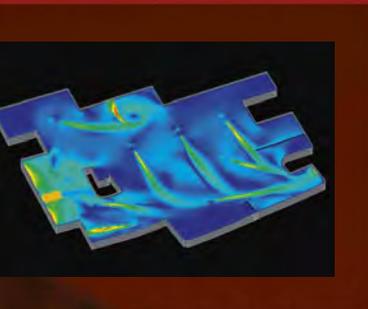


The Helios jet fan program has been developed over a number of years and the ventilation technology has been incorporated in car park ventilation for decades.

Jet fans are used in car parks for daily ventilation and also for smoke extraction in case of fire. They carry out an impulse effect on the air due to the generated air jet.

Thus, it is a continuous air movement in each jet direction towards the central extract or the next impulse fan unit.

In contrast to a ducted car park ventilation system the use of jet fans allows the control of the air flow to ensure continued and effective ventilation in an emergency and life-saving smoke extraction.



**Compact. High thrust performance.
Easy to assemble. Jet fans IV.**

Helios fans come in axial and centrifugal design, they are light and compact.

Practical, integrated standard mounting rails for easy installation to the ceiling complement the lightweight aluminum construction ideal. Lowest sound emissions at maximum thrust performance 6-75 N also speak further for themselves.

Axial jet fans Type IVA / B IVA

Quiet and universal in application - setting standard in thrust and weight.

- Highly efficient axial impeller for multi-directional operation.
- \varnothing 315-400, thrust 6-67 N
- Optional in F300 and F400 (300 °C or 400 °C/120 minutes)

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Centrifugal jet fans Type IVR / B IVR

Slimline, compact, lightweight and powerful. Perfect, even in limited space.

- Highly efficient centrifugal impeller with backward curved blades.
- \varnothing 500-560, thrust 16-75 N
- Optional in F300 (300 °C/120 minutes)

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The future of car park ventilation is with Helios.

High quality, compact and extremely powerful jet fans for the ventilation and smoke extraction of car parks. Easy to install due to the low weight. Certified according to

DIN EN 12101-3 and approved by DIBt. Come with first class service during planning, set up and operation.

Axial jet fan
IVA and B IVA F300/F400

■ **Application**

- For the ventilation and smoke extraction of car parks..
- For applications with air flow temperatures of 300 °C for 120 minutes and 400 °C for 120 minutes (F300 and F400). Suitable for continuous operation for temperature to max. +40 °C.

■ **Casing**

- Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet with safety guard according to DIN EN 13857 and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides
- By polygon silencers on both sides. Casing from corrosion-resistant aluminium, completely acoustically lined inside with abrasion-proof mineral wool according to DIN 4102 (not inflammable), restrained by perforated steel sheet.

■ **Impeller**

- High efficient impeller for unidirectional or reversible operation.
- Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.
- With aerodynamically optimised impeller from corrosion-resistant aluminium alloy, adjustable at standstill.

■ **Motor**

- Series IVA:
Maintenance-free 3-phase a.c. standard motor, protection to IP 55. Connection cable (Ölflex SY-cable), external cable with metal sheathing.
- Series B IVA:
Direct by IEC-three phase a.c. motor in temperature-resistant execution. Protection to IP 55. Fire-resistant external cable with sheathing.

■ **Motor protection**

For effective motor protection the motors are to be protected by means of motor protection switch on site. In case of smoke extraction this must be bridged.

■ **Electrical connection**

- Series IVA:
Terminal box from polymer fitted externally on casing as standard (IP 55).
- Series B IVA:
Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55).

■ **Air flow temperatures**

- Series IVA:
Suitable for ventilation from -20 °C to +40 °C continuous temperature.
- Series B IVA:
Suitable for smoke gases to 300 °C/120 minutes (F300) or 400 °C/120 minutes (F400).

■ **Air flow direction**

Depending on the selected type an unidirectional as well as a 100 % reversible air flow direction is possible.

■ **Certification**

The smoke and heat exhaust fans B VAR were tested to DIN EN 12101-3.
 CE-approval:
 F300: 1511 CPD - 502
 F400: 1511 CPD - 503
 DIBt approved

■ **Installation**

- Easy and safe installation by integrated standard mounting rails directly to the ceiling. Attaching the rails with only four fastening points.
- When installing a fan of series B IVAD temperature-resistant rawl plugs and screws (accessories, to be provided on site) are to be used.
- To avoid vibration transmission the use of anti vibration mounts is recommended.
- With girders or other suspensions the guide vane of the jet fan has to be adjusted. Thus, different distances can be realized to girders
- Compliance with national and regional fire protection regulations.

Centrifugal jet fan
IVR and B IVR F300

■ **Application**

- For the ventilation and smoke extraction of car parks..
- For applications with air flow temperatures of 300 °C (F300). Suitable for continuous operation for temperature to max. +40 °C.

