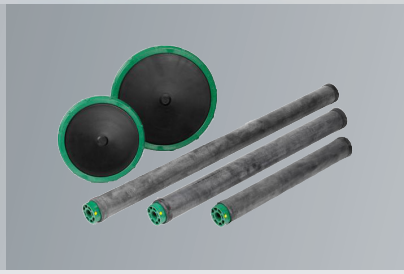
BIBUS®
SUPPORTING YOUR SUCCESS



Environmental Technology

Linear Diaphragm Pumps

Side Channel Blowers

Diffusers

www.bibus.co.uk

BIBUS - Network of Competencies

We are the link between the manufacturing plants and our customers. Our many years of trading partnerships are based on continuity and trust. In this way we achieve the best possible conditions for our customers. Over 60 years of experience in the specialist areas of Environmental Technologies, Pneumatics, Mechatronics and Hydraulics have made BIBUS a leading provider in European industry.

Efficient Logistics - Our customers make the highest demands

We offer a high degree of availability for our more then 250,000 group articles. Modern warehouse systems with barcodes and mobile data loging terminals ensure an efficient flow of goods intercompany.

We provide specific service and repairs in 26 European countries and guarantee a high degree of availability of spare parts throughout the product life cycle.

Quality

Quality and the relevant qualifications go without saying at BIBUS.

Applications

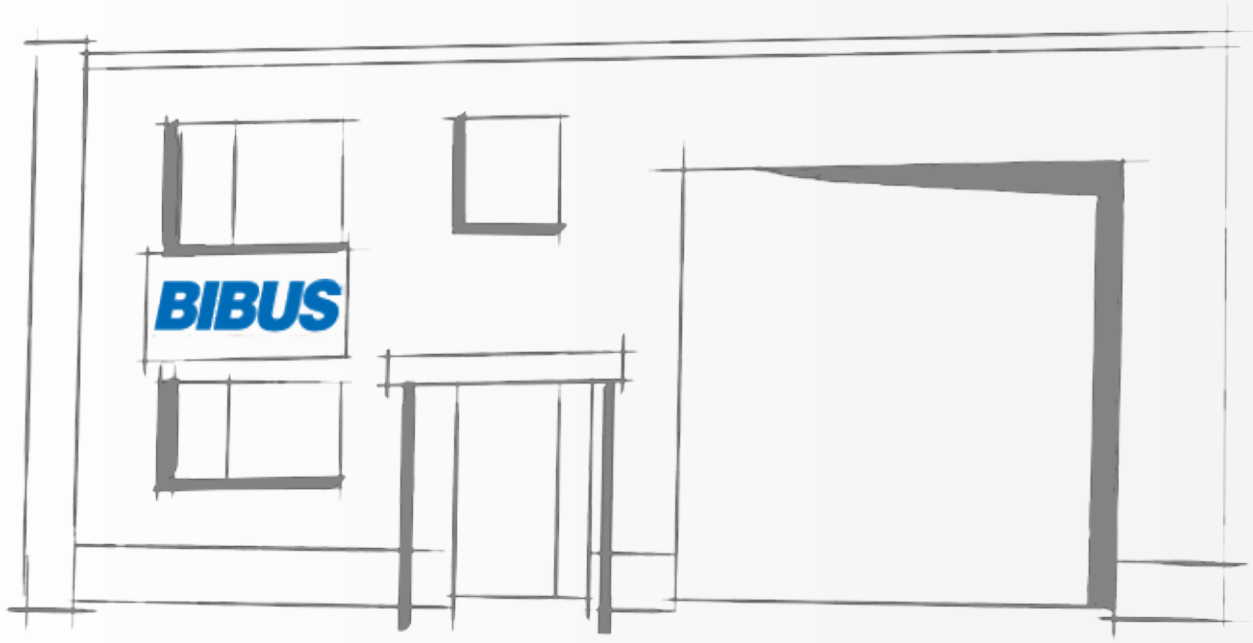
Water Treatment and Environmental Technology
- •Domestic Sewage Plants
- •Grease Trapping
- •Air Ventilation of Waste Water
- •Biogas Production

Aquaculture
- •Aeration of Koi and Garden Ponds
- •Filter Systems
- •Aeration of Chemical and Biological Bath

Medical and Health Technology
- •Scent Systems and Odor Neutralisation
- •Tank Pressuration
- •Airbeds and Decubitus Mattresses
- •Underwater Massages and Whirlpools
- •Compression Therapy
- •Inhalation Devices and Nebulizer

