

Movement by Perfection



Fans

for transformer cooling
06/2017 edition

Addendum
02/2020

The Royal League in ventilation, control and drive technology

Contents

Technical description		Page 4
FE2owlet-ECblue with ZAplus		Page 6
FE2owlet-ZAplus		Page 42
MAXventowlet		Page 92

Technical description

FE2owlet with ZAplus

Product specification for transformer cooling

Optimised full nozzle with guide vane, motor suspension, and short diffusor. Profiled sickle-shaped blades based on bionic insights. Available sizes 450 - 1000 mm, air flows up to 42,800 m³/h and static pressure increase up to 490 Pa.

Characteristics and special features

- Intelligent ventilation system with built-in efficiency guarantee
- Extremely low operating costs due to optimum efficiency with minimum noise emissions as a result of bionic blade design and aerodynamically optimised ZAplus nozzle
- High flexibility due to 100% speed controlled air flow
- High corrosion protection with corrosion-free nozzle made of high performance composite material
- Very smooth running and high durability due to dynamic balancing in 2 planes
- Fast and easy assembly, as no packaging is required
- Meets ErP directive (327/2011)
- Numerous approvals (incl. VDE, UL, CCC, CE)

Motor concepts

External rotor motors

- ECblue EC technology with integrated controller matched to the fan
 - Efficient continuous RPM control via 0-10V PWM and MODBUS
 - Easy connection to common bus systems (actuation/data acquisition)
 - Integrated motor protection
 - Active temperature management
 - Top EMC standard
 - Degree of protection (IEC 60259) IP54 or IP55
- AC technology
 - Voltage controllable
 - Degree of protection (IEC 60259) IP54 or IP55
 - Thermal contact for monitoring the winding temperature



Technical description

MAXventowlet

Product specification for transformer cooling

Medium pressure axial fan with low noise emissions due to bionic blade design, high efficiency and more power due to high performance internal rotor motor.

Factory adjustable pitch angle and various number of blades for precise operation settings.

Available in 14 sizes 315 mm to 1400 mm and different housing designs.

Motors are available in 2-, 4-, 6- or 8-pole design in 50 Hz or 60 Hz.

Features and special features

- High power density as a result of internal rotor motors
- Corrosion protection for CX application
- Low operating costs due to optimum efficiency
- Short housing according to Eurovent
- Very smooth running and high durability due to dynamic balancing on two levels
- Meets the ErP-instruction (327/2011)
- ATEX (optional)

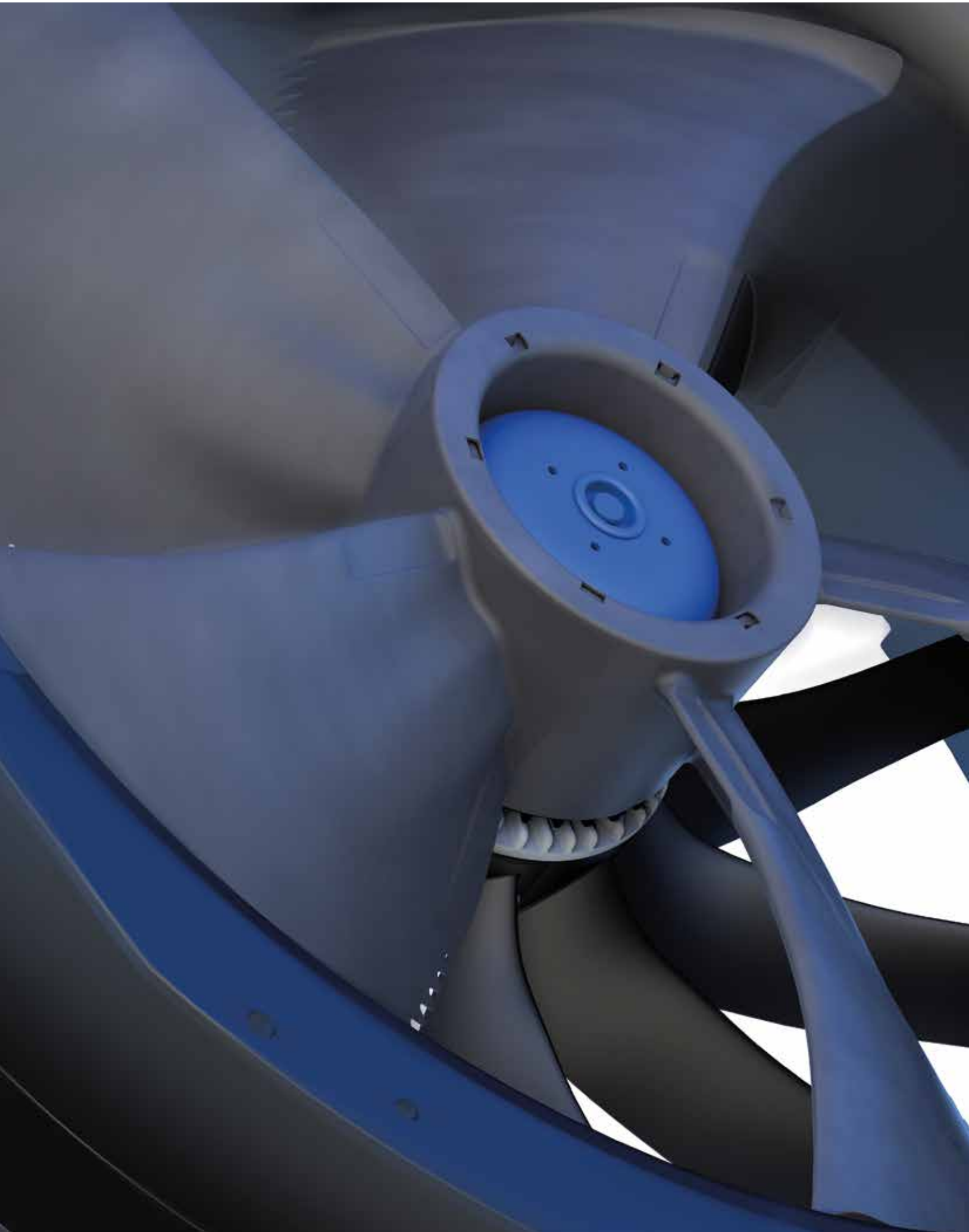
Customer-specific designs

- Degree of protections (IEC 60259)
- Insulation classes to DIN EN 60085
- Temperature application ranges from -60°C...120°C
- Different voltage and frequency ranges

Application examples

- Radiator cooling
- Oil cooler
- Wind energy (ON-/OFFshore applications)
- Block heating station





Oil transformer cooling

Product overview

FE2owlet-ECblue with ZAplus

Size 500 Page 8

Size 560 Page 10

Size 630 Page 12

Size 710 Page 18

Size 800 Page 24

Size 910 Page 30

Size 1000 Page 36

FE2owlet-ZAplus

Size 450 Page 42

Size 500 Page 46

Size 560 Page 52

Size 630 Page 56

Size 710 Page 64

Size 800 Page 68

Size 910 Page 76

Size 1000 Page 84

FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

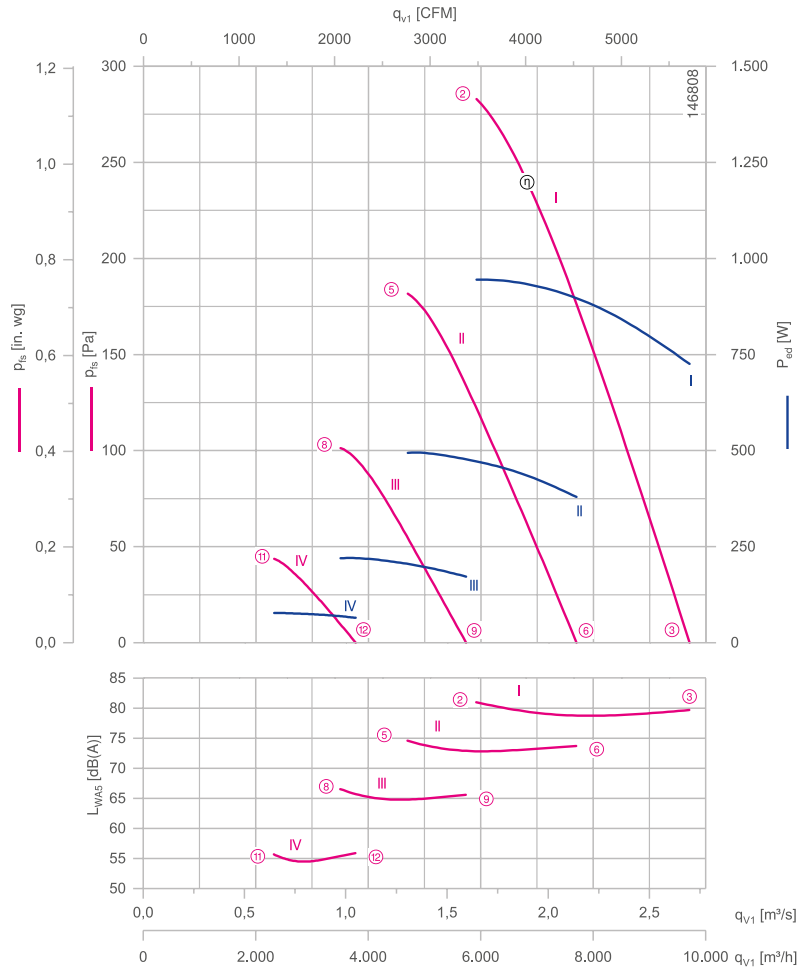
ZN050



Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 920 W*
 Rated current I_N : 1.60- 1.25 A*
 Rated speed n_N : 1550 rpm⁻¹*
 Speed n at $p_{fs} = 0$ Pa: 1550 min⁻¹*
 Power input P_{ed} at $p_{fs} = 0$ Pa: 720 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 2.7 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 55 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL
ErP-data
 Efficiency η_{stdA} : 56.3 %
 Efficiency grade: $N_{actual} = 62.9 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

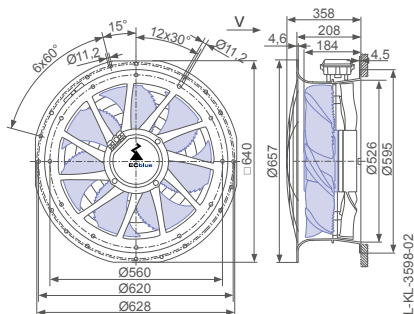
Connection diagram

1360-390 KLK

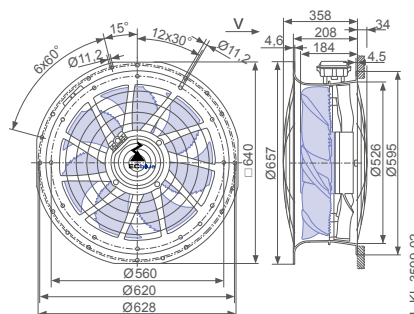
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



Performance data

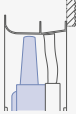
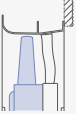
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	
ZN050-ZL_DC_7P2	I	1550	②	1.50	940	81	55
			③	1.20	720	80	
	II	1240	⑤	0.92	480	75	60
			⑥	0.78	380	74	
	III	930	⑧	0.54	210	67	
			⑨	0.48	170	66	
	IV	620	⑪	0.29	75	55	
			⑫	0.27	65	56	

Current values determined at 400V

Fan ordering information

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Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN050-ZIL.DC.V7P2	ZN050-ZIL.DC.V7P2
Article no.	180657/10C4	180657/10C6
Weight kg	16.40	17.60
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

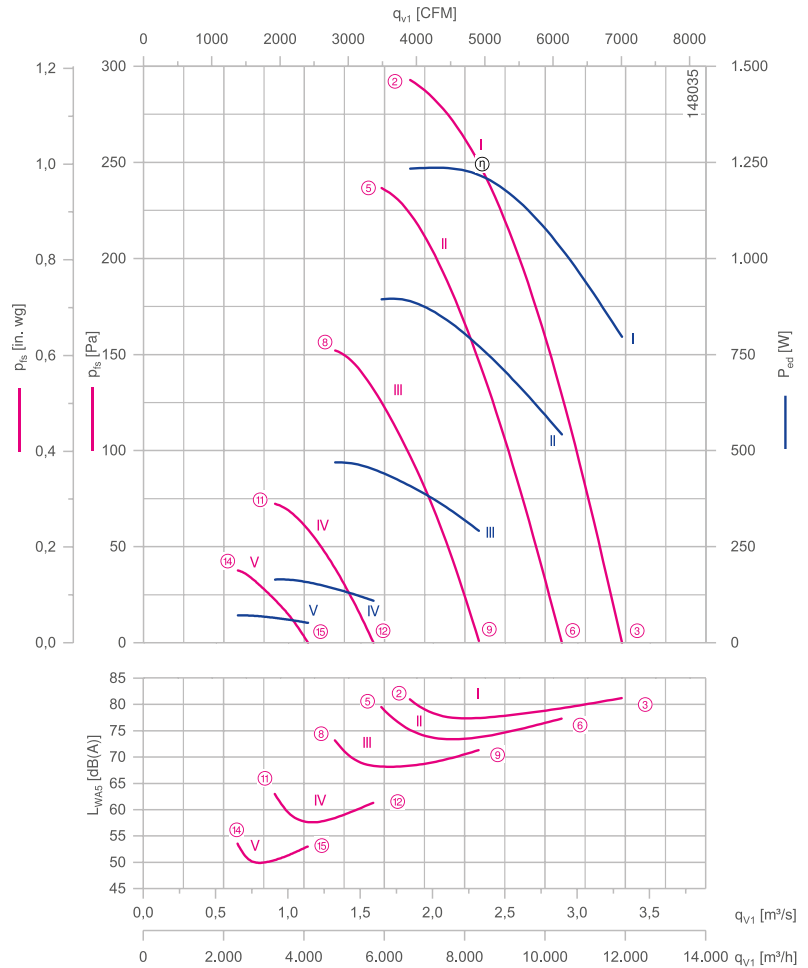
ZN056



Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.35 kW*
 Rated current I_N : 2.20- 1.75 A*
 Rated speed n_N : 1450 rpm⁻¹*
 Speed n at $p_{fs} = 0$ Pa: 1450 min⁻¹*
 Power input P_{ed} at $p_{fs} = 0$ Pa: 800 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 3.3 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL
ErP-data
 Efficiency η_{stdA} : 53.7 %
 Efficiency grade: $N_{actual} = 59.5 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

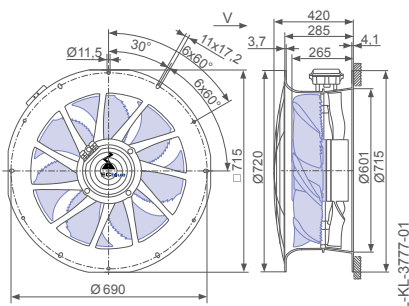
Connection diagram

1360-390 KLK

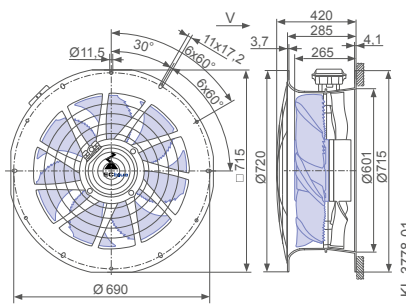
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Performance data

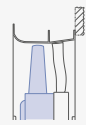
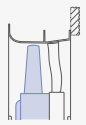
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN056-ZL_DC_5P4	I	1450	②	1.95	1250	82	50
			③	1.30	800	81	
	II	1270	⑤	1.45	900	80	55
			⑥	0.98	540	77	
	III	1020	⑧	0.86	460	74	60
			⑨	0.62	290	71	
	IV	700	⑪	0.44	160	63	
			⑫	0.35	110	61	
	V	500	⑭	0.28	70	54	
			⑮	0.24	50	53	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type **ZN056-ZIL.DC.V5P4** **ZN056-ZIL.DC.V5P4**
Article no. **180759/10C4** **180759/10C6**

Weight kg 18.00 18.90
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

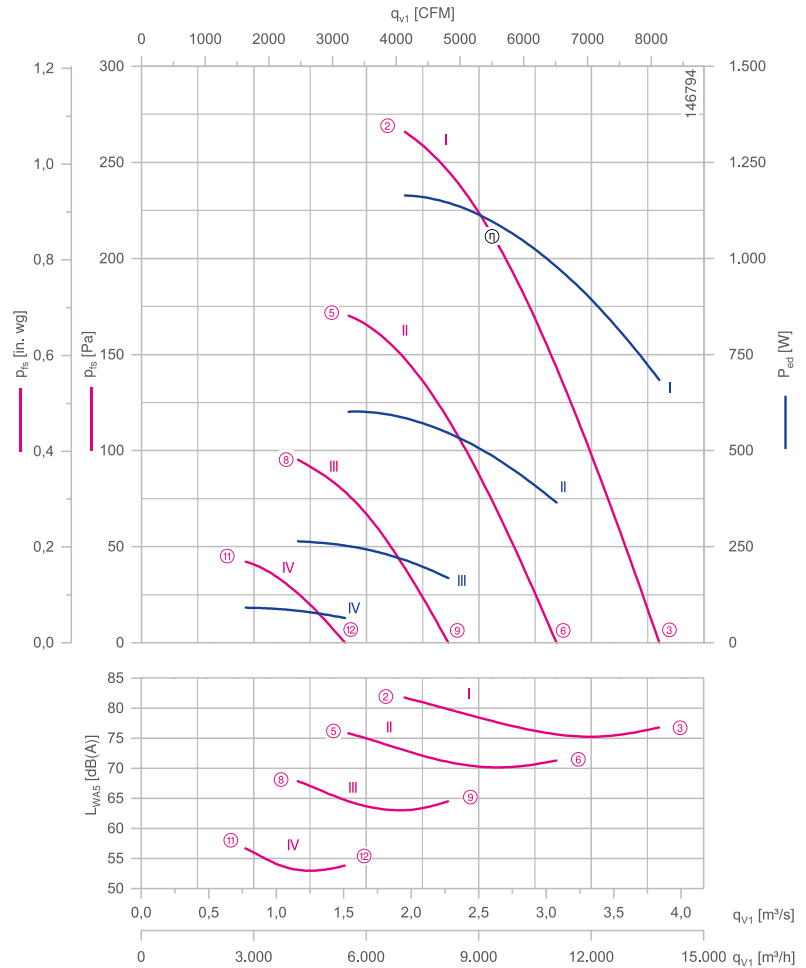
ZN063



Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.15 kW*
 Rated current I_N : 1.90- 1.50 A*
 Rated speed n_N : 1200 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 1200 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 680 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 3.8 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 55 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL
ErP-data
 Efficiency η_{stdA} : 58.7 %
 Efficiency grade: $N_{actual} = 64.8 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

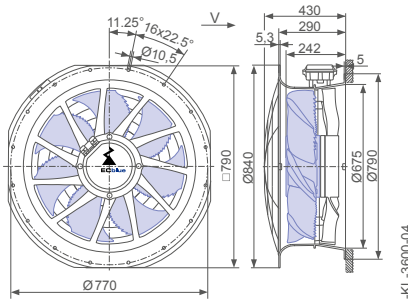
Connection diagram

1360-390 KLK

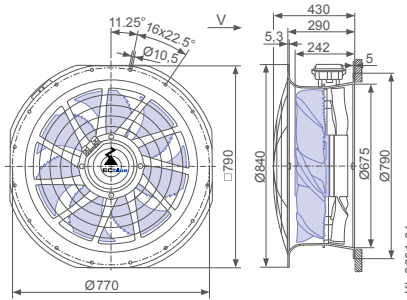
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



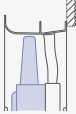
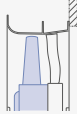
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	
ZN063-ZL_DG_7P2	I	1200	②	1.80	1150	82	55
			③	1.15	680	77	
			⑤	1.05	600	76	
	II	960	⑥	0.74	370	71	60
			⑧	0.60	260	68	
	III	720	⑨	0.44	170	65	
			⑪	0.32	90	57	
	IV	480	⑫	0.28	65	54	

Current values determined at 400V

Fan ordering information

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Air flow direction		
Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-ZIL.DG.V7P2	ZN063-ZIL.DG.V7P2
Article no.	180658/10C4	180658/10C6
Weight kg	22.50	23.50
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

ZN063



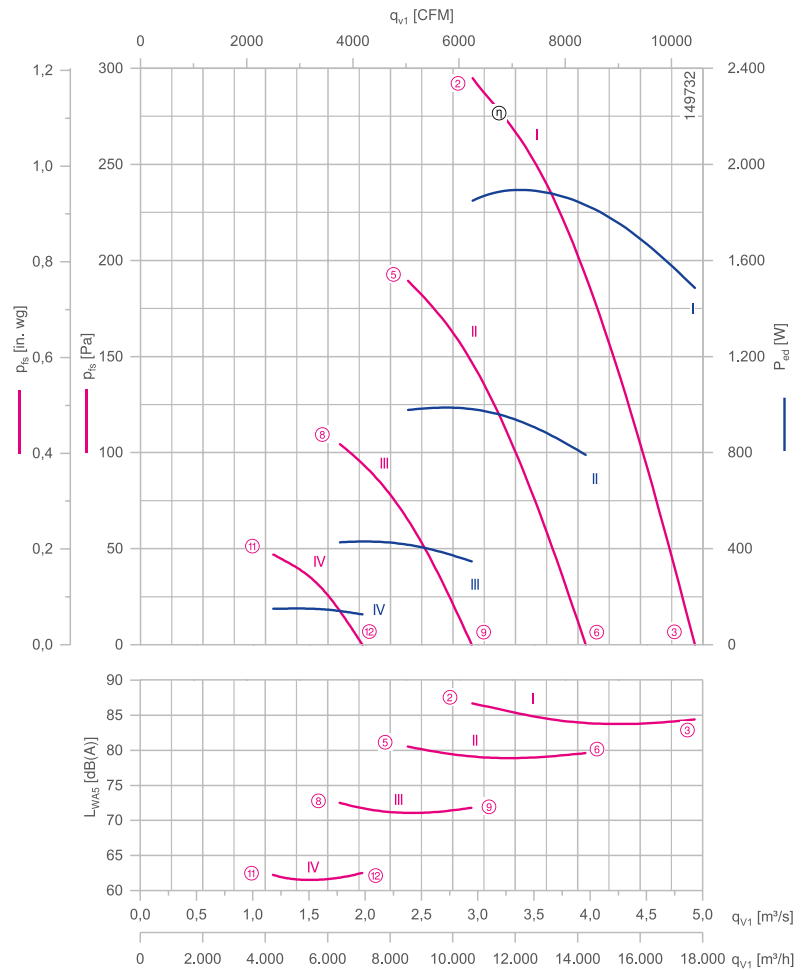
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.90 kW*
 Rated current I_N : 3.00- 2.40 A*
 Rated speed n_N : 1270 rpm⁻¹*
 Speed n at $p_s = 0$ Pa: 1270 min⁻¹*
 Power input P_{ed} at $p_s = 0$ Pa: 1500 W*
 Air flow q_{v1} at $p_s = 0$ Pa: 4.9 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 60 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 52.8 %
 Efficiency grade: $N_{actual} = 57.5 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

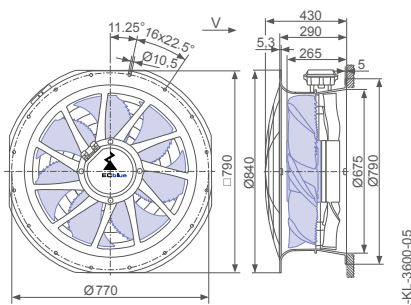
Connection diagram

1360-390 KLK

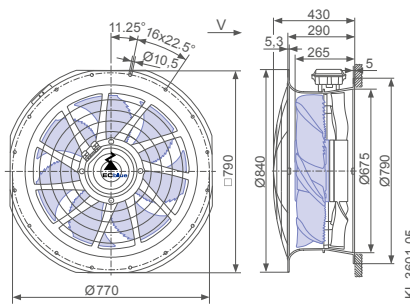
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




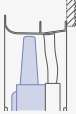
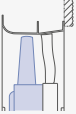
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)		$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN063-ZL_GG_7P3	I	1270	②	2.80	1850	87	50	
			③	2.30	1500	84		
	II	1020	⑤	1.55	980	81		65
			⑥	1.30	800	80		
	III	760	⑧	0.84	420	73		
			⑨	0.74	350	72		
	IV	510	⑪	0.42	150	62		
			⑫	0.38	130	63		

Current values determined at 400V

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-ZIL.GG.V7P3	ZN063-ZIL.GG.V7P3
Article no.	180760/10C4	180760/10C6
Weight kg	34.50	35.40
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

ZN063



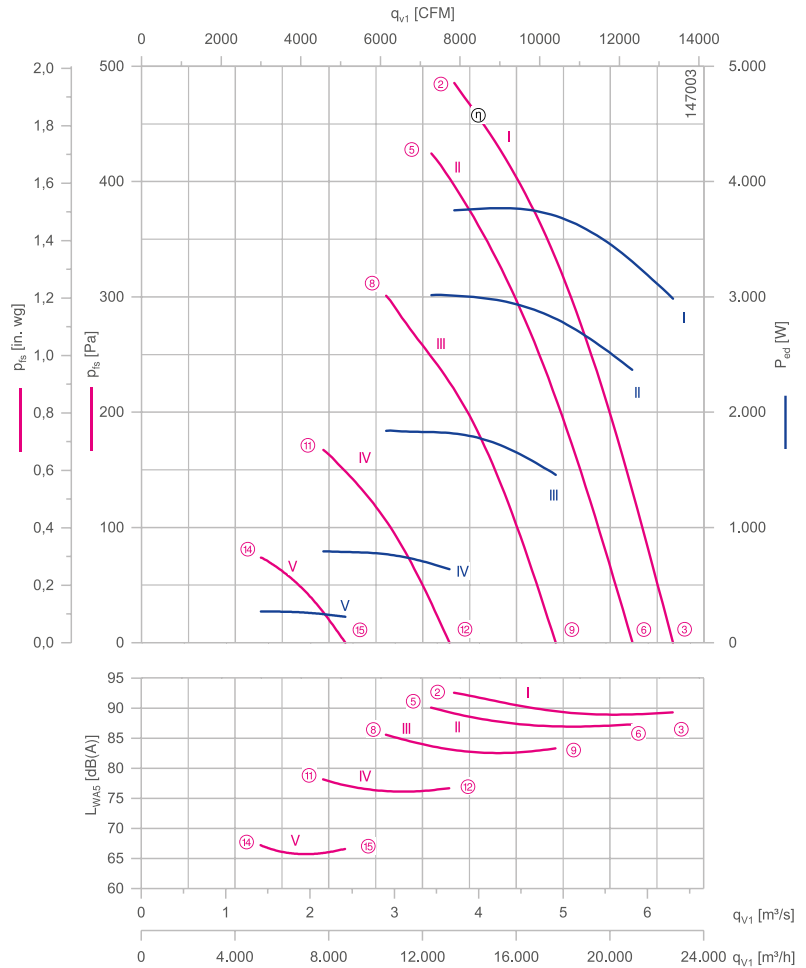
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.80 kW*
 Rated current I_N : 5.80- 4.60 A*
 Rated speed n_N : 1600 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 1600 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 3000 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 6.3 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 45 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 52.9 %
 Efficiency grade: $N_{actual} = 55.7 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

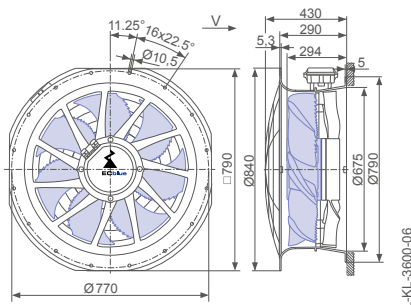
Connection diagram

1360-390 KLK

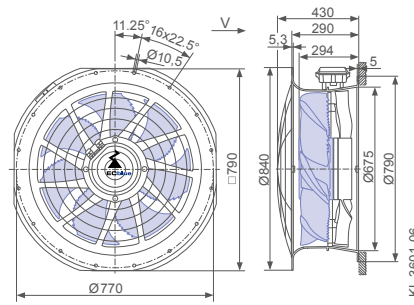
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Performance data

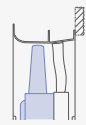
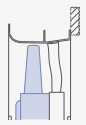
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WAS} dB(A)	Maximum ambient temperature $t_{amb (max.)}$ °C
		n min^{-1}		I A	P_{ed} W		
ZN063-ZL_GL_7P3	I	1610	②	5.60	3800	93	45
			③	4.40	3000	89	
	II	1490	⑤	4.40	3000	90	55
			⑥	3.50	2400	87	
	III	1260	⑧	2.70	1800	86	65
			⑨	2.20	1450	83	
	IV	940	⑪	1.30	780	78	
			⑫	1.10	640	77	
	V	620	⑭	0.62	270	67	
			⑮	0.54	220	67	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type ZN063-ZIL.GL.V7P3 ZN063-ZIL.GL.V7P3
Article no. 180761/10C4 180761/10C6

Weight kg 38.80 39.80
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

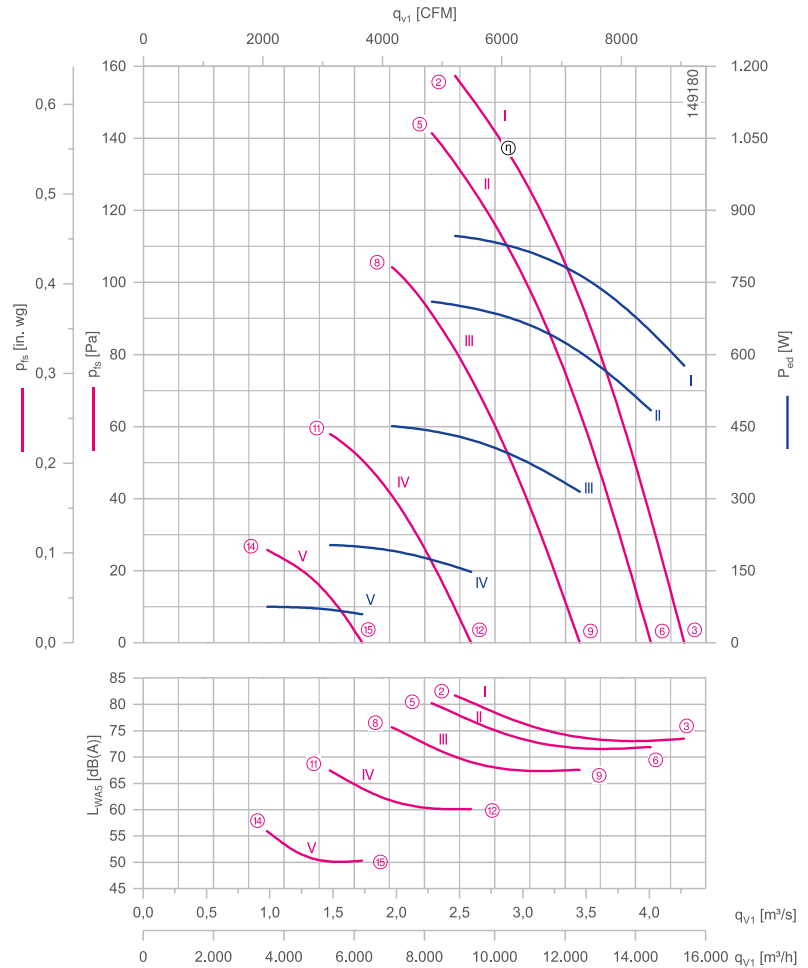
ZN071



Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 840 W*
 Rated current I_N : 1.45- 1.15 A*
 Rated speed n_N : 960 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 960 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 580 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 4.3 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL
ErP-data
 Efficiency η_{stdA} : 54.5 %
 Efficiency grade: $N_{actual} = 61.4 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