■ **Casing**

Casing from corrosion-resistant aluminium in compact design. Aerodynamically shaped inlet cone. Permanently optimal surface protection by steel-powder coating.

■ **Impeller**

High efficient centrifugal impeller with backward curved blades from powder coated sheet steel. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

■ **Motor**

- Series IVR:
Maintenance-free 3-phase a.c. standard motor, protection to IP 55. Connection cable (Ölflex SY-cable), external cable with metal sheathing.
- Series B IVR:
Direct by IEC-three phase a.c. motor in temperature-resistant execution. Protection to IP 55. Fire-resistant external cable with sheathing.

■ **Motor protection**

For effective motor protection the motors are to be protected by means of motor protection switch on site. In case of smoke extraction this must be bridged.

■ **Electrical connection**

- Series IVR:
Terminal box from polymer fitted externally on casing as standard (IP 55).
- Series B IVR:
Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55).

■ **Air flow temperatures**

- Series IVR:
Suitable for ventilation from -20 °C to +40 °C continuous temperature.
- Series B IVR:
Suitable for smoke gases to 300 °C/120 minutes (F300)

■ **Certification**

The smoke and heat exhaust fans B VAR were tested to DIN EN 12101-3.
 CE-approval:
 F300 : 1511 CPD - 501
 DIBt approved

■ **Installation**

- Easy and safe installation by integrated standard mounting rails directly to the ceiling. Attaching the rails with only four fastening points.
- When installing a fan of series B IVRD temperature-resistant rawl plugs and screws (accessories, to be provided on site) are to be used.
- To avoid vibration transmission the use of anti vibration mounts is recommended.

■ Requirements for car park ventilation systems

- Each ventilation system must have at least two identical fans, which together provide the required total air flow volume with simultaneous operation. Explosion-proof fans are not required.
- Each fan of a powered supply or exhaust air system must be supplied by a dedicated circuit to which other systems may not be connected.
- Each final and auxiliary circuit of a powered supply and exhaust air system is to be carried out in such a way that an electrical fault does not cause failure of the entire ventilation system.
- If the ventilation system shall be operated with one fan from time to time, the fans must be connected in such a way that with failure of a fan the other switches on automatically.

■ Powered smoke and heat extraction

Sometimes the smoke and heat extraction is also prescribed in addition to the pure ventilation function.

- The demands of the GaVO in Germany with regard to the powered smoke and heat extraction have the following in common:
- Automatic switching on in case of smoke.
- Maximum stress temperature of 300 °C (F300)/1 hour.
- 10 air changes per hour.
- Functional endurance of the electrical cable systems from external fire at least 1 ½ hours.

■ Isolator switch and control

A use of isolator switches on smoke and heat exhaust fans is only permissible if it is secured

against unauthorized operation. This can be done through the use of key switches or by attaching a padlock. Furthermore, the terminal boxes of smoke and heat exhaust fans must be temperature resistant. The control equipment (cabinets) of smoke and heat exhaust fans may not be placed inside the garage, but are to be installed outside the fire risk areas.

■ Car park ventilation systems

The perfect ventilation solution in a car park consists of:

- Jet fans for development of a controlled air flow in the direction of the extract air unit, and for after-flow of the supply air.
- Central extract units for extraction of waste air at ambient temperature and/or smoke gas in case of fire.
- Supply air fans, if air supply via access ramp or other supply air openings is not sufficient.

■ Functionality in the ventilation mode

Through the generated wake turbulence indoor air is induced into the jet. Due to this induction effect and a mixture of indoor air the discharge flow rate of the fan increases by approx. tenfold to an effective total air flow rate.

Thus, a reliable and highly effective air purging of the car park is guaranteed. Dead zones – as in duct-guided conventional extract air systems – are avoided by the use of jet fans.

- Extract air fans discharge the waste air of the car park. The supply air enters passively via the entrance and exit alternatively by powered supply air fans.

- The number of fans, size and exact positioning is specific to the project taking into consideration the structural conditions such as, geometry girders, columns etc.
- Helios jet fans are available in axial and centrifugal design. Depending on structural conditions or ventilation system requirements thus different solutions can be realised

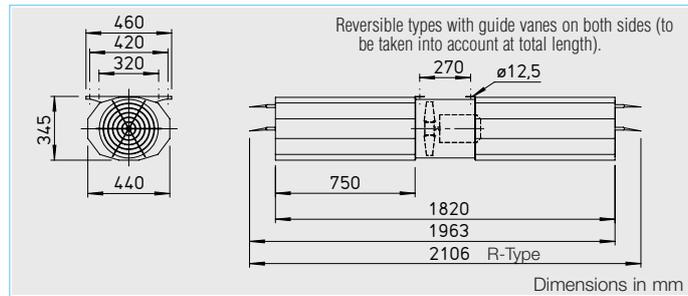
■ Functionality in case of fire

The jet fans IV from Helios are available in different temperature classes. If related to building law or regulatory requirements powered smoke and heat extraction is required, jet fans for a maximum ambient temperature of up to 40 °C are used. For use as smoke and heat exhaust fan the two temperature classes F300 (120 min.) and F400 (120 min.) are available.