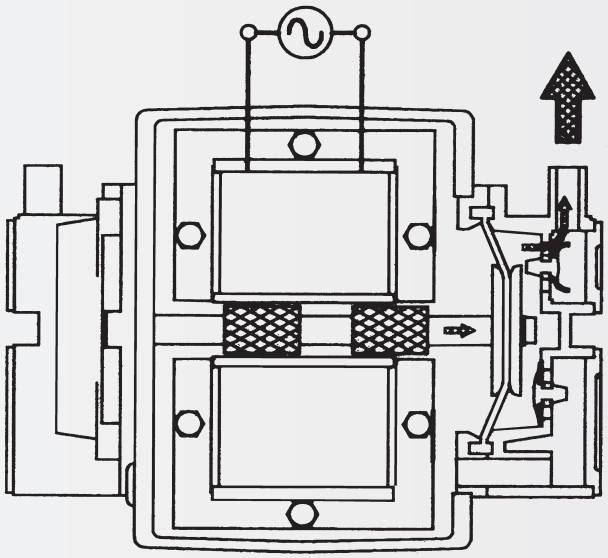
Aeration of Fuel Cell Stacks

Aqua-Air-Lights and Design Pillars



Operating Principle

The activated elecromagnets put a permanent magmnet into oscillation movements. The magnet holder moves now at the same frequency as that of the power supply (50Hz) back and forth between the electromagnets and sets the diaphragm going on both sides, which then changes the the valve box volume. By discharging via the valves, both pressure and vacuum can be realized.



Choose the right pump capacity

The technical specifications from different diaphragm pump manufacturers are based on various reference pressure levels. We therefore recommend that you compare the performance data of the diaphragm pumps exactly.

We are happy to advise you so that you find the correct model for your application.

Your Advantages

Long Life Expectancy
Motor and pump parts are combined in one single construction. The compact and light construction form and the simple mechanism offer a long and reliable period of operation.

High Degree of Efficiency
The principle of electromagnetic oscillation, which practically has no mechanical friction, minimises power consumption and provides a high degree of efficiency.

Low Noise Level
The soundproof casing and the muffler integrated in the tank base reduce operating noise.

Low Vibration
Motor and pump parts are separated by a vibration-isolating rubber, so only low vibration consists.

Completely Oil-Free
The oil-free operation guarantees a dry and unadulterated air flow.

Pulsation-free Air Flow
Specially formed pump chambers and the muffler integrated in the tank base provide an air flow, which is practically pulsation-free.

Weatherproof
Pumps are rainproof and weatherproof. However, they should not be exposed to direct sunlight, rain or snow.

Universal Service Kits
For each model series service kits are available. They are vacuum-packed in aluminium foil for better and longer life/storage.

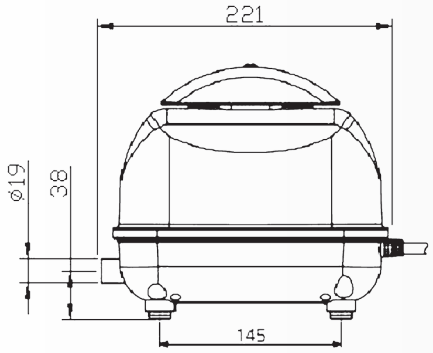
JDK Series

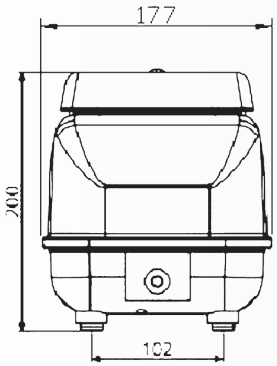
JDK - 40 / JDK - 50

Product Characteristics

- Compact Design
- Low Energy Consumption
- High Quality Plastic Housing
- Connecting Hose Included

Dimensions



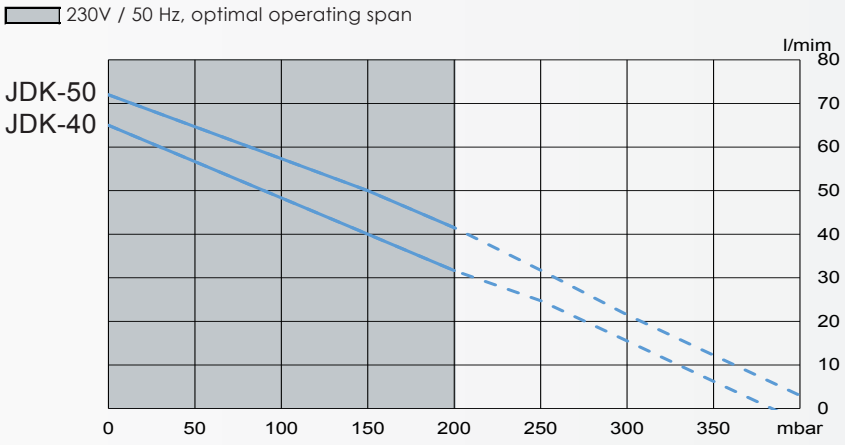


Technical Data

Model			JDK-40	JDK-50
Air Flow l/min	l/min	0 mbar	65	72
		50 mbar	59	65
		100 mbar	50	59
		150 mbar	43	50
		200 mbar	34	40
Voltage	V		230	
Power Consumption	W	200 mbar	35	42
Noise Level	dB(A)		33	36
Dimensions	mm	L x W x H	221 X 177 X 200	
Connection	mm	ø outside	19	
Net Weight	Kg		4.5	

1) Product performance may vary +/- 10% from performance curves. 2) Values at 50 Hz.