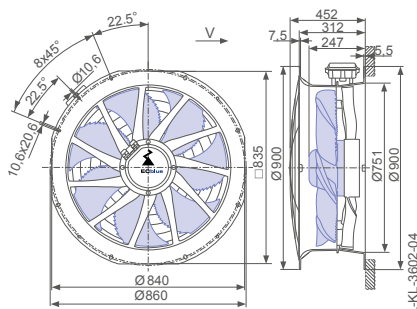
Connection diagram

1360-390 KLK

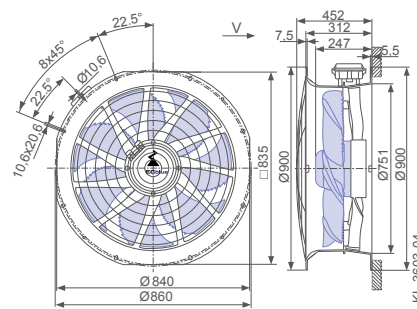
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



Performance data

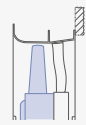
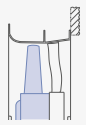
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN071-ZL_DG_7P3	I	960	②	1.35	840	82	50
			③	1.00	580	74	
	II	900	⑤	1.20	700	80	55
			⑥	0.90	480	72	
	III	770	⑧	0.86	460	76	60
			⑨	0.68	310	68	
	IV	580	⑪	0.52	200	68	
			⑫	0.42	150	60	
	V	390	⑭	0.28	75	56	
			⑮	0.25	60	50	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type **ZN071-ZIL.DG.V7P3** **ZN071-ZIL.DG.V7P3**
Article no. **180762/10C4** **180762/10C6**

Weight kg 23.50 24.70
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN071



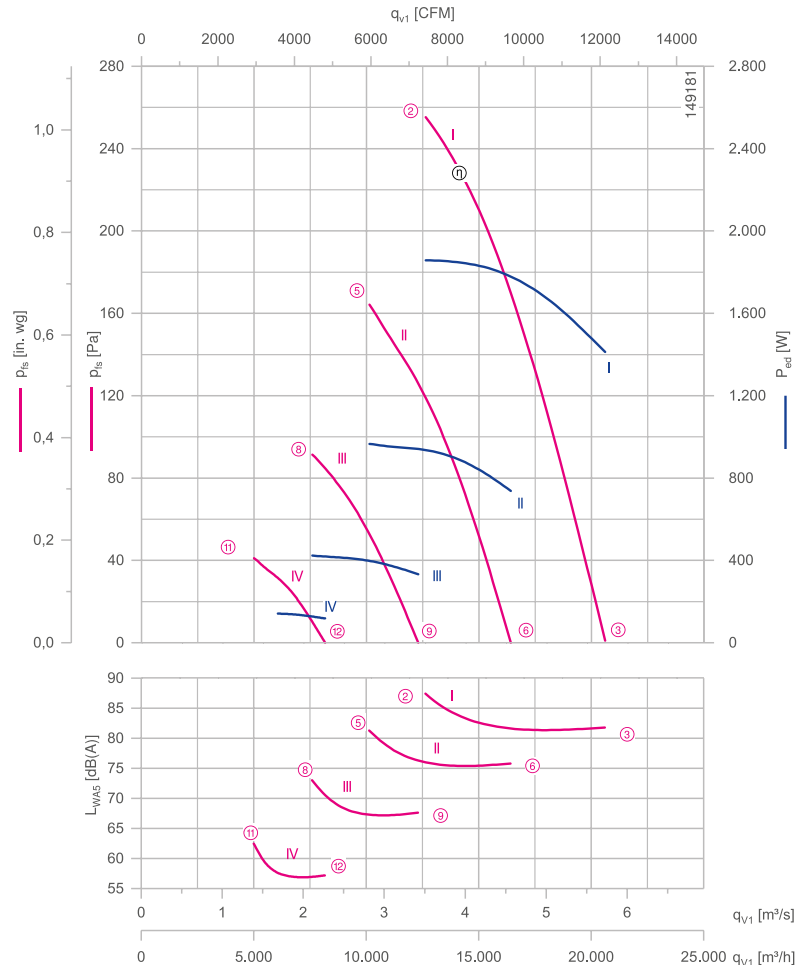
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.85 kW*
 Rated current I_N : 3.00- 2.40 A*
 Rated speed n_N : 1150 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 1150 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 1400 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 5.7 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 55 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 54.8 %
 Efficiency grade: $N_{actual} = 59.5 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

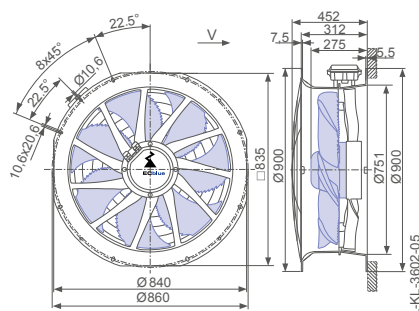
Connection diagram

1360-390 KLK

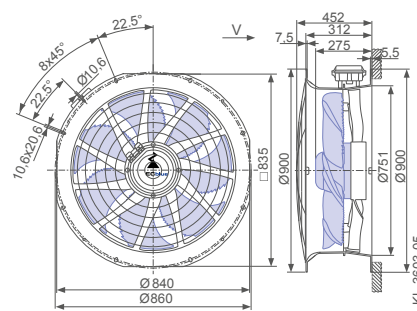
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



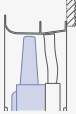
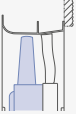
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN071-ZL_GG_7P4	I	1150	②	2.80	1850	88	55
			③	2.20	1400	82	
	II	920	⑤	1.55	960	82	60
			⑥	1.25	740	76	
	III	690	⑧	0.84	420	74	65
			⑨	0.72	330	68	
	IV	460	⑪	0.42	140	63	
			⑫	0.37	120	57	

Current values determined at 400V

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN071-ZIL.GG.V7P4	ZN071-ZIL.GG.V7P4
Article no.	180763/10C4	180763/10C6
Weight kg	35.00	36.20
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

Performance data

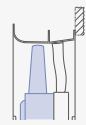
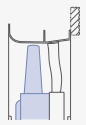
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN071-ZL_GL_7P4	I	1410	②	5.00	3400	93	50
			③	3.70	2600	87	
	II	1340	⑤	4.20	2900	92	55
			⑥	3.20	2200	86	
	III	1110	⑧	2.40	1650	87	60
			⑨	1.90	1300	81	
	IV	840	⑪	1.20	760	80	
			⑫	1.00	600	74	
	V	560	⑭	0.58	260	69	
			⑮	0.50	220	64	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type **ZN071-ZIL.GL.V7P4** **ZN071-ZIL.GL.V7P4**
Article no. **180764/10C4** **180764/10C6**

Weight kg 39.40 40.60
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN080



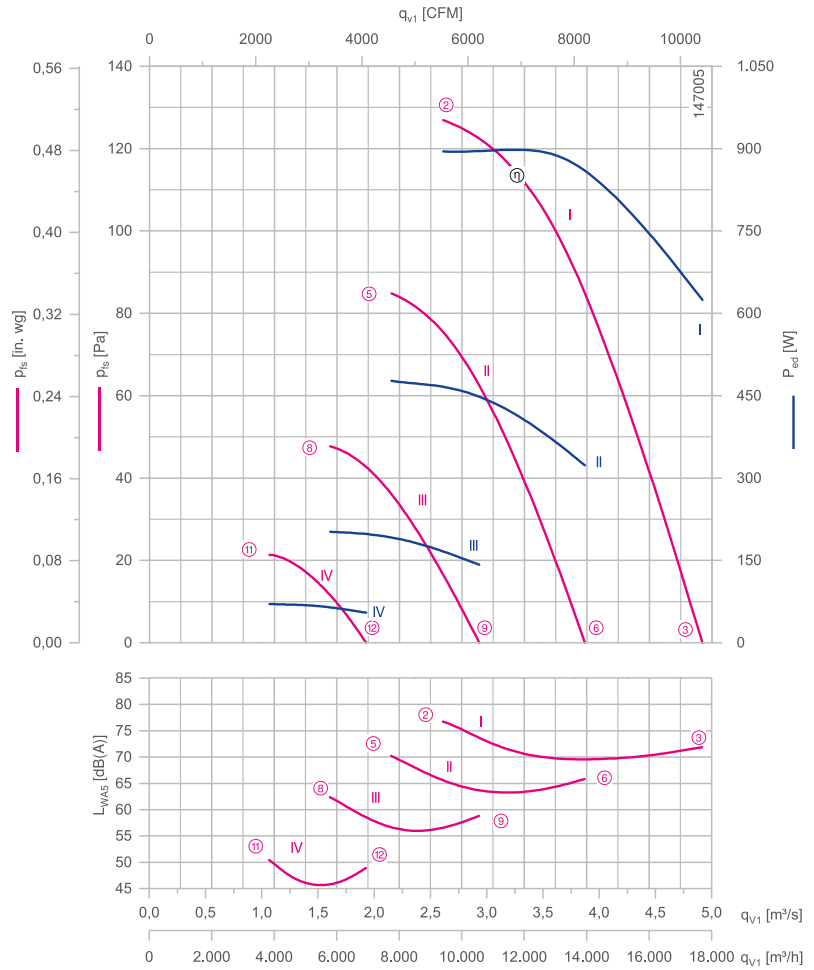
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 960 W*
 Rated current I_N : 1.55- 1.25 A*
 Rated speed n_N : 700 rpm^{-1*}
 Speed n at $p_{is} = 0$ Pa: 700 min^{-1*}
 Power input P_{ed} at $p_{is} = 0$ Pa: 620 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 4.9 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{stdA} : 55.3 %
 Efficiency grade: $N_{actual} = 62.3 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

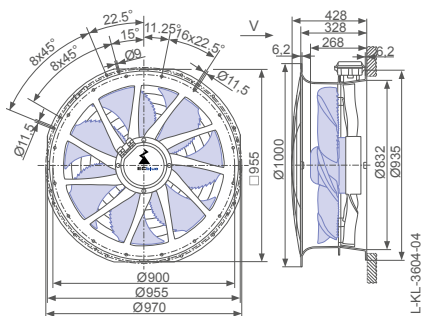
Connection diagram

1360-390 KLK

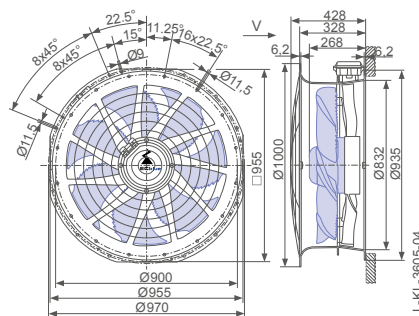
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



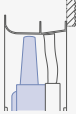
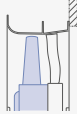
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		t _{amb (max.)} °C
ZN080-ZI_DG_5P4	I	700	②	1.40	900	77	50	
			③	1.05	620	72		
			④	0.88	480	70		
	II	560	⑤	0.68	320	66		60
			⑥	0.50	200	63		
			⑦	0.40	140	59		
	III	420	⑧	0.27	70	50		
			⑨	0.24	55	49		
			⑩					
	IV	280	⑪					
			⑫					

Current values determined at 400V

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-ZIL.DG.V5P4	ZN080-ZIL.DG.V5P4
Article no.	180765/10C4	180765/10C6
Weight kg	28.10	30.10
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN080



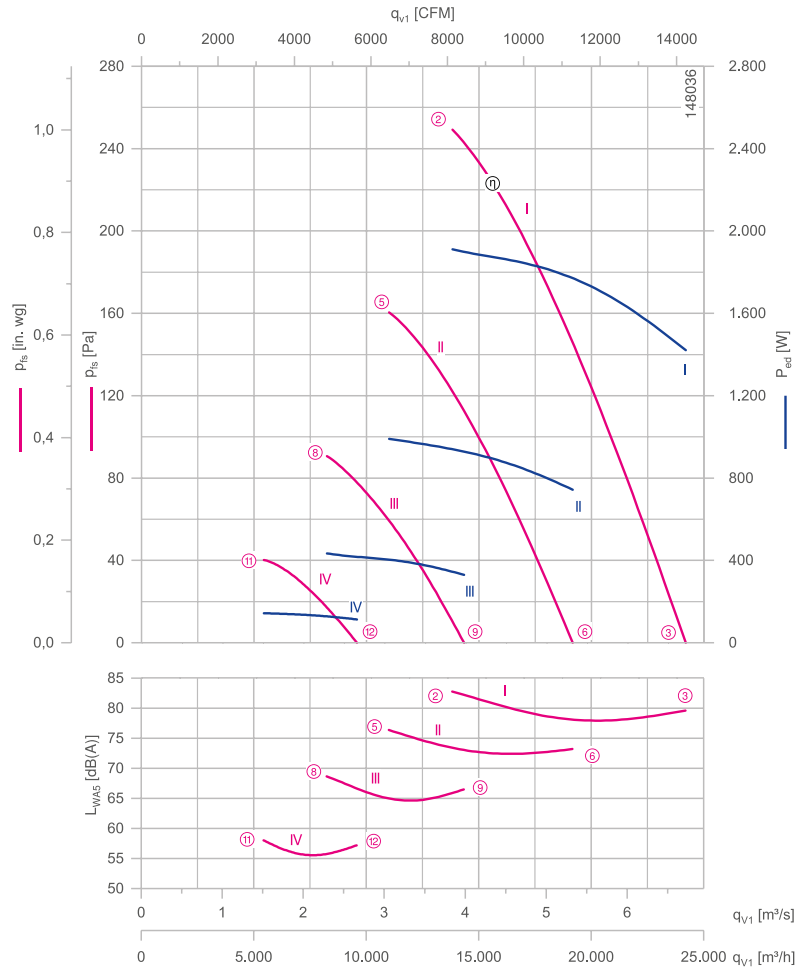
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.90 kW*
 Rated current I_N : 3.00-2.40 A*
 Rated speed n_N : 950 rpm^{-1*}
 Speed n at $p_{fs} = 0$ Pa: 950 min^{-1*}
 Power input P_{ed} at $p_{fs} = 0$ Pa: 1400 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 6.7 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 60 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 57.4 %
 Efficiency grade: $N_{actual} = 62.1 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

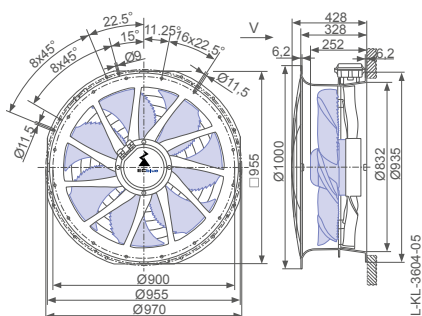
Connection diagram

1360-390 KLK

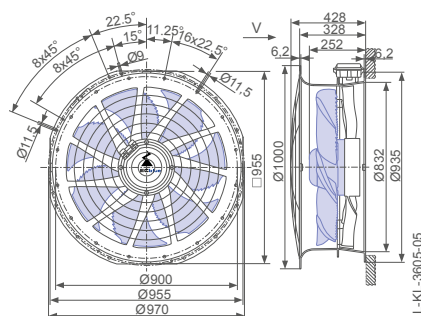
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



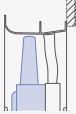
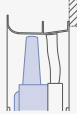
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	
ZN080-ZL_GG_7P3	I	950	②	2.90	1900	83	60
			③	2.20	1400	80	
			⑤	1.55	980	76	
	II	760	⑥	1.20	740	73	70
			⑧	0.84	420	69	
	III	570	⑨	0.70	330	67	
			⑪	0.42	140	58	
	IV	380	⑫	0.36	110	57	

Current values determined at 400V

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-ZIL.GG.V7P3	ZN080-ZIL.GG.V7P3
Article no.	180766/10C4	180766/10C6
Weight kg	40.80	42.30
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

ZN080



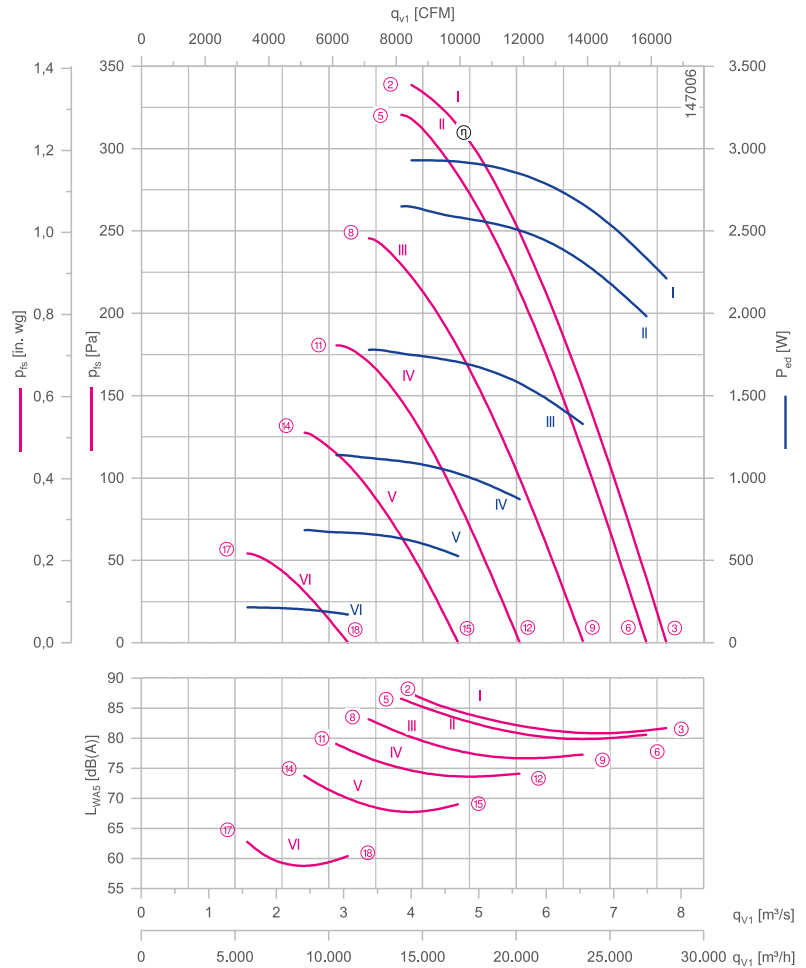
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 2.90 kW*
 Rated current I_N : 4.60- 3.60 A*
 Rated speed n_N : 1100 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 1100 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 2200 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 7.8 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{stat} : 57.6 %
 Efficiency grade: $N_{actual} = 61.1 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

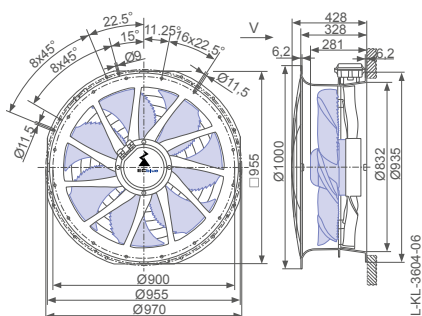
Connection diagram

1360-390 KLK

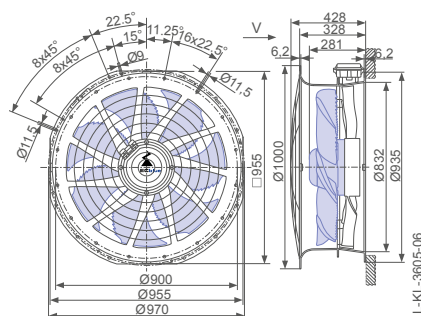
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




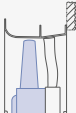

Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	
ZN080-ZL_GL_7P3	I	1110	②	4.40	2900	88	50
			③	3.30	2200	82	
	II	1070	⑤	3.90	2600	87	60
			⑥	3.00	2000	81	
	III	930	⑧	2.70	1750	83	65
			⑨	2.00	1350	77	
	IV	800	⑪	1.75	1150	79	65
			⑫	1.40	880	74	
	V	670	⑭	1.15	680	74	65
			⑮	0.96	520	69	
	VI	440	⑰	0.54	210	63	65
			⑱	0.46	170	60	

Current values determined at 400V

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-ZIL.GL.V7P3	ZN080-ZIL.GL.V7P3
Article no.	180767/10C4	180767/10C6
Weight kg	45.20	46.70
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

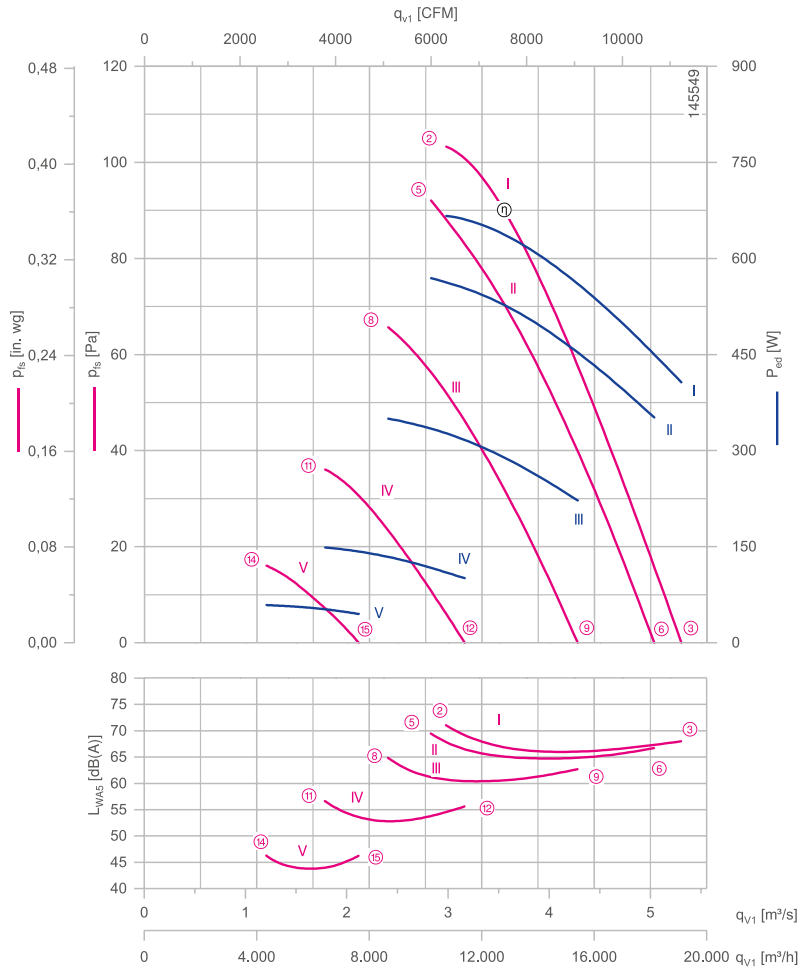
ZN091



Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 660 W*
 Rated current I_N : 1.15- 0.92 A*
 Rated speed n_N : 570 rpm^{1*}
 Speed n at $p_{is} = 0$ Pa: 570 min^{-1*}
 Power input P_{ed} at $p_{is} = 0$ Pa: 400 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 5.3 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 4
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: High Performance Composite Material, uncoated, black
 Rotor: Steel, 2 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL
ErP-data
 Efficiency η_{stdA} : 53.0 %
 Efficiency grade: $N_{actual} = 60.8 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

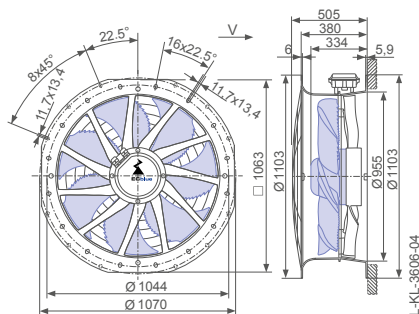
Connection diagram

1360-390 KLK

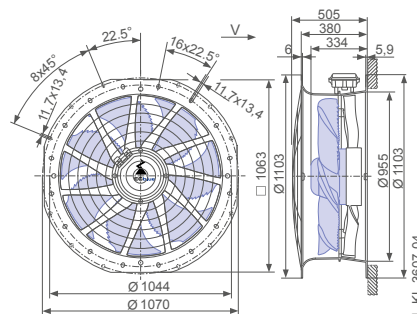
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



Performance data

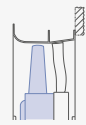
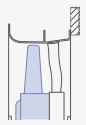
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN091-ZL_DG_4P3	I	570	②	1.10	660	71	50
			③	0.78	400	68	
	II	540	⑤	0.98	560	69	55
			⑥	0.70	350	67	
	III	460	⑧	0.72	350	65	60
			⑨	0.54	220	63	
	IV	340	⑪	0.42	150	57	
			⑫	0.33	100	56	
	V	230	⑭	0.24	60	46	
			⑮	0.21	44	46	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type **ZN091-ZIL.DG.V4P3** **ZN091-ZIL.DG.V4P3**
Article no. **180659/10C4** **180659/10C6**

Weight kg 32.60 34.50
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN091



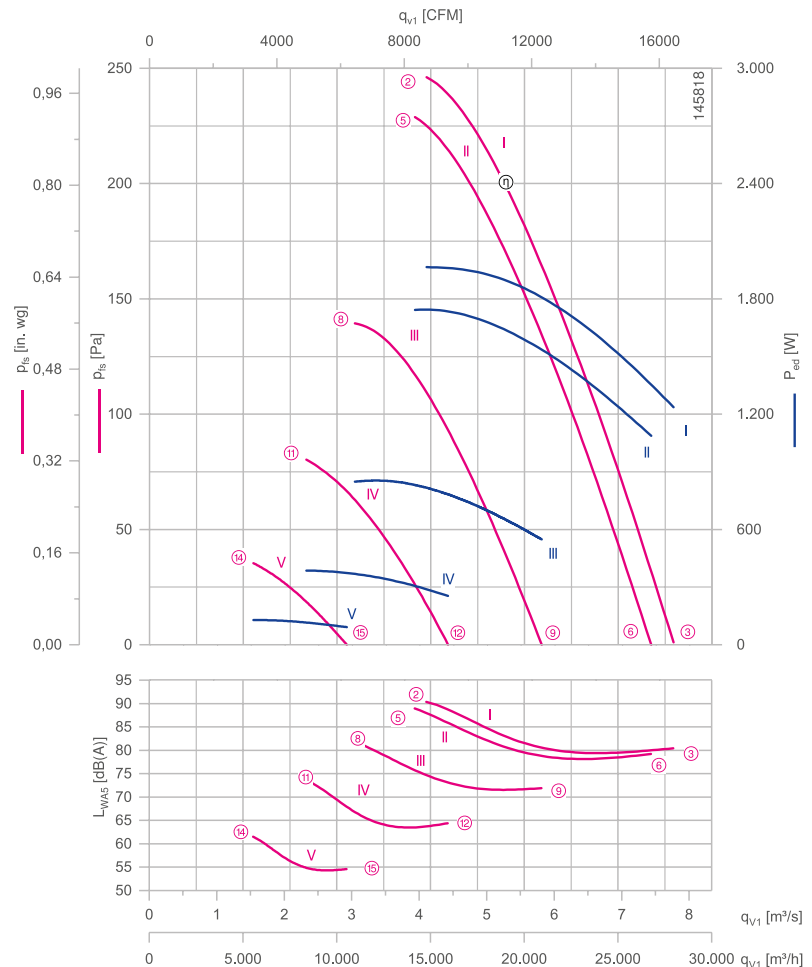
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.95 kW*
 Rated current I_N : 3.10- 2.40 A*
 Rated speed n_N : 930 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 930 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 1.25 kW*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 7.8 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 55 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 61.8 %
 Efficiency grade: $N_{actual} = 66.5 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

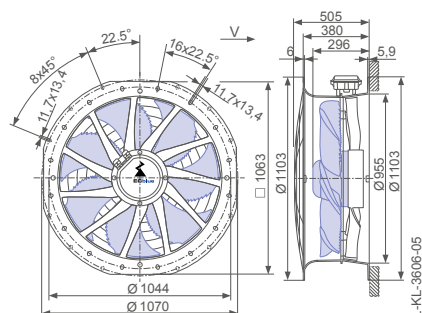
Connection diagram

1360-390 KLK

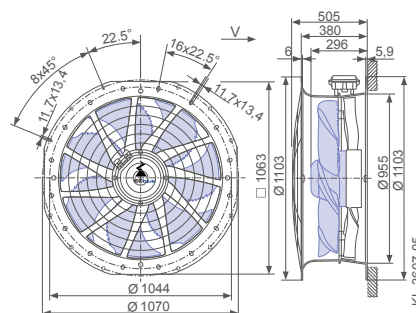
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



Performance data

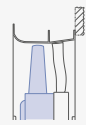
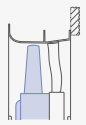
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN091-ZL_GG_5P1	I	930	②	2.90	1950	91	55
			③	1.90	1250	80	
	II	890	⑤	2.60	1750	89	65
			⑥	1.65	1100	79	
	III	700	⑧	1.35	860	82	
			⑨	0.96	540	72	
	IV	530	⑪	0.76	390	74	
			⑫	0.58	250	64	
	V	350	⑭	0.38	130	62	
			⑮	0.31	90	55	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type ZN091-ZIL.GG.V5P1 ZN091-ZIL.GG.V5P1
Article no. 180660/10C4 180660/10C6