- Whereas when designing smoke extraction for factories, assembly areas, sales outlets and non-residential buildings the aim is to provide an escape route keeping the smoke layer above head height. This cannot be achieved in car parks due to the low height of the ceiling (approx. 2.5 m) in order for people to escape in the event of a fire. It is therefore necessary to provide a low smoke or smoke free escape route.

Usually car parks are required to have fire alarm systems which monitor not only smoke within the car park but also offer a suitable control strategy which observes the impulse and smoke extraction fans in their operation. Their primary task is to prevent the spread of smoke and fumes effectively and to direct the smoke gases towards the main

extraction points depending on the design strategy the car parks can be kept smoke-free. By the use of reversible thrust impulse fans all fire locations may be dealt with.



High quality, powerful jet fan with optimal dimensions for minimum space. Suitable for ventilation of car parks with ambient temperature from up to 40 °C.

Special features

- Low noise emission.
- Maximum thrust
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..)

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from polymer fitted externally on casing as standard (IP 55).

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

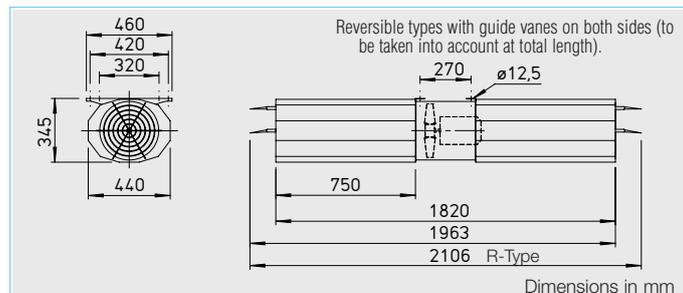
SDZ



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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾	Nominal motor power	Current full load	Current initial	Wiring diagram	Max. air flow temperature	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	Ref.No.
		N	m/s	V m ³ /h	min ⁻¹		dB(A)	kW	A	A	No.	+°C	kg	Type	Ref.No.
3 Phase motor, 400 V, 50 Hz, protection to IP 55															
IVAD 315/2 R	4102	23	15,4	4400	2840	yes	59	1,10	2,4	16,6	498	40	37	SDZ 1	1454
IVAD 315/2	4110	25	15,9	4600	2840	no	58	1,10	2,4	16,6	498	40	37	SDZ 1	1454
Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
IVAD 315/4/2 R	4101	6/23	7,6/15,3	2200/4400	1380/2840	yes	39/59	0,25/0,95	0,9/2,3	4,6/17,2	471	40	42	SDZ 1	1454
IVAD 315/4/2	4109	6/24	7,9/15,8	2300/4500	1380/2840	no	39/58	0,25/0,95	0,9/2,3	4,6/17,2	471	40	42	SDZ 1	1454

¹⁾ Measured under freefield conditions in 45°, distance of 3 m



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation respectively smoke extraction of car parks. Temperature range optional 300 °C/120 min. or 400 °C/120 min (for smoke extraction) respectively up to 70 °C at continuous operation.

Special features

- Low noise emission.
- Maximum thrust.
- Easy and fast to install due to the lightweight (aluminium construction).
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..).

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on

both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3. With aerodynamically optimised impeller from corrosion-resistant aluminium alloy, adjustable at standstill.

Motor

IEC 3-phase standard motor in temperature-resistant execution, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl

plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55). On site wiring by temperature-resistant cable.

Certification

- Tolerances according to DIN 2768
- Power measuring according to DIN 24163
- F300 + F400 tested according to DIN EN 12101-3:2002 CE certification no.1511
- CPD-502 (F300) CE certification no.1511
- CPD-503 (F400)
- DIBt approved

Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

SDZ 1 F

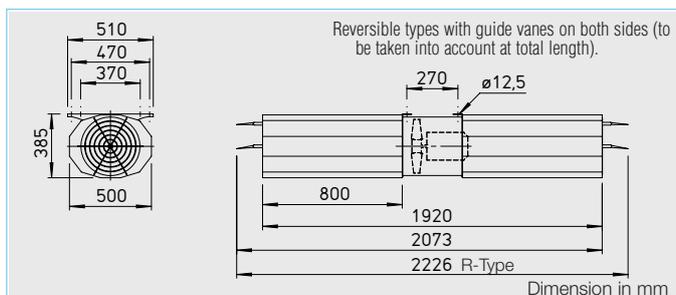


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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾	Nominal motor power	Current full load	Current initial	Wiring diagram	Max. air flow temperature ²⁾	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)
		N	m/s	V m ³ /h	min ⁻¹		dB(A)	kW	A	A	No.	+°C	kg	Type Ref.No.
F300 3 Phase motor, 400 V, 50 Hz, protection to IP 55														
B IVAD 315/2 R F300	4118	23	15,4	4400	2840	yes	59	1,10	2,5	17,2	498	40 / 300	41	SDZ 1 F 1943
B IVAD 315/2 F300	4126	24	15,9	4600	2840	no	58	1,10	2,5	17,2	498	40 / 300	41	SDZ 1 F 1943
F300 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55														
B IVAD 315/4/2 R F300	4117	6/23	7,8/15,6	2300/4500	1410/2870	yes	40/60	0,25/0,95	0,9/2,3	4,9/17,4	471	40 / 300	40	SDZ 1 F 1943
B IVAD 315/4/2 F300	4125	7/25	8,1/16,2	2300/4600	1410/2870	no	39/58	0,25/0,95	0,9/2,3	4,9/17,4	471	40 / 300	40	SDZ 1 F 1943
F400 3 Phase motor, 400 V, 50 Hz, protection to IP 55														
B IVAD 315/2 R F400	4134	23	15,3	4400	2810	yes	59	1,10	2,3	13,9	498	40 / 400	42	SDZ 1 F 1943
B IVAD 315/2 F400	4142	24	15,8	4500	2810	no	58	1,10	2,3	13,9	498	40 / 400	42	SDZ 1 F 1943
F400 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55														
B IVAD 315/4/2 R F400	4133	6/23	7,6/15,3	2200/4400	1390/2810	yes	39/59	0,25/1,10	0,8/2,4	2,9/14,4	471	40 / 400	43	SDZ 1 F 1943
B IVAD 315/4/2 F400	4141	6/24	7,9/15,7	2300/4500	1390/2810	no	37/58	0,25/1,10	0,8/2,4	2,9/14,4	471	40 / 400	43	SDZ 1 F 1943

¹⁾ Measured under freefield conditions in 45°, distance of 3 m

²⁾ In ventilation mode / Smoke exhaust (for at least 120 minutes)



High quality, powerful jet fan with optimal dimensions for minimum space. Suitable for ventilation of car parks with ambient temperature from up to 40 °C.

Special features

- Low noise emission.
- Maximum thrust
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..)

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from polymer fitted externally on casing as standard (IP 55).

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Accessories

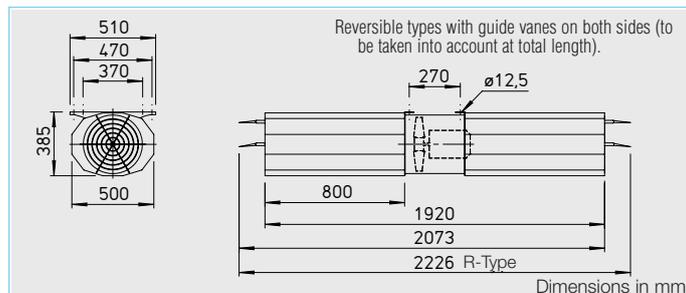
Anti vibration mounts for suspension (1 Set = 4 pcs.)

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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾ L _{Pa}	Nominal motor power	Current		Wiring diagram	Max. air flow temperature	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
									full load	initial				Type	Ref.No.
3 Phase motor, 400 V, 50 Hz, protection to IP 55															
IVAD 355/2 R	4105	38	17,7	6400	2890	yes	63	1,50	3,2	22,1	498	40	47	SDZ 1	1454
IVAD 355/2	4113	46	19,4	7000	2890	no	63	1,50	3,3	22,1	498	40	47	SDZ 1	1454
Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
IVAD 355/4/2 R	4104	10/37	8,7/17,4	3200/6300	1380/2840	yes	38/62	0,30/1,40	0,8/3,3	4,5/25	471	40	48	SDZ 1	1454
IVAD 355/4/2	4112	11/42	9,4/18,7	3400/6800	1380/2840	no	41/62	0,30/1,40	0,8/3,3	4,5/25	471	40	48	SDZ 1	1454

¹⁾ Measured under freefield conditions in 45°, distance of 3 m



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation respectively smoke extraction of car parks. Temperature range optional 300 °C/120 min. or 400 °C/120 min (for smoke extraction) respectively up to 70 °C at continuous operation.

Special features

- Low noise emission.
- Maximum thrust.
- Easy and fast to install due to the lightweight (aluminium construction).
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..).