Performance Data



Spare Parts / Accessories

Spares	BIBUS Code
Service Kit	SE29
Diaphragm Sets	SE21
Filters	SE30
Magnets	SE4
Accessories	
Pressure Gauge	BP1
Pressure Relief Valve	SE11

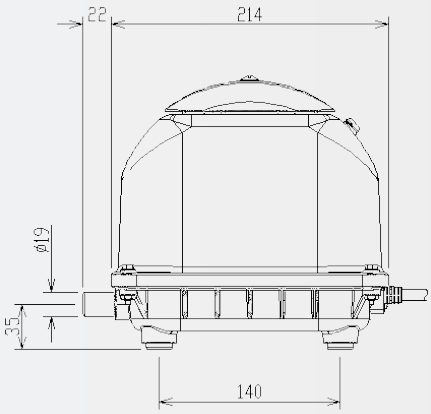
JDK Series

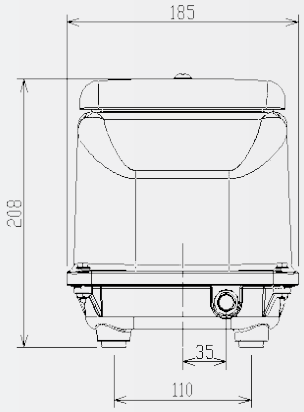
JDK - 60 / JDK - 80

Product Characteristics

- Compact Design
- Low Energy Consumption
- Protective Switch Inclusive
- LED Service Light (Cable Option)
- Connecting Hose Included
- Aluminium Housing

Dimensions





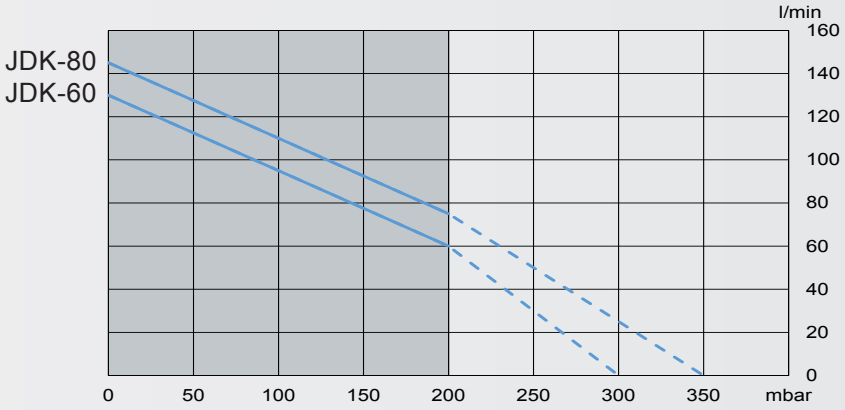
Technical Data

Model			JDK-60	JDK-80
Air Flow l/min	l/min	0 mbar	130	145
		50 mbar	125	130
		100 mbar	105	115
		150 mbar	85	90
		200 mbar	60	75
Voltage	V		230	
Power Consumption	W	200 mbar	40	50
Noise Level	dB(A)		36	38
Dimensions	mm	L x W x H	214 X 185 X 211	
Connection	mm	ø outside	19	
Net Weight	Kg		6.4	

1) Product performance may vary +/- 10% from performance curves. 2) Values at 50Hz.

Performance Data

230V / 50 Hz, optimal operating span



Spare Parts / Accessories

Spares	BIBUS Code
Service Kit	SE29
Diaphragm Sets	SE21
Filters	SE30
Magnets	SE4
Autostopper	SK53204150
Accessories	
Pressure Gauge	BP1
Pressure Relief Valve	SE11

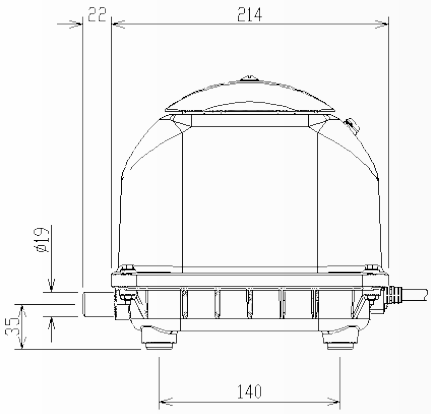
JDK Series

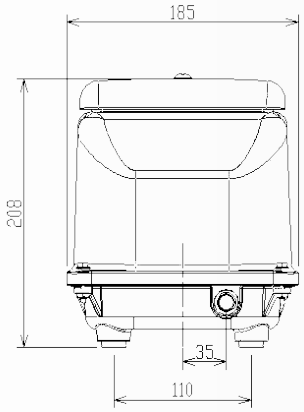
JDK - 100 / JDK - 120

Product Characteristics

- Compact Design
- Low Energy Consumption
- Protective Switch Inclusive
- LED Service Light (Cable Option)
- Connecting Hose Included
- Aluminium Housing