Weight kg 43.40 45.30
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN091



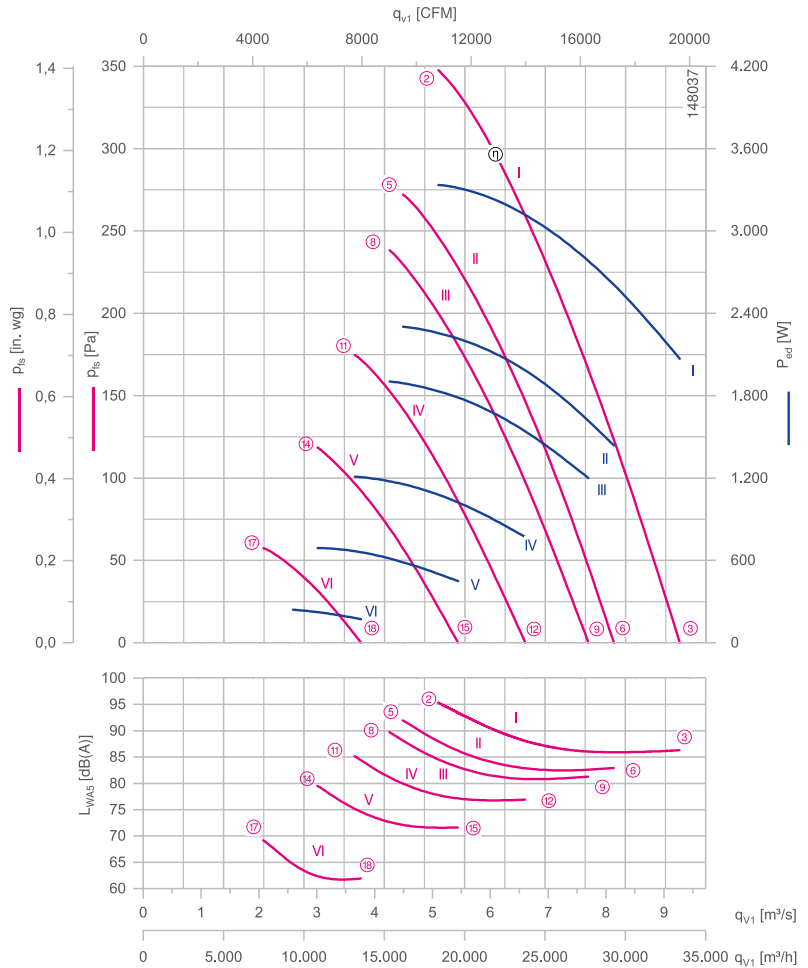
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.30 kW*
 Rated current I_N : 5.20- 4.20 A*
 Rated speed n_N : 1110 rpm⁻¹*
 Speed n at $p_{is} = 0$ Pa: 1110 min⁻¹*
 Power input P_{ed} at $p_{is} = 0$ Pa: 2200 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa: 9.3 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 45 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{statA} : 61.5 %
 Efficiency grade: $N_{actual} = 64.7 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

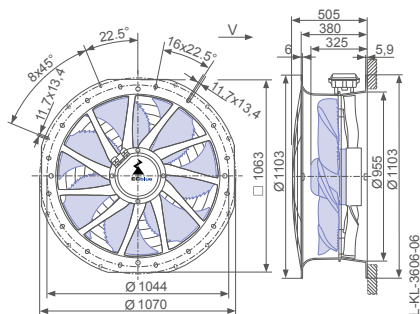
Connection diagram

1360-390 KLK

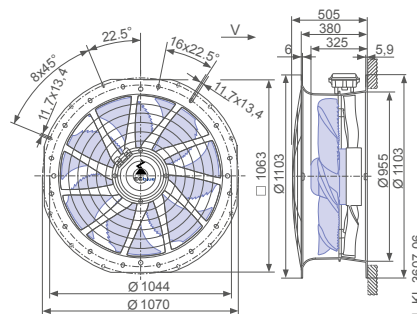
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



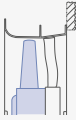
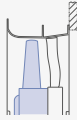
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN091-ZL_GL_5P1	I	1110	②	5.00	3300	95	45
			③	3.10	2100	86	
	II	980	⑤	3.40	2300	92	55
			⑥	2.20	1450	83	
	III	920	⑧	2.80	1900	90	60
			⑨	1.85	1200	81	
IV	790	⑪	1.85	1200	85	65	
		⑫	1.25	780	77		
V	650	⑭	1.15	700	80		
		⑮	0.84	440	72		
VI	450	⑰	0.58	250	69		
		⑱	0.46	170	62		

Current values determined at 400V

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN091-ZIL.GL.V5P1	ZN091-ZIL.GL.V5P1
Article no.	180769/10C4	180769/10C6
Weight kg	47.80	49.70
ZApplus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet-ECblue with ZAplus

for three phase alternating current, 380-480 V

ZN100



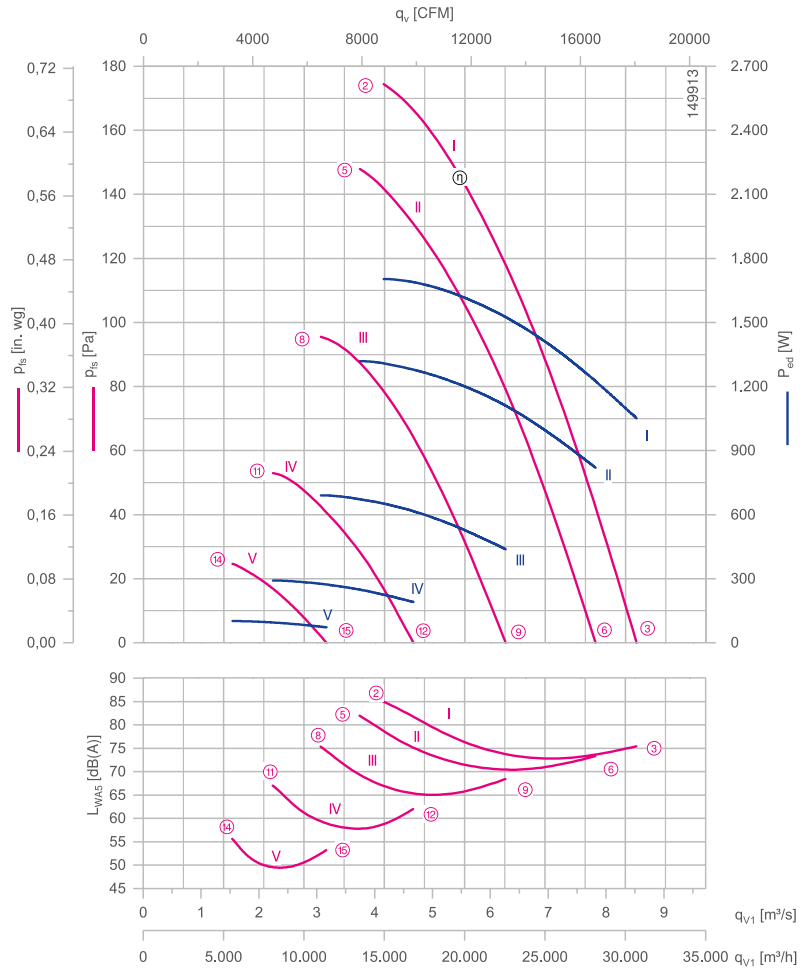
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.70 kW*
 Rated current I_N : 2.70- 2.10 A*
 Rated speed n_N : 730 rpm^{1*}
 Speed n at $p_{fs} = 0$ Pa: 730 min^{-1*}
 Power input P_{ed} at $p_{fs} = 0$ Pa: 1050 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 8.5 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{stat} : 55.5 %
 Efficiency grade: $N_{actual} = 60.6 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

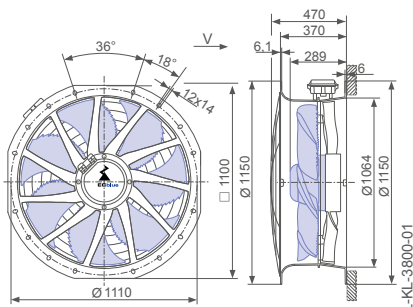
Connection diagram

1360-390 KLK

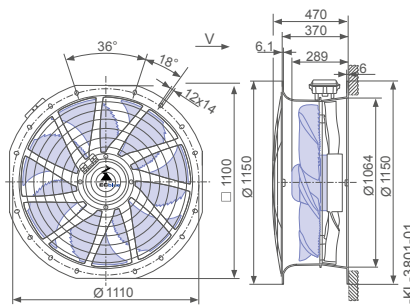
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Performance data

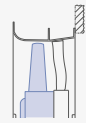
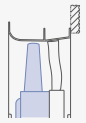
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN100-ZL_GG_5P1	I	730	②	2.60	1700	85	50
			③	1.65	1050	75	
	II	670	⑤	2.00	1300	81	60
			⑥	1.35	820	73	
	III	540	⑧	1.15	680	76	70
			⑨	0.82	440	68	
	IV	400	⑪	0.64	290	67	
			⑫	0.48	190	62	
	V	270	⑭	0.33	100	56	
			⑮	0.27	75	53	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type ZN100-ZIL.GG.V5P1 ZN100-ZIL.GG.V5P1
Article no. 180350/10C4 180350/10C6

Weight kg 45.20 48.00
ZAprus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

ZN100



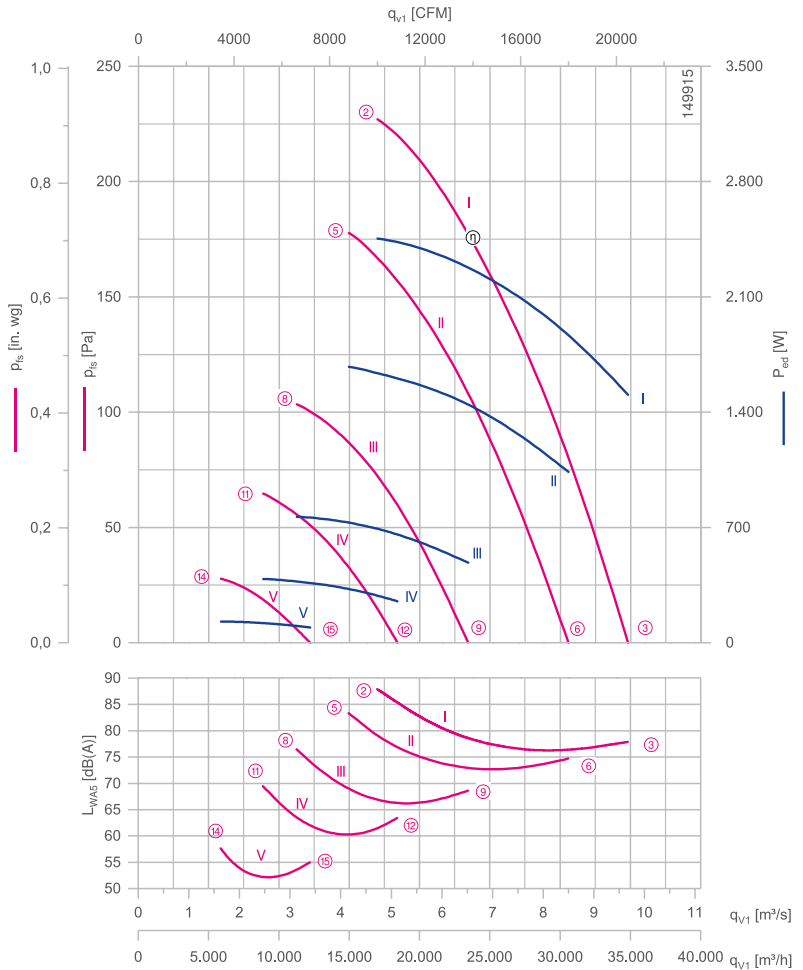
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 2.50 kW*
 Rated current I_N : 3.90- 3.10 A*
 Rated speed n_N : 830 rpm^{1*}
 Speed n at $p_{fs} = 0$ Pa: 830 min^{-1*}
 Power input P_{ed} at $p_{fs} = 0$ Pa: 1500 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 9.7 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{stat} : 56.9 %
 Efficiency grade: $N_{actual} = 61.0 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

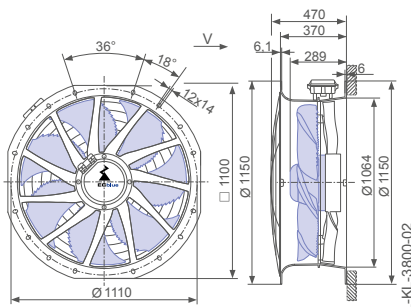
Connection diagram

1360-390 KLK

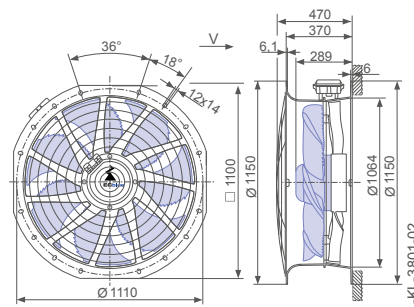
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Performance data

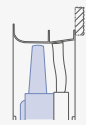
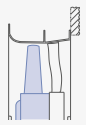
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
ZN100-ZL_GL_5P1	I	830	②	3.70	2500	88	50
			③	2.30	1500	78	
	II	730	⑤	2.50	1650	83	60
			⑥	1.65	1050	75	
	III	560	⑧	1.25	760	76	70
			⑨	0.88	480	69	
	IV	440	⑪	0.76	380	69	
			⑫	0.58	250	63	
	V	290	⑭	0.38	130	58	
			⑮	0.32	95	55	

Current values determined at 400V

Fan ordering information

Air flow direction

Design L (guard grille suction side) L (guard grille two-sided)



Type **ZN100-ZIL.GL.V5P1** **ZN100-ZIL.GL.V5P1**
Article no. **180351/10C4** **180351/10C6**

Weight kg 49.60 52.40
ZAplus attachable on both sides.

Control technology

Control modules

Add-on modules

Operating terminal



FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

ZN100



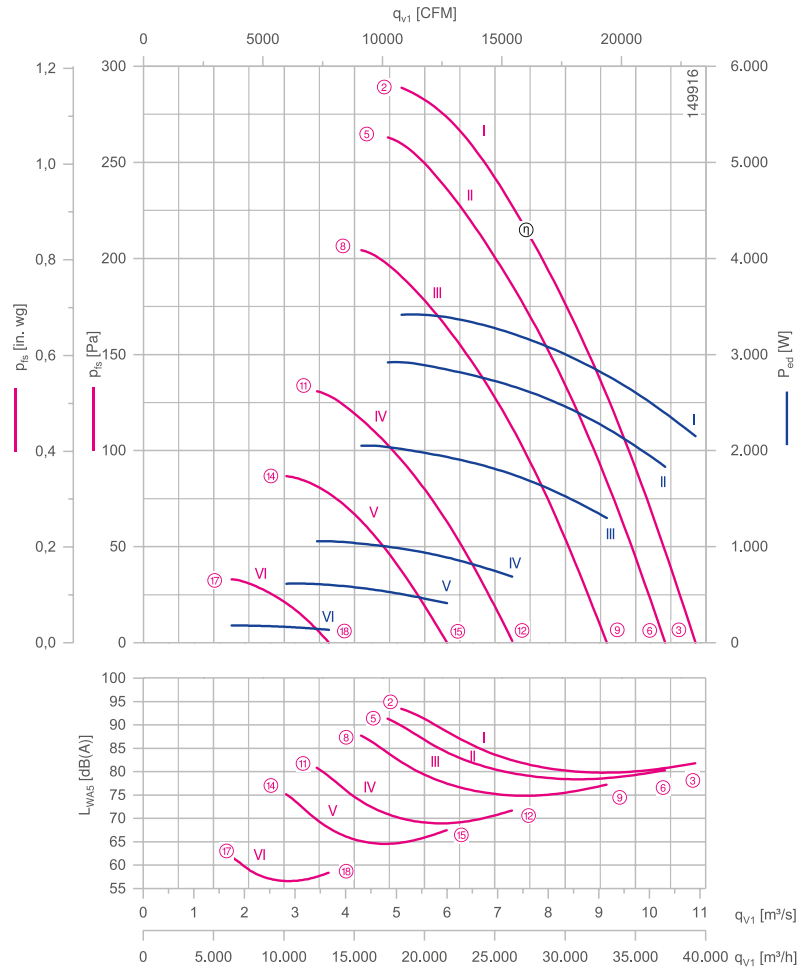
Description

Motor technology: EC
 Rated voltage U_N : 3~ 380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.40 kW*
 Rated current I_N : 5.40- 4.20 A*
 Rated speed n_N : 940 rpm^{1*}
 Speed n at $p_{fs} = 0$ Pa: 940 min^{-1*}
 Power input P_{ed} at $p_{fs} = 0$ Pa: 2200 W*
 Air flow q_{v1} at $p_{fs} = 0$ Pa: 10.9 m³/s*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Max. permitted ambient temperature $t_{amb(max)}$: 40 °C
 Electrical connection: Integrated controller
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Blades: Aluminium, powder-coated, RAL 9005 (jet black)
 Rotor: Aluminium, 1 coat paint, RAL 5002 (ultramarine blue)
 Conformity: ErP 2015, CE, UL

ErP-data

Efficiency η_{stat} : 57.0 %
 Efficiency grade: $N_{actual} = 60.1 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

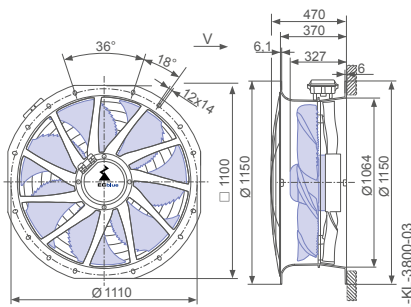
Connection diagram

1360-390 KLK

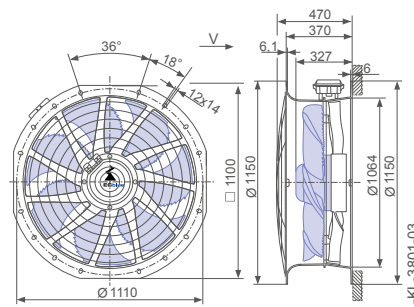
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



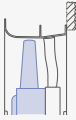
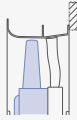
Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min^{-1}		I A	P_{ed} W	L_{WAS} dB(A)	$t_{\text{amb (max.)}}$ °C
ZN100-ZL_GQ_5P1	I	940	②	5.00	3400	94	40
			③	3.20	2200	82	
	II	890	⑤	4.40	2900	91	50
			⑥	2.80	1850	80	
	III	790	⑧	3.10	2000	88	60
			⑨	2.00	1300	77	
	IV	630	⑪	1.65	1050	81	70
			⑫	1.15	680	72	
	V	520	⑭	1.05	620	75	70
			⑮	0.80	420	68	
	VI	320	⑰	0.48	180	62	70
			⑱	0.42	130	58	

Current values determined at 400V

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN100-ZIL.GQ.V5P1	ZN100-ZIL.GQ.V5P1
Article no.	180352/10C4	180352/10C6
Weight kg	56.40	59.20
ZPlus attachable on both sides.		

Control technology

Control modules	Add-on modules	Operating terminal
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

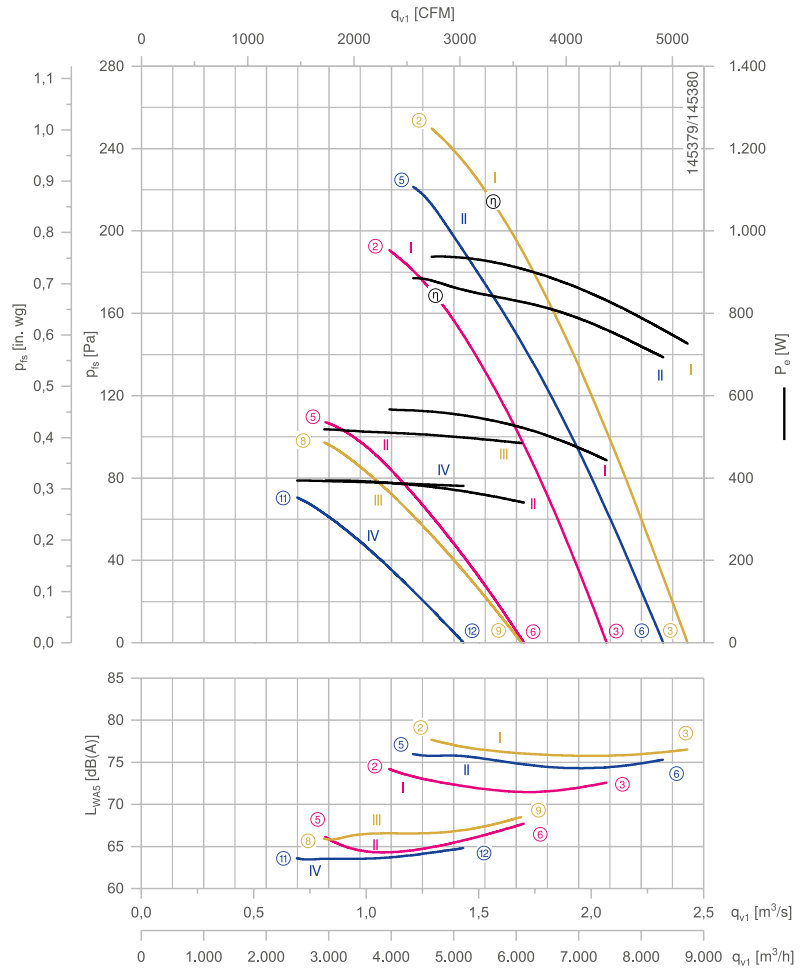
ZN045-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 560/390 W | 860/390 W | 940/520 W*
 Rated current I_N :
 1.05/0.68 A | 1.50/0.74 A | 1.40/0.82 A*
 Rated speed n_N :
 1360/1020 min^{-1} | 1450/730 min^{-1} | 1560/980 min^{-1} **
 Speed n at $p_{is} = 0$ Pa:
 1400/1150 min^{-1} | 1560/970 min^{-1} | 1640/1140 min^{-1} *
 Power input P_e at $p_{is} = 0$ Pa:
 440/340 W | 700/380 W | 720/480 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 2.1/1.7 m^3/s | 2.3/1.4 m^3/s | 2.4/1.7 m^3/s *
 Starting current I_A : 4.0/1.2 A | 3.6/1.0 A | 4.2/1.2 A
 Current increase ΔI : 10 % | 0 % | 5 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 50 °C | 50 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 41.6 %
 Efficiency grade: $N_{actual} = 49.6 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

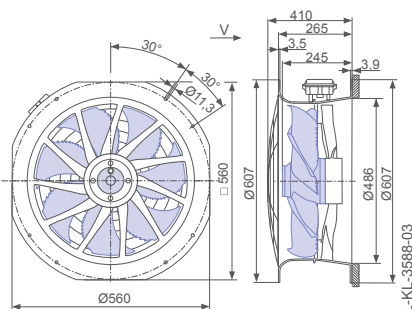
Connection diagram

1360-108XA

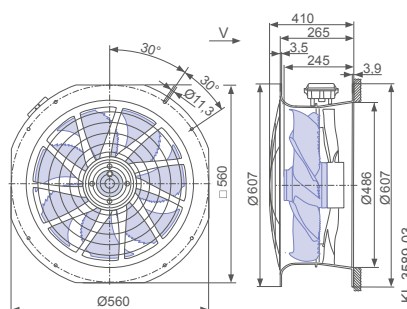
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




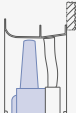
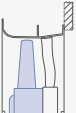
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level			
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)			
ZN045-VD_4F_7P1	Δ	I	400*	50	②	1.05*	560*	1360*	74			
					③	0.92*	440*	1400*	73			
					⑤	0.68*	390*	1020*	66			
		Y			II	⑥	0.58*	340*	1150*	68		
						Δ	I	②	1.40*	940*	1550*	78
								③	1.15*	720*	1640*	77
	Y	II	460*	60	⑤	1.50*	860*	1450*	77			
					⑥	1.20*	700*	1560*	75			
					Y	III	⑧	0.82*	520*	980*	67	
		⑨					0.76*	480*	1140*	69		
		IV					⑪	0.74*	390*	830*	64	
					⑫	0.70*	380*	970*	65			




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN045-VDL.4F.V7P1	ZN045-VDL.4F.V7P1
Article no.	180420/10K4	180420/10K6
Weight kg	15.20	15.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

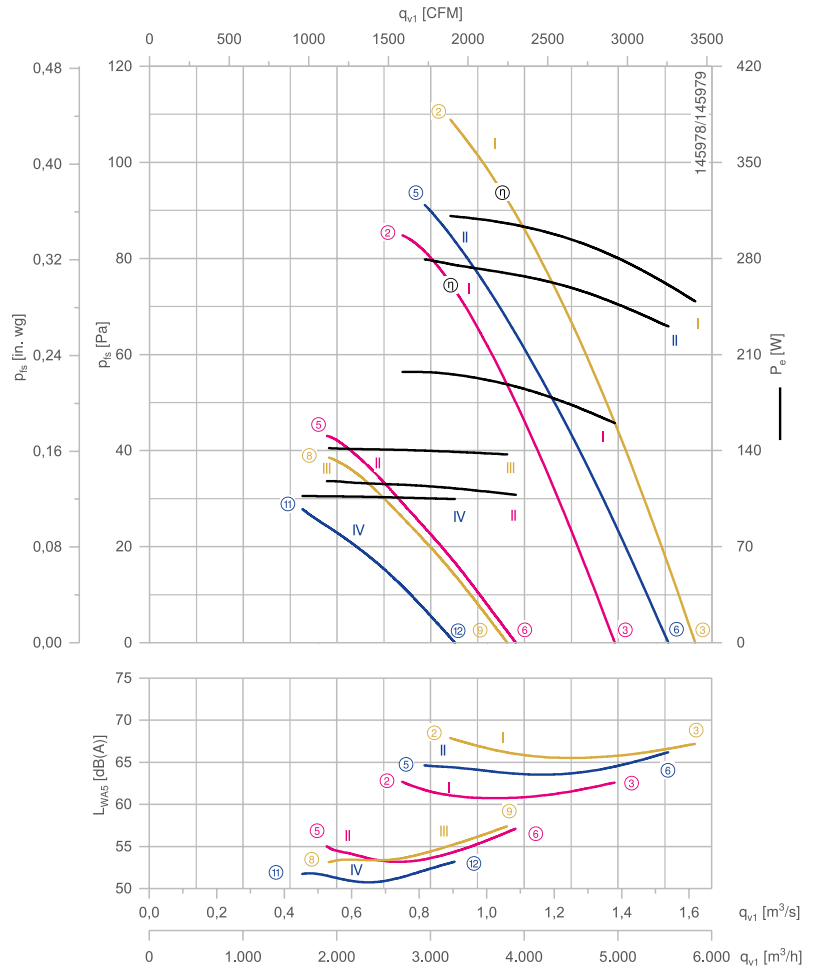
ZN045-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 200/120 W | 280/110 W | 310/140 W*
 Rated current I_N :
 0.50/0.27 A | 0.62/0.26 A | 0.62/0.30 A*
 Rated speed n_N :
 910/650 min⁻¹ | 950/540 min⁻¹ | 1040/630 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 940/740 min⁻¹ | 1040/620 min⁻¹ | 1100/720 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 160/110 W | 230/100 W | 250/140 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 1.38/1.09 m³/s | 1.54/0.91 m³/s | 1.62/1.06 m³/s*
 Starting current I_A : 1.1/0.32 A | 0.95/0.26 A | 1.1/0.3 A
 Current increase ΔI : 0 % | 0 % | 5 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 36.6 %
 Efficiency grade: $N_{actual} = 47.5 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

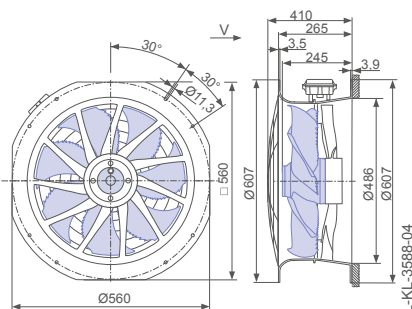
Connection diagram

1360-108XA

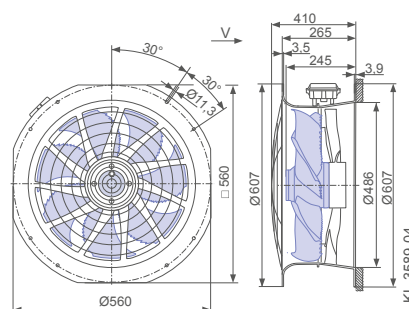
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




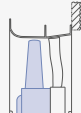
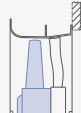
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level		
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)		
ZN045-SD_4F_7P1	Δ	I	400*	50	②	0.50*	200*	910*	63		
					③	0.46*	160*	940*	63		
					⑤	0.27*	120*	650*	55		
		II			⑥	0.24*	110*	740*	57		
					Δ	I	②	0.62*	310*	1040*	68
							③	0.52*	250*	1100*	67
	Y	II	460*	60	⑤	0.62*	280*	950*	65		
					⑥	0.52*	230*	1040*	66		
					Y	III	⑧	0.30*	140*	630*	53
		⑨					0.28*	140*	720*	57	
		IV					⑪	0.26*	110*	540*	52
					⑫	0.26*	100*	620*	53		

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN045-SDL.4F.V7P1	ZN045-SDL.4F.V7P1
Article no.	180421/10K4	180421/10K6
Weight kg	15.20	15.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

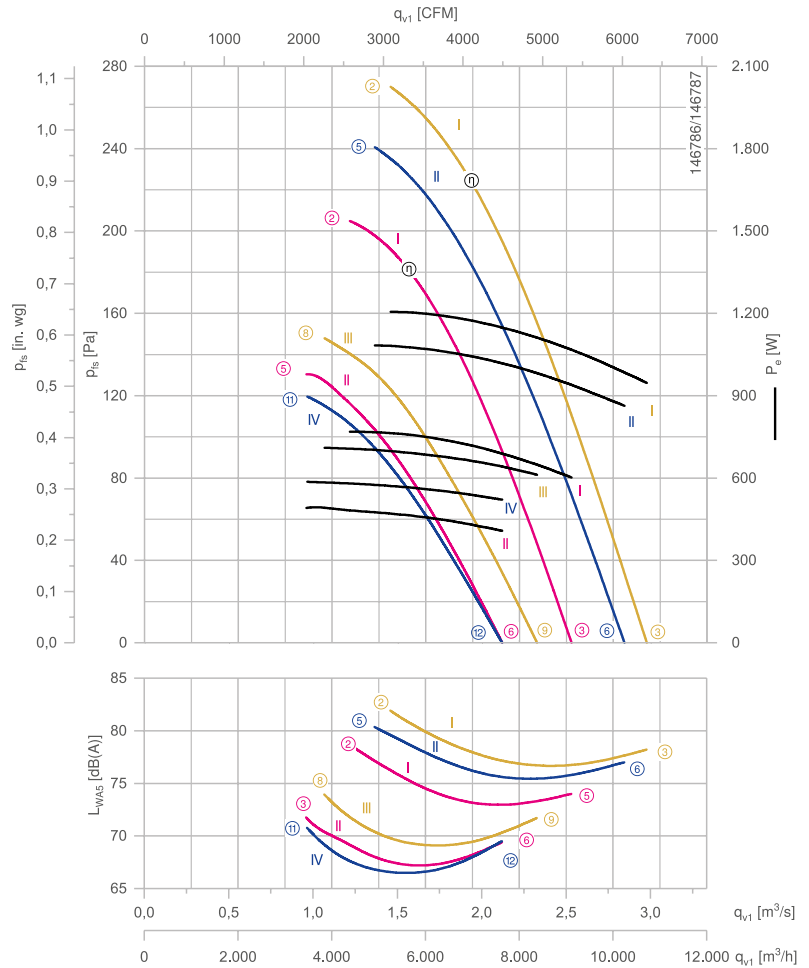
ZN050-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 760/480 W | 1.10/0.58 kW | 1.20/0.70 kW*
 Rated current I_N :
 1.65/0.80 A | 1.85/0.96 A | 1.90/1.00 A*
 Rated speed n_N :
 1300/1030 min^{-1} | 1400/990 min^{-1} | 1490/1100 min^{-1} *
 Speed n at $p_{is} = 0$ Pa:
 1350/1130 min^{-1} | 1510/1130 min^{-1} | 1580/1240 min^{-1} *
 Power input P_e at $p_{is} = 0$ Pa:
 600/400 W | 860/520 W | 940/620 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 2.5/2.1 m^3/s | 2.8/2.1 m^3/s | 3.0/2.3 m^3/s *
 Starting current I_A : 5.5/1.7 A | 5.0/1.6 A | 6.0/1.8 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 41.0 %
 Efficiency grade: $N_{actual} = 48.3 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