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet

with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3. With aerodynamically optimised impeller from corrosion-resistant aluminium alloy, adjustable at standstill.

Motor

IEC 3-phase standard motor in temperature-resistant execution, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-

proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55). On site wiring by temperature-resistant cable.

Certification

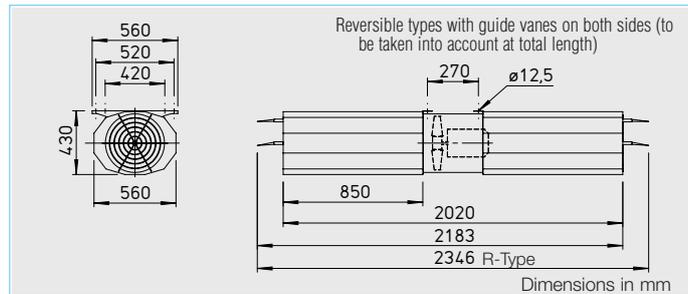
- Tolerances according to DIN 2768
- Power measuring according to DIN 24163
- F300 + F400 tested according to DIN EN 12101-3:2002 CE certification no.1511
- CPD-502 (F300) CE certification no.1511
- CPD-503 (F400)
- DIBt approved

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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾	Nominal motor power	Current		Wiring diagram	Max. air flow temperature ²⁾	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
									full load	initial				Type	Ref.No.
		N	m/s	ṽ m³/h	min ⁻¹		dB(A)	kW	A	A	No.	+°C	kg		
F300 3 Phase motor, 400 V, 50 Hz, protection to IP 55															
B IVAD 355/2 R F300	4121	37	17,4	6300	2840	yes	62	1,50	3,3	22,8	498	40 / 300	51	SDZ 1 F	1943
B IVAD 355/2 F300	4129	44	19,0	6900	2840	no	63	1,50	3,3	22,8	498	40 / 300	51	SDZ 1 F	1943
F300 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
B IVAD 355/4/2 R F300	4120	10/38	8,8/17,6	3200/6400	1430/2880	yes	41/62	0,30/1,40	1,1/3,1	6,0/23,7	471	40 / 300	53	SDZ 1 F	1943
B IVAD 355/4/2 F300	4128	11/44	9,5/19,0	3500/6900	1430/2880	no	41/63	0,30/1,40	1,1/3,1	6,0/23,7	471	40 / 300	53	SDZ 1 F	1943
F400 3 Phase motor, 400 V, 50 Hz, protection to IP 55															
B IVAD 355/2 R F400	4137	37	17,5	6400	2870	yes	62	1,50	3,1	21,1	498	40 / 400	54	SDZ 1 F	1943
B IVAD 355/2 F400	4145	45	19,2	7000	2870	no	63	1,50	3,1	21,1	498	40 / 400	54	SDZ 1 F	1943
F400 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
B IVAD 355/4/2 R F400	4136	10/38	8,7/17,7	3200/6400	1440/2900	yes	41/62	0,37/1,50	1,3/3,5	5,6/23,0	471	40 / 400	52	SDZ 1 F	1943
B IVAD 355/4/2 F400	4144	12/46	9,7/19,4	3500/7000	1440/2900	no	41/64	0,37/1,50	1,3/3,5	5,6/23,0	471	40 / 400	52	SDZ 1 F	1943

¹⁾ Measured under freefield conditions in 45°, distance of 3 m

²⁾ In ventilation mode / Smoke exhaust (for at least 120 minutes)



High quality, powerful jet fan with optimal dimensions for minimum space. Suitable for ventilation of car parks with ambient temperature from up to 40 °C.

Special features

- Low noise emission.
- Maximum thrust
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..)

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from polymer fitted externally on casing as standard (IP 55).

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

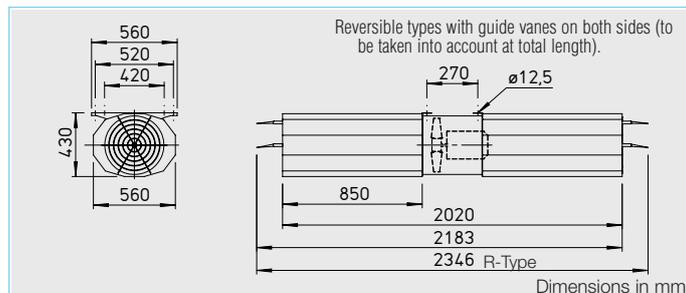
SDZ



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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾ L _{Pa}	Nominal motor power	Current		Wiring diagram	Max. air flow temperature	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
									full load	initial				Type	Ref.No.
3 Phase motor, 400 V, 50 Hz, protection to IP 55															
IVAD 400/2 R	4108	62	20,2	9200	2890	yes	67	2,20	4,5	31,4	498	40	59	SDZ 1	1454
IVAD 400/2	4116	67	21,1	9600	2890	no	66	2,20	4,5	31,4	498	40	59	SDZ 1	1454
Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
IVAD 400/4/2 R	4107	15/60	9,9/19,8	4500/9000	1400/2840	yes	43/66	0,65/2,50	1,9/5,3	10,2/39,4	471	40	73	SDZ 2	1455
IVAD 400/4/2	4115	17/65	10,4/20,7	4700/9400	1400/2840	no	44/65	0,65/2,50	1,9/5,3	10,2/39,4	471	40	73	SDZ 2	1455