Dimensions





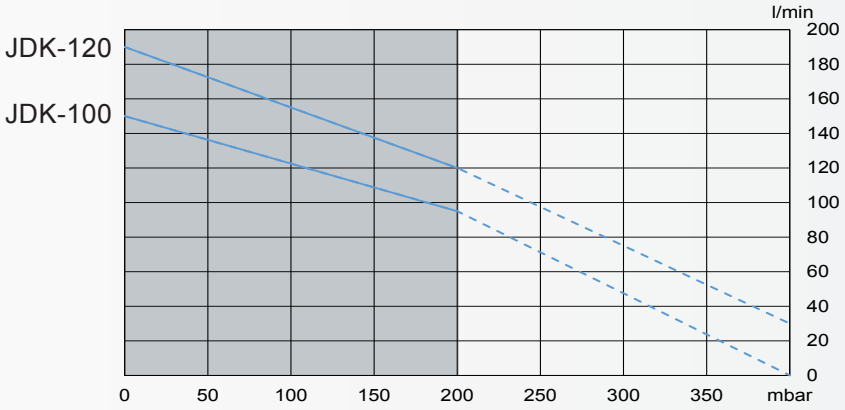
Technical Data

Model			JDK-100	JDK-120
Air Flow l/min	l/min	0 mbar	150	190
		50 mbar	145	180
		100 mbar	130	160
		150 mbar	110	140
		200 mbar	95	120
Voltage	V		230	
Power Consumption	W	200 mbar	75	95
Noise Level	dB(A)		42	45
Dimensions	mm	L x W x H	214 X 185 X 211	
Connection	mm	ø outside	19	
Net Weight	Kg		6.4	

1) Product performance may vary +/- 10% from performance curves. 2) Values at 50Hz.

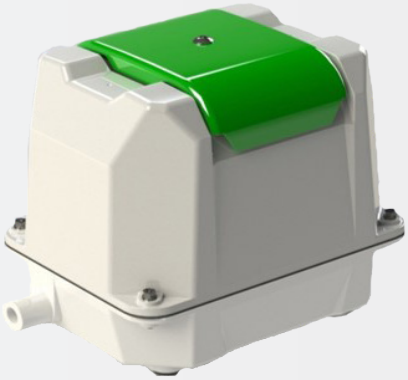
Performance Data

230V / 50 Hz, optimal operating span



Spare Parts / Accessories

Spares	BIBUS Code
Service Kit	SE29
Diaphragm Sets	SE21
Filters	SE30
Magnets	SE4
Autostopper	SK53204150
Accessories	
Pressure Gauge	BP1
Pressure Relief Valve	SE11



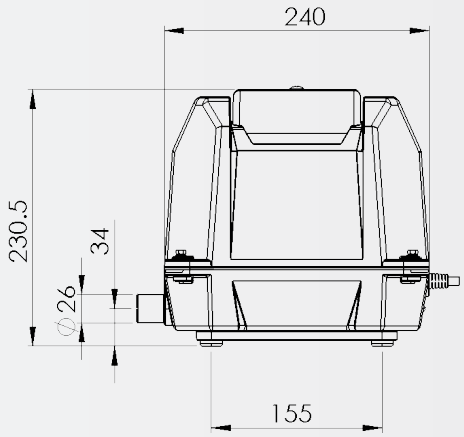
JDK Series

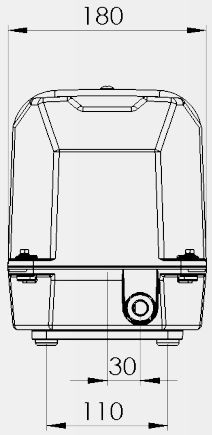
JDK - 150 / JDK - 200 / JDK - 250

Product Characteristics

- Simple Maintence
- Long Lifecycle
- Low Noise Level
- Protective Switch Inclusive
- Connecting Hose and Relief Valve Included
- LED Service Light (Cable Option)
- Aluminium Housing

Dimensions



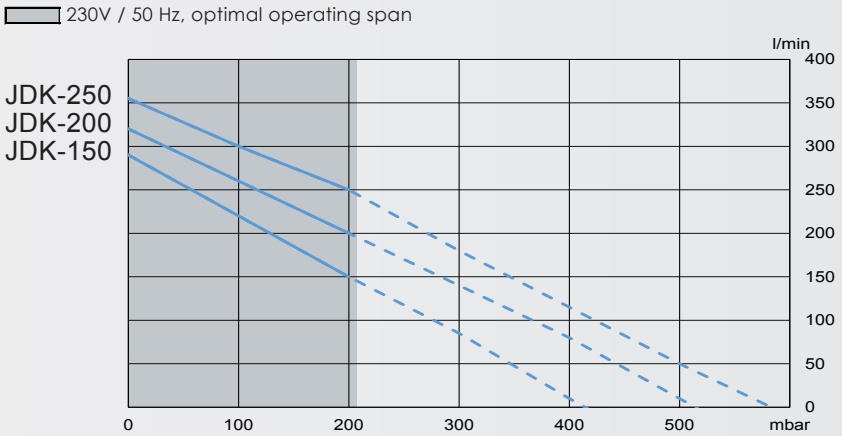


Technical Data

Model			JDK-150	JDK-200	JDK-250
Air Flow l/min	l/min	0 mbar	270	290	300
		50 mbar	240	270	325
		100 mbar	210	245	300
		150 mbar	180	220	270
		200 mbar	150	200	250
Voltage	V		230		
Power Consumption	W	200 mbar	115	180	225
Noise Level	dB(A)		44	46	52
Dimensions	mm	L x W x H	240 X 180 X 230.5		
Connection	mm	ø outside	26		
Net Weight	Kg		10		

1) Product performance may vary +/- 10% from performance curves. 2) Values at 50Hz.

