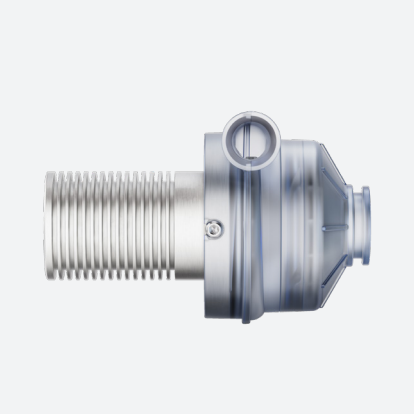
Specification

Radial Blower U65H4-024KX-6





General Information

Item	
Product type	Radial blower
Part no.	U65H4-024KX-6
Customer	N/A
Project no.	N/A
Modification	Standard product

Description

This efficient and super silent high performance blower has been specifically designed for demanding intensive care ventilation, where 100% oxygen resistance is required.

SWISS ENGINEERED

CE

BIOCOMPATIBILITY ISO 18562

REACh Compliant

RoHS III Compliant

Features

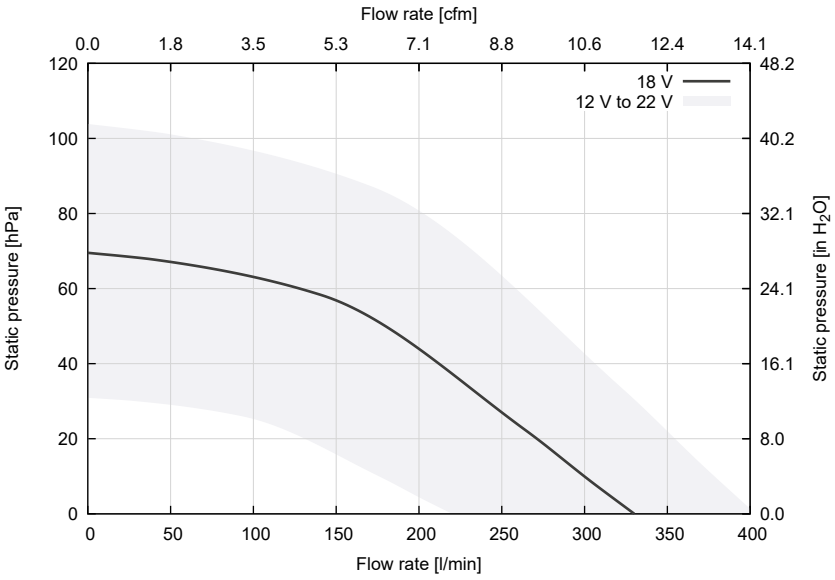
- Static pressure: 69.5 hPa, freeflow: 330 l/min
- 18 V_{DC} brushless DC-motor
- Two-stage blower with reduced speed
- Internal temperature sensor
- O_2 resistant

General Conditions

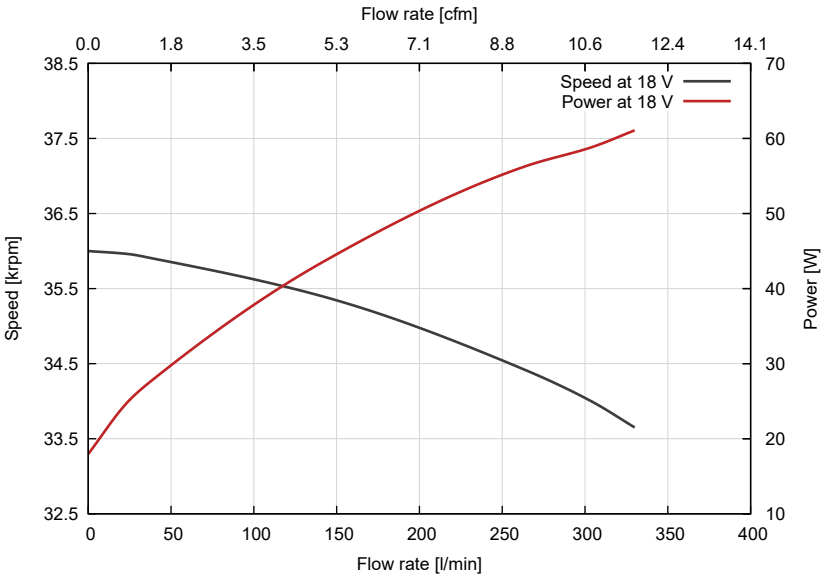
Unless otherwise stated all data are measured at nominal voltage and are valid at 20 °C ambient temperature and 1.2 kg/m³ standard air density. Values listed are nominal and can vary depending on the installation conditions and due to component tolerances. Test setup according to ISO 5801 with standardized inlet and outlet chambers. Tolerances based on specified speed data according to ISO 13348, grade 4: pressure +/-10 %, power +16 %. Tolerances based on constant voltage: speed +/-10 %, pressure +/-21 %, power +33 %. For continuous blower operation please refer to specified maximum ratings. Performance data outside normal operating range plotted for information only.