¹⁾ Measured under freefield conditions in 45°, distance of 3 m



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation respectively smoke extraction of car parks. Temperature range optional 300 °C/120 min. or 400 °C/120 min (for smoke extraction) respectively up to 70 °C at continuous operation.

Special features

- Low noise emission.
- Maximum thrust.
- Easy and fast to install due to the lightweight (aluminium construction).
- Direct driven, axial.
- Optionally fully reversible (model IVA..R..).

Casing

Duct casing from corrosion-resistant aluminium with motor support and ceiling suspension. Aerodynamically shaped inlet

with safety guard and extract cone with adjustable guide vanes. Fully reversible types with adjustable guide vanes on both sides (to be taken into account at total length).

Impeller

High efficient impeller for unidirectional or reversible operation. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3. With aerodynamically optimised impeller from corrosion-resistant aluminium alloy, adjustable at standstill.

Motor

IEC 3-phase standard motor in temperature-resistant execution, protection to IP 55.

Noise insulation

By polygon silencers on both sides. High quality casing from aluminium, completely acoustically lined inside with abrasion-

proof mineral wool according to DIN 4102 (not inflammable), retained by perforated steel sheet.

Installation

Mounting rails integrated in series. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55). On site wiring by temperature-resistant cable.

Certification

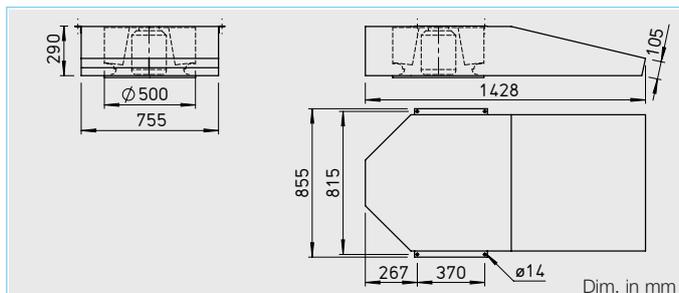
- Tolerances according to DIN 2768
- Power measuring according to DIN 24163
- F300 + F400 tested according to DIN EN 12101-3:2002 CE certification no.1511
- CPD-502 (F300) CE certification no.1511
- CPD-503 (F400)
- DIBt approved

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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	reversible	Sound pressure level ¹⁾	Nominal motor power	Current		Wiring diagram	Max. air flow temperature ²⁾	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
									full load	initial				Type	Ref.No.
		N	m/s	∇ m ³ /h	min ⁻¹		dB(A)	kW	A	A	No.	+°C	kg		
F300 3 Phase motor, 400 V, 50 Hz, protection to IP 55															
B IVAD 400/2 R F300	4124	60	19,9	9000	2840	yes	66	2,20	4,6	32,3	498	40 / 300	62	SDZ 1 F	1943
B IVAD 400/2 F300	4132	65	20,7	9400	2840	no	65	2,20	4,6	32,3	498	40 / 300	62	SDZ 1 F	1943
F300 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
B IVAD 400/4/2 R F300	4123	15/57	9,7/19,4	4400/8800	1440/2890	yes	44/65	0,40/1,90	1,50/4,2	8,1/31,4	471	40 / 300	62	SDZ 1 F	1943
B IVAD 400/4/2 F300	4131	16/63	10,2/20,3	4600/9200	1440/2890	no	44/66	0,40/1,90	1,50/4,2	8,1/31,4	471	40 / 300	62	SDZ 1 F	1943
F400 3 Phase motor, 400 V, 50 Hz, protection to IP 55															
B IVAD 400/2 R F400	4140	55	19,1	8700	2840	yes	66	2,20	4,5	29,6	498	40 / 400	63	SDZ 1 F	1943
B IVAD 400/2 F400	4148	65	20,7	9400	2840	no	65	2,20	4,5	29,6	498	40 / 400	63	SDZ 1 F	1943
F400 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55															
B IVAD 400/4/2 R F400	4139	15/60	9,9/19,9	4500/9000	1420/2850	yes	43/66	0,50/2,20	1,5/4,6	5,4/27,8	471	40 / 400	63	SDZ 1 F	1943
B IVAD 400/4/2 F400	4147	17/65	10,4/20,7	4700/9400	1420/2850	no	42/65	0,50/2,20	1,5/4,6	5,4/27,8	471	40 / 400	63	SDZ 1 F	1943

¹⁾ Measured under freefield conditions in 45°, distance of 3 m

²⁾ In ventilation mode / Smoke exhaust (for at least 120 minutes)



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation of car parks with ambient temperature from up to 40 °C.