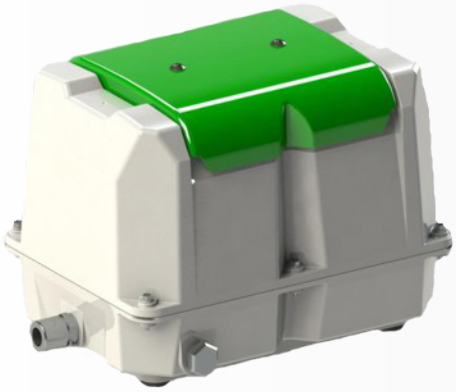
Performance Data



Spare Parts / Accessories

Spares	BIBUS Code
Service Kit	SE40
Diaphragm Sets	SE41
Filters	SE42
Magnets	SE43 / SE44
Autotoppers	SK53204150
Accessories	
Pressure Gauge	BP1

SE44 Magnet used only in the JDK-250



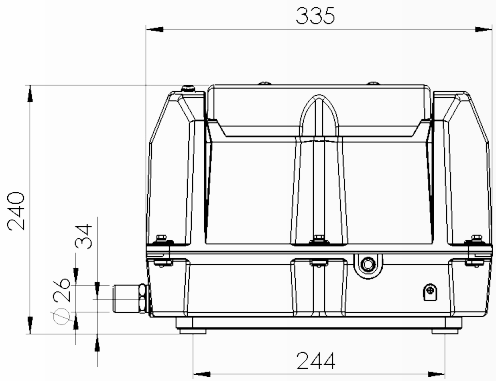
JDK Twin Series

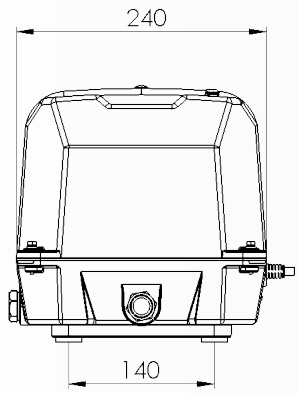
JDK - 300 / JDK - 400 / JDK - 500

Product Characteristics

- Simple Maintence
- Long Lifecycle
- Low Noise Level
- High Reliability Auto-Stopper
- Connecting Hose and Relief Valve Included
- LED Service Light (Cable Option)
- Aluminium Housing

Dimensions



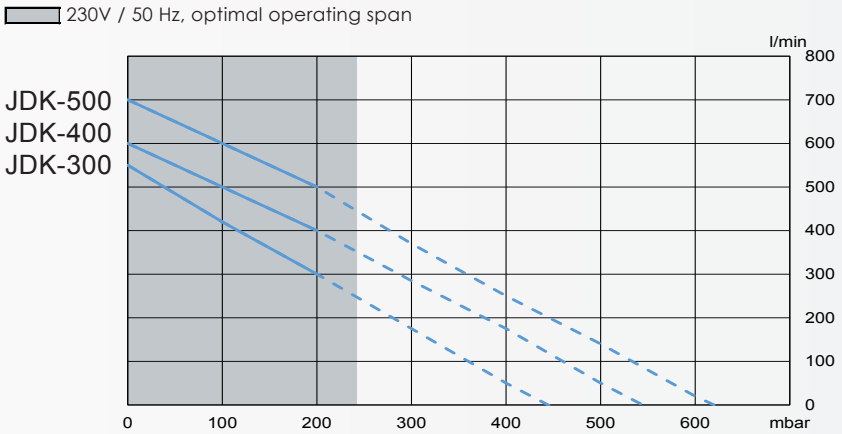


Technical Data

Model			JDK-300	JDK-400	JDK-500
Air Flow l/min	l/min	0 mbar	525	600	700
		50 mbar	480	560	655
		100 mbar	430	510	600
		150 mbar	375	460	545
		200 mbar	300	400	500
Voltage	V		230		
Power Consumption	W	200 mbar	230	360	450
Noise Level	dB(A)		52	54	58
Dimensions	mm	L x W x H	335 X 240 X238.5		
Connection	mm	ø outside	27		
Net Weight	Kg		18		

1) Product performance may vary +/- 10% from performance curves. 2) Values at 50Hz.