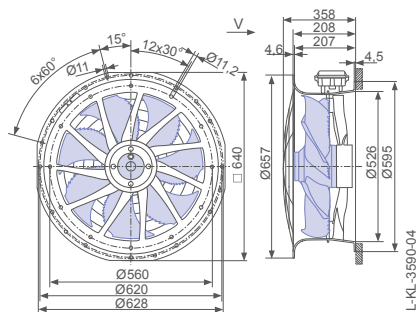
Connection diagram

1360-108XA

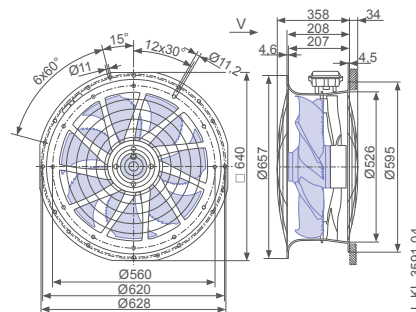
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




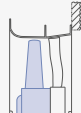
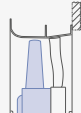
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN050-VD_4I_7P1	Δ	I	400*	50	②	1.65*	760*	1300*	79				
					③	1.50*	600*	1350*	74				
					⑤	0.80*	480*	1030*	72				
		II			⑥	0.68*	400*	1130*	69				
					Δ	I	460*	60	②	1.90*	1200*	1490*	82
									③	1.65*	940*	1580*	78
	⑤	1.85*	1100*	1400*					80				
	II	⑥	1.55*	860*		1510*			77				
		Y	III	460*		60			⑧	1.00*	700*	1120*	74
									⑨	0.86*	620*	1240*	72
	⑪				0.94*		580*	1000*	71				
	IV	400*	60	⑫	0.84*	520*	1130*	70					



*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN050-VDL.4I.V7P1	ZN050-VDL.4I.V7P1
Article no.	180422/10K4	180422/10K6
Weight kg	18.20	19.30
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

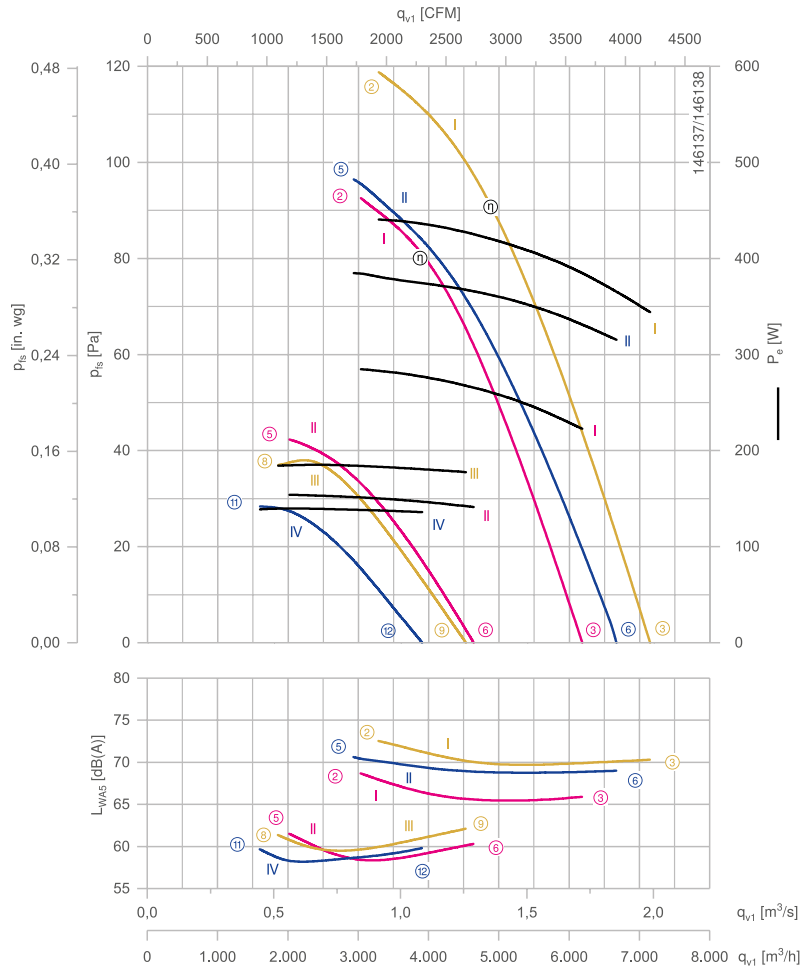
ZN050-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 290/150 W | 380/140 W | 440/190 W*
 Rated current I_N :
 0.68/0.34 A | 0.82/0.33 A | 0.82/0.37 A*
 Rated speed n_N :
 880/600 min⁻¹ | 880/500 min⁻¹ | 980/580 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 920/700 min⁻¹ | 990/590 min⁻¹ | 1060/680 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 220/140 W | 320/140 W | 340/180 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 1.72/1.3 m³/s | 1.85/1.1 m³/s | 2.0/1.26 m³/s*
 Starting current I_A : 1.5/0.4 A | 1.2/0.32 A | 1.5/0.4 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 60 °C | 60 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 33.8 %
 Efficiency grade: $N_{actual} = 43.8 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

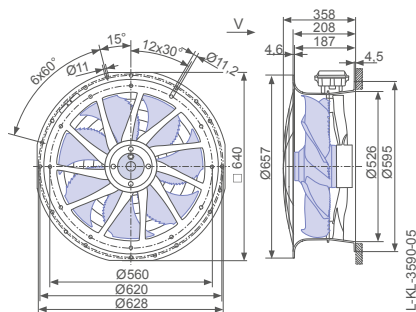
Connection diagram

1360-108XA

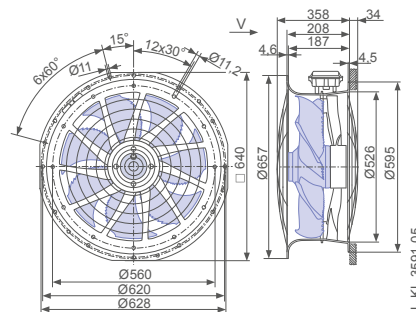
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




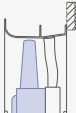
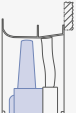
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN050-SD_4I_7P1	Δ	I	400*	50	②	0.68*	280*	880*	69				
					③	0.60*	220*	920*	66				
					⑤	0.34*	150*	600*	62				
		II			⑥	0.31*	140*	700*	60				
					Δ	I	460*	60	②	0.82*	440*	980*	73
									③	0.68*	340*	1060*	70
	⑤	0.82*	380*	880*					71				
	II	⑥	0.68*	320*		990*			69				
		Y	III	460*		60			⑧	0.37*	180*	610*	62
									⑨	0.35*	180*	680*	62
	⑪				0.33*		140*	520*	60				
	⑫	0.32*	140*	590*	60								


*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN050-SDL.4F.V7P1	ZN050-SDL.4F.V7P1
Article no.	180423/10K4	180423/10K6
Weight kg	16.70	17.80
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

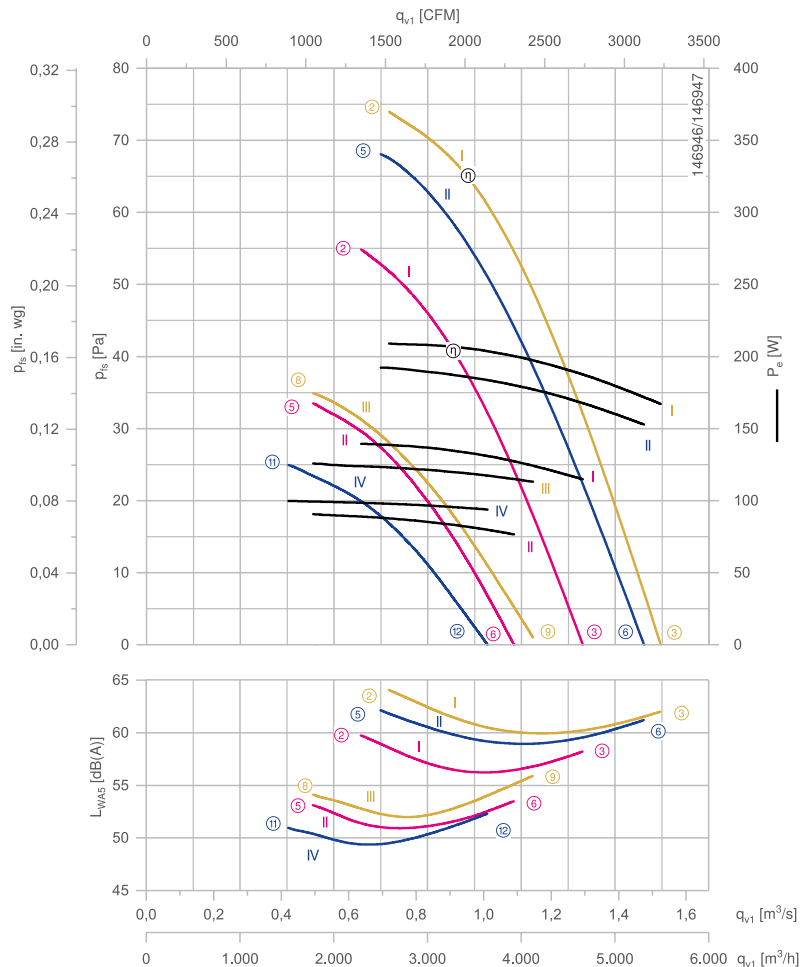
ZN050-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
3~400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : **50 Hz | 60 Hz | 60 Hz***
 Input power P_e :
140/90 W | 190/100 W | 210/130 W*
 Rated current I_N :
0.32/0.16 A | 0.35/0.185 A | 0.36/0.195 A*
 Rated speed n_N :
680/540 min⁻¹ | 750/470 min⁻¹ | 790/540 min⁻¹*
 Speed n at $p_s = 0$ Pa:
700/590 min⁻¹ | 790/550 min⁻¹ | 820/630 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
110/75 W | 150/95 W | 170/110 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
1.3/1.1 m³/s | 1.5/1.0 m³/s | 1.5/1.15 m³/s*
 Starting current I_A : **0.8/0.26 A | 0.7/0.22 A | 0.8/0.26 A**
 Current increase ΔI : **0 % | 0 % | 0 %**
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: **-40 °C*****
 Max. permitted ambient temperature $t_{amb(max)}$:
70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 30.6 %
 Efficiency grade: $N_{actual} = 42.5 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

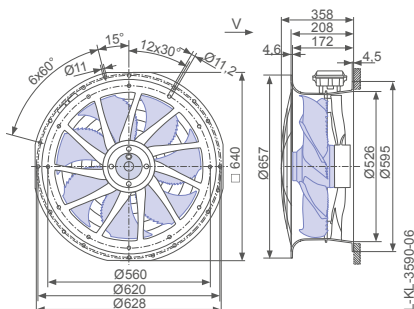
Connection diagram

1360-108XA

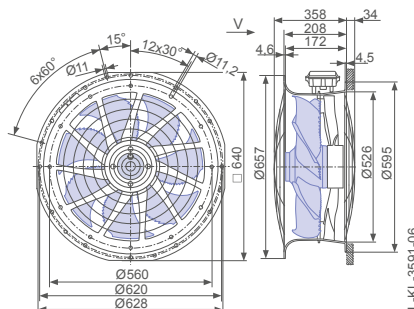
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




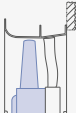

Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN050-AD_4C_7P1	Δ	I	400*	50	②	0.32*	140*	680*	60				
					③	0.31*	110*	700*	58				
					⑤	0.16*	90*	530*	53				
		II			⑥	0.14*	75*	590*	54				
					Δ	I	460*	60	②	0.36*	210*	790*	64
									③	0.32*	170*	820*	62
	⑤	0.35*	190*	750*					62				
	II	⑥	0.30*	150*		790*			61				
		Y	III	460*		60			⑧	0.19*	130*	540*	54
									⑨	0.17*	110*	630*	56
	⑪				0.18*		100*	470*	51				
	IV	400*	60	⑫	0.17*	95*	550*	52					




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN050-ADL.4C.V7P1	ZN050-ADL.4C.V7P1
Article no.	180662/10K4	180662/10K6
Weight kg	15.00	16.10
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

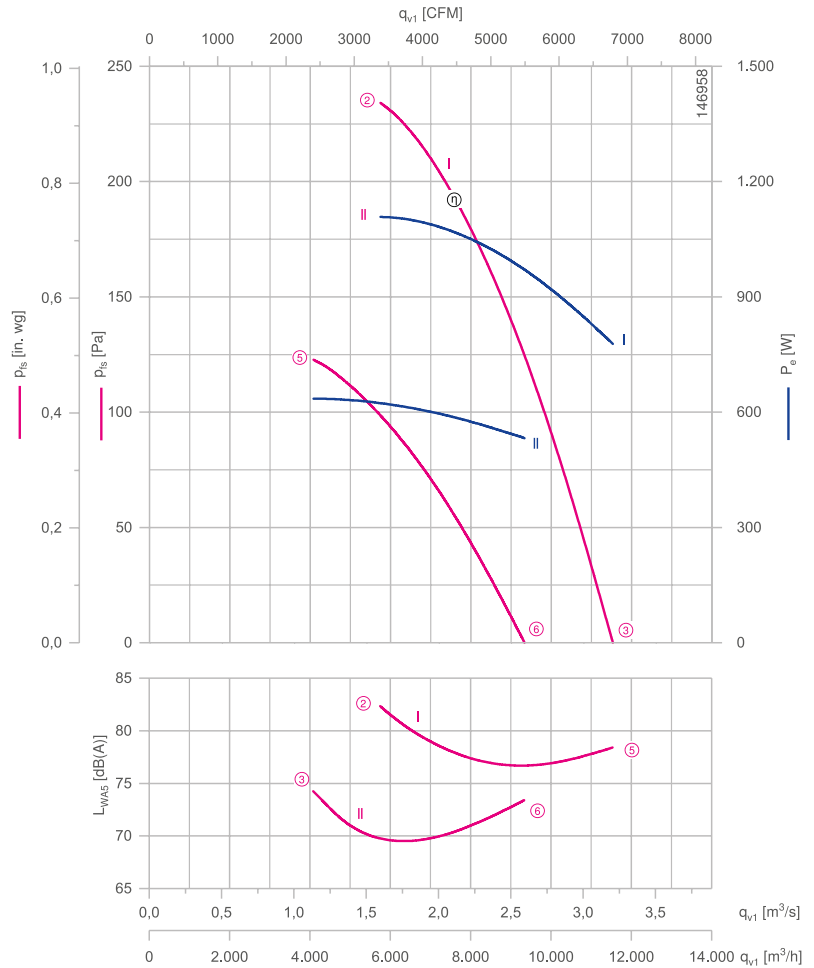
ZN056-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
3~ 400 V (Δ/Y)*
 Rated frequency f_N : **50 Hz***
 Input power P_e :
1.10/0.64 kW*
 Rated current I_N :
2.30/1.20 A*
 Rated speed n_N :
1310/950 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
1380/1120 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
780/540 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
3.2/2.6 m³/s*
 Starting current I_A : **6.5/1.9 A**
 Current increase ΔI : **0 %**
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: **-40 °C*****
 Max. permitted ambient temperature $t_{amb(max)}$: **70 °C**
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{stdA} : 39.6 %
 Efficiency grade: $N_{actual} = 45.8 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

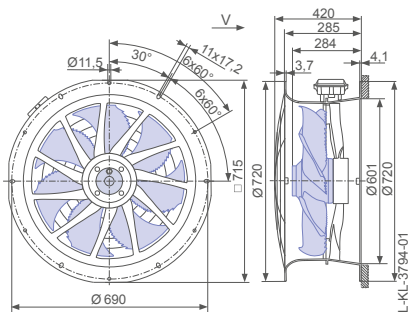
Connection diagram

1360-108XA

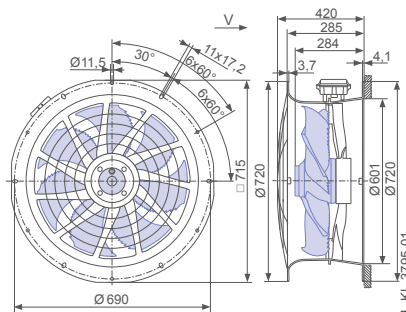
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



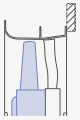
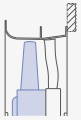
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level L_{WAS} dB(A)
			U V	f Hz		I A	P_o W	n min ⁻¹	
ZN056-VD_4M_7P2	Δ	I	400*	50	②	2.30*	1100*	1300*	83
					③	1.90*	780*	1380*	78
	Y	II			⑤	1.20*	640*	940*	74
					⑥	1.00*	540*	1120*	73

*rated data

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN056-VDL.4M.V7P2	ZN056-VDL.4M.V7P2
Article no.	180663/10K4	180663/10K6
Weight kg	21.10	22.00
ZAplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

ZN056-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 350/220 W | 500/220 W | 560/290 W*
 Rated current I_N :
 0.72/0.38 A | 0.90/0.42 A | 0.90/0.46 A*
 Rated speed n_N :
 870/650 min⁻¹ | 920/570 min⁻¹ | 1000/660 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 920/750 min⁻¹ | 1020/700 min⁻¹ | 1070/800 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 260/180 W | 370/210 W | 400/260 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 2.1/1.75 m³/s | 2.4/1.6 m³/s | 2.5/1.85 m³/s*

Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 55 °C | 55 °C

Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE

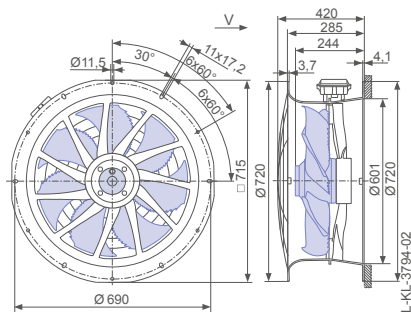
ErP-data

Efficiency η_{statA} : 36.9 %
 Efficiency grade: $N_{actual} = 46.2 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

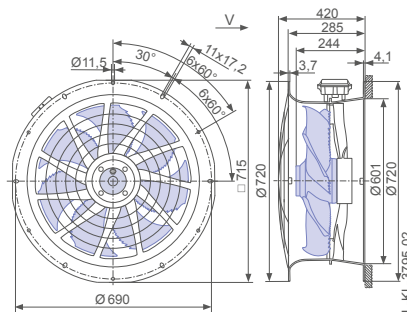
Dimensions mm

Air flow direction

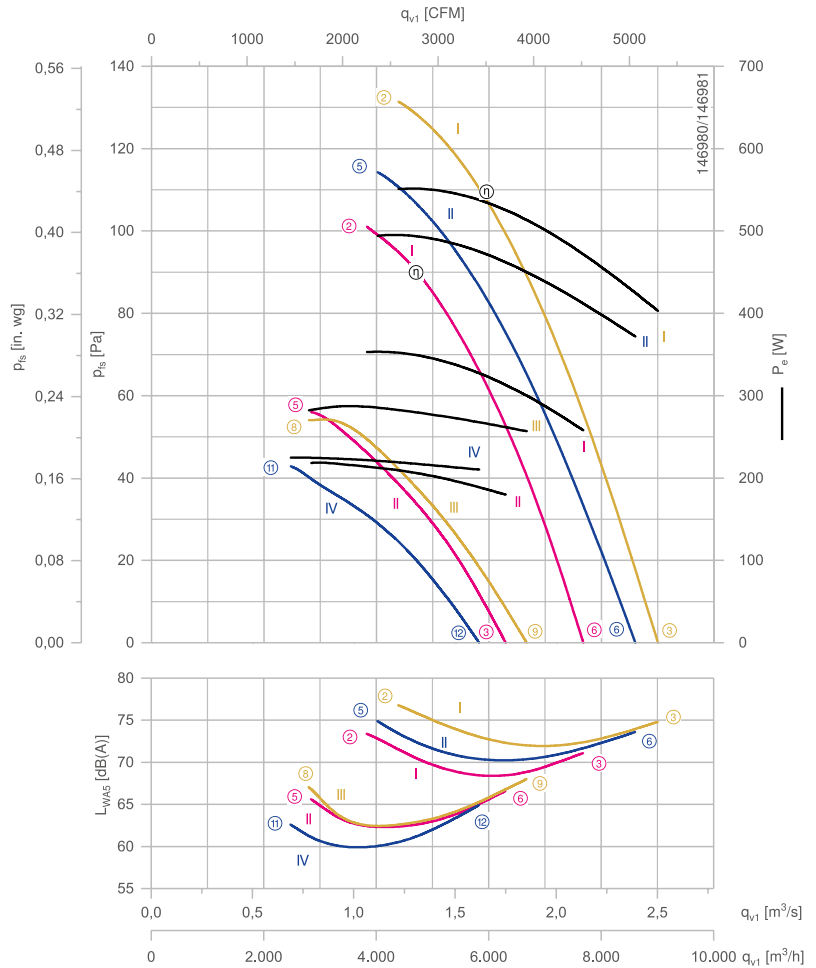
Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Connection diagram


1360-108XA

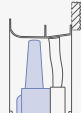
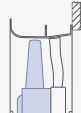
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN056-SD_4F_7P2	Δ	I	400*	50	②	0.72*	350*	870*	73				
					③	0.62*	260*	920*	71				
					⑤	0.38*	220*	650*	66				
		II			⑥	0.32*	180*	750*	67				
					Δ	I	460*	60	②	0.90*	560*	1000*	77
									③	0.72*	400*	1070*	75
	⑤	0.90*	500*	920*					75				
	II	⑥	0.70*	370*		1020*			74				
		Y	III	460*		60			⑧	0.46*	280*	680*	67
									⑨	0.40*	260*	800*	68
	IV		⑪		0.42*		220*	570*	63				
			⑫		0.39*		210*	700*	65				




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN056-SDL.4F.V7P2	ZN056-SDL.4F.V7P2
Article no.	180664/10K4	180664/10K6
Weight kg	17.50	18.30
ZAprus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

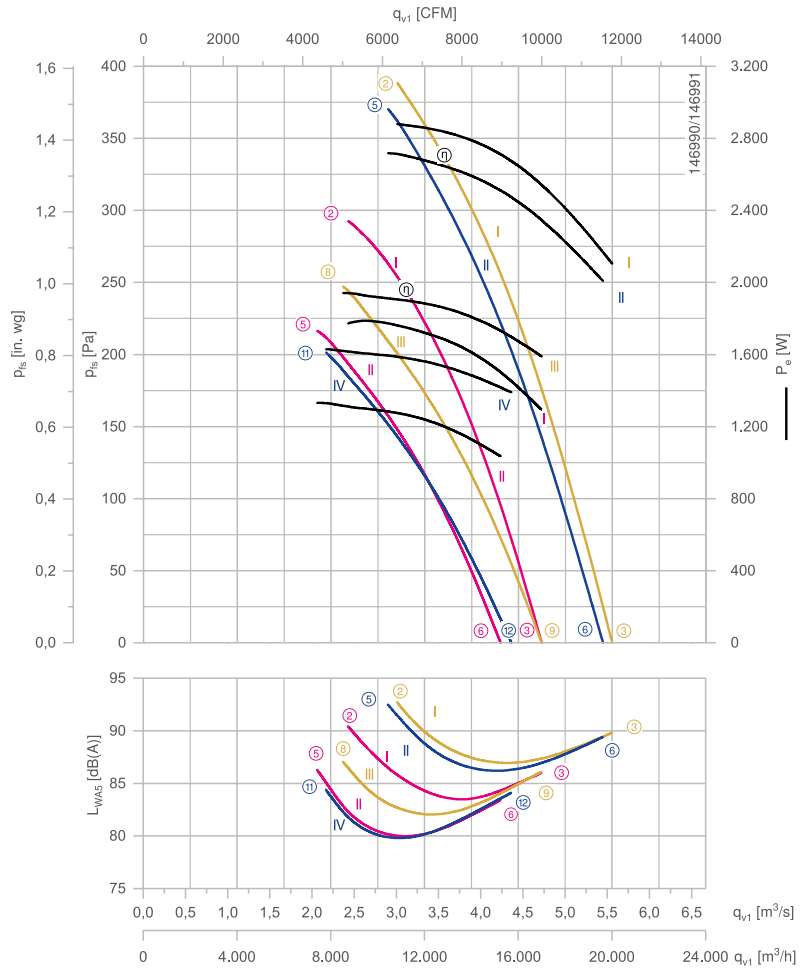
ZN063-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 1.70/1.30 kW | 2.70/1.65 kW | 2.90/1.95 kW*
 Rated current I_N :
 3.80/2.20 A | 4.80/2.80 A | 4.60/2.90 A*
 Rated speed n_N :
 1400/1190 min^{-1} | 1580/1170 min^{-1} | 1640/1290 min^{-1} *
 Speed n at $p_s = 0$ Pa:
 1430/1290 min^{-1} | 1650/1330 min^{-1} | 1690/1440 min^{-1} *
 Power input P_e at $p_s = 0$ Pa:
 1300/1050 W | 2000/1400 W | 2100/1600 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 4.7/4.2 m^3/s | 5.45/4.35 m^3/s | 5.6/4.7 m^3/s *
 Starting current I_A : 20/6.5 A | 19/6.0 A | 22/7.0 A
 Current increase ΔI : 5 % | 0 % | 10 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{\text{amb(min)}}$: -40 °C***
 Max. permitted ambient temperature $t_{\text{amb(max)}}$:
 70 °C | 65 °C | 65 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 44.8 %
 Efficiency grade: $N_{\text{actual}} = 49.7 / N_{\text{target}} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

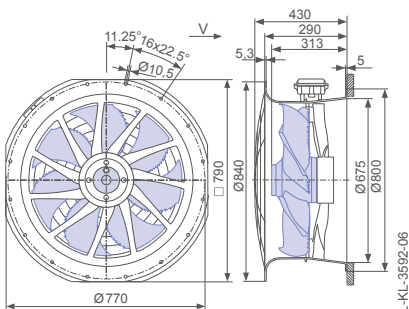
Connection diagram

1360-108XA

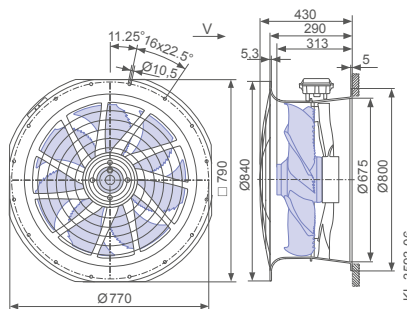
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




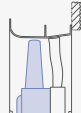
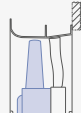
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN063-VD_6N_7P6	Δ	I	400*	50	②	3.80*	1750*	1400*	91				
					③	3.30*	1300*	1430*	86				
					⑤	2.20*	1300*	1190*	86				
		II			⑥	1.80*	1050*	1290*	83				
					Δ	I	460*	60	②	4.60*	2900*	1640*	93
									③	3.70*	2100*	1690*	90
	⑤	4.80*	2700*	1580*					92				
	II	⑥	3.70*	2000*		1650*			89				
		Y	III	460*		60			⑧	2.90*	1950*	1290*	87
									⑨	2.40*	1600*	1440*	86
	⑪				2.80*		1600*	1170*	85				
	IV	400*	60	⑫	2.40*	1400*	1330*	84					

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-VDL.6N.V7P6	ZN063-VDL.6N.V7P6
Article no.	180666/10K4	180666/10K6
Weight kg	33.90	35.00
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

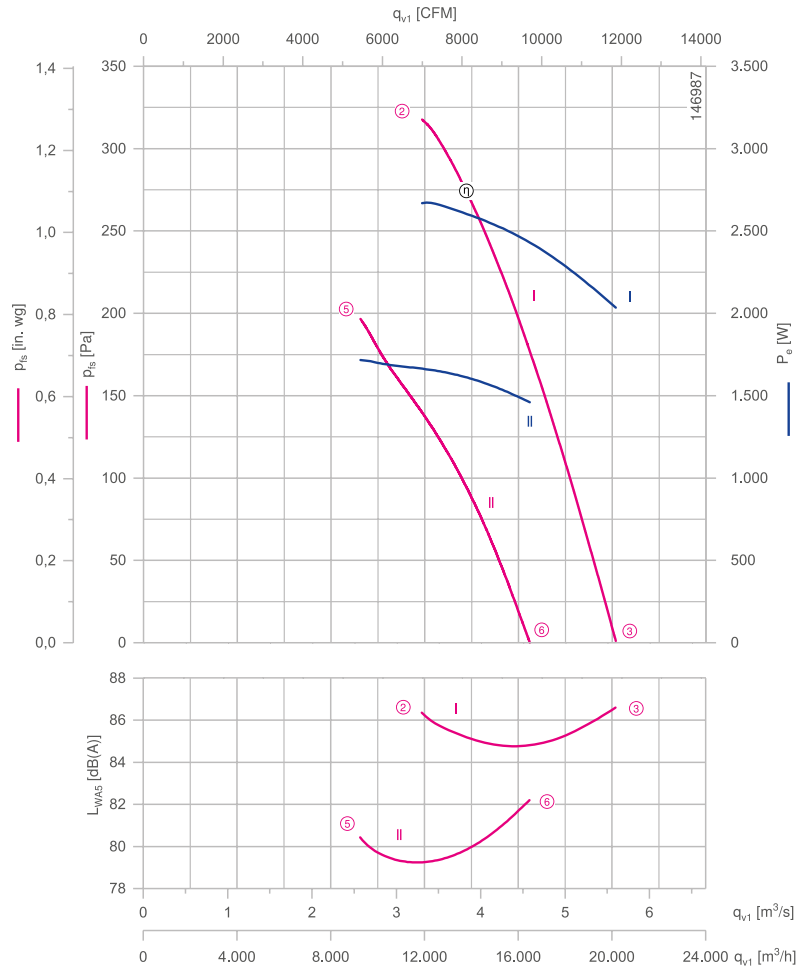
ZN063-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
3~ 400 V (Δ/Y)*
 Rated frequency f_N : **50 Hz***
 Input power P_e :
2.70/1.70 kW*
 Rated current I_N :
4.80/2.80 A*
 Rated speed n_N :
1310/1020 min⁻¹*
 Speed n at $p_s = 0$ Pa:
1370/1130 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
2000/1450 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
5.6/4.6 m³/s*
 Starting current I_A : **19/6.0 A**
 Current increase ΔI : **0 %**
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: **-40 °C*****
 Max. permitted ambient temperature $t_{amb(max)}$: **55 °C**
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{stdA} : 44.1 %
 Efficiency grade: $N_{actual} = 47.8 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

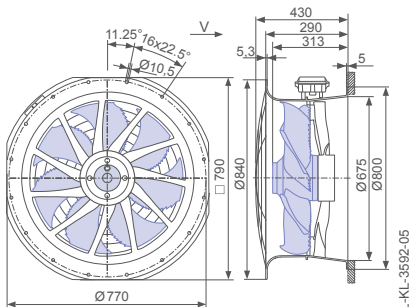
Connection diagram

1360-108XA

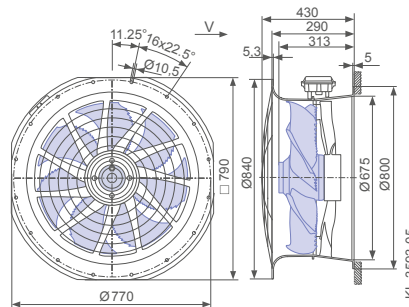
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



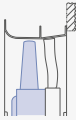

Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level
			U V		I A	P _o W	n min ⁻¹	L _{WA5} dB(A)
ZN063-VD_6N_7P7	Δ	I	400*	②	4.80*	2700*	1320*	86
				③	4.00*	2000*	1370*	87
	Y	II		⑤	2.80*	1700*	1020*	81
				⑥	2.40*	1450*	1130*	82

*rated data

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-VDL.6N.V7P7	ZN063-VDL.6N.V7P7
Article no.	180665/10K4	180665/10K6
Weight kg	36.90	38.00
	ZAplus attachable on both sides.	