Special features

- Low noise emission.
- Maximum thrust.
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, centrifugal.

Casing

Casing from corrosion-resistant aluminium in compact design. Aerodynamically shaped inlet cone. Permanently optimal surface protection by steel-powder coating.

Impeller

High efficient centrifugal impeller with welded, backward curved blades. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor, protection to IP 55.

Installation

Assembly bracket integrated as standard. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from polymer fitted externally on casing as standard (IP 55).

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

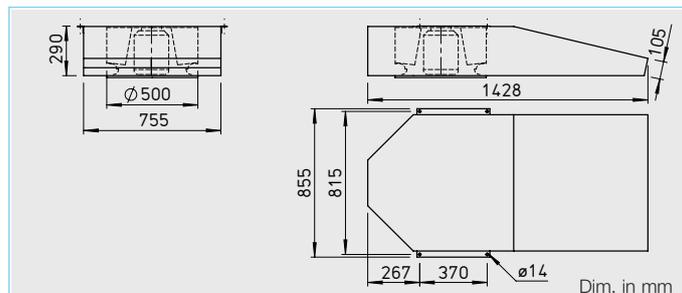
SDZ



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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	Sound pressure level ¹⁾	Nominal motor power	Current full load	Current initial	Wiring diagram	Max. air flow temperature	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)
		N	m/s	V m ³ /h	min ⁻¹	dB(A)	kW	A	A	No.	+°C	kg	Type Ref.No.
3 Phase motor, 400 V, 50 Hz, protection to IP 55													
IVRD 500/4	4149	43	21,3	6100	1440	73	1,50	3,3	20,5	498	40	63	SDZ 2 1455
Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55													
IVRD 500/8/4	4150	11/42	10,5/21,0	3000/6000	700/1420	55/73	0,40/1,60	1,7/3,8	5,4/21,7	471	40	61	SDZ 2 1455

¹⁾ Measured under freefield conditions in 45°, distance of 3 m



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation respectively smoke extraction of car parks.

Temperature range 300 °C/120 min. (for smoke extraction) respectively up to 70 °C at continuous operation.

Special features

- Low noise emission
- Maximum thrust
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, centrifugal.

Casing

Casing from corrosion-resistant aluminium in compact design. Aerodynamically shaped inlet cone. Permanently optimal surface protection by steel-powder coating.

Impeller

High efficient centrifugal impeller with welded, backward curved blades. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor in temperature-resistant execution, protection to IP 55.

Installation

Assembly bracket integrated as standard. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55). On site wiring by temperature-resistant cable.

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Certification

- Tolerances according to DIN 2768
- Power measuring according to DIN 24163
- F300 tested according to DIN EN 12101-3:2002 CE certification no.1511
- CPD-501 (F300)
- DIBt approved

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Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

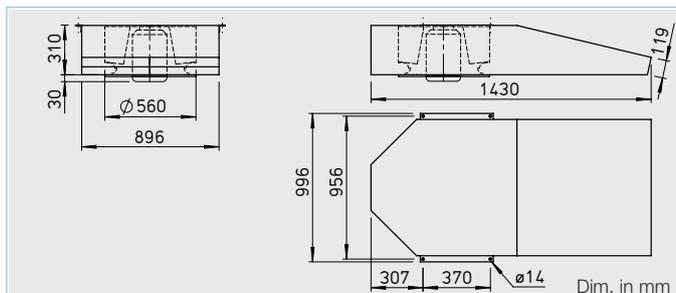
SDZ 1 F



Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	Sound pressure level ¹⁾	Nominal motor power	Current full load	Current initial	Wiring diagram	Max. air flow temperature ²⁾	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)
		N	m/s	V m ³ /h	min ⁻¹	dB(A)	kW	A	A	No.	+°C	kg	Type Ref.No.
F300 3 Phase motor, 400 V, 50 Hz, protection to IP 55													
B IVRD 500/4 F300	4155	42	21,0	6000	1420	73	1,50	3,3	20,5	498	40 / 300	63	SDZ 1 F 1943
F300 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55													
B IVRD 500/8/4 F300	4156	11/42	10,5/21,0	3000/6000	700/1420	55/73	0,40/1,60	1,7/3,8	5,4/21,7	471	40 / 300	63	SDZ 1 F 1943

¹⁾ Measured under freefield conditions in 45°, distance of 3 m

²⁾ In ventilation mode / Smoke exhaust (for at least 120 minutes)



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation of car parks with ambient temperature from up to 40 °C.