Performance Data

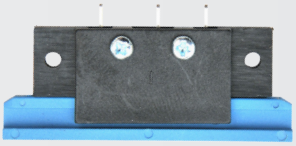


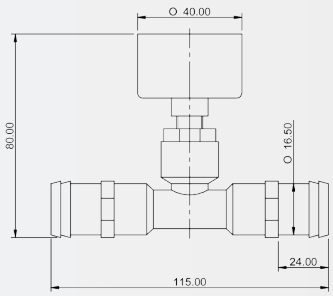
Spare Parts / Accessories

Spares	BIBUS Code
Service Kit	SE40
Diaphragm Sets	SE41
Filters	SE42
Magnets	SE43 / SE44
Autotoppers	SK53204150
Accessories	
Pressure Gauge	BP1

SE44 Magnet used only in the JDK-500

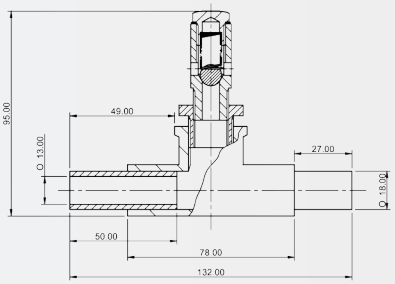
Spare Kits and Accessories





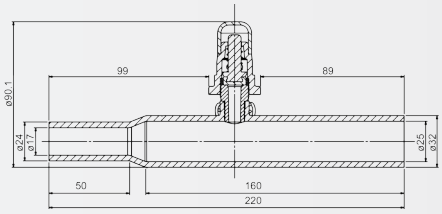
Back Pressure Gauge (BP1)

Pressure Gauge Range	0 - 0.6 bar
Dimensions (L x W x H)	115 x 40 x 80 mm
Connection	19 ø mm
Net weight	0.25 kg



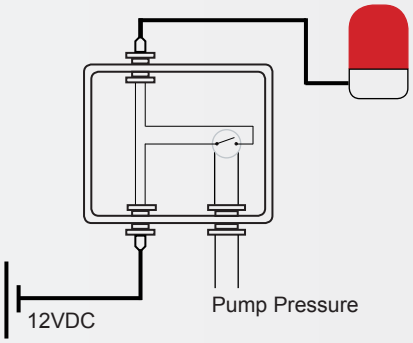
Pressure Relief Valve - JDK-50 / 120 (SE11)

Pressure Relief Setting	0.20 bar
Dimensions (L x W x H)	132 x 30 x 95 mm
Connection	19 ø mm
Net weight	0.5 kg



Pressure Relief Valve - JDK-150 / 400 (SE45)

Pressure Relief Setting	0.25 bar
Dimensions (L x W x H)	220 x 32 x 90.1 mm
Connection	19 ø / 26 ø mm
Net weight	0.1 kg



Pressure Alarm Box (BJD-8 / BJD-20)

	BJD-8	BJD-20
Alarm Pressure	40~80	200~250
Input Voltage	220/230	220/230
Lamp Voltage	12	12
Box Sixe	95 x 65 x 55	

Technical Reference

Air Flow
Corresponding operating pressure

Optimal Operating Span
Pressure range at which the diaphragm pump can operate continuously.

Power Consumption
The power consumption is at 200mbar. Other power data available on request.

Power Supply
All data given refer to an electricity supply of 230VAC / 50Hz, with variations up to +/- 10% are acceptable.

Overload Protection
All pumps have an integrated thermal overload protection fitted. The pump will cut out in excessive temperatures of 130°C and restart once below 120°C.

Ambient Temperature
The ambient and suction temperature can range from -10°C to +40°C.

Insulation class
Class E, which corresponds to a temperature limit of 120°C.

Life Expectancy
Depends on the operation conditions and the work environment.

Protective Switch (Auto-Stopper)
JDK-60 and above pumps are equipped with an auto-stopper function which interrupts the power supply to the motor should a diaphragm ever break.

Fault Alarm Lamp
JDK-60 and above pumps are are fitted with a service light. On customer request there is also the possibility to register faults alternatively by an integrated signal cable.

Installation and Operation

Installation
The pump must always be installed above the water level, if the pump is set below, the back-flowing water can cause an electrical short circuit. The pump should be installed at least 10cm higher than the foundation on a levelled, stable platform to reduce biased strain and excessive vibration.

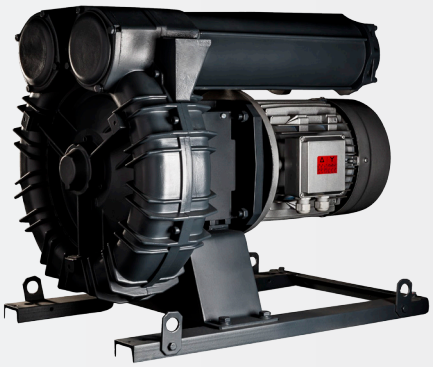
Ambience
Ensure that the unit has good ventilation, especially when subject to severe operating conditions. If installed in a control cabinet, sufficient ventilation by louvered vents is essential. The diaphragm blowers are waterproof, however, they should not be exposed to direct sunlight, rain or snow.

Air Quality
They should not be operating in a dusty or moist environment, the blocked filter will cause overheating. The atmosphere humidity should not be higher than 90%. Inflammable or aggressive gases and vapours should not enter the pump.

Piping
- Straight piping and as short as possible
- Tubing, which diameter is equal or greater than the port of the unit
- Large radius bends and no elbows
- Valves of bigger diameter than the blower's connector port
- Smooth-running valves that provide the lowest pressure drop
- Low air loss diffusers for aeration.

