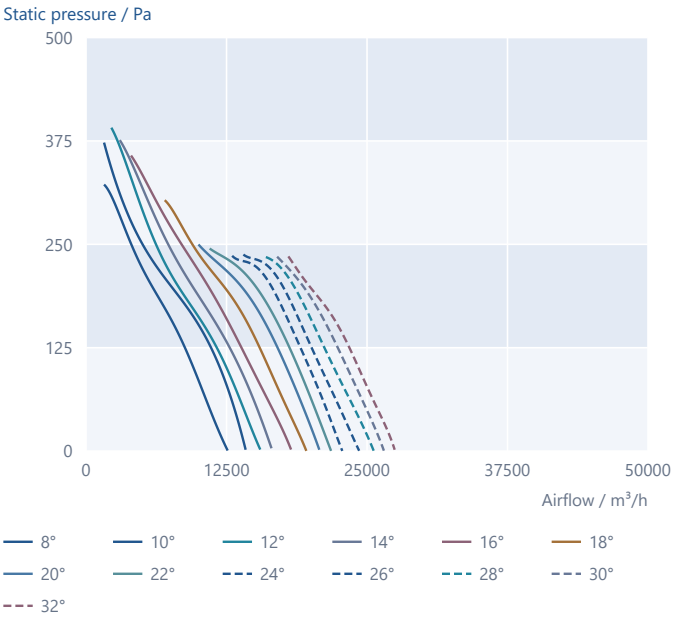
VLF-BS 710/3/6P

13 blade angles / 400 V / 50 Hz



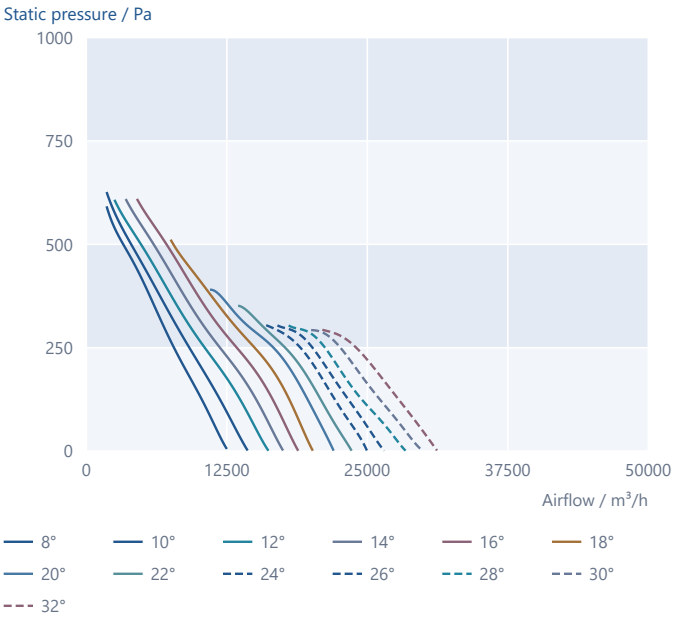
VLF-BS 710/3/4-8P

13 blade angles / 400 V / 50 Hz



VLF-BS 710/6/4P

13 blade angles / 400 V / 50 Hz



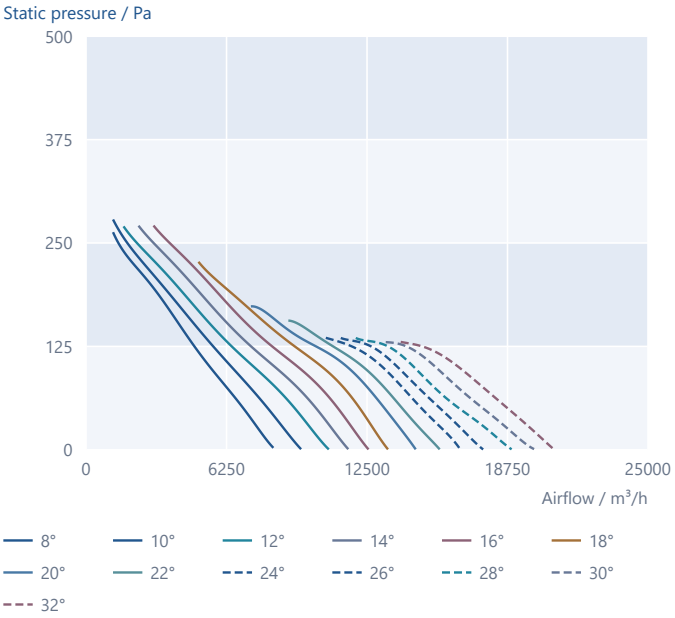
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 07