Performance

Pressure vs. Flow Characteristics



Speed and Power vs. Flow Characteristics



Shut-Off in Pressure Operation (Zero Flow Rate)	Unit	Value
Static pressure	[hPa]	69.5
Power consumption	[W]	18
Speed	[rpm]	36000

Shut-Off in Vacuum Operation (Zero Flow Rate)		
Static pressure	[hPa]	66
Power consumption	[W]	18
Speed	[rpm]	36000

Free-Air (Zero Static Pressure)		
Flow rate	[l/min]	330
Power consumption	[W]	60
Speed	[rpm]	33650

Technical Data

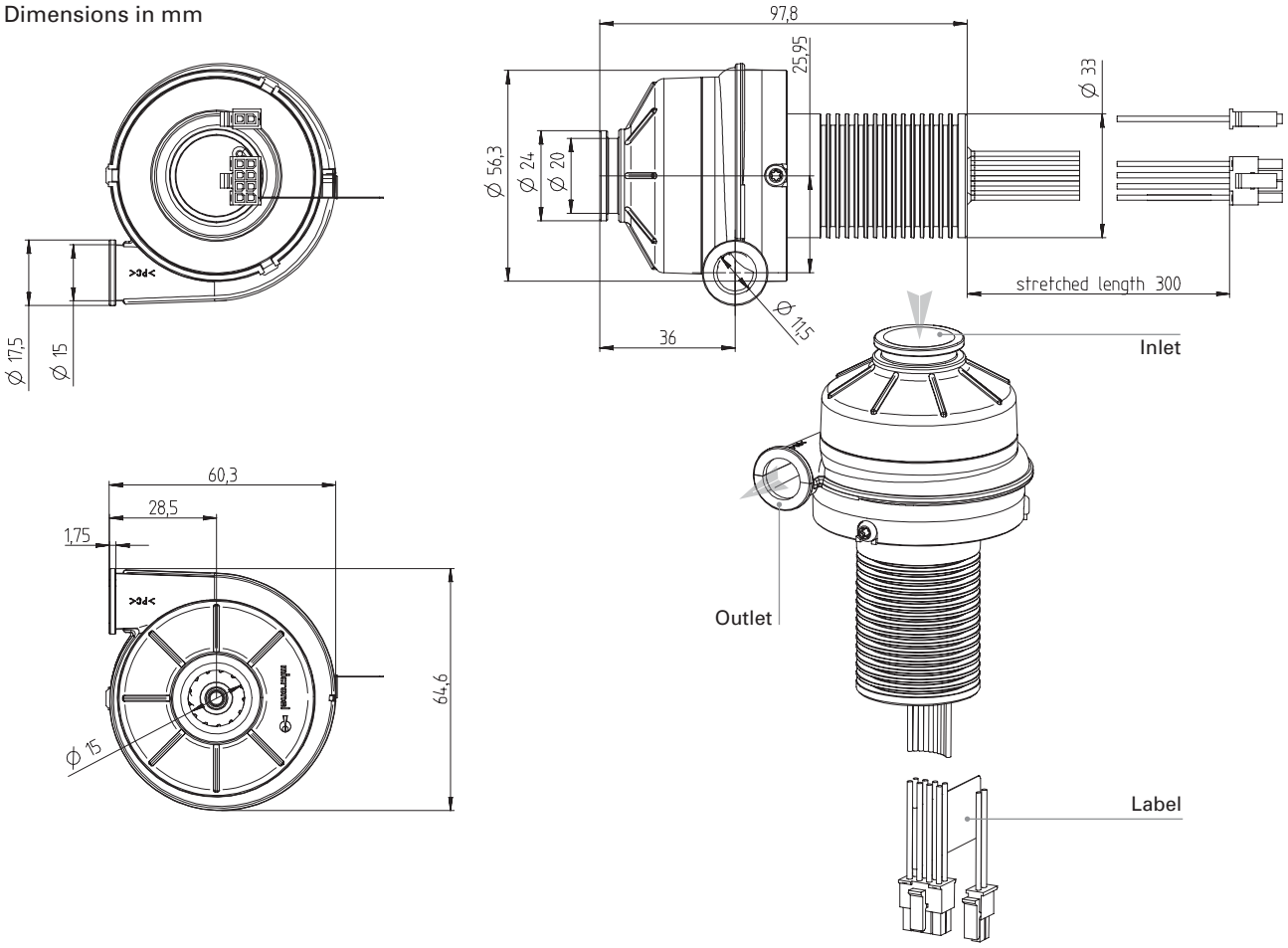
Electrical	Unit	Value
Nominal supply voltage	[V_{DC}]	18
Supply voltage range	[V_{DC}]	12 to 22
Maximum Ratings for Continuous Operation		
Minimum flow rate	[l/min]	0
Maximum speed	[rpm]	45 000
Maximum acceleration[1]	[rpm/ms]	40
Maximum power consumption	[W]	75
Maximum housing surface temperature	[°C]	85
Maximum NTC temperature	[°C]	85
Environmental		
Ambient temperature (operating)	[°C]	-20 to 50
Ambient temperature (storage)	[°C]	-20 to 70
Relative humidity (non-condensing)	[%RH]	10 to 95 (non condensing)
Ingress protection (EN60529)		IP30
Maximum oxygen concentration	[%]	100
Motor		
Type		Brushless direct current motor
Winding insulation class		F, 155 °C
Phase to phase resistance	[Ω]	0.182
Phase to phase inductance	[mH]	0.014
Speed constant	[rpm/V]	2 127
Torque constant	[mNm/A]	4.49
Number of pole pairs		1
Hall sensor type		Melexis US 2881 LUA
NTC type		10 kOhm (± 1 %) Art.-No. B57421V2103J062 R/ T8502
Lifetime		
L10 at 25 °C ambient temperature[1]	[h]	20 000
Acoustics		
Sound pressure level[2]	[dB(A)]	74
Leak Tightness		
Maximum leak flow rate	[l/min]	0.15 at 3.5 kPa
Mechanical		
Blower weight	[g]	270
Rotor weight	[g]	N/A
Rotor moment of inertia	[g · cm^2]	26.9