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

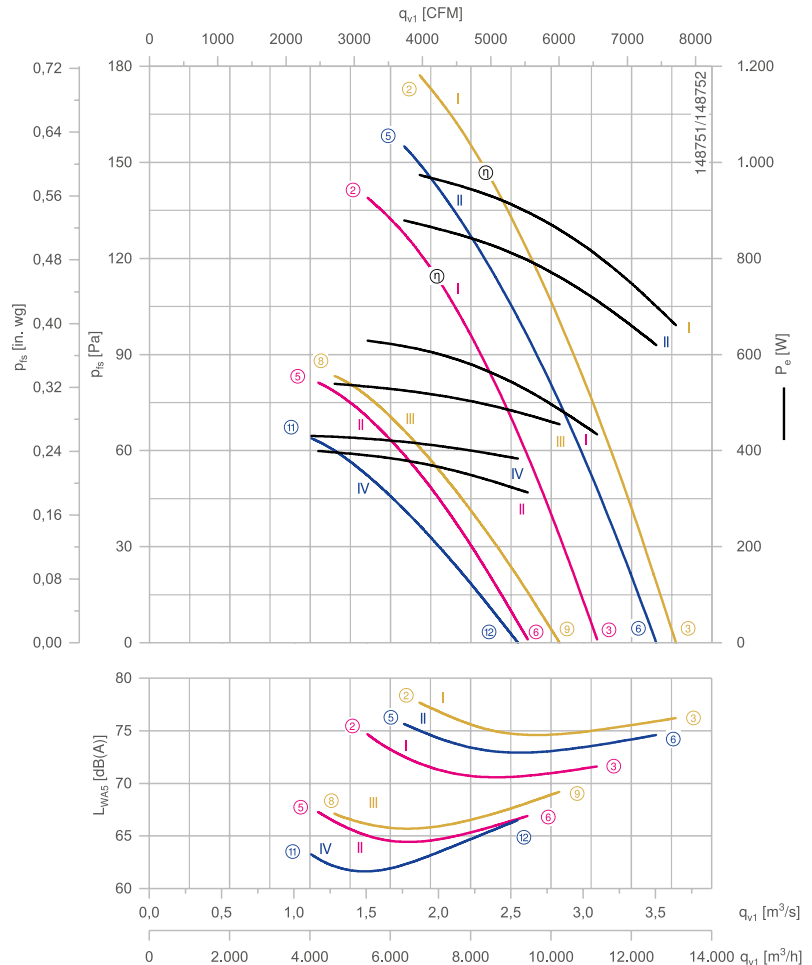
ZN063-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 640/400 W | 880/440 W | 980/540 W*
 Rated current I_N :
 1.30/0.70 A | 1.55/0.78 A | 1.55/0.84 A*
 Rated speed n_N :
 890/670 min⁻¹ | 940/600 min⁻¹ | 1010/690 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 930/790 min⁻¹ | 1050/760 min⁻¹ | 1090/850 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 440/310 W | 620/380 W | 660/460 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 3.1/2.6 m³/s | 3.5/2.6 m³/s | 3.6/2.8 m³/s*
 Starting current I_A : 3.6/1.1 A | 3.2/0.95 A | 3.6/1.1 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 60 °C | 60 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 39.3 %
 Efficiency grade: $N_{actual} = 47.1 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

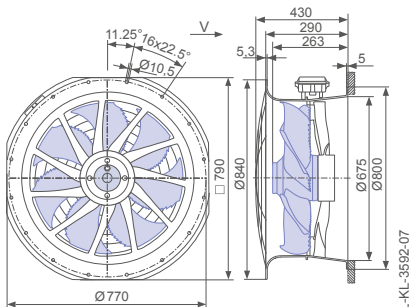
Connection diagram

1360-108XA

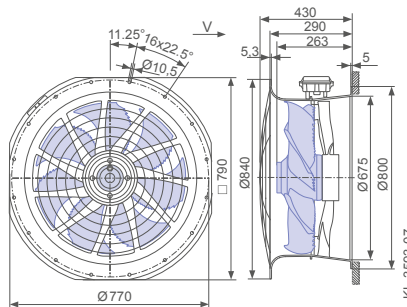
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level			
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WA5} dB(A)			
ZN063-SD_4I_7P1	Δ	I	400*	50	②	1.30*	620*	890*	75			
					③	1.10*	440*	930*	72			
					⑤	0.68*	400*	680*	67			
		Y			II	⑥	0.54*	310*	790*	67		
						Δ	I	②	1.55*	980*	1010*	78
								③	1.20*	660*	1090*	76
	Y	II	400*	60	⑤	1.55*	880*	950*	76			
					⑥	1.15*	620*	1050*	75			
					Y	III	460*	⑧	0.84*	540*	700*	67
		⑨						0.70*	460*	850*	69	
		IV						400*	⑪	0.78*	440*	610*
					⑫	0.68*	380*		760*	67		




*rated data

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-SDL.4I.V7P1	ZN063-SDL.4I.V7P1
Article no.	180824/10K4	180824/10K6
Weight kg	22.10	23.20
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

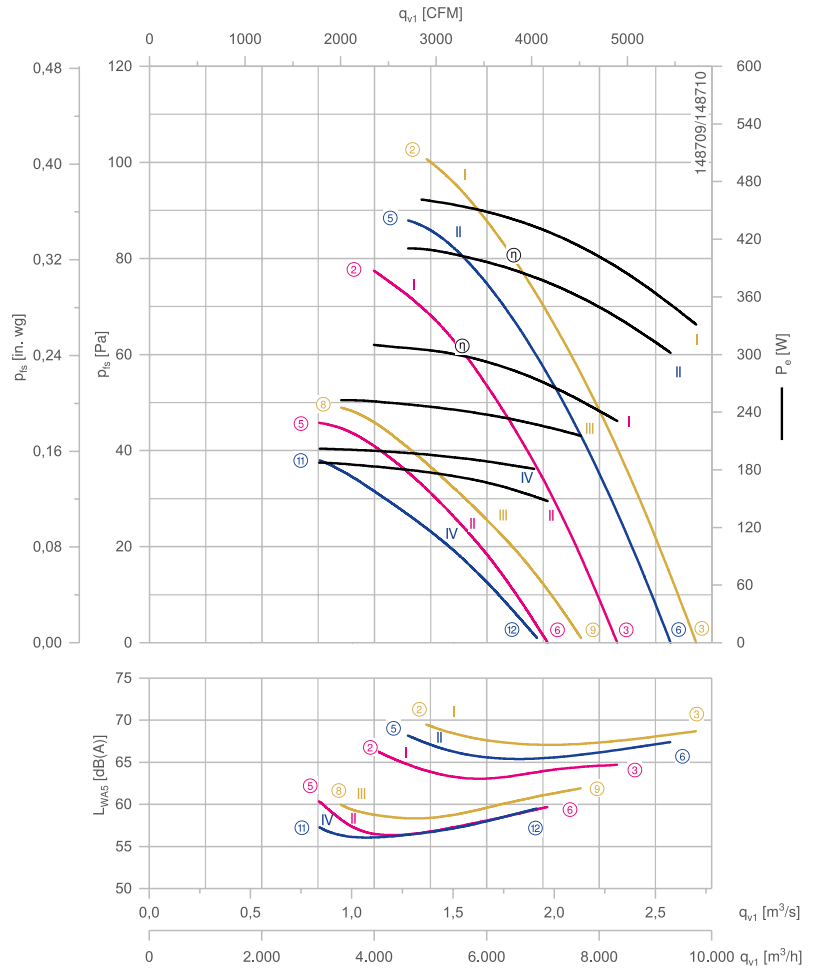
ZN063-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 310/190 W | 420/200 W | 460/250 W*
 Rated current I_N :
 0.78/0.36 A | 0.84/0.39 A | 0.88/0.42 A*
 Rated speed n_N :
 660/530 min⁻¹ | 710/470 min⁻¹ | 760/530 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 690/590 min⁻¹ | 780/570 min⁻¹ | 810/640 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 230/150 W | 300/180 W | 330/220 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 3.2/2.0 m³/s | 2.6/1.9 m³/s | 2.7/2.1 m³/s*
 Starting current I_A : 1.7/0.50 A | 1.5/0.42 A | 1.7/0.50 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 33.6 %
 Efficiency grade: $N_{actual} = 43.5 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

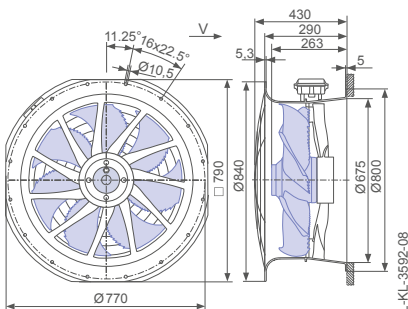
Connection diagram

1360-108XA

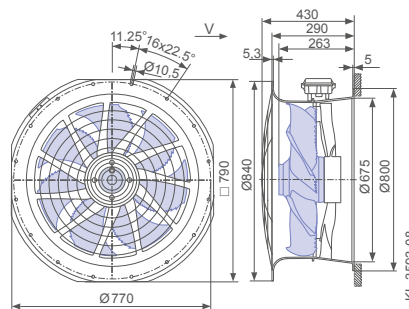
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




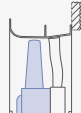
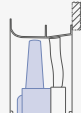
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN063-AD_4I_7P1	Δ	I	400*	50	②	0.78*	310*	660*	67				
					③	0.72*	230*	690*	65				
					⑤	0.36*	190*	530*	60				
		II			⑥	0.30*	150*	590*	60				
					Δ	I	460*	60	②	0.88*	460*	760*	70
									③	0.74*	330*	810*	69
	⑤	0.84*	420*	710*					68				
	II	⑥	0.68*	300*		780*			67				
		Y	III	460*		60			⑧	0.42*	250*	530*	60
									⑨	0.37*	220*	640*	62
	⑪				0.40*		200*	470*	57				
	IV		⑫		0.35*		180*	570*	60				




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN063-ADL.4I.V7P1	ZN063-ADL.4I.V7P1
Article no.	180825/10K4	180825/10K6
Weight kg	22.10	23.20
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

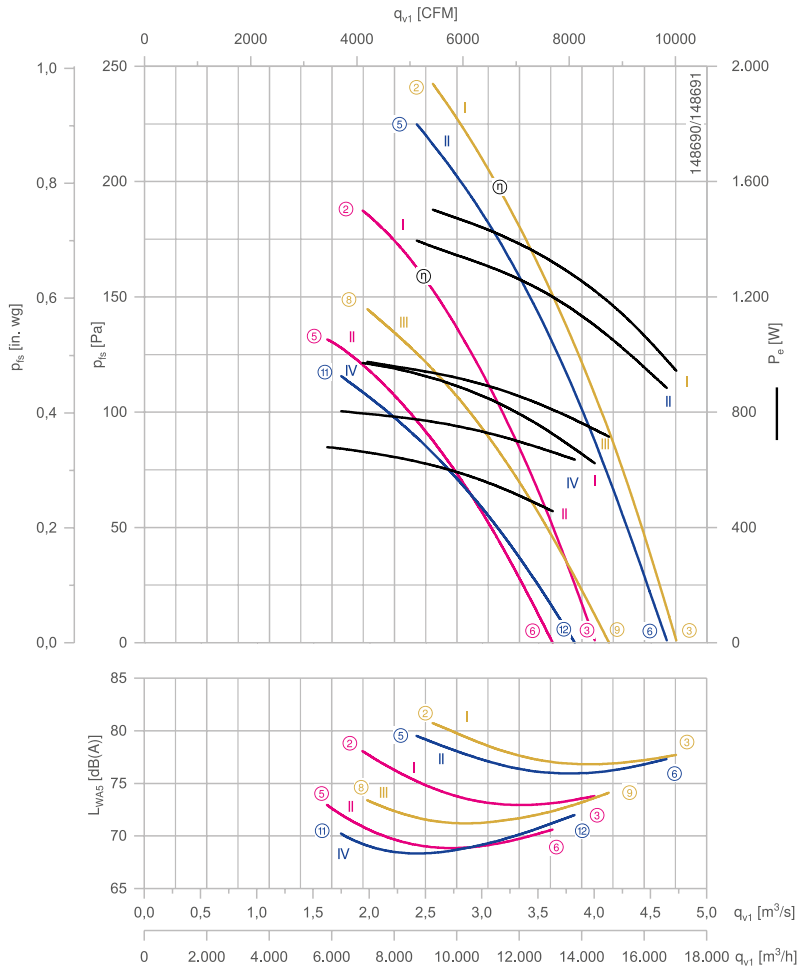
ZNO71-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 980/680 W | 1.40/0.80 kW | 1.55/0.98 kW*
 Rated current I_N :
 2.40/1.25 A | 2.70/1.50 A | 2.80/1.55 A*
 Rated speed n_N :
 920/770 min⁻¹ | 1030/740 min⁻¹ | 1070/830 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 950/860 min⁻¹ | 1100/910 min⁻¹ | 1130/980 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 620/460 W | 880/640 W | 940/720 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 4.0/3.6 m³/s | 4.6/3.8 m³/s | 4.7/4.1 m³/s*
 Starting current I_A : 9.5/3.0 A | 9.0/2.8 A | 10/3.2 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 43.9 %
 Efficiency grade: $N_{actual} = 50.6 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

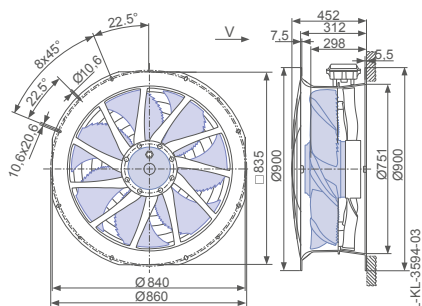
Connection diagram

1360-108XA

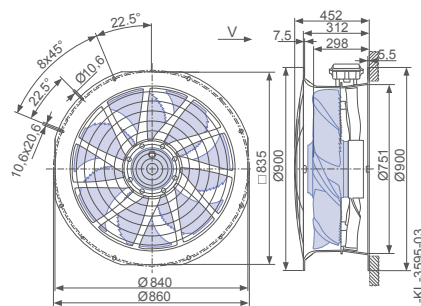
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




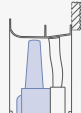
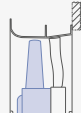
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level		
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)		
ZN071-SD_6K_7P1	Δ	I	400*	50	②	2.40*	980*	920*	78		
					③	2.20*	620*	950*	74		
					⑤	1.25*	680*	770*	73		
		II			⑥	0.90*	460*	860*	71		
					Δ	I	②	2.70*	1500*	1070*	81
							③	2.20*	940*	1130*	78
	Y	II	460*	60	⑤	2.70*	1400*	1030*	80		
					⑥	1.95*	880*	1100*	77		
					Y	III	⑧	1.55*	980*	830*	74
		⑨					1.15*	720*	980*	74	
		IV					⑪	1.50*	800*	740*	70
					⑫	1.15*	640*	910*	72		


*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN071-SDL.6K.V7P1	ZN071-SDL.6K.V7P1
Article no.	180826/10K4	180826/10K6
Weight kg	34.20	35.50
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

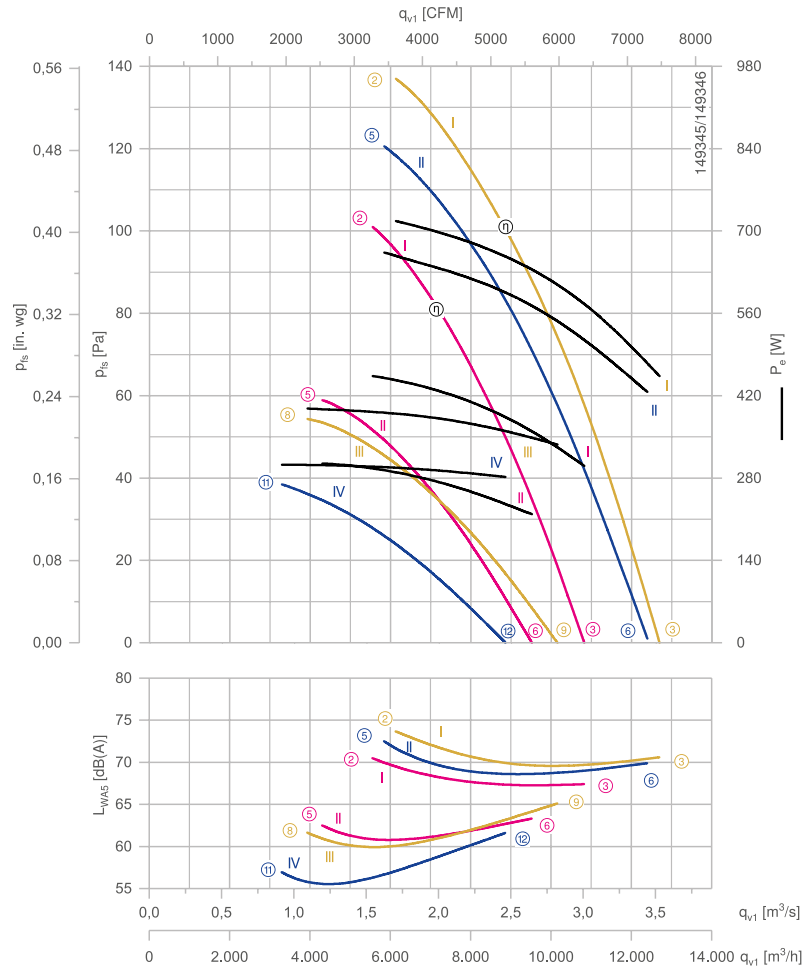
ZNO71-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 460/310 W | 660/300 W | 720/400 W*
 Rated current I_N :
 1.05/0.60 A | 1.30/0.66 A | 1.25/0.74 A*
 Rated speed n_N :
 680/520 min⁻¹ | 730/420 min⁻¹ | 780/500 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 710/630 min⁻¹ | 810/580 min⁻¹ | 840/670 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 300/220 W | 420/280 W | 460/340 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 3.0/2.6 m³/s | 3.4/2.5 m³/s | 3.5/2.8 m³/s*
 Starting current I_A : 3.2/0.95 A | 2.8/0.85 A | 3.2/1.0 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 38.0 %
 Efficiency grade: $N_{actual} = 46.7 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

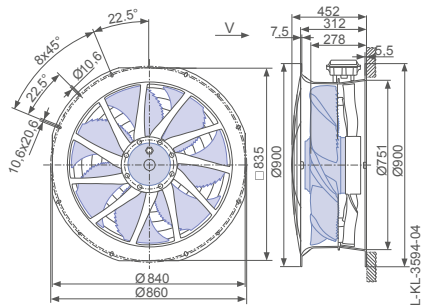
*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Connection diagram
1360-108XA

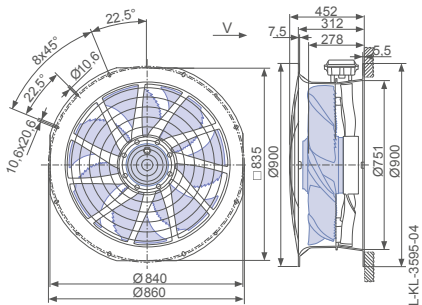
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




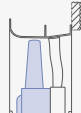
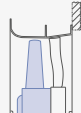
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)
ZN071-AD_.6F_.7P1	Δ	I	400*	50	②	1.05*	460*	680*	71
					③	0.92*	300*	710*	67
					⑤	0.60*	310*	520*	63
	Y	II	460*	60	⑥	0.44*	220*	630*	63
					②	1.25*	720*	780*	74
		I	400*	③	0.96*	460*	840*	71	
				⑤	1.30*	660*	740*	73	
		Y	III	460*	⑥	0.90*	420*	810*	70
					⑧	0.74*	400*	500*	62
	IV	400*	⑨	0.58*	340*	670*	65		
			⑪	0.66*	300*	420*	57		
					⑫	0.58*	280*	580*	62

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN071-ADL.6F.V7P1	ZN071-ADL.6F.V7P1
Article no.	180827/10K4	180827/10K6
Weight kg	30.60	31.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZAplus

for three phase alternating current, 6-6 pole

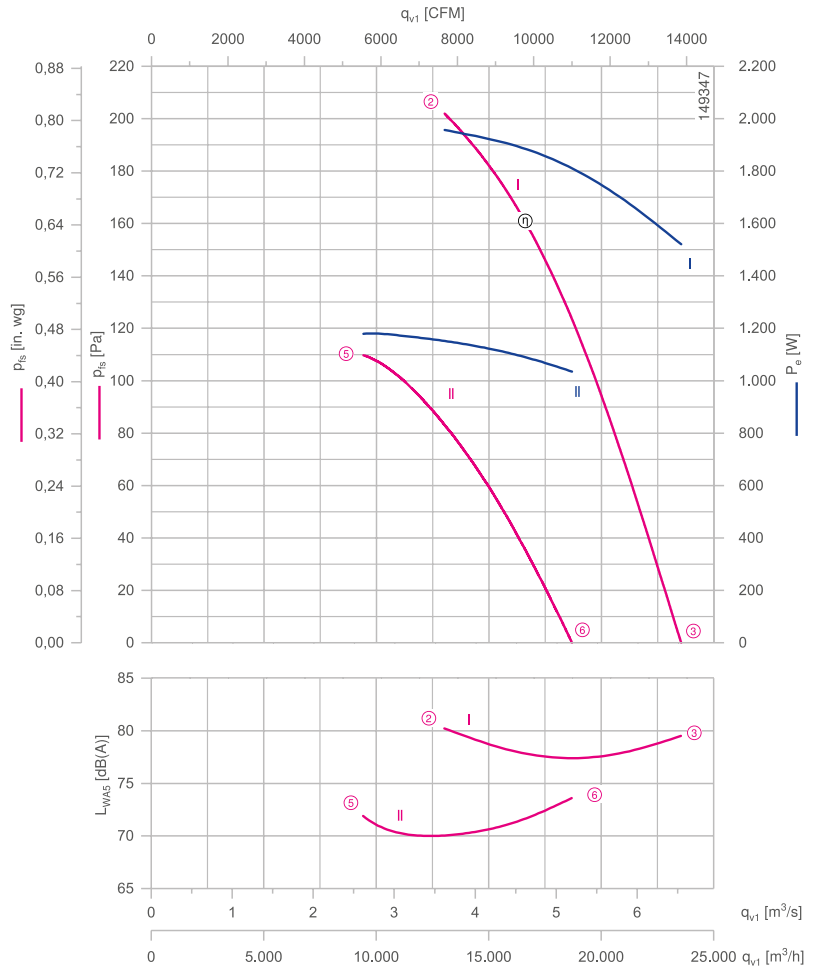
ZN080-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
3~ 400 V (Δ/Y)*
 Rated frequency f_N : **50 Hz***
 Input power P_e :
1.95/1.20 kW*
 Rated current I_N :
4.00/2.20 A*
 Rated speed n_N :
880/650 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
920/730 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
1500/1050 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
6.5/5.2 m³/s*
 Starting current I_A : **11/3.4 A**
 Current increase ΔI : **0 %**
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: **-40 °C*****
 Max. permitted ambient temperature $t_{amb(max)}$: **60 °C**
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{stdA} : 42.7 %
 Efficiency grade: $N_{actual} = 47.5 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZAplus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

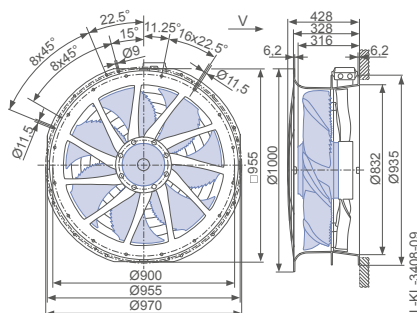
Connection diagram

1360-108XA

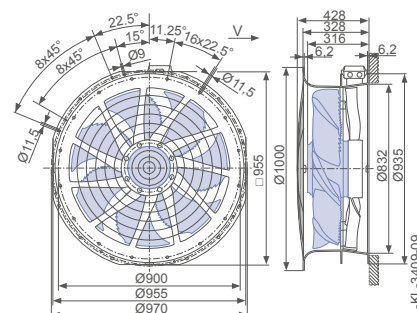
Dimensions mm

Air flow direction

Design L - ZAplus, guard grille suction side with connection box



Design L - ZAplus, guard grille two-sided with connection box



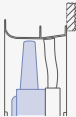
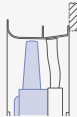
Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level
			U V		I A	P _o W	n min ⁻¹	L _{WA5} dB(A)
ZN080-SD_6N_7P5	Δ	I	400*	②	4.20*	2000*	880*	80
				③	3.50*	1550*	920*	80
	Y	II		⑤	2.30*	1200*	650*	72
				⑥	2.00*	1050*	730*	74

*rated data

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-SDL.6N.V7P5	ZN080-SDL.6N.V7P5
Article no.	180828/10K4	180828/10K6
Weight kg	43.40	44.90
ZApuls attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

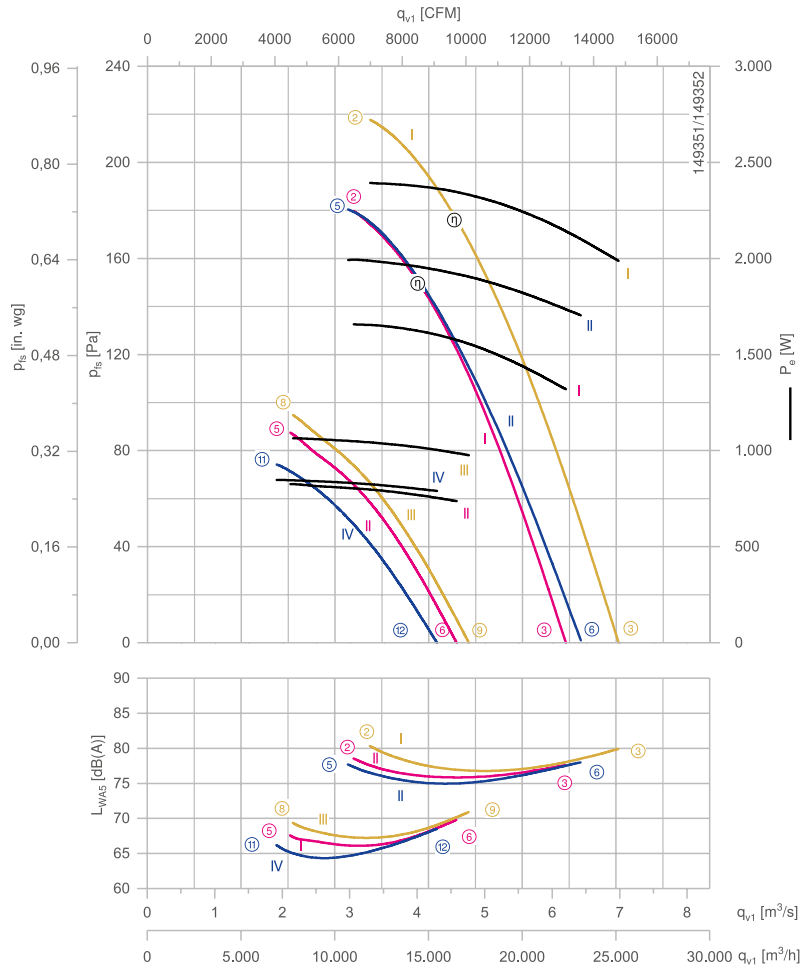
ZN080-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 1.65/0.82 kW | 2.00/0.82 kW | 2.40/1.05 kW*
 Rated current I_N :
 3.50/1.55 A | 3.80/1.60 A | 4.20/1.75 A*
 Rated speed n_N :
 800/560 min⁻¹ | 790/510 min⁻¹ | 870/580 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 850/630 min⁻¹ | 890/590 min⁻¹ | 960/660 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 1300/740 W | 1700/800 W | 2000/980 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 6.2/4.6 m³/s | 6.4/4.3 m³/s | 7.0/4.8 m³/s*
 Starting current I_A : 9.5/3.0 A | 8.5/2.6 A | 10/3.2 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 65 °C | 50 °C | 40 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 39.4 %
 Efficiency grade: $N_{actual} = 44.4 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