Fan Performance Curves

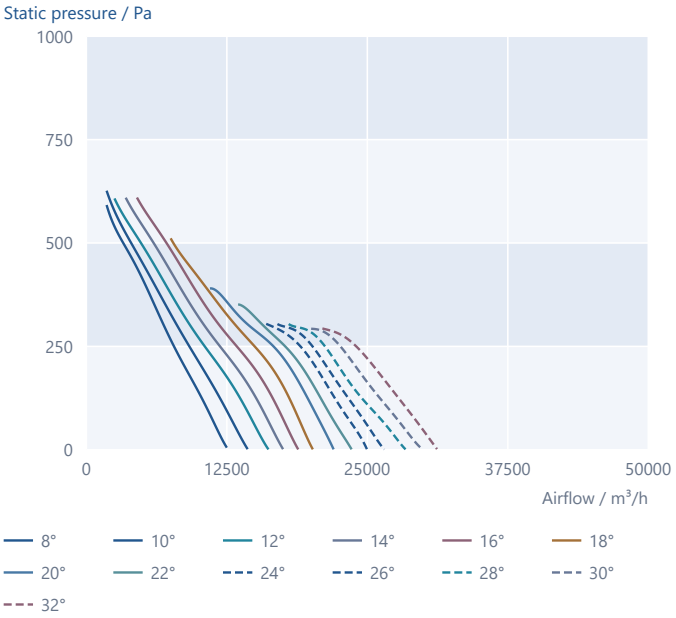
VLF-BS 710/6/6P

13 blade angles / 400 V / 50 Hz



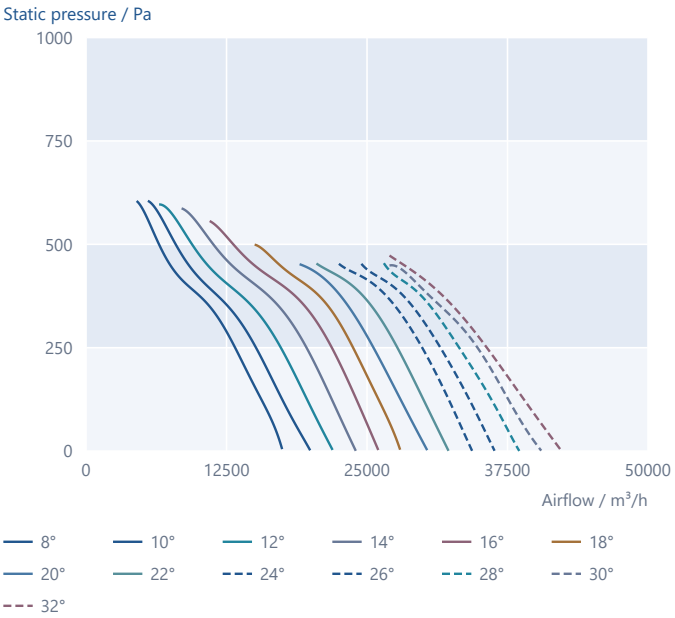
VLF-BS 710/6/4-8P

13 blade angles / 400 V / 50 Hz



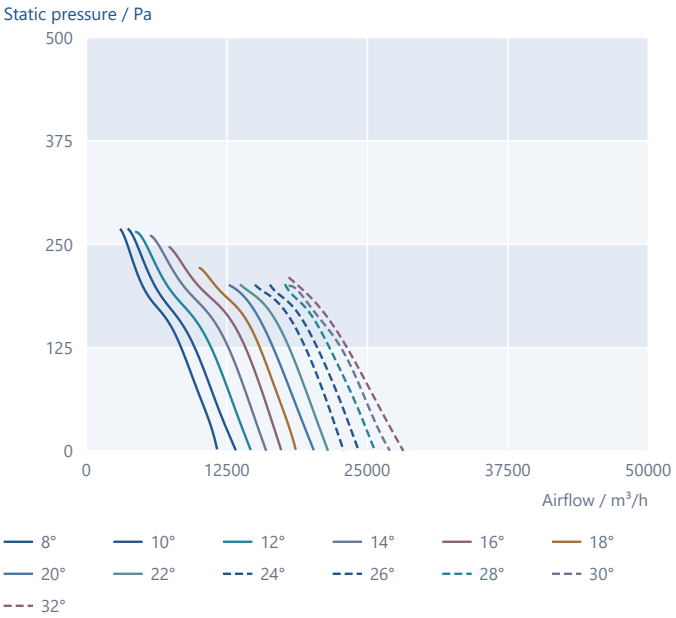
VLF-BS 800/6/4P

13 blade angles / 400 V / 50 Hz



VLF-BS 800/6/6P

13 blade angles / 400 V / 50 Hz



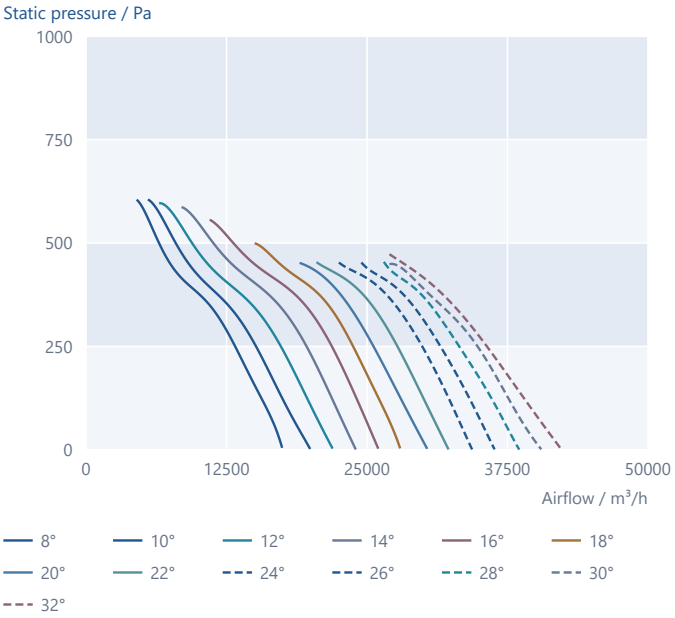
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 08