Maintenance
Clean the filter regularly and replace broken diaphragms immediately.

Storage
The pumps may not be stored at less than -10°C. The pumps may not be stored in direct sunlight or at high temperatures.

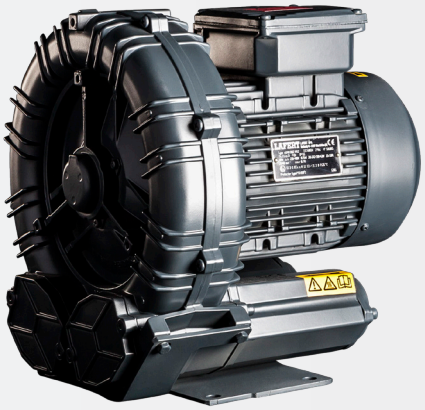


Single Stage Blower

MS Range

Product Characteristics

- High Reliability
- Great Performance
- Energy Efficient
- 0.2 - 18.5 kW
- 55 - 1022 m^3/h
- 90 - 500 mbar

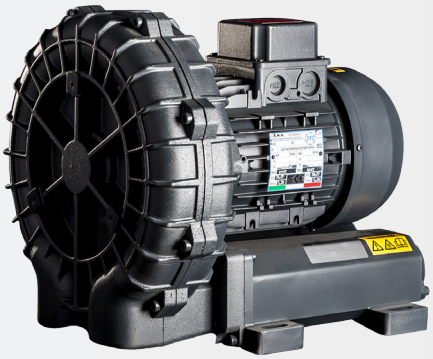


Single Stage Blower

TS Range

Product Characteristics

- High Reliability
- Great Performance
- Energy Efficient
- 4 - 22 kW
- 334 - 1985 m^3/h
- 235 - 380 mbar



Double Stage Blower

MD Range

Product Characteristics

- High Reliability
- Great Performance
- Energy Efficient
- 0.37 - 15 kW
- 30 - 473 m^3/h
- 200 - 750 mbar

Double Stage Blower

TD Range

Product Characteristics

- High Reliability
- Great Performance
- Energy Efficient
- 2.2 - 22 kW
- 140 - 1008 m^3/h
- 400 - 650 mbar

Disc Diffuser

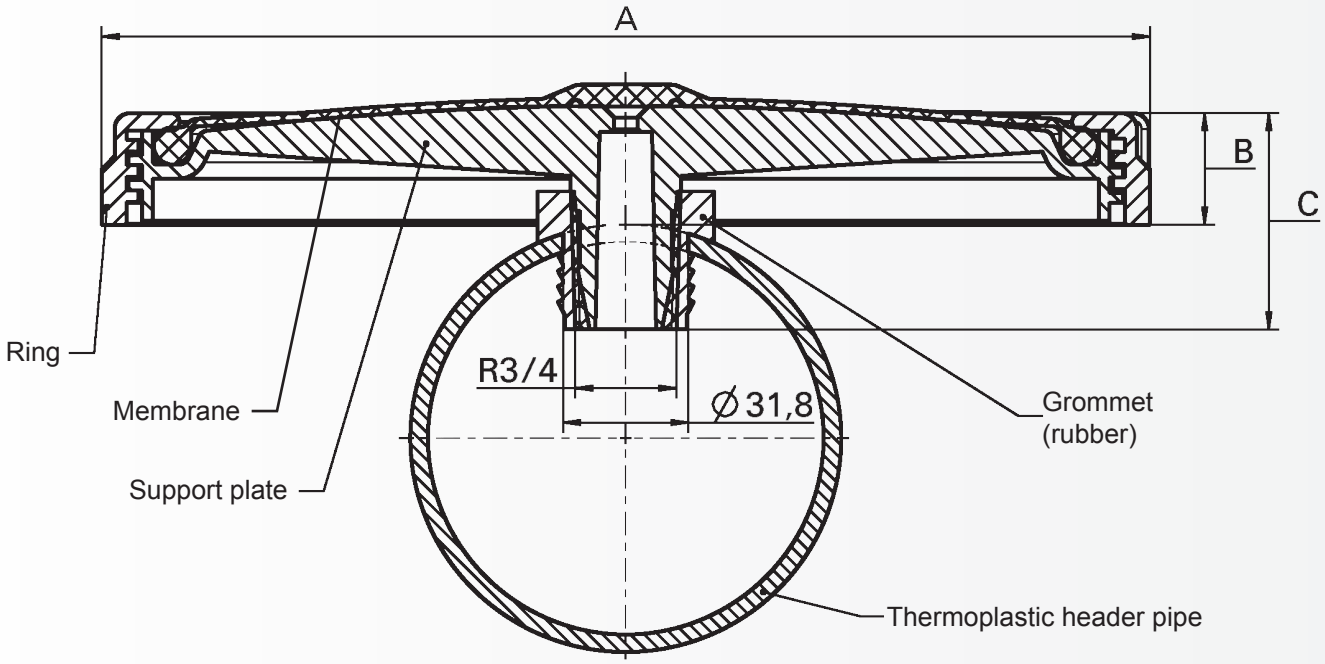
HD 270 / HD 340

Product Characteristics

- Low Installation Cost
- High Reliability
- Great Performance
- Low Mainenance
- Cost Effective Design