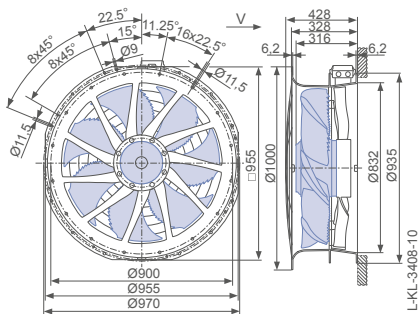
Connection diagram

1360-108XA

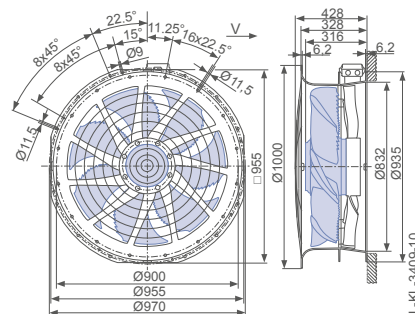
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




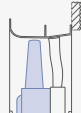
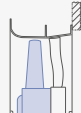
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN080-SD_6N_7P5	Δ	I	400*	50	②	3.50*	1650*	800*	79				
					③	3.00*	1300*	850*	78				
					⑤	1.55*	820*	560*	68				
		II			⑥	1.40*	740*	630*	70				
					Δ	I	460*	60	②	4.20*	2400*	870*	80
									③	3.60*	2000*	960*	80
	⑤	3.80*	2000*	790*					78				
	II	⑥	3.40*	1700*		890*			78				
		Y	III	460*		60			⑧	1.75*	1050*	580*	70
									⑨	1.60*	980*	660*	71
	⑪				1.60*		840*	510*	66				
	IV	400*	60	⑫	1.50*	780*	590*	69					


*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-SDL.6N.V7P5	ZN080-SDL.6N.V7P5
Article no.	180829/10K4	180829/10K6
Weight kg	43.40	44.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

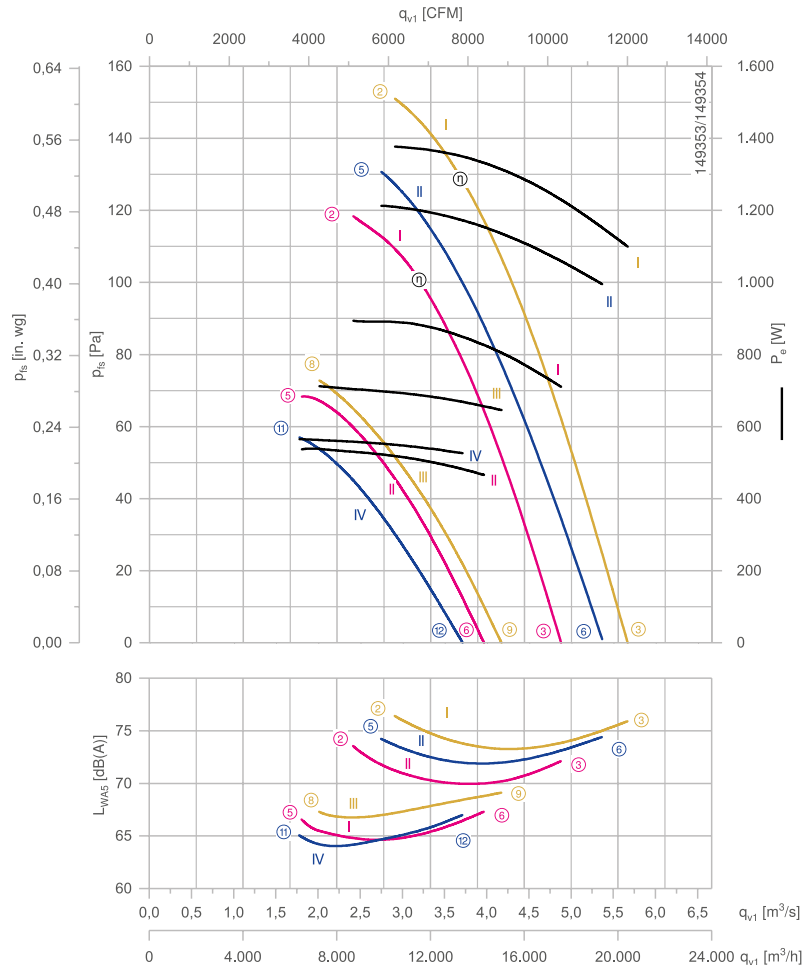
ZN080-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 900/540 W | 1.20/0.56 kW | 1.40/0.70 kW*
 Rated current I_N :
 2.20/1.10 A | 2.50/1.15 A | 2.60/1.25 A*
 Rated speed n_N :
 660/500 min⁻¹ | 700/460 min⁻¹ | 750/520 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 690/560 min⁻¹ | 750/520 min⁻¹ | 800/590 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 720/460 W | 1000/520 W | 1100/640 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 4.9/4.0 m³/s | 5.4/3.7 m³/s | 5.7/4.2 m³/s*
 Starting current I_A : 5.5/1.6 A | 4.6/1.4 A | 5.5/1.7 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 65 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 39.4 %
 Efficiency grade: $N_{actual} = 46.2 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

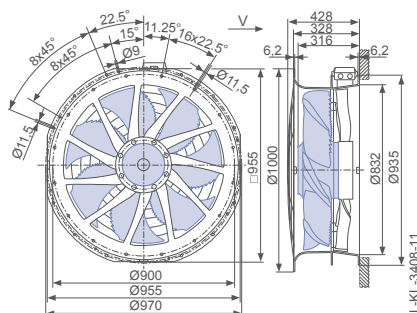
Connection diagram

1360-108XA

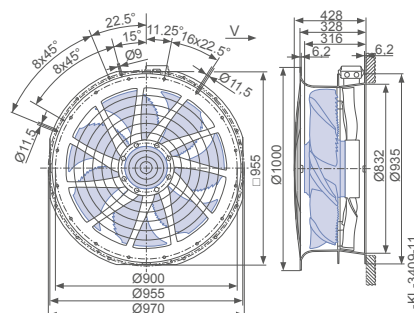
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




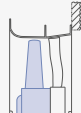
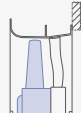
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level		
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WA5} dB(A)		
ZN080-AD_.6N_.7P5	Δ	I	400*	50	②	2.20*	920*	660*	74		
					③	2.00*	720*	690*	72		
					⑤	1.10*	540*	500*	67		
		II			⑥	1.00*	480*	560*	67		
					Δ	I	②	2.70*	1400*	750*	76
							③	2.30*	1100*	800*	76
	Y	II	460*	60	⑤	2.60*	1250*	690*	74		
					⑥	2.20*	1000*	750*	74		
					Y	III	⑧	1.30*	720*	520*	67
		⑨					1.15*	660*	590*	69	
		IV					⑪	1.20*	580*	460*	65
					⑫	1.10*	540*	520*	67		




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-ADL.6N.V7P5	ZN080-ADL.6N.V7P5
Article no.	180830/10K4	180830/10K6
Weight kg	43.40	44.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 12-12 pole

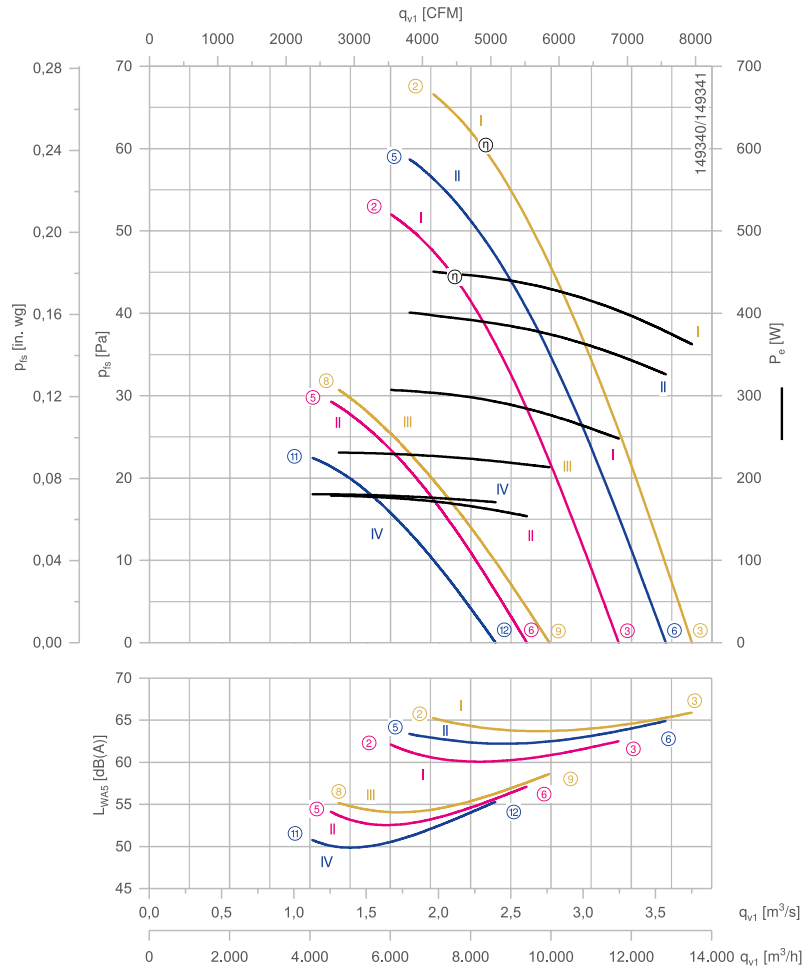
ZN080-ND



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 310/180 W | 400/180 W | 460/230 W*
 Rated current I_N :
 0.82/0.38 A | 0.88/0.40 A | 0.92/0.44 A*
 Rated speed n_N :
 430/330 min⁻¹ | 460/290 min⁻¹ | 490/330 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 450/370 min⁻¹ | 500/340 min⁻¹ | 520/390 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 250/150 W | 330/170 W | 360/210 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 3.2/2.6 m³/s | 3.6/2.4 m³/s | 3.8/2.8 m³/s*
 Starting current I_A : 1.8/0.6 A | 1.6/0.55 A | 1.9/0.6 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{stat} : 34.3 %
 Efficiency grade: $N_{actual} = 43.9 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

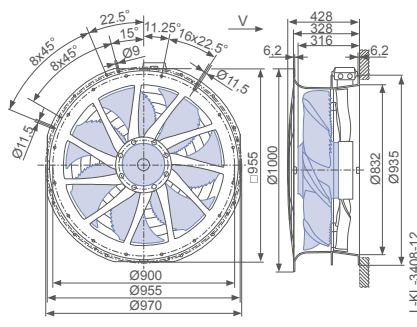
*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Connection diagram
1360-108XA

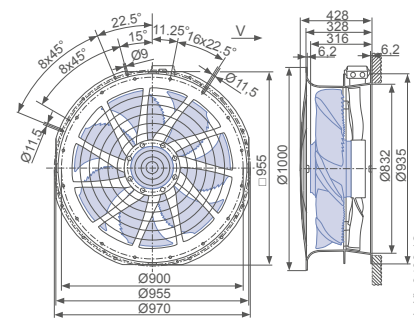
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




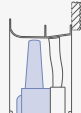
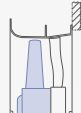
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level		
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)		
ZN080-ND_.6N_.7P5	Δ	I	400*	50	②	0.82*	310*	430*	62		
					③	0.76*	250*	450*	63		
					⑤	0.38*	180*	320*	54		
		II			⑥	0.34*	150*	370*	57		
					Δ	I	②	0.92*	460*	490*	65
							③	0.82*	360*	520*	66
	⑤	0.88*	400*	460*			64				
	II	⑥	0.76*	330*		500*	65				
		Y	III	⑧		0.44*	230*	330*	55		
				⑨		0.40*	210*	390*	59		
	⑪			0.40*	180*	290*	51				
	IV	⑫	0.37*	170*	340*	55					

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN080-NDL.6N.V7P5	ZN080-NDL.6N.V7P5
Article no.	180831/10K4	180831/10K6
Weight kg	43.40	44.90

ZAplus attachable on both sides.

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

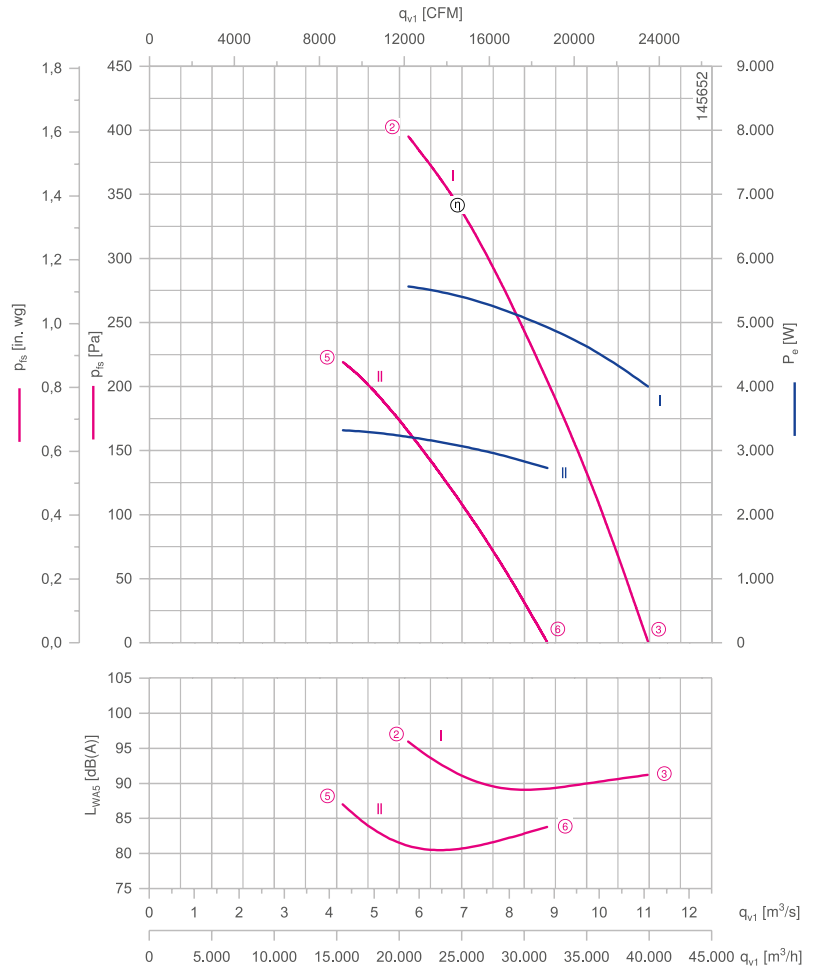
ZN09 1-VD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
3~ 400 V (Δ/Y)*
 Rated frequency f_N : **50 Hz***
 Input power P_e :
5.60/3.30 kW*
 Rated current I_N :
8.80/5.20 A*
 Rated speed n_N :
1240/910 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
1330/1060 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
4.0/2.7 kW*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
11.0/8.8 m³/s*
 Starting current I_A : **32/10 A**
 Current increase ΔI : **0 %**
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: **-40 °C*****
 Max. permitted ambient temperature $t_{amb(max)}$: **45 °C**
 Electrical connection: Terminal box
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{stdA} : 46.9 %
 Efficiency grade: $N_{actual} = 48.8 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

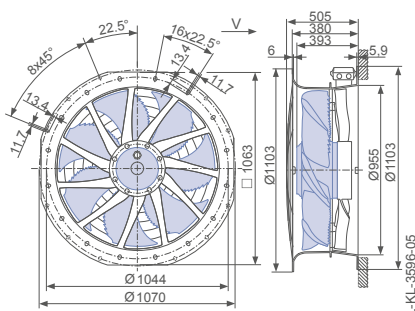
Connection diagram

1360-108XA

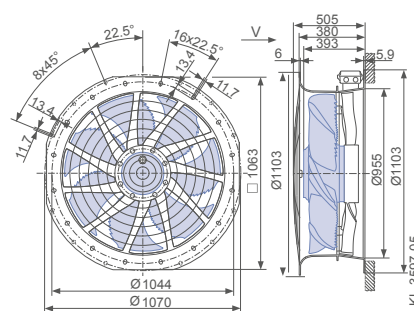
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box



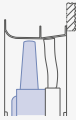
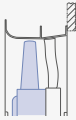
Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level
			U V		I A	P _o W	n min ⁻¹	L _{WA5} dB(A)
ZN091-VD_7Q_5P1	Δ	I	400*	②	8.80*	5600*	1230*	96
				③	6.60*	4000*	1330*	91
	Y	II		⑤	5.20*	3300*	910*	87
				⑥	4.20*	2700*	1060*	84




*rated data

Fan ordering information

Air flow direction

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN091-VDL.7Q.V5P1	ZN091-VDL.7Q.V5P1
Article no.	180430/10K4	180430/10K6
Weight kg	61.70	63.60
ZApus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

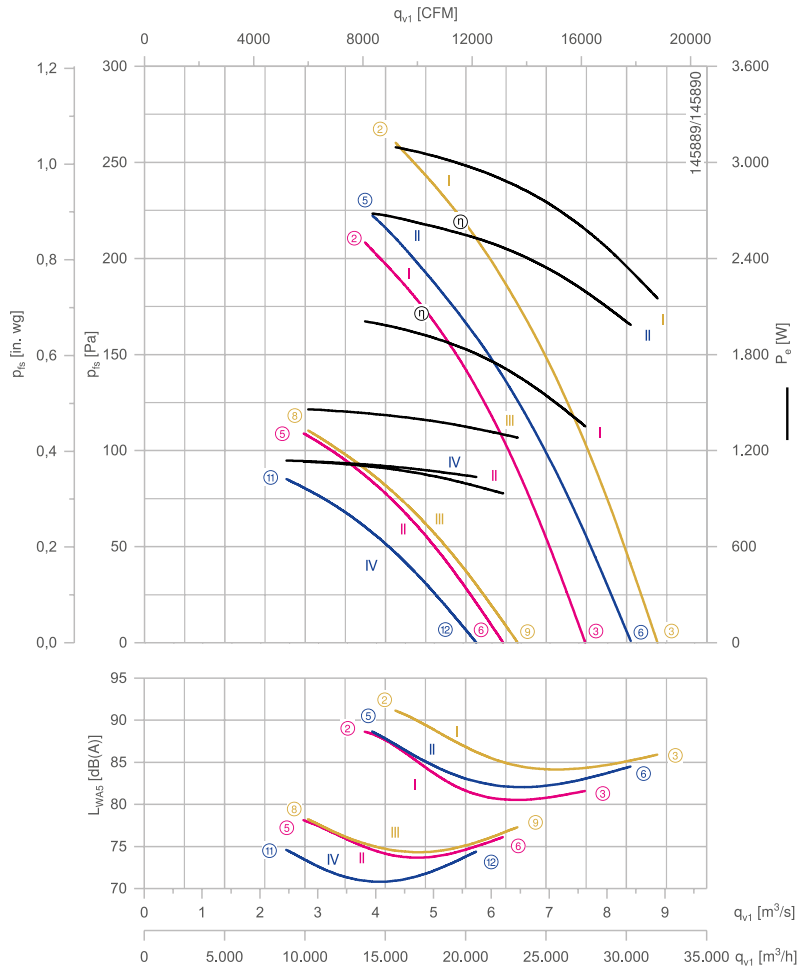
ZN091-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 2.00/1.15 kW | 2.70/1.15 kW | 3.10/1.45 *
 Rated current I_N :
 4.20/2.20 A | 5.20/2.30 A | 5.40/2.50 A*
 Rated speed n_N :
 880/640 min⁻¹ | 910/560 min⁻¹ | 990/640 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 930/760 min⁻¹ | 1030/710 min⁻¹ | 1080/800 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 1.35/0.94 kW | 2.0/1.05 kW | 2.2/1.3 kW*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 7.6/6.2 m³/s | 8.4/5.7 m³/s | 8.9/6.5 m³/s*
 Starting current I_A : 11/3.4 A | 10/3.0 A | 11/3.6 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 65 °C | 40 °C | 40 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 44.7 %
 Efficiency grade: $N_{actual} = 49.6 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

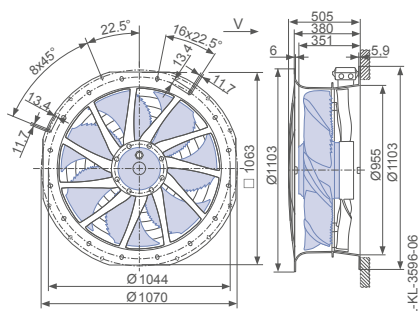
Connection diagram

1360-108XA

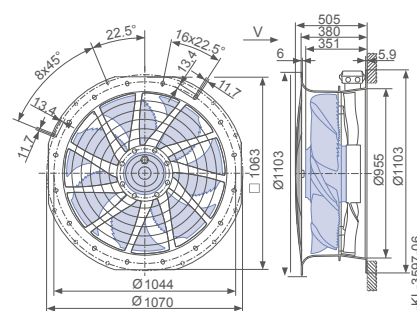
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




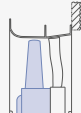
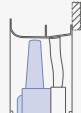
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN091-SD_6N_7P2	Δ	I	400*	50	②	4.20*	2000*	880*	89				
					③	3.40*	1350*	930*	82				
					⑤	2.20*	1150*	640*	78				
		II			⑥	1.80*	940*	760*	76				
					Δ	I	460*	60	②	5.20*	3100*	990*	91
									③	3.90*	2200*	1080*	86
	⑤	5.20*	2700*	910*					89				
	II	⑥	3.90*	2000*		1030*			85				
		Y	III	460*		60			⑧	2.50*	1450*	650*	78
									⑨	2.10*	1300*	800*	77
	⑪				2.30*		1150*	570*	75				
	IV	400*	60	⑫	2.00*	1050*	710*	74					


*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN091-SDL.6N.V7P2	ZN091-SDL.6N.V7P2
Article no.	180431/10K4	180431/10K6
Weight kg	45.40	47.30
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

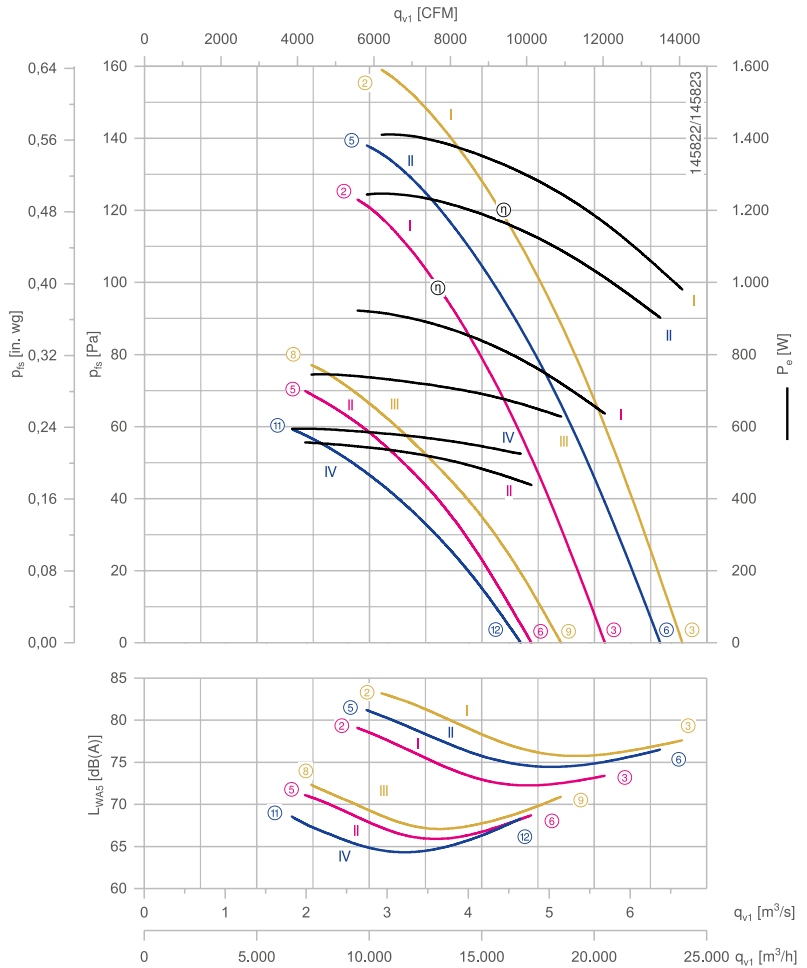
ZN091-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 920/560 W | 1.25/0.60 kW | 1.40/0.74 kW*
 Rated current I_N :
 2.10/1.05 A | 2.40/1.15 A | 2.50/1.25 A*
 Rated speed n_N :
 660/500 min⁻¹ | 700/460 min⁻¹ | 750/520 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 700/590 min⁻¹ | 780/570 min⁻¹ | 810/640 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 640/440 W | 900/520 W | 980/620 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 5.7/4.8 m³/s | 6.4/4.7 m³/s | 6.6/5.1 m³/s*
 Starting current I_A : 5.5/1.6 A | 4.6/1.4 A | 5.5/1.7 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 43.4 %
 Efficiency grade: $N_{actual} = 50.1 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

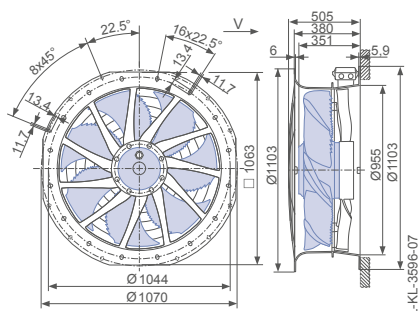
Connection diagram

1360-108XA

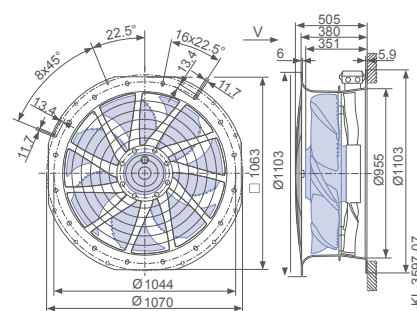
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




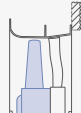
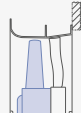
Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN091-AD_6N_7P2	Δ	I	400*	50	②	2.10*	920*	660*	79				
					③	1.85*	640*	700*	73				
					⑤	1.05*	560*	500*	71				
		II			⑥	0.88*	440*	590*	69				
					Δ	I	460*	60	②	2.50*	1400*	750*	83
									③	2.00*	980*	810*	78
	⑤	2.40*	1250*	700*					81				
	II	⑥	1.95*	900*		780*			77				
		Y	III	460*		60			⑧	1.25*	740*	520*	72
									⑨	1.05*	620*	640*	71
	⑪				1.15*		600*	460*	69				
	IV	⑫	1.00*		520*		570*	68					


*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN091-ADL.6N.V7P2	ZN091-ADL.6N.V7P2
Article no.	180432/10K4	180432/10K6
Weight kg	45.40	47.30
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 12-12 pole

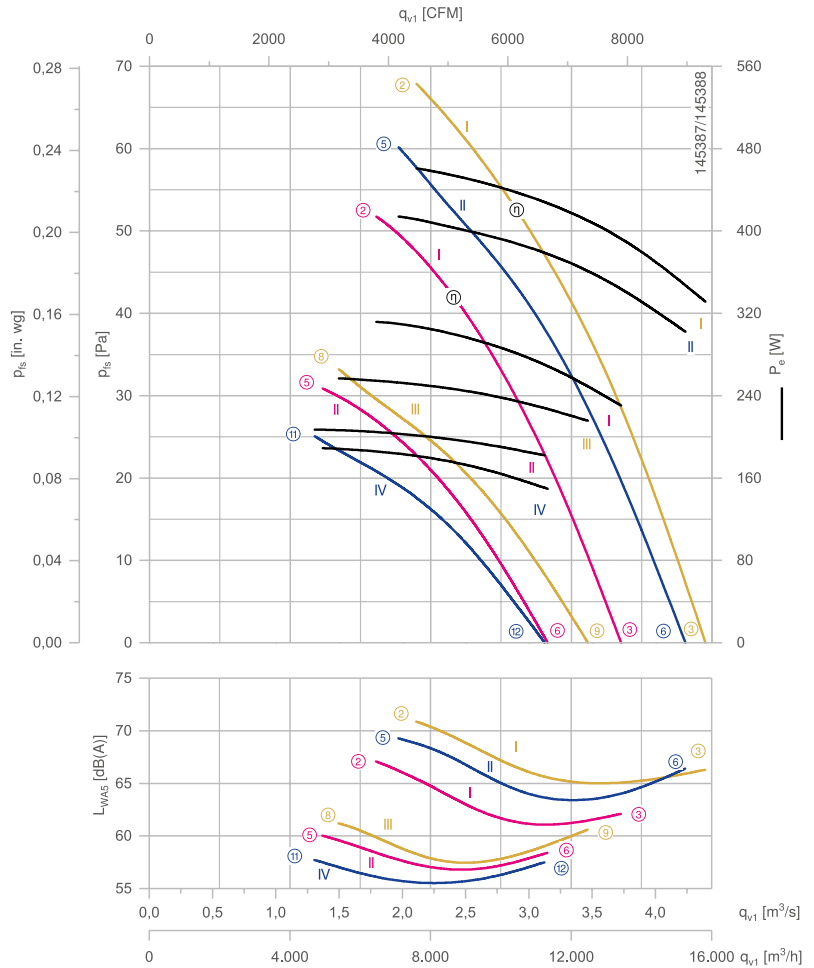
ZN091-ND



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 310/190 W | 420/210 W | 460/260 W*
 Rated current I_N :
 0.76/0.36 A | 0.84/0.40 A | 0.86/0.44 A*
 Rated speed n_N :
 440/340 min⁻¹ | 470/310 min⁻¹ | 500/350 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 460/390 min⁻¹ | 520/390 min⁻¹ | 540/430 min⁻¹*
 Power input P_e at $p_{is} = 0$ Pa:
 230/150 W | 380/180 W | 330/220 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 3.7/3.2 m³/s | 4.2/3.1 m³/s | 4.4/3.5 m³/s*
 Starting current I_A : 1.8/0.6 A | 1.6/0.55 A | 1.9/0.6 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 7
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint, RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 34.9 %
 Efficiency grade: $N_{actual} = 44.7 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

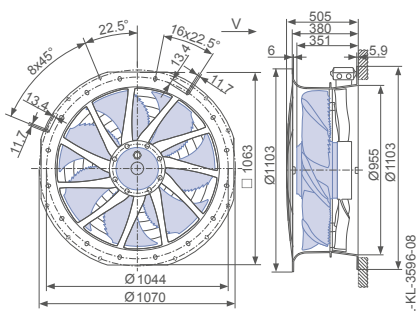
Connection diagram

1360-108XA

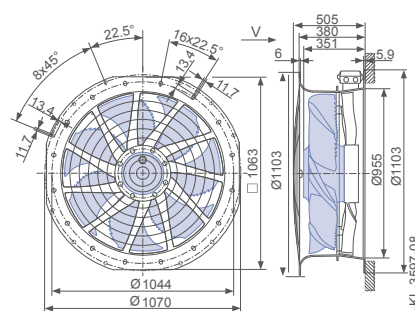
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




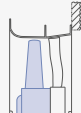
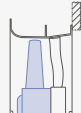
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN091-ND_6N_7P2	Δ	I	400*	50	②	0.76*	310*	440*	67				
					③	0.70*	230*	460*	62				
					⑤	0.36*	190*	340*	60				
		II			⑥	0.31*	150*	390*	58				
					Δ	I	460*	60	②	0.86*	460*	500*	71
									③	0.72*	330*	540*	66
	⑤	0.82*	420*	470*					69				
	II	⑥	0.68*	300*		520*			66				
		Y	III	460*		60			⑧	0.44*	260*	350*	61
									⑨	0.36*	220*	430*	61
	⑪				0.40*		210*	310*	58				
	⑫	0.35*	180*	390*	58								

*rated data


Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN091-NDL.6N.V7P2	ZN091-NDL.6N.V7P2
Article no.	180433/10K4	180433/10K6
Weight kg	45.40	47.30

ZAplus attachable on both sides.

