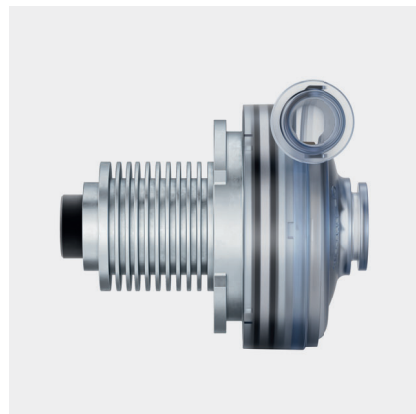


SPECIFICATION

Micronel Radial Blower

U65HN-024KS-6



GENERAL INFORMATION

Item

Product type	Radial blower
Article no.	U65HN-024KS-6
Manufacturer	Micronel AG
Customer	N/A
Project no.	P16006
Modification	Standard product

APPLICATIONS

The versatile, high-power Micronel blower type U65HN-024KS-6 can be widely used for medical applications such as Neonatal, Intensive care and transport ventilation and where constantly reliable pressure performance is needed. O₂ enriched breathing gas.

FEATURES

- Pressure: 95 hPa, flow rate: 435 l/min
- 24 V_{DC} brushless DC-motor
- Highly efficient
- Very quiet operation
- Low inertia rotor



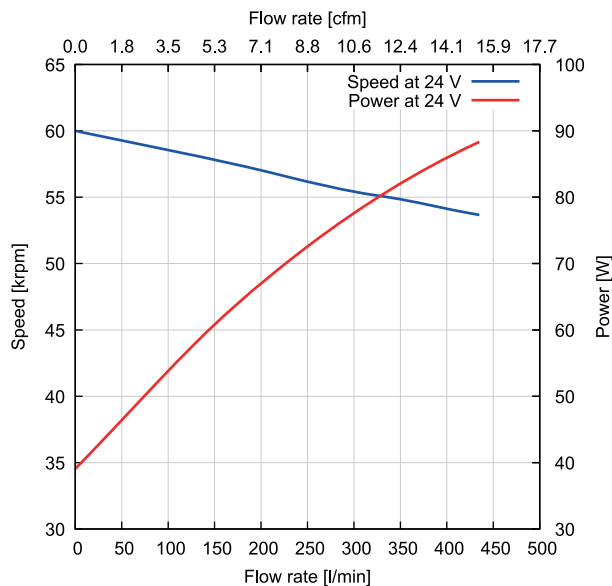
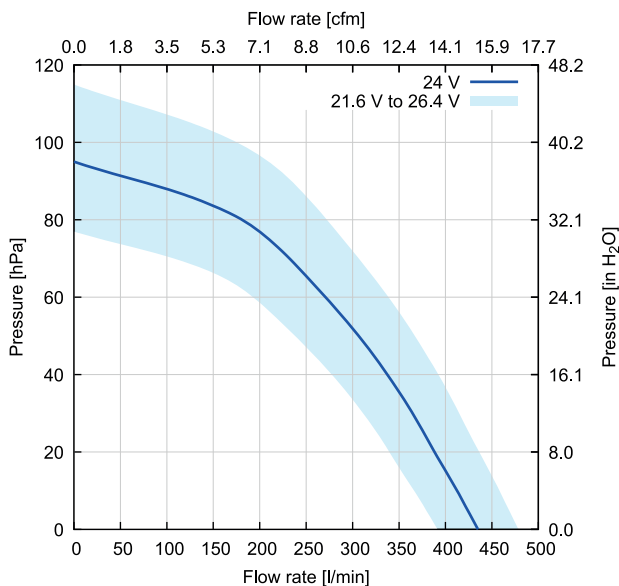
DECLARATION OF CONFORMITY
NON-USE OF
CONFLICT MINERALS