Fan Performance Curves

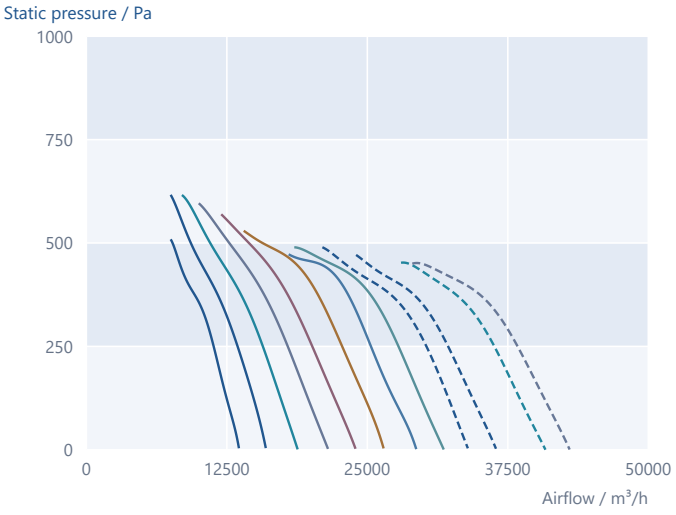
VLF-BS 800/6/4-8P

13 blade angles / 400 V / 50 Hz



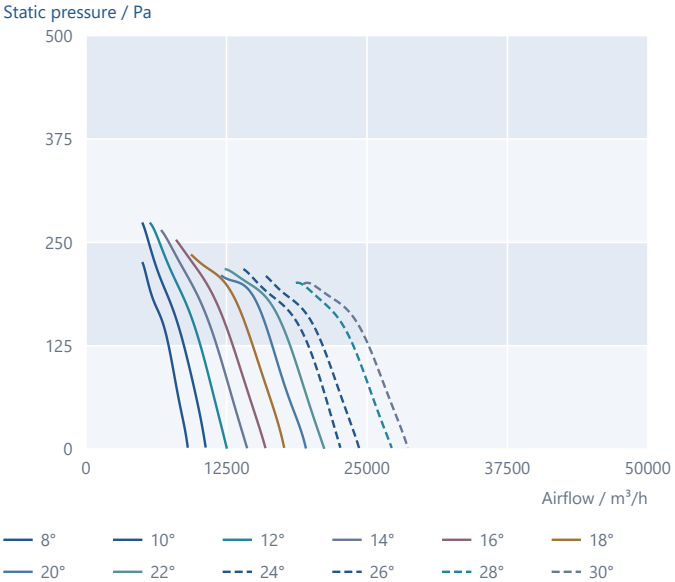
VLF-BS 800/9/4P

12 blade angles / 400 V / 50 Hz



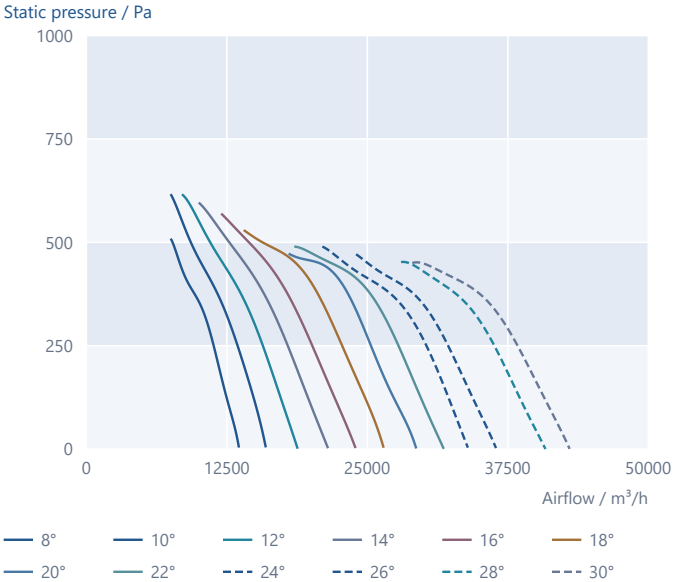
VLF-BS 800/9/6P

12 blade angles / 400 V / 50 Hz



VLF-BS 800/9/4-8P

12 blade angles / 400 V / 50 Hz



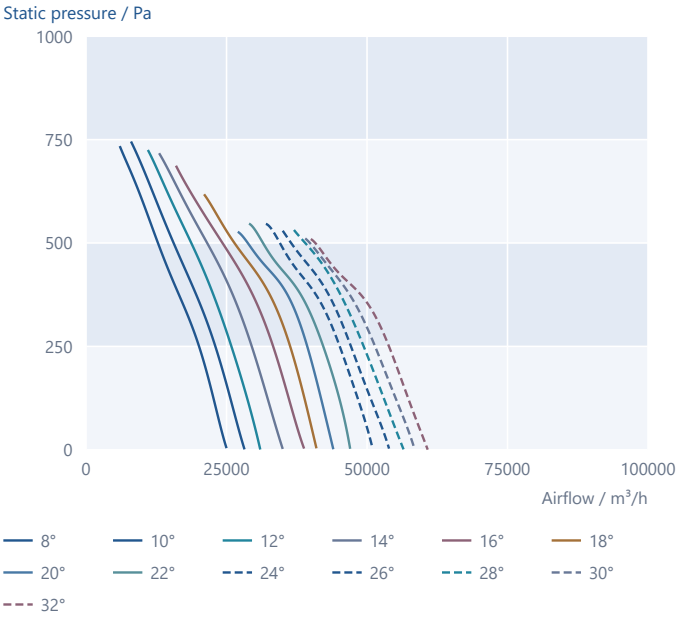
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 09