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 6-6 pole

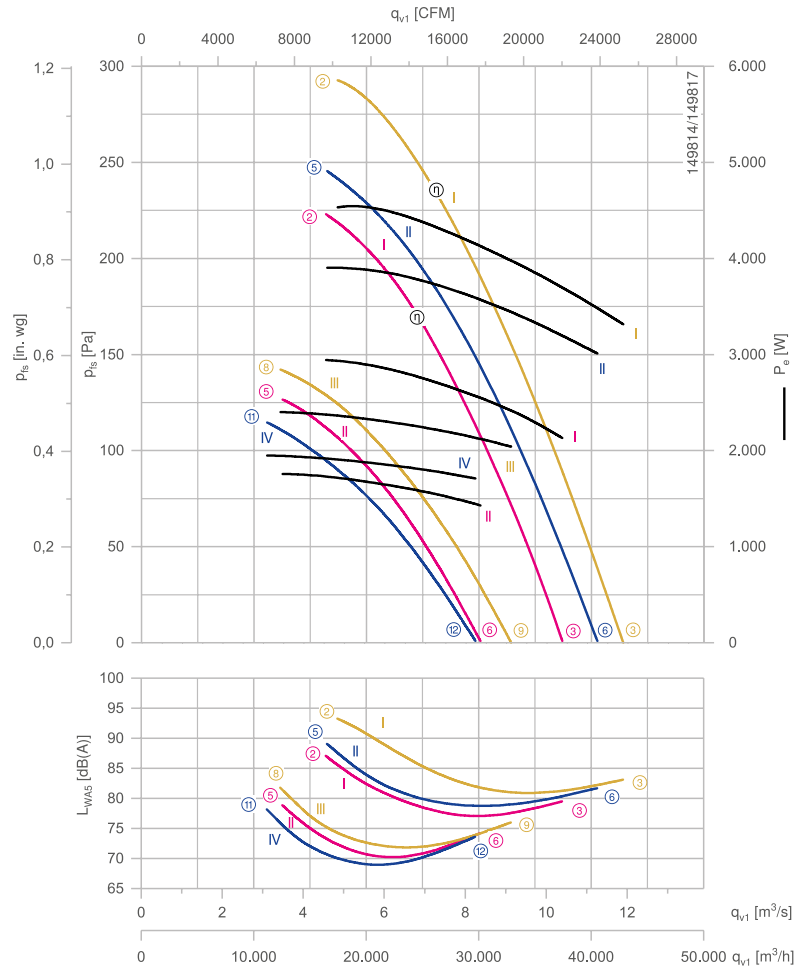
ZN100-SD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 2.90/1.75 kW | 3.90/1.95 kW | 4.40/2.40 kW*
 Rated current I_N :
 5.60/3.00 A | 6.60/3.30 A | 6.80/3.50 A*
 Rated speed n_N :
 830/630 min⁻¹ | 870/590 min⁻¹ | 930/660 min⁻¹*
 Speed n at $p_{is} = 0$ Pa:
 890/720 min⁻¹ | 960/710 min⁻¹ | 1010/780 min⁻¹**
 Power input P_e at $p_{is} = 0$ Pa:
 2100/1450 W | 3000/1700 W | 3300/2000 W*
 Air flow q_{v1} at $p_{is} = 0$ Pa:
 10.4/8.4 m³/s | 11.3/8.2 m³/s | 11.9/9.1 m³/s*
 Starting current I_A : 18/6.0 A | 17/5.0 A | 19/6.0 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 45 °C | 45 °C
 Electrical connection: Terminal box
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 45.1 %
 Efficiency grade: $N_{actual} = 48.6 / N_{target} = 40$ **
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

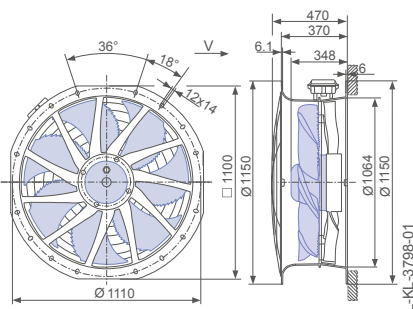
Connection diagram

1360-108XA

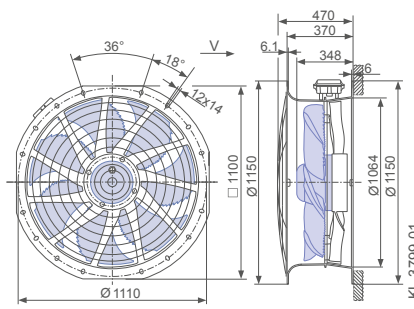
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




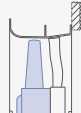
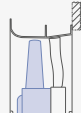
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN100-SD_.7Q_.5P1	Δ	I	400*	50	②	5.60*	2900*	830*	87				
					③	4.60*	2100*	890*	80				
					⑤	3.00*	1750*	630*	79				
		II			⑥	2.50*	1450*	720*	74				
					Δ	I	460*	60	②	6.80*	4400*	930*	92
									③	5.40*	3300*	1010*	83
	⑤	6.60*	3900*	870*					90				
	II	⑥	5.20*	3000*		960*			82				
		Y	III	460*		60			⑧	3.50*	2400*	660*	82
									⑨	3.00*	2000*	780*	76
	⑪				3.30*		1950*	590*	78				
	IV	400*	60	⑫	2.90*	1700*	710*	74					




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN100-SDL.7Q.V5P1	ZN100-SDL.7Q.V5P1
Article no.	180353/10K4	180353/10K6
Weight kg	63.70	66.40
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 8-8 pole

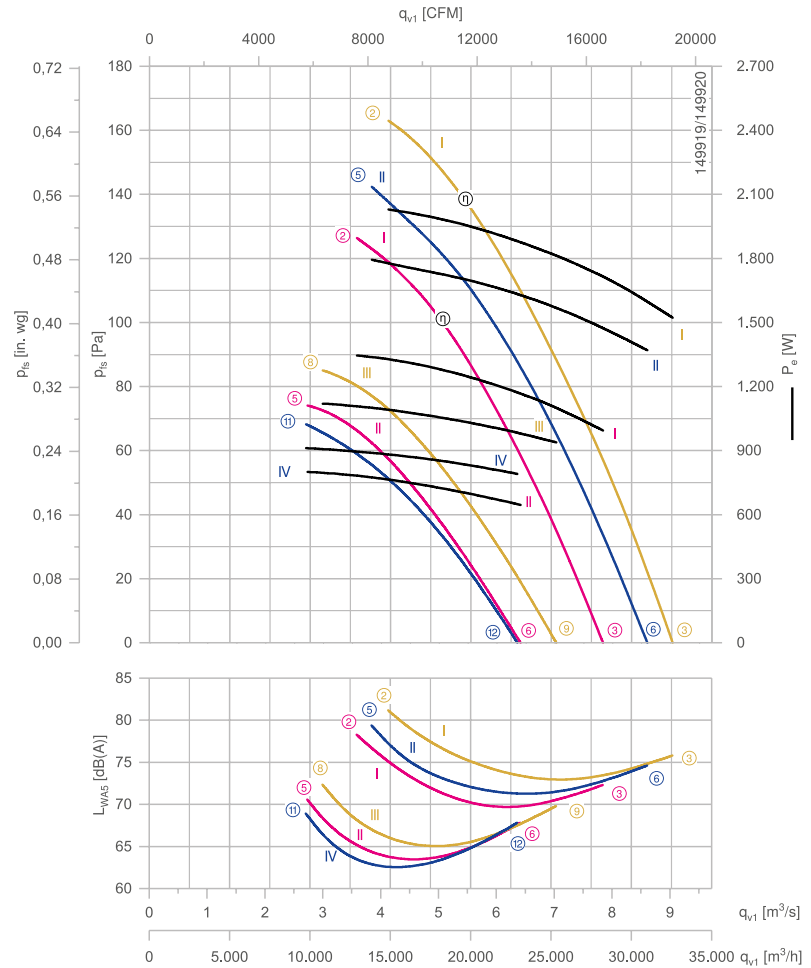
ZN100-AD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) | 3~460 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 1.35/0.8 kW | 1.80/0.92 kW | 2.00/1.1 kW*
 Rated current I_N :
 3.10/1.45 A | 3.40/1.65 A | 3.50/1.75 A*
 Rated speed n_N :
 630/480 min⁻¹ | 670/460 min⁻¹ | 710/520 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 670/540 min⁻¹ | 730/550 min⁻¹ | 770/600 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 1000/640 W | 1350/800 W | 1500/940 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 7.8/6.4 m³/s | 8.6/6.4 m³/s | 9.0/7.0 m³/s*
 Starting current I_A : 9.0/2.8 A | 8.0/2.6 A | 9.5/3.0 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 42.1 %
 Efficiency grade: $N_{actual} = 47.8 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

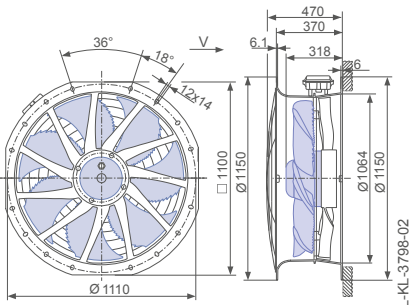
*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Connection diagram
1360-108XA

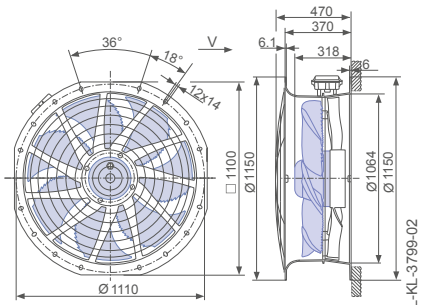
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




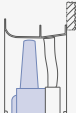
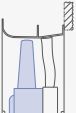
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN100-AD_7M_5P1	Δ	I	400*	50	②	3.10*	1350*	620*	79				
					③	2.70*	1000*	670*	72				
					⑤	1.45*	800*	480*	71				
		II			⑥	1.25*	640*	540*	68				
					Δ	I	460*	60	②	3.50*	2000*	710*	81
									③	3.00*	1500*	770*	76
	⑤	3.40*	1800*	660*					79				
	II	⑥	2.80*	1350*		730*			75				
		Y	III	460*		60			⑧	1.75*	1100*	510*	72
									⑨	1.50*	940*	600*	70
	⑪				1.65*		920*	460*	69				
	IV	400*	60	⑫	1.40*	800*	550*	68					

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN100-ADL.7M.V5P1	ZN100-ADL.7M.V5P1
Article no.	180354/10K4	180354/10K6
Weight kg	57.20	59.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 10-10 pole

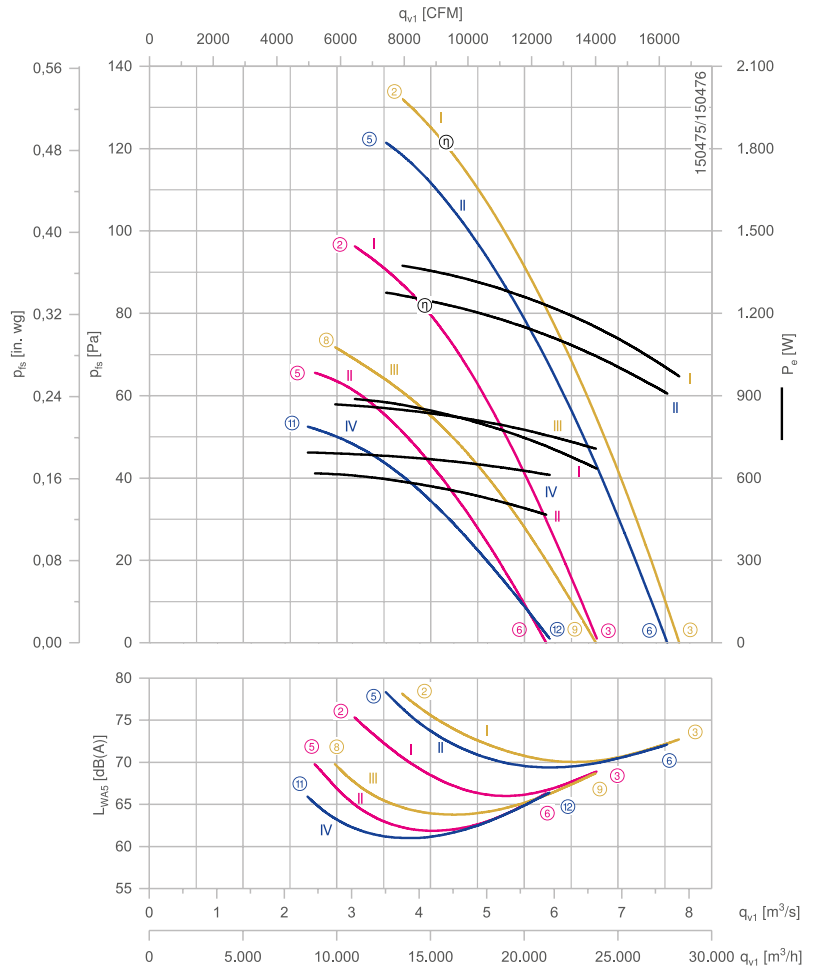
ZN100-MD



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 880/620 W | 1.30/0.70 kW | 1.40/0.88 kW*
 Rated current I_N :
 2.30/1.25 A | 2.60/1.50 A | 2.60/1.55 A*
 Rated speed n_N :
 550/450 min⁻¹ | 610/400 min⁻¹ | 640/470 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 570/500 min⁻¹ | 650/500 min⁻¹ | 670/560 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 640/460 W | 900/620 W | 980/700 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 6.6/5.9 m³/s | 7.7/5.9 m³/s | 7.8/5.8 m³/s*
 Starting current I_A : 8.0/2.2 A | 6.5/1.9 A | 8.0/2.2 A
 Current increase ΔI : 0 % | 5 % | 5 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 43.3 %
 Efficiency grade: $N_{actual} = 50.1 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

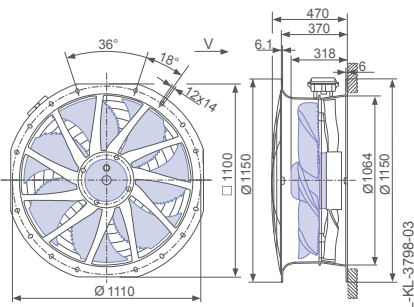
Connection diagram

1360-108XA

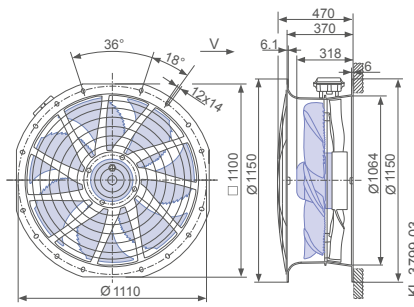
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




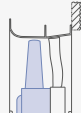
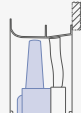
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN100-MD_7M_5P1	Δ	I	400*	50	②	2.30*	880*	550*	76				
					③	2.00*	640*	570*	69				
					⑤	1.25*	620*	450*	70				
		II			⑥	0.96*	460*	500*	66				
					Δ	I	460*	60	②	2.60*	1400*	640*	79
									③	2.10*	980*	670*	73
	⑤	2.60*	1250*	610*					78				
	II	⑥	2.00*	900*		650*			72				
		Y	III	460*		60			⑧	1.55*	860*	470*	70
									⑨	1.25*	700*	560*	69
	⑪				1.50*		700*	400*	66				
	IV	400*	60	⑫	1.25*	620*	500*	66					




*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN100-MDL.7M.V5P1	ZN100-MDL.7M.V5P1
Article no.	180355/10K4	180355/10K6
Weight kg	57.20	59.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		

FE2owlet with ZPlus

for three phase alternating current, 12-12 pole

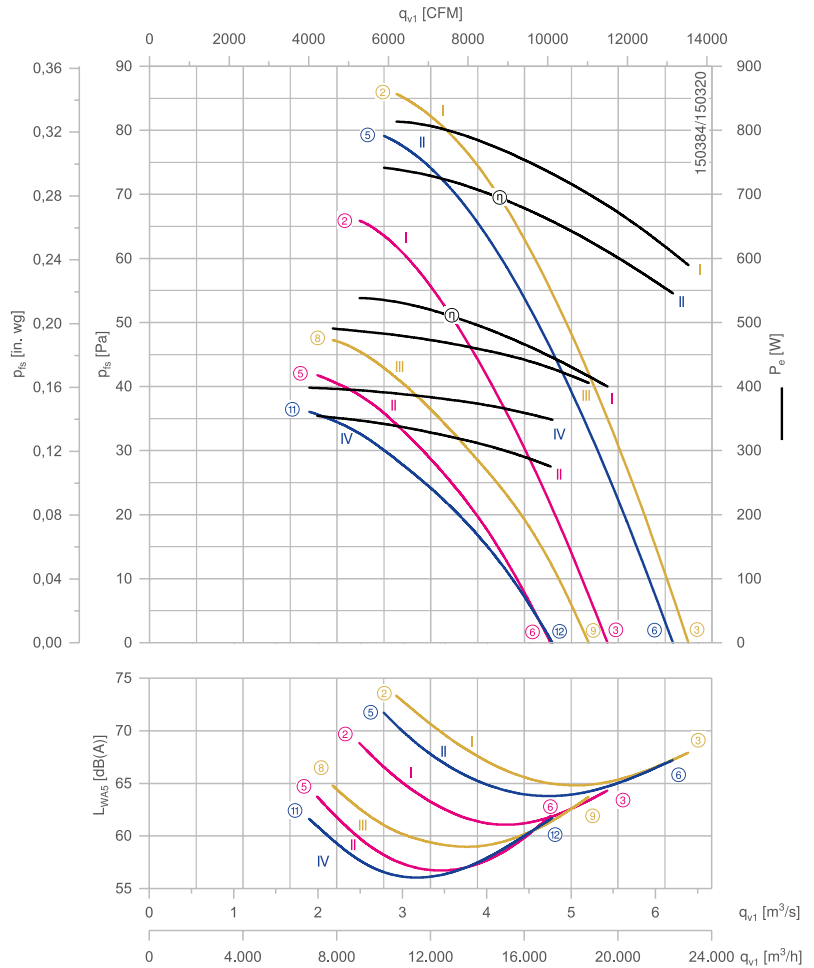
ZN100-ND



Description

Motor technology: AC
 Rated voltage $U_N \pm 10\%$:
 3~ 400 V (Δ/Y) | 3~400 V (Δ/Y) *
 Rated frequency f_N : 50 Hz | 60 Hz | 60 Hz*
 Input power P_e :
 540/350 W | 740/400 W | 820/500 W*
 Rated current I_N :
 1.45/0.72 A | 1.55/0.82 A | 1.60/0.82 A*
 Rated speed n_N :
 450/370 min⁻¹ | 500/340 min⁻¹ | 520/390 min⁻¹*
 Speed n at $p_s = 0$ Pa:
 470/410 min⁻¹ | 530/410 min⁻¹ | 550/450 min⁻¹*
 Power input P_e at $p_s = 0$ Pa:
 400/280 W | 540/350 W | 600/400 W*
 Air flow q_{v1} at $p_s = 0$ Pa:
 5.4/4.8 m³/s | 6.2/4.8 m³/s | 6.4/5.2 m³/s*
 Starting current I_A : 3.8/1.2 A | 3.2/1.0 A | 3.8/1.2 A
 Current increase ΔI : 0 % | 0 % | 0 %
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -40 °C***
 Max. permitted ambient temperature $t_{amb(max)}$:
 70 °C | 70 °C | 70 °C
 Electrical connection: Terminal box
 Number of blades: 5
 Degree of protection : IP54
 Motor protection: thermal contact
 Blades: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Rotor: Aluminium, 2 coat paint,
 RAL 9005 (jet black)
 Conformity: ErP 2015, CE
ErP-data
 Efficiency η_{statA} : 39.4 %
 Efficiency grade: $N_{actual} = 47.7 / N_{target} = 40^{**}$
 * Rated data
 **ErP 2015

Characteristic curve



Measured in ZPlus and guard grille on suction side in installation type A according to ISO 5801.

*** Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

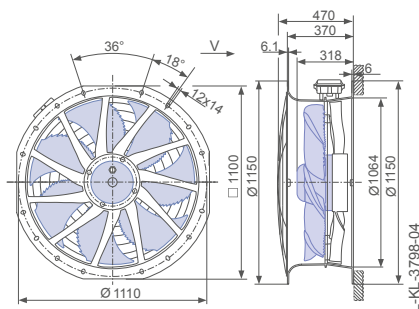
Connection diagram

1360-108XA

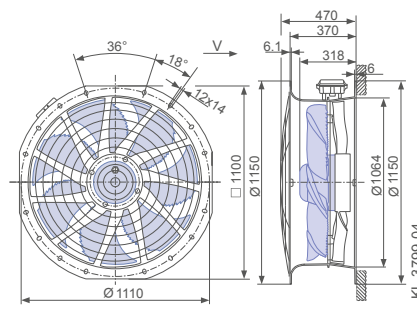
Dimensions mm

Air flow direction

Design L - ZPlus, guard grille suction side with connection box



Design L - ZPlus, guard grille two-sided with connection box




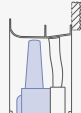
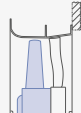
Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level				
			U V	f Hz		I A	P _e W	n min ⁻¹	L _{WAS} dB(A)				
ZN100-ND_7M_5P1	Δ	I	400*	50	②	1.45*	540*	450*	69				
					③	1.35*	400*	470*	64				
					⑤	0.72*	350*	370*	64				
		II			⑥	0.60*	280*	410*	62				
					Δ	I	460*	60	②	1.60*	820*	520*	74
									③	1.40*	580*	550*	68
	⑤	1.55*	740*	500*					72				
	II	⑥	1.30*	540*		530*			67				
		Y	III	460*		60			⑧	0.86*	500*	390*	65
									⑨	0.72*	400*	450*	64
	⑪				0.82*		400*	340*	62				
	⑫	0.70*	350*	410*	62								

*rated data

Fan ordering information

Air flow direction 

Design	L (guard grille suction side)	L (guard grille two-sided)
		
Type	ZN100-NDL.7M.V5P1	ZN100-NDL.7M.V5P1
Article no.	180356/10K4	180356/10K6
Weight kg	57.20	59.90
ZApplus attachable on both sides.		

Control technology

Frequency inverters Fcontrol 3~	Motor protection units 3~	Electronic voltage controllers 3~
		



MAXventowlet

Product overview

Size 450 / 500	Page 94
Size 630 / 710	Page 96
Size 800	Page 98
Size 1000	Page 100
Size 1250	Page 102
Size 1400	Page 104



MAXventowlet

for three phase alternating current, 4 pole

DN45/DN50



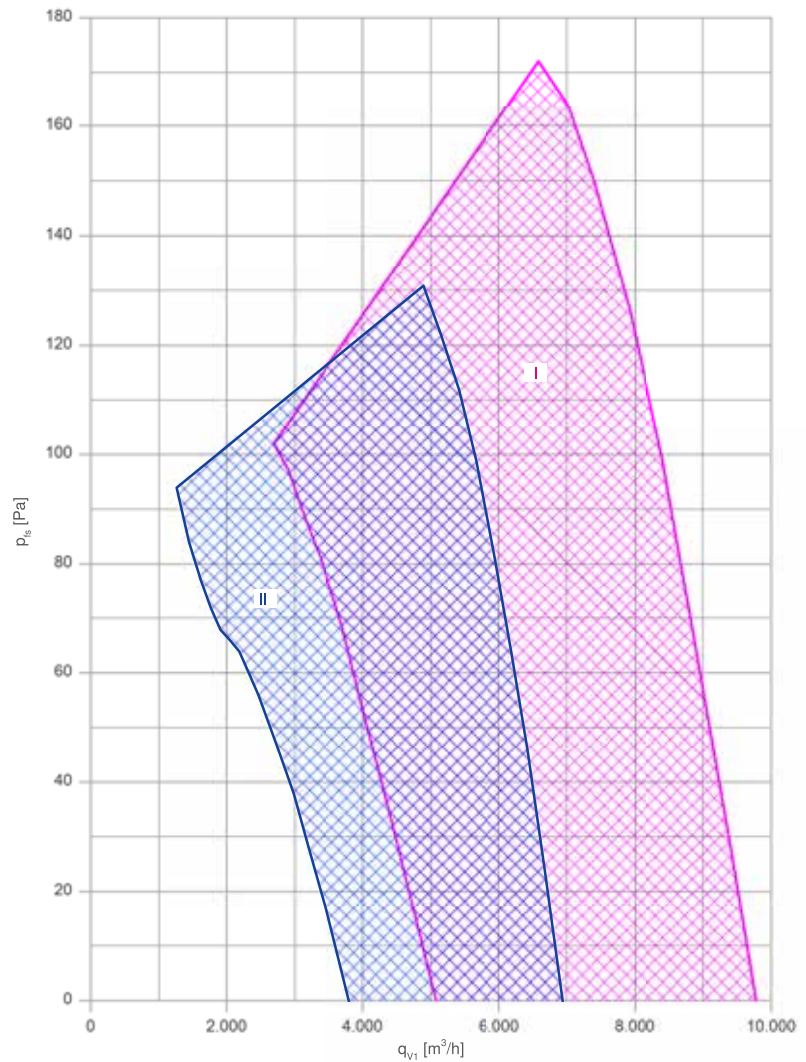
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Technical data

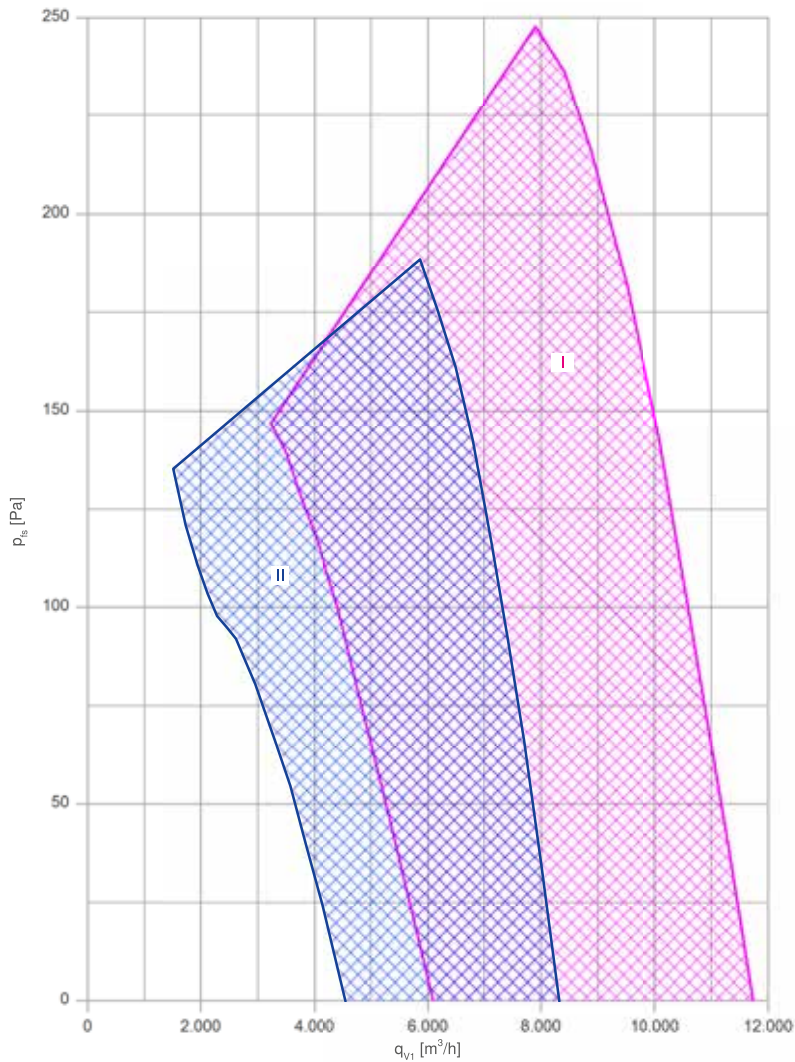
Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN50_-4_S	14 - 34	63 ... 90	3; 6; 9
II	DN45_-4_S	14 - 34	56 ... 80	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

Other versions on request.

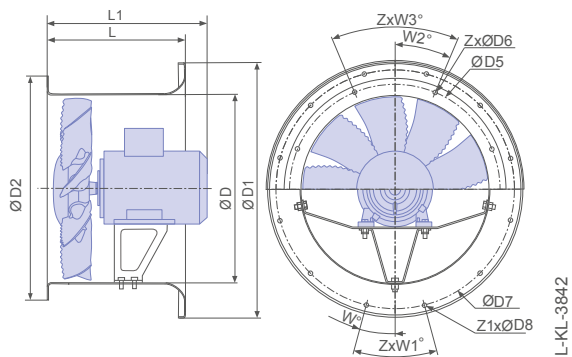


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L	L1*	ØD	ØD1	ØD2	ØD5	ZxØD6	ØD7	Z1xØD8	W°	ZxW1°	W2°	ZxW3°
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
DN50_-4_S	370	433	500	655	590	562	12x12	620	12x12	15°	12x30°	15°	12x30°
DN45_-4_S	370	370	450	595	530	500	8x12	560	12x12	15°	12x30°	22,5°	8x45°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.