Dimensions

Type	Height (C) mm	Diameter Total (A) mm	Diameter Effective mm	Overall Height Membrane (B) mm	Perforated Area m^2	Disc Material	Membrane Material	Total Weight Kg
HD 270	58	270	220	30	0.037	PP GF 30	EPDM	0.6
HD 340	76	340	310	46	0.06	PP GF 30	EPDM	0.85



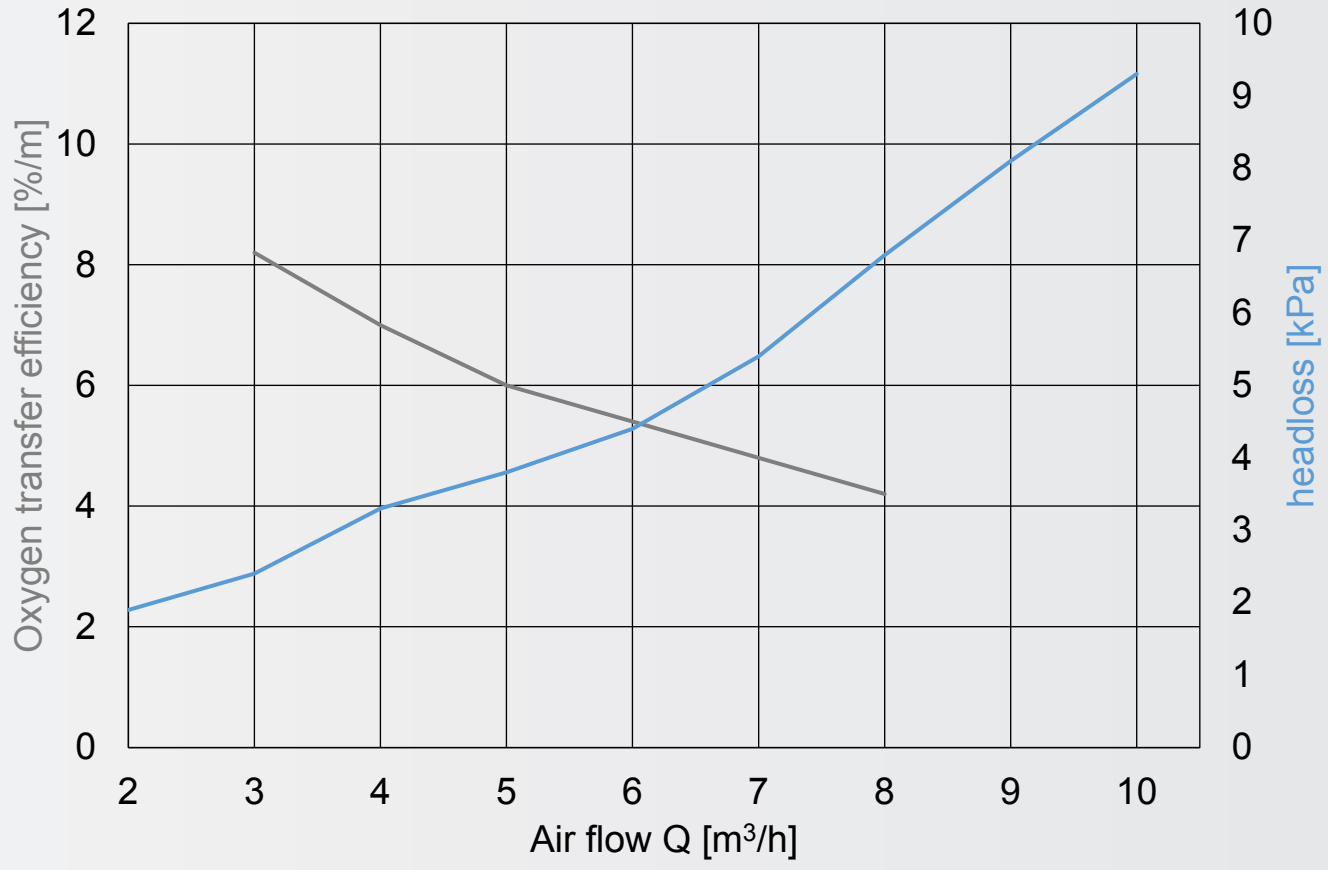
Type	Permitted Wall Thickness of Header Tube mm	Diameter Straight-Drilled Hole mm	Material	Colour
Universal Saddle	2-8	31.8 (1 1/4")	EPDM 75 Sh A	Black

Properties of Membranes

Material	EPDM F 053 A
Colour	Black
Wall Thickness	2.0 mm ± 0.15 mm
Density DIN 53479	<1.2 g/cm^3
Tensil Strength DIN 53504	> 7 N/mm^2
Elongation on Break DIN 53504	> 500 %
Tear Strength