[1] Calculated value. Accelerated aging test at 45 °C ambient temperature, continuous operation 30 000 rpm @ 45 hPa / 45 l/min and normal cleanliness according to ISO 281. Temperature dependency of lifetime according to IPC-9591: factor 1.5 per 10 °C.

[2] Measured at distance of 1 meter from inlet.

Drawings

Dimensions in mm



Orientations	
Direction of rotation	Counter-clockwise (view on inlet)
Mounting position	Any direction

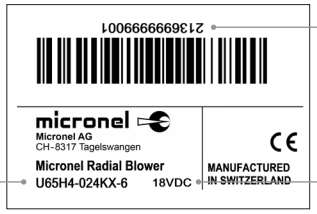
Materials

Components	Material
Blower housing	Polycarbonate (PC)
Impeller	PA6 glass fibre reinforced
Hub	Brass CuZn39Pb3
Motor housing	Aluminum 6082
Label	HD-PE
Connector	Molex Micro-Fit 8 Pol 43025-0800 2 Pol Molex 43025-0200
Crimp terminal	Molex Micro-Fit 43030-0001
Lead wire	Single lead Silicone insulation AWG24

Identification

Label

Design



Identification number:

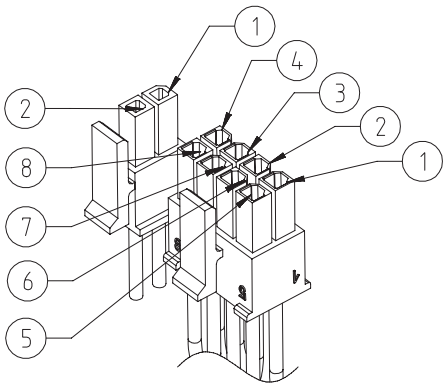
- Year, calendar week (YYWW)
- Fabrication number (6 digits)
- Serial number (3 digits)

Part number

Nominal voltage

Blower Pinout

Pin	Color	Description	AWG
1	Blue	Hall sensor 1	24
2	Black	Hall sensor 2	24
3	Yellow	V_{Hall} 4.5 V_{DC} to 18 V_{DC}	24
4	Orange	Motor winding 3	24
5	Grey	Hall sensor 3	24
6	Green	GND	24
7	Brown	Motor winding 1	24
8	Red	Motor winding 2	24
1	White	NTC	24
2	White	NTC	24



Notice

Handle in power-off conditions only!
Read operating manual!

Please see separate accessories list or contact Micronel Sales for a full list of options and accessories.

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