Special features

- Low noise emission.
- Maximum thrust.
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, centrifugal.

Casing

Casing from corrosion-resistant aluminium in compact design. Aerodynamically shaped inlet cone. Permanently optimal surface protection by steel-powder coating.

Impeller

High efficient centrifugal impeller with welded, backward curved blades. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor, protection to IP 55.

Installation

Assembly bracket integrated as standard. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from polymer fitted externally on casing as standard (IP 55).

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Accessories

Anti vibration mounts for suspension (1 Set = 4 pcs.)

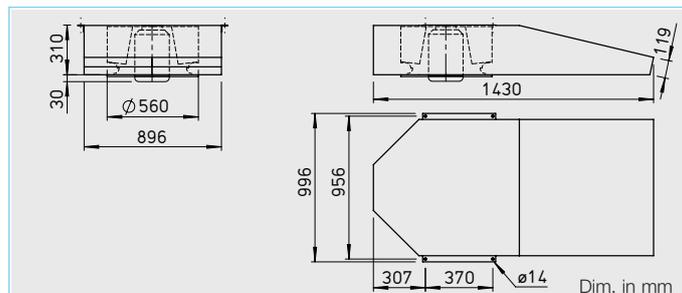
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Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	Sound pressure level ¹⁾ L _{Pa}	Nominal motor power	Current		Wiring diagram	Max. air flow temperature	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
								full load	initial				Type	Ref.No.
3 Phase motor, 400 V, 50 Hz, protection to IP 55														
IVRD 560/4	4153	75	25,2	8900	1420	77	2,20	4,6	34	498	40	72	SDZ 2	1455
Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55														
IVRD 560/8/4	4154	16/61	11,9/22,6	3900/8000	700/1420	58/77	0,40/1,60	1,7/3,8	5,4/21,7	471	40	68	SDZ 2	1455

¹⁾ Measured under freefield conditions in 45°, distance of 3 m



High quality, powerful jet fan with optimal dimensions for minimum space.

Suitable for ventilation respectively smoke extraction of car parks.

Temperature range 300 °C/120 min. (for smoke extraction) respectively up to 70 °C at continuous operation.

Special features

- Low noise emission
- Maximum thrust
- Easy and fast to install due to the lightweight (aluminium construction)
- Direct driven, centrifugal.

Casing

Casing from corrosion-resistant aluminium in compact design. Aerodynamically shaped inlet cone. Permanently optimal surface protection by steel-powder coating.

Impeller

High efficient centrifugal impeller with welded, backward curved blades. Dynamically balanced according to DIN ISO 1940-1, balancing quality 6.3.

Motor

IEC 3-phase standard motor in temperature-resistant execution, protection to IP 55.

Installation

Assembly bracket integrated as standard. They are attached directly to the ceiling by means of rawl plugs (accessories, to be provided on site) at four fastening points. To avoid vibration transmission the use of anti vibration mounts is recommended (SDZ, accessories, see chart).

Electrical connection

Terminal box from aluminium die-casting fitted externally on casing as standard (IP 55). On site wiring by temperature-resistant cable.

Assembly

During installation the federal, national, and local regulations and ordinances are to be observed.

Certification

- Tolerances according to DIN 2768
- Power measuring according to DIN 24163
- F300 tested according to DIN EN 12101-3:2002 CE certification no.1511
- CPD-501 (F300)
- DIBt approved

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Accessories
Anti vibration mounts for suspension (1 Set = 4 pcs.)



Type	Ref.No.	Thrust	Air flow speed	Max. air flow volume	R.P.M.	Sound pressure level ¹⁾	Nominal motor power	Current		Wiring diagram	Max. air flow temperature ²⁾	Nominal weight ca.	Anti vibration mounts (1 set = 4 pcs.)	
								full load	initial				Type	Bestell-Nr.
F300 3 Phase motor, 400 V, 50 Hz, protection to IP 55														
B IVRD 560/4 F300	4159	75	25,2	8900	1410	77	2,20	5,2	34	498	40 / 300	70	SDZ 1 F	1943
F300 Pole-switching, 2 speed motor, 3 ph., Dahlander-Windings Y/YY, 400 V, 50 Hz, protection to IP 55														
B IVRD 560/8/4 F300	4160	16/61	11,9/22,6	3900/8000	700/1420	58/77	0,40/1,60	1,7/3,8	5,4/21,7	471	40 / 300	70	SDZ 1 F	1943

¹⁾ Measured under freefield conditions in 45°, distance of 3 m

²⁾ In ventilation mode / Smoke exhaust (for at least 120 minutes)