GENERAL CONDITIONS

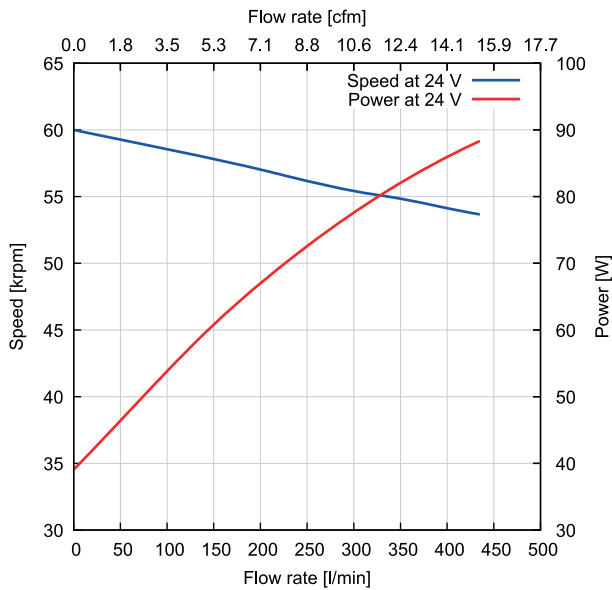
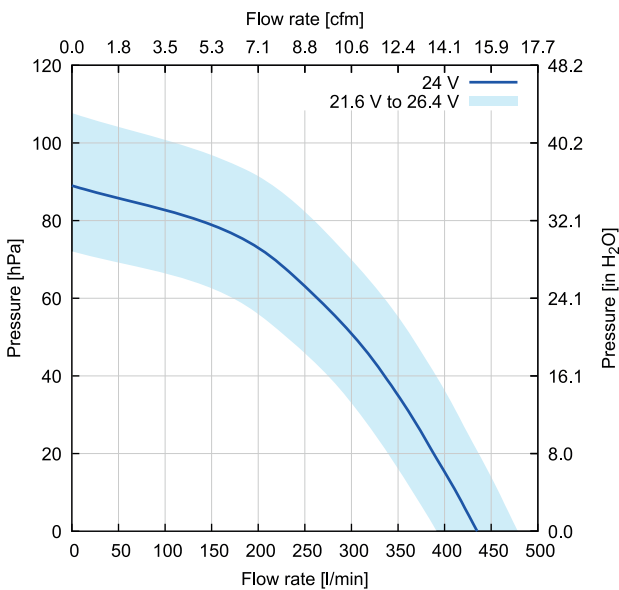
Unless otherwise stated all data are measured at nominal voltage and are valid at 20 °C ambient temperature and 1.2 kg/m³ standard air density. Values listed are nominal and can vary depending on the installation conditions and due to component tolerances. Test setup according to ISO 5801 with standardized 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 Operation at Outlet



Vacuum Operation at Inlet



Shut-Off in Pressure Operation (Zero Flow Rate)

	Unit	Value
Static pressure	[hPa]	95
Power consumption	[W]	40
Speed	[rpm]	60 000

Shut-Off in Vacuum Operation (Zero Flow Rate)

Static pressure	[hPa]	89
Power consumption	[W]	40
Speed	[rpm]	60 000

Free-Air (Zero Static Pressure)

Flow rate	[l/min]	435
Power consumption	[W]	90
Speed	[rpm]	54 000

TECHNICAL DATA

Electrical	Unit	Value
Nominal voltage	[V _{DC}]	24
Voltage range	[V _{DC}]	12 to 26.4
Maximum Ratings for Continuous Operation		
Minimum flow rate	[l/min]	10
Maximum speed	[rpm]	60 000
Maximum acceleration	[rpm/ms]	400
Maximum power consumption	[W]	90
Maximum housing surface temperature	[°C]	70
Maximum NTC temperature	[°C]	N/A
Environmental		
Ambient temperature (operating)	[°C]	-20 to 50
Ambient temperature (storage)	[°C]	-20 to 70
Relative humidity (noncondensing)	[%RH]	10 to 95 (non condensing)
Ingress protection (EN60529)		IP10
Maximum oxygen concentration	[%]	80 %
Motor		
Type		Brushless direct current motor with Hall sensors
Winding insulation class		F, 155 °C
Phase to phase resistance	[Ω]	0.21
Phase to phase inductance	[mH]	0.014
Speed constant	[rpm/V]	2700
Torque constant	[mNm/A]	3.53
Number of pole pairs		1
Hall sensor type		Allegro A 1220
NTC type		Resistance at 25° C 10 kOhm +/- 1 % beta (25-85° C), 3490 K
Lifetime		
L10 at 25 °C ambient temperature ⁽²⁾	[h]	20 000
Acoustics		
Sound pressure level ⁽³⁾	[dB(A)]	47
Leak Tightness		
Maximum leak flow rate	[l/min]	N/A
Mechanical		
Blower weight	[g]	240
Rotor weight	[g]	N/A
Housing pull-off torque	[Nm]	N/A
Rotor moment of inertia	[g · cm ²]	6.12