MAXventowlet

for three phase alternating current, 4 pole

DN63/DN71



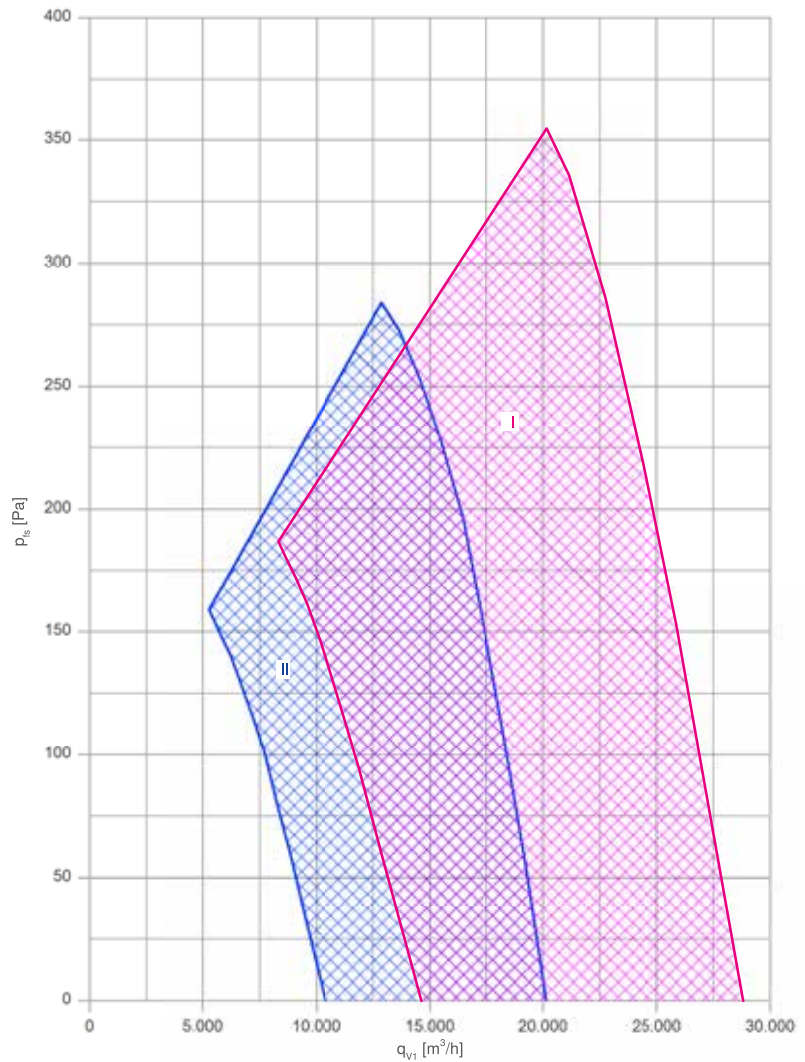
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

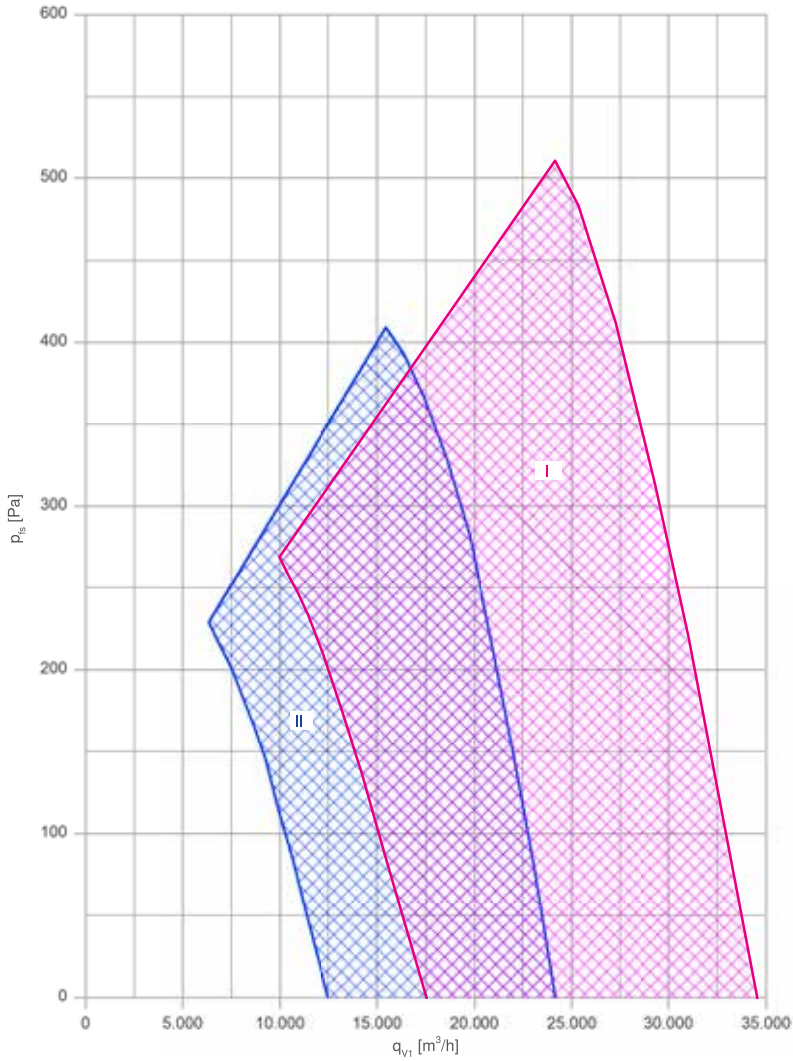
Technical data

Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN71_-4_S	11 - 34	90 ... 160	3; 6; 9
II	DN63_-4_S	14 - 34	80 ... 112	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

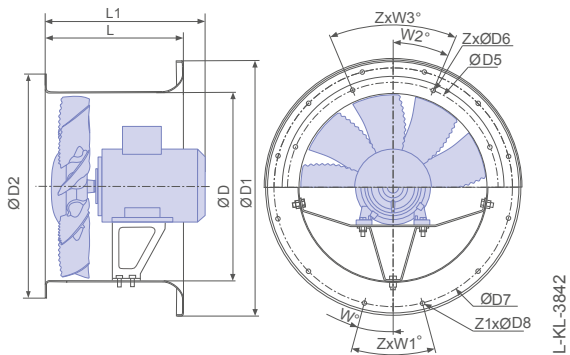
Other versions on request.

Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L	L1*	ØD	ØD1	ØD2	ØD5	ZxØD6	ØD7	Z1xØD8	W°	ZxW1°	W2°	ZxW3°
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
DN71_-4_S	590	733	710	895	800	770	16x12	860	16x12	11,25°	16x22,5°	11,25°	16x22,5°
DN63_-4_S	445	537	630	805	720	690	12x12	770	16x12	11,25°	16x22,5°	15°	12x30°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.

MAXventowlet

for three phase alternating current, 4- and 6-pole

DN80V



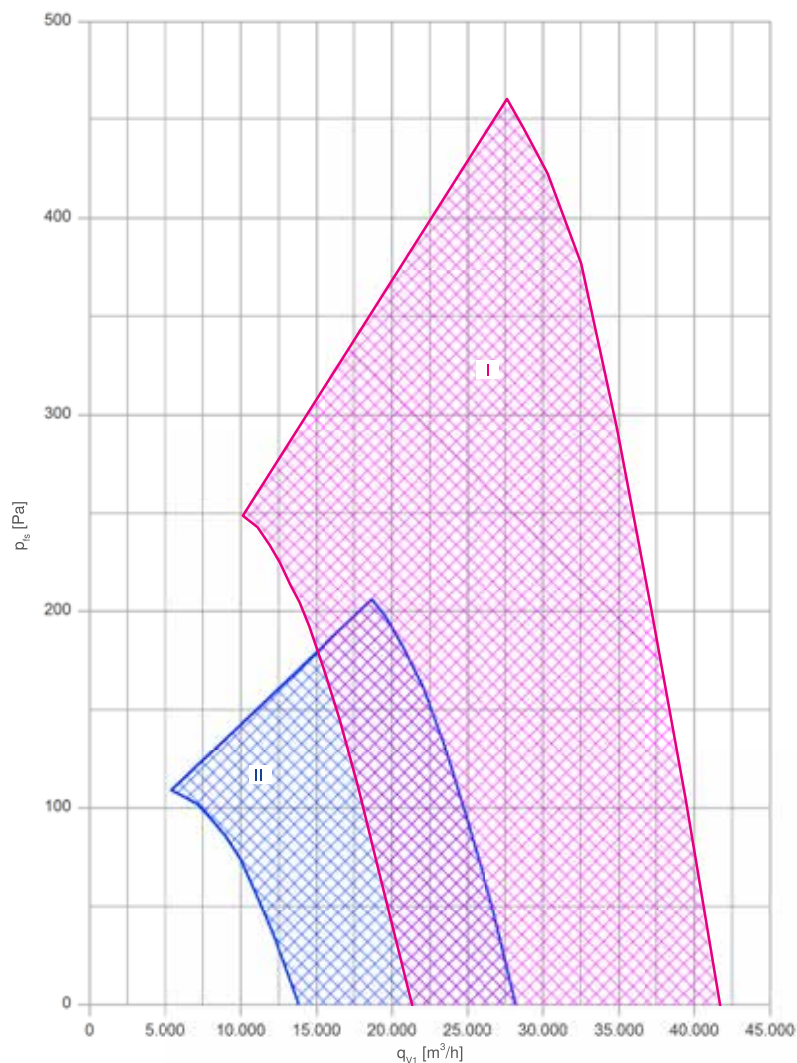
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Technical data

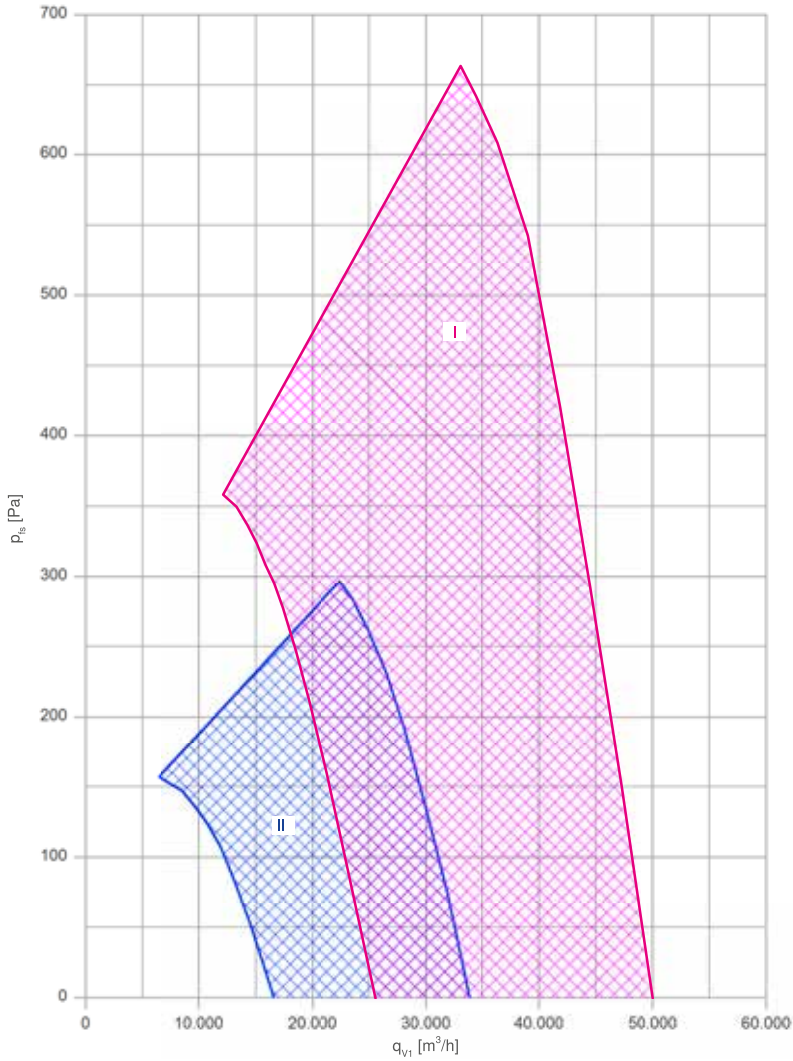
Characteristic diagram	Type	Blade setting angle* min. - max. degree	Motor size* min. - max.	Number of blades
I	DN80_-4_S	11 - 34	90 ... 160	3; 6; 9
II	DN80_-6_S	11 - 34	80 ... 132	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

Other versions on request.

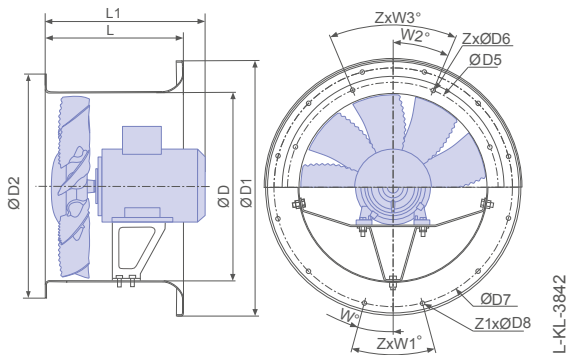


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L	L1*	ØD	ØD1	ØD2	ØD5	ZxØD6	ØD7	Z1xØD8	W°	ZxW1°	W2°	ZxW3°
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
DN80_-4_S	600	777	800	1007	890	860	16x12	970	16x15	11,25°	16x22,5°	11,25°	16x22,5°
DN80_-6_S	600	698	800	1007	890	860	16x12	970	16x15	11,25°	16x22,5°	11,25°	16x22,5°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.

MAXventowlet

for three phase alternating current, 4- and 6-pole

DN10V



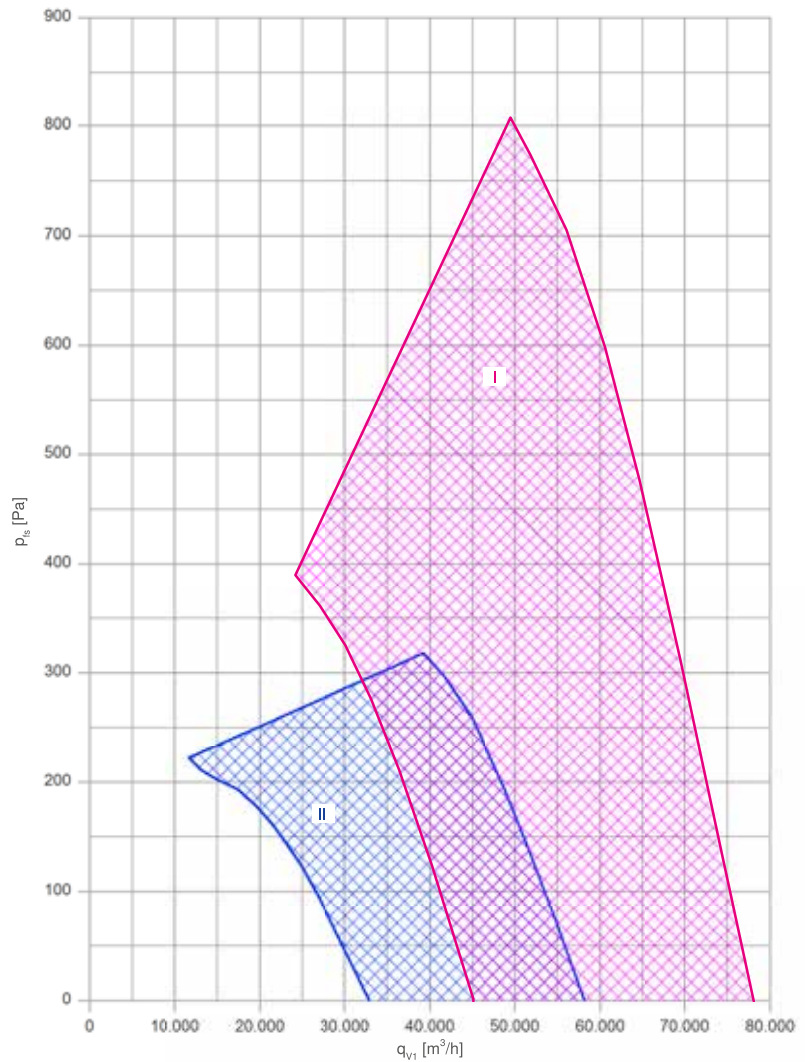
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Technical data

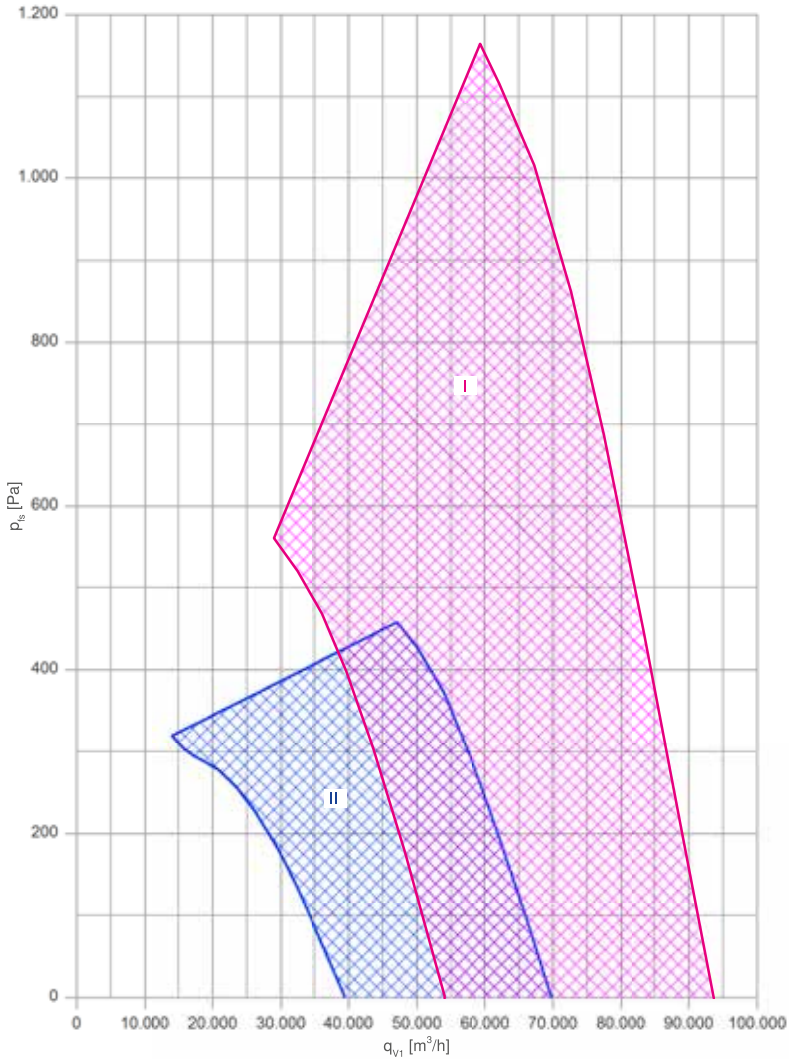
Characteristic diagram	Type	Blade setting angle* min. - max. degree	Motor size* min. - max.	Number of blades
I	DN10_-4_S	11 - 29	112 ... 225	3; 6; 9
II	DN10_-6_S	14 - 34	100 ... 180	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

Other versions on request.

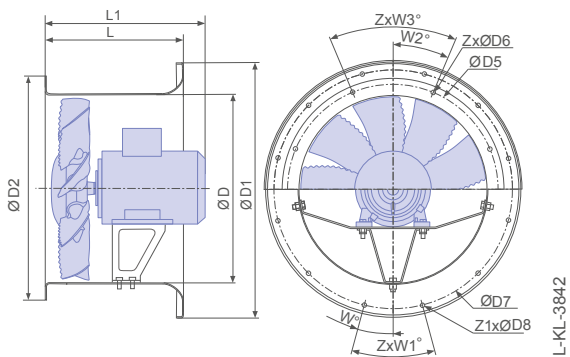


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L mm	L1* mm	$\varnothing D$ mm	$\varnothing D1$ mm	$\varnothing D2$ mm	$\varnothing D5$ mm	$Z \times \varnothing D6$ mm	$\varnothing D7$ mm	$Z1 \times \varnothing D8$ mm	W°	$Z \times W1^\circ$	$W2^\circ$	$Z \times W3^\circ$
DN10_-4_S	on request												
DN10_-6_S	625	851	1000	1227	1100	1070	16x15	1190	20x15	9°	20x18°	11,25°	16x22,5°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.

MAXventowlet

for three phase alternating current, 6- and 8-pole

DN12V



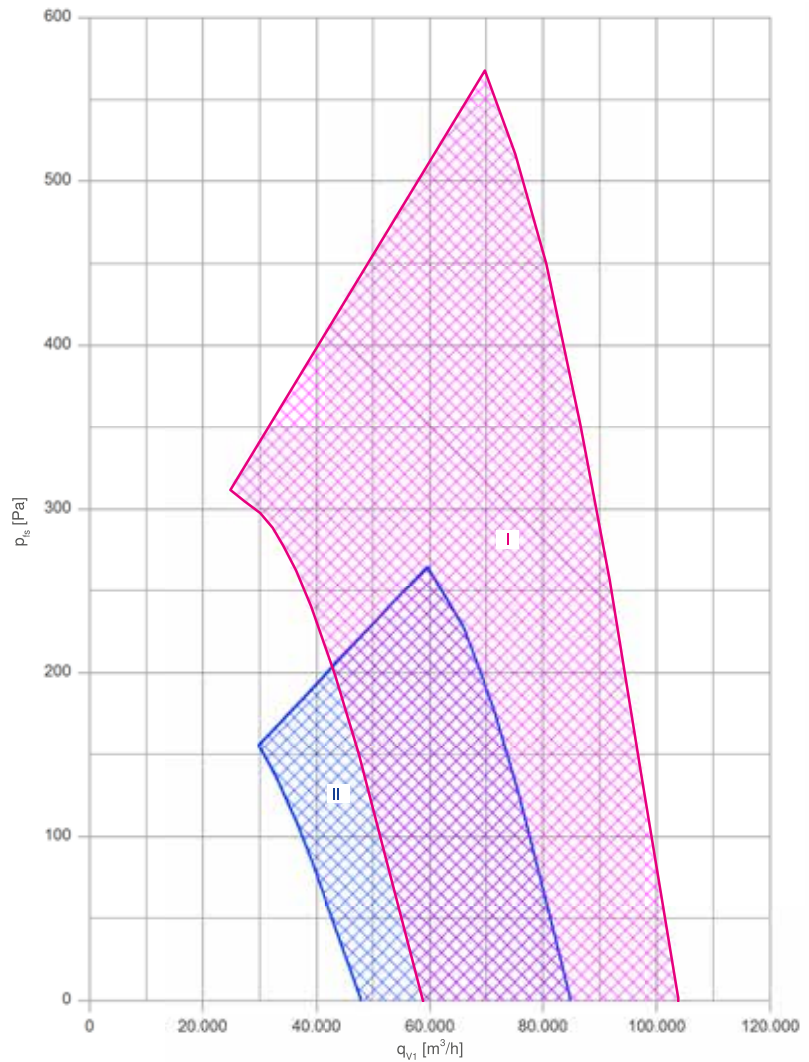
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Technical data

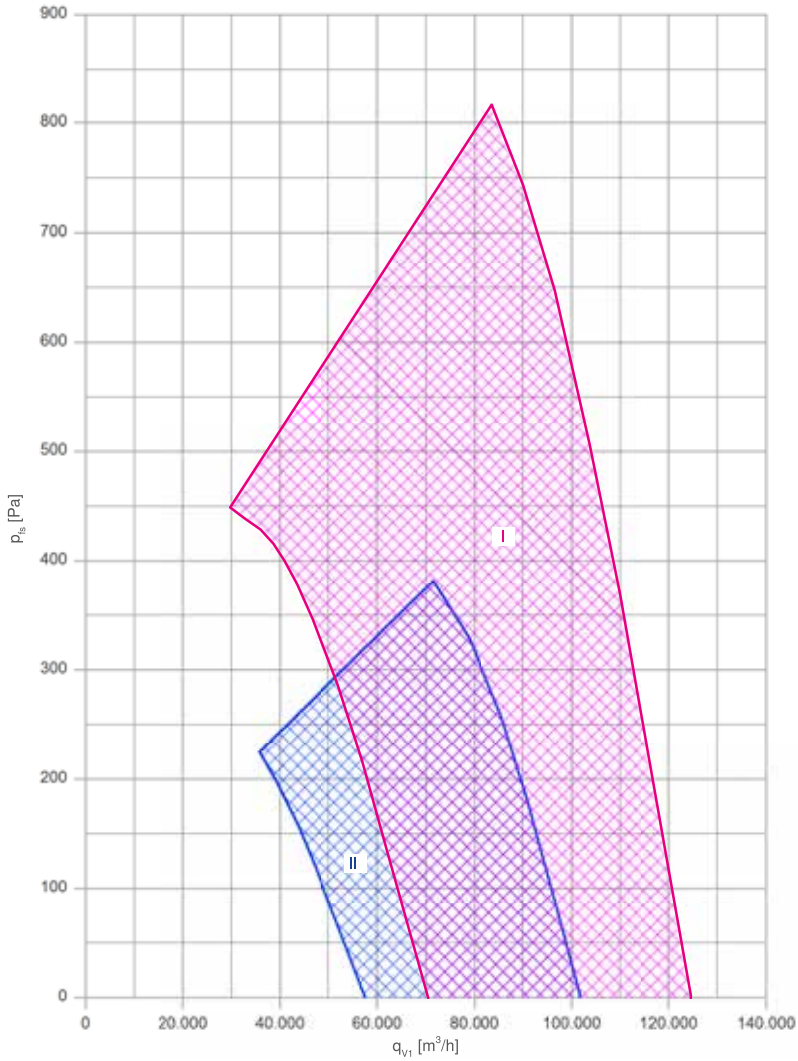
Characteristic diagram	Type	Blade setting angle* min. - max. degree	Motor size* min. - max.	Number of blades
I	DN12_-6_S	11 - 29	132 ... 250	3; 6; 9
II	DN12_-8_S	14 - 34	132 ... 225	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

Other versions on request.

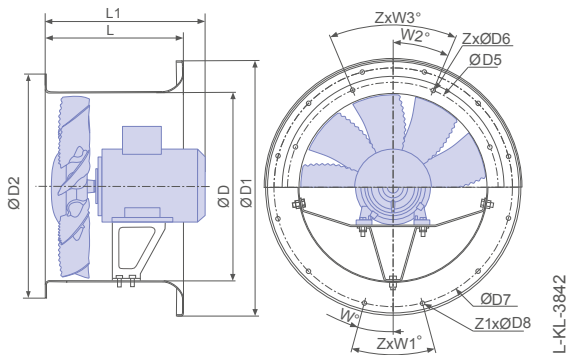


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L mm	L1* mm	ØD mm	ØD1 mm	ØD2 mm	ØD5 mm	ZxØD6 mm	ØD7 mm	Z1xØD8 mm	W°	ZxW1°	W2°	ZxW3°
DN12_-6_S	on request												
DN12_-8_S	700	964	1250	1507	1350	1320	20x15	1470	20x15	9°	20x18°	9°	20x18°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.

MAXventowlet

for three phase alternating current, 6- and 8-pole

DN14V



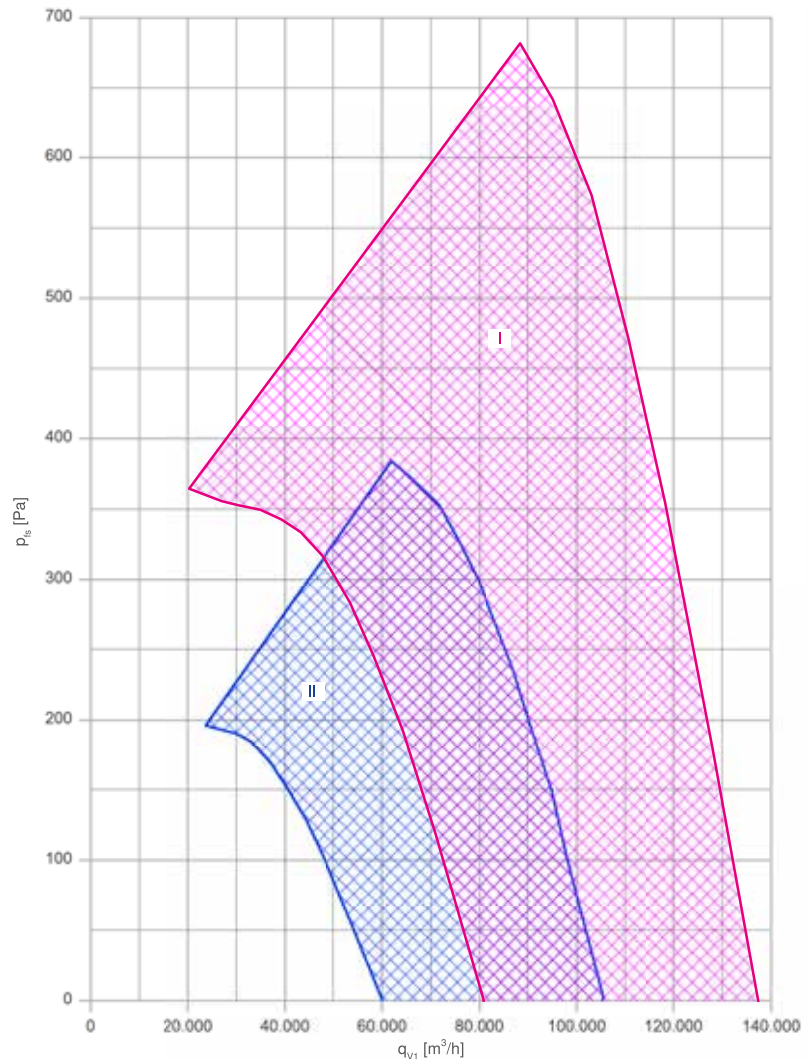
Description 50 Hz

Motor technology: AC
Rated voltage U_N : 3~ 400 V
Rated frequency f_N : 50 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Description 60 Hz

Motor technology: AC
Rated voltage U_N : 3~ 460 V
Rated frequency f_N : 60 Hz
Min. permitted ambient temperature $t_{amb(min)}$: -20 °C
Max. permitted ambient temperature $t_{amb(max)}$: 50 °C
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Technical data

Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN14_-6_S	11 - 29	160 ... 250	3; 6; 9
II	DN14_-8_S	11 - 29	132 ... 225	3; 6; 9

*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

Other versions on request.

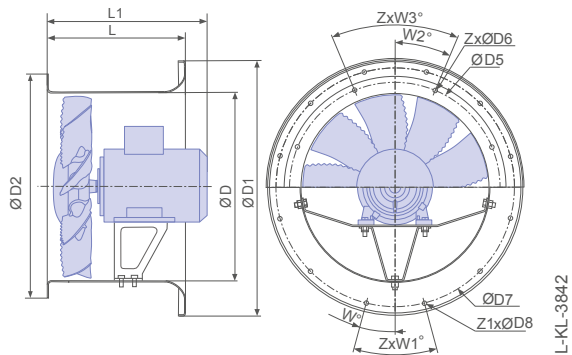


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.
For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	L mm	L1* mm	ØD mm	ØD1 mm	ØD2 mm	ØD5 mm	ZxØD6 mm	ØD7 mm	Z1xØD8 mm	W°	ZxW1°	W2°	ZxW3°
DN14_-6_S	on request												
DN14_-8_S	750	989	1400	1721	1500	1470	20x15	1680	20x19	7,5°	24x15°	9°	20x18°

*Motor size depends on blade setting angle, number of blades and number of poles in dependence of motor manufactures.



General notes

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The Royal League

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