Fan Performance Curves

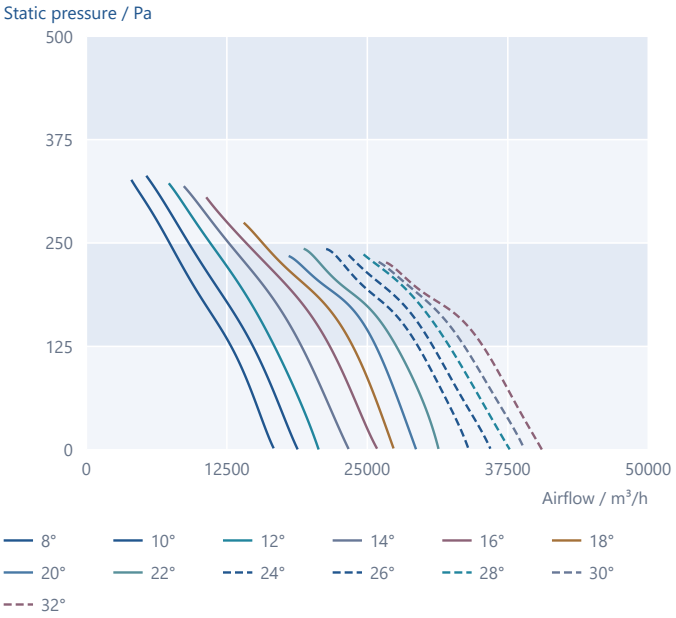
VLF-BS 900/6/4P

13 blade angles / 400 V / 50 Hz



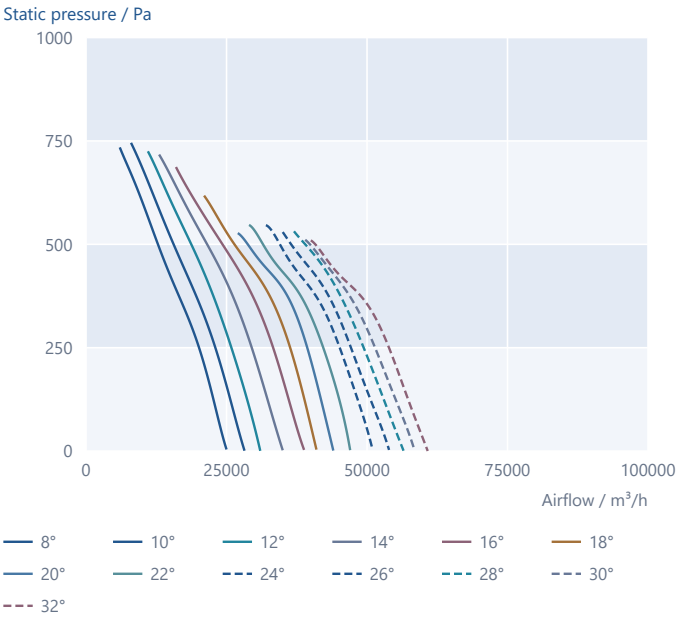
VLF-BS 900/6/6P

13 blade angles / 400 V / 50 Hz



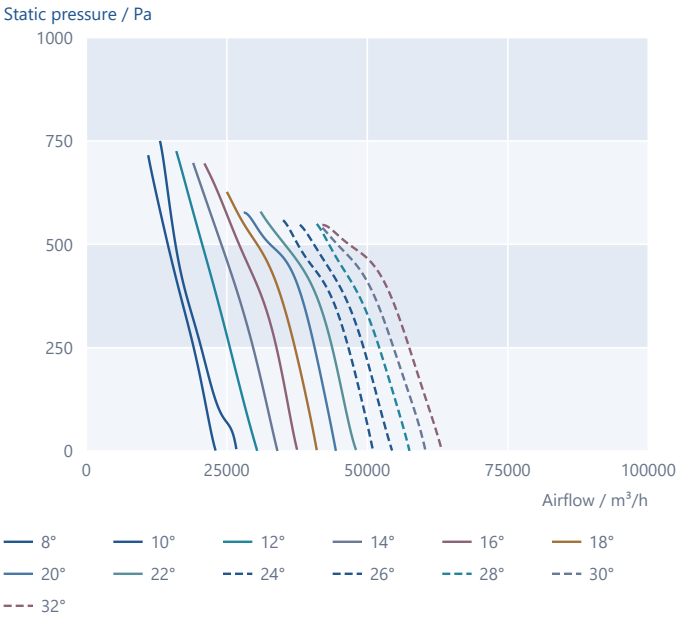
VLF-BS 900/6/4-8P

13 blade angles / 400 V / 50 Hz



VLF-BS 900/9/4P

13 blade angles / 400 V / 50 Hz



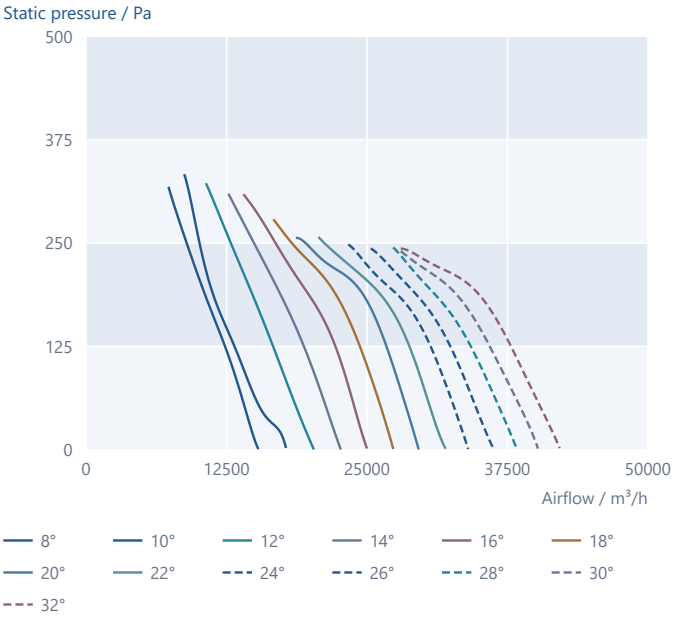
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 10

Fan Performance Curves

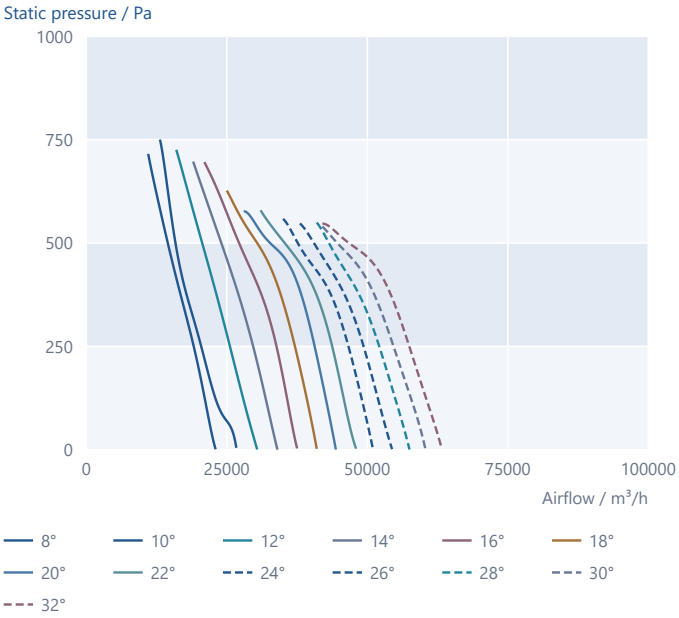
VLF-BS 900/9/6P

13 blade angles / 400 V / 50 Hz



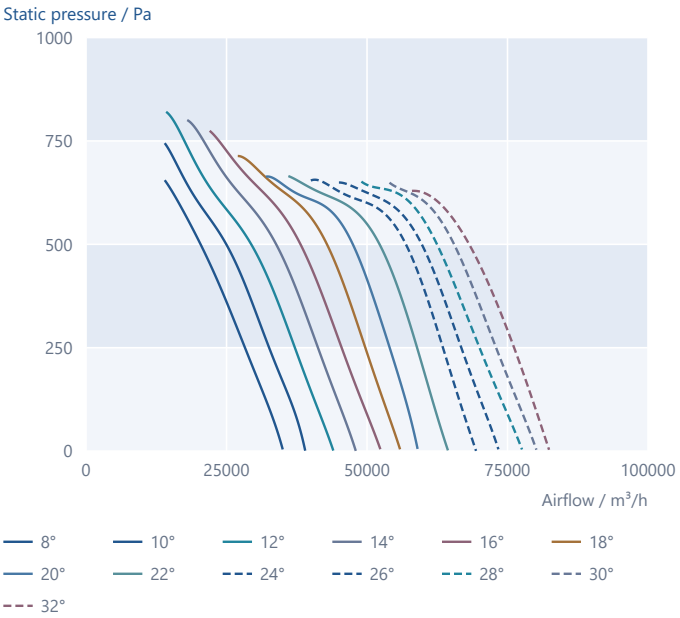
VLF-BS 900/9/4-8P

13 blade angles / 400 V / 50 Hz



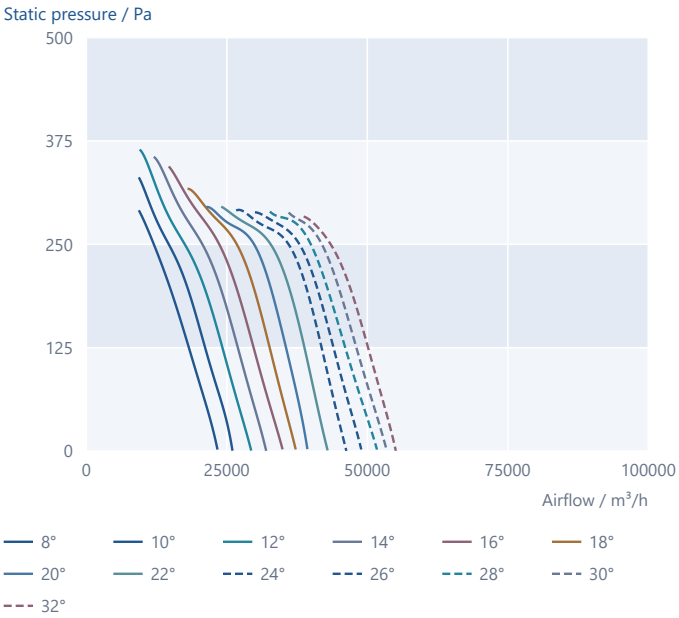
VLF-BS 1000/6/4P

13 blade angles / 400 V / 50 Hz



VLF-BS 1000/6/6P

13 blade angles / 400 V / 50 Hz



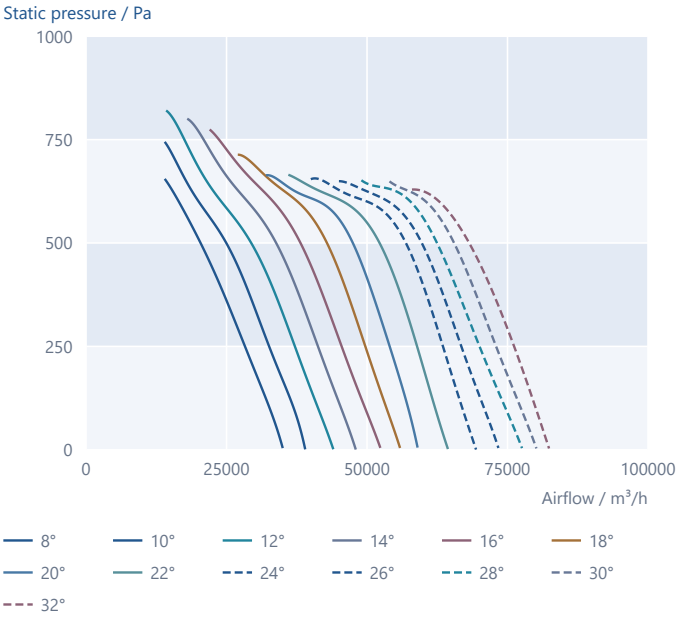
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 11

Fan Performance Curves

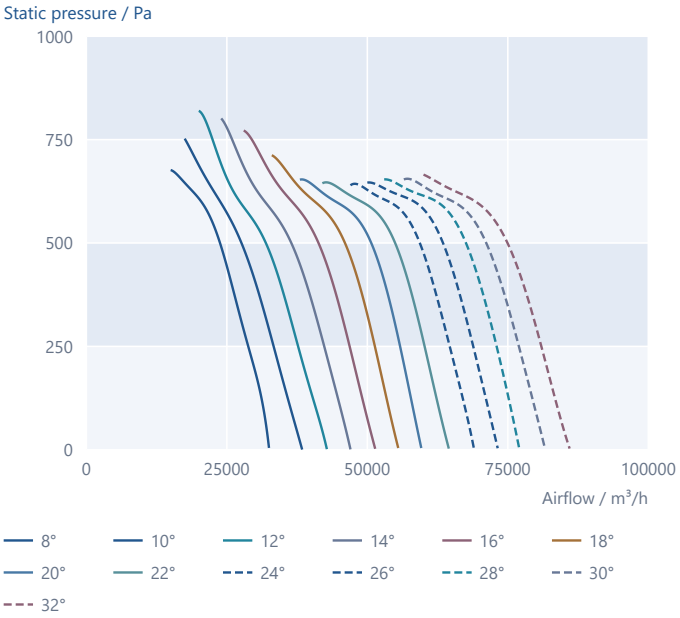
VLF-BS 1000/6/4-8P

13 blade angles / 400 V / 50 Hz



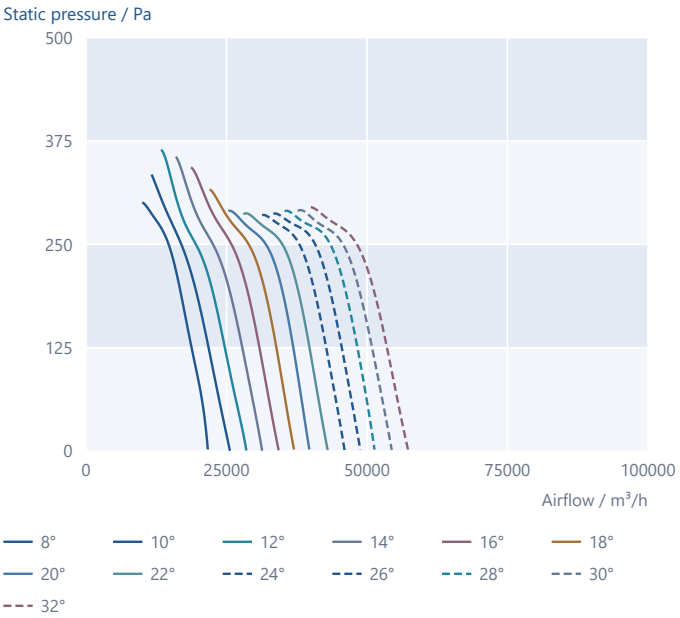
VLF-BS 1000/9/4P

13 blade angles / 400 V / 50 Hz



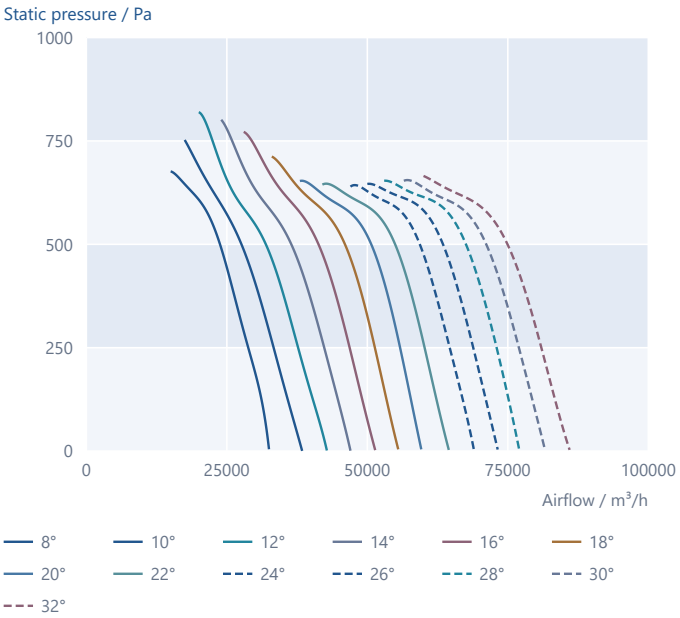
VLF-BS 1000/9/6P

13 blade angles / 400 V / 50 Hz



VLF-BS 1000/9/4-8P

13 blade angles / 400 V / 50 Hz



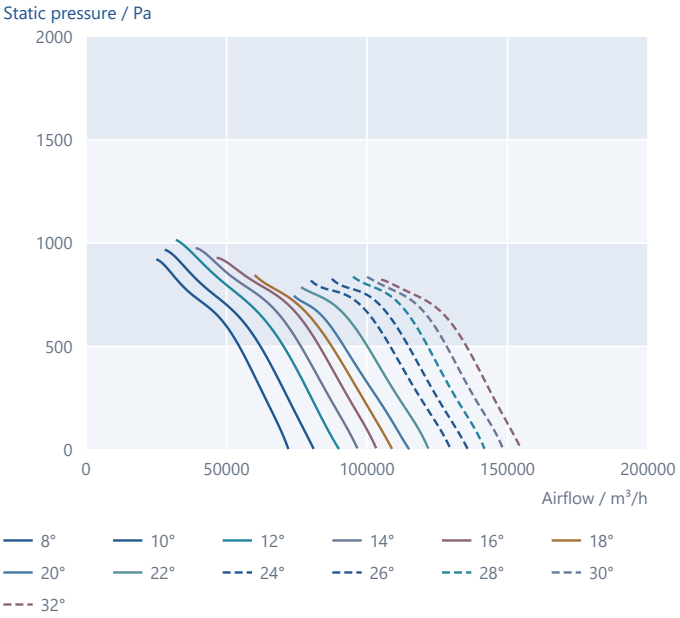
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 12

Fan Performance Curves

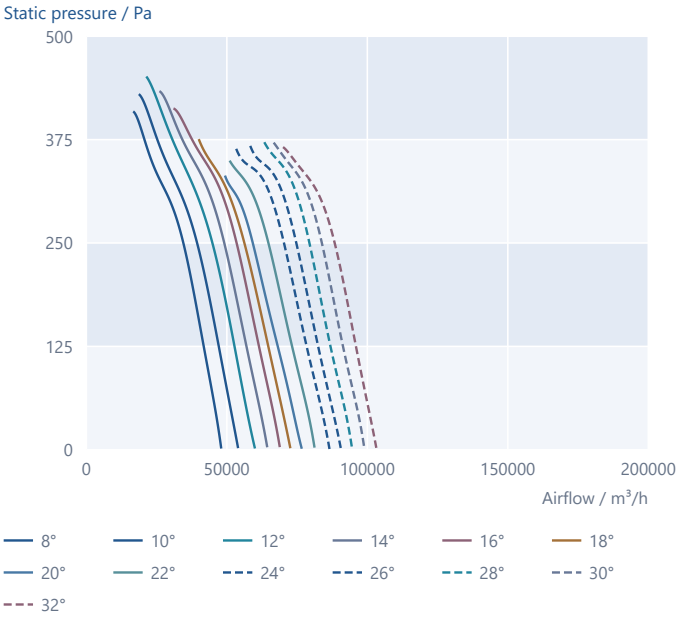
VLF-BS 1250/6/4P

13 blade angles / 400 V / 50 Hz



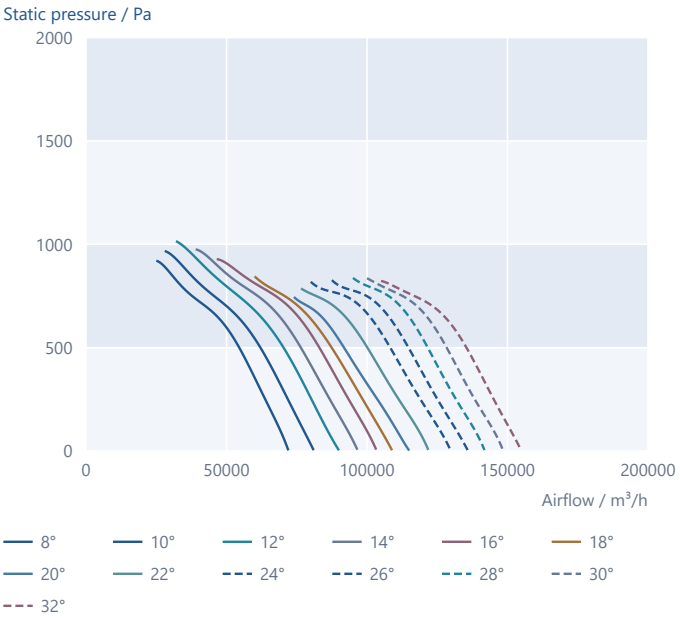
VLF-BS 1250/6/6P

13 blade angles / 400 V / 50 Hz



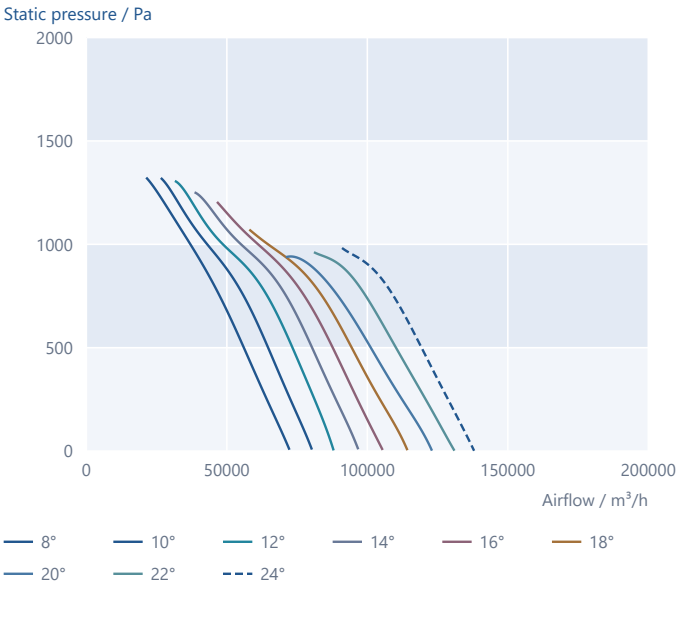
VLF-BS 1250/6/4-8P

13 blade angles / 400 V / 50 Hz



VLF-BS 1250/9/4P

9 blade angles / 400 V / 50 Hz



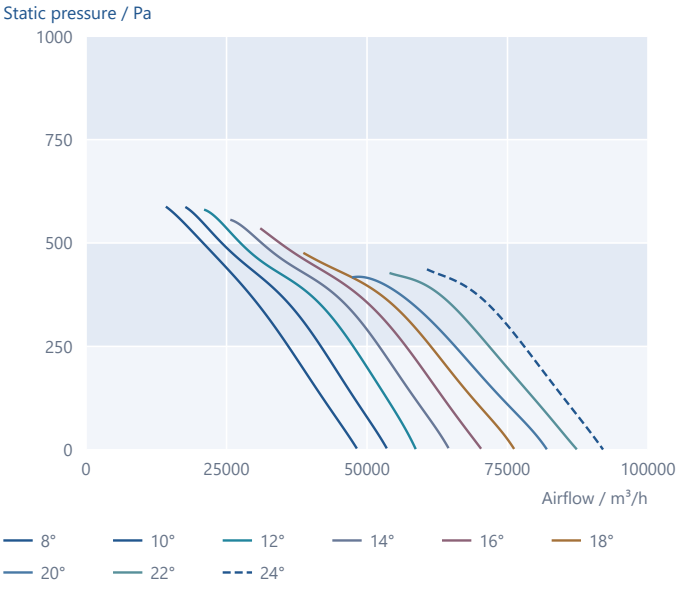
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

03 / AIR PERFORMANCE / 13

Fan Performance Curves

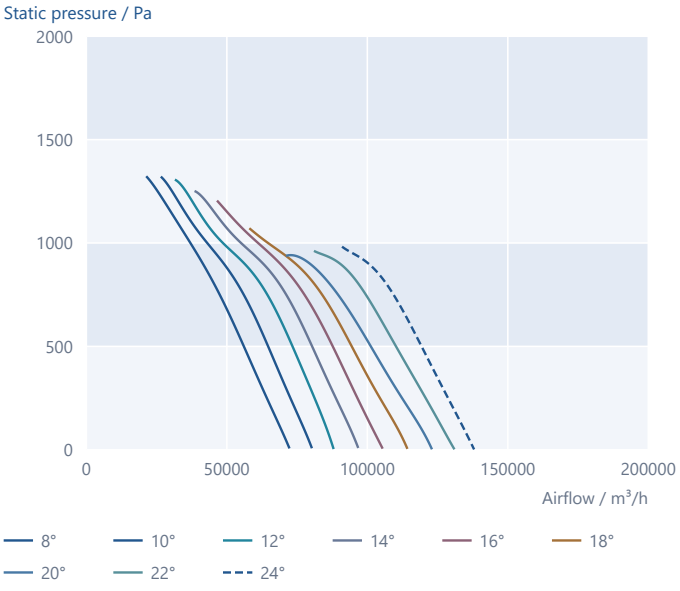
VLF-BS 1250/9/6P

9 blade angles / 400 V / 50 Hz



VLF-BS 1250/9/4-8P

9 blade angles / 400 V / 50 Hz



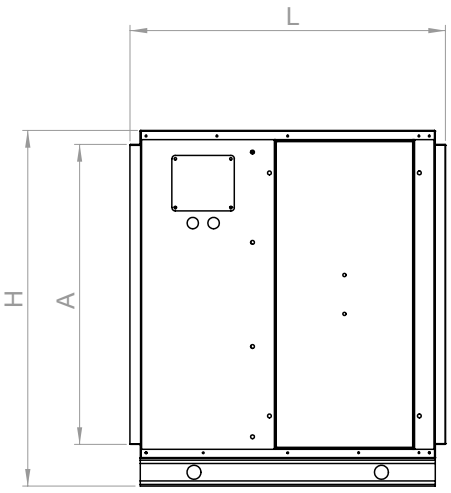
One chart per diameter/blade-count/pole configuration. Legend values are blade angles. Curves remain within domains; negative-pressure portions are omitted. Shared 20°C selection data for F300°C / F400°C options. Two-speed curves show high-speed duty only.

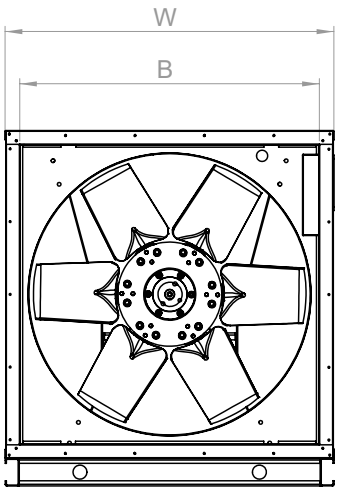
04 / DIMENSIONAL DATA

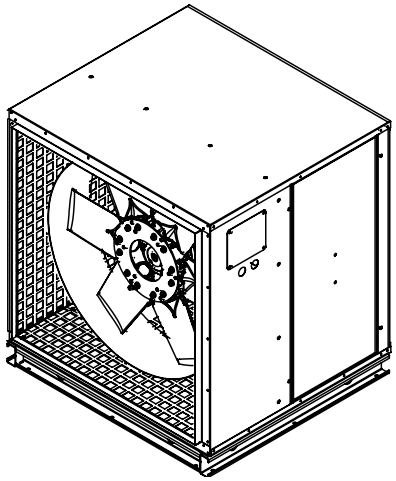
Plan the mounting connections.

COMMON F300°C / F400°C DIMENSIONS

All lengths in mm







Size	A	B	H	L	W
400	490	490	640	592	568
450	490	490	640	592	568
500	536	536	686	592	620
560	624	624	775	745	707
630	694	694	845	745	777
710	774	774	925	910	857
800	865	865	1025	910	950
900	965	965	1125	1065	1050
1000	1069	1069	1250	1065	1150
1250	1319	1319	1500	1065	1400

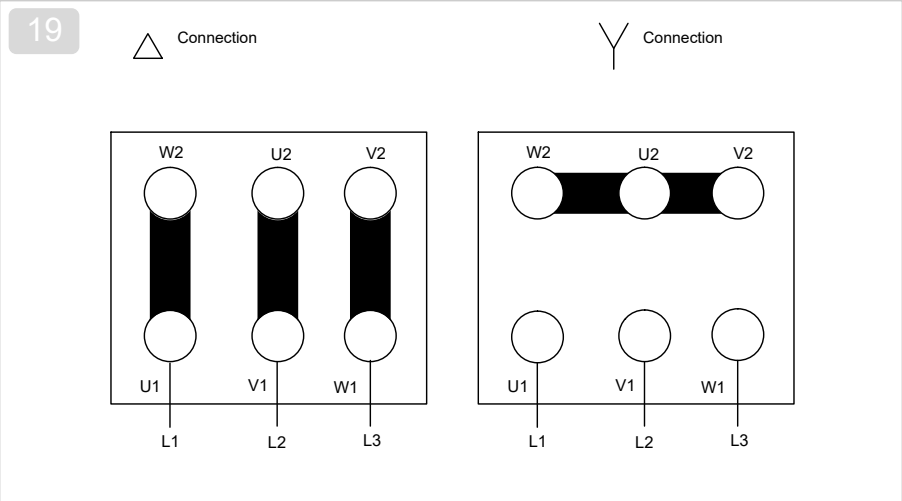
Original vector drawing. A, B, H, L and W retain their original definitions. Cabinet dimensions are shared by configurations at each diameter. Allow clearance for the access panel. Confirm mounting orientation and supports for the supplied unit.

05 / ELECTRICAL & INSTALLATION

Connect the specified smoke-duty motor.

Single-speed connection diagram 19. Star or delta connection must match the actual motor nameplate and supplied documentation. This generic diagram does not define the final smoke-duty wiring or a two-speed connection.

THREE PHASE / SINGLE-SPEED REFERENCE DIAGRAM



F300°C / F400°C DUTY SPECIFICATION

Specify F300°C / 120 minutes or F400°C / 120 minutes when selecting the unit. Follow the supplied unit classification and motor documentation for the actual assembly, permitted installation arrangement and emergency operation.

MOTOR SELECTION & INSTALLATION

Select blade angle and motor for the required airflow and pressure. Final motor power, current and protection follow the selected unit. Two-speed connections require the supplied motor diagram; the reference curves here describe high-speed operation only.

Provide suitable supports, unobstructed air paths and maintenance access. Isolate the supply before inspection. Keep smoke-control connections consistent with the project specification and supplied unit instructions.

VLF-BS

Insulated box axial smoke extract fans

F300°C / F400°C

VOLTVENT®
VENTILATION SYSTEMS

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