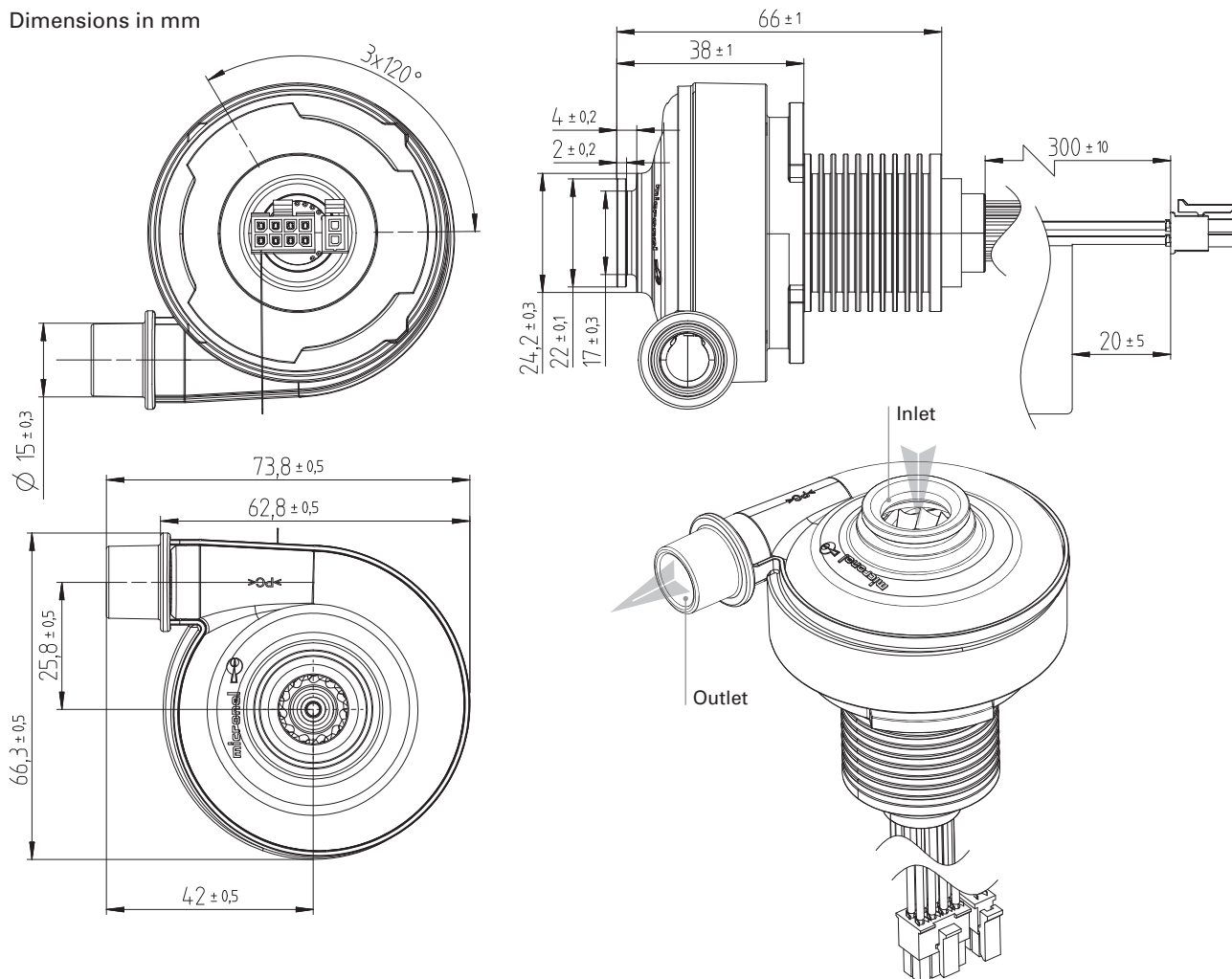
⁽¹⁾ To be considered when maximum start-up acceleration is required.

⁽²⁾ Calculated value. Accelerated aging test ongoing at 45 °C ambient temperature, operation cycle 11.5 h ON, 0.5 h OFF, normal cleanliness according to ISO 281. Temperature dependency of lifetime according to IPC-9591: factor 1.5 per 10 °C.

⁽³⁾ Measured at distance of 1 meter from inlet, with open inlet, outlet connected to breathing tube and 4 mm orifice in sound cancellation box at 1 kPa.

DRAWINGS

Dimensions in mm



Orientations

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

MATERIALS

Components	Material
Blower housing	Polycarbonate (PC) Flammability: Glow wire flammability index 850 °C / 1 mm (IEC 60695-2-12) Biocompatibility: USP Class VI / ISO 10993-5
Impeller	PEEK glass fibre reinforced Flammability: Glow wire flammability index 960 °C / 2 mm (IEC 60695-2-12) Biocompatibility: ISO 10993-5
Hub	Steel
Motor housing	Zinc die cast
Label	Plastic
Connector	Molex 43025-0800/43025-0200
Crimp terminal	Pin 1, 2, 3, 5, 6, 9, 10 Molex 43030-0005 Pin 4, 7, 8 Molex 43030-0002
Lead wire	PVC insulated AWG22/26 Flammability: UL 1007/1569

IDENTIFICATION

Label

Design

Article number
Nominal voltage

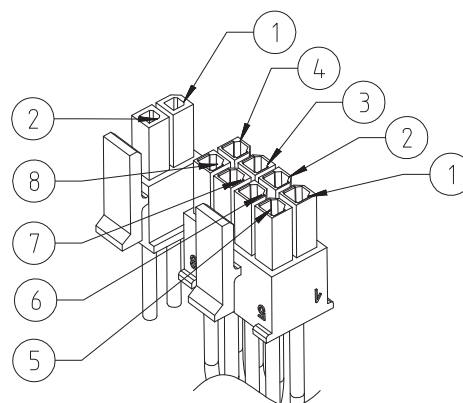


Identification number:

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

BLOWER PINOUT

Pin	Color	Descripti1	AWG
1	Yellow	Hall sensor 1	26
2	Brown	Hall sensor 2	26
3	Orange	V _{Hall} 4.5 to 24 V _{DC}	26
4	White	Motor winding 3	22
5	Grey	Hall sensor 3	26
6	Blue	GND	26
7	Red	Motor winding 1	22
8	Black	Motor winding 2	22
1	Purple	NTC	26
2	Purple	NTC	26



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.

All data are subject to change without advanced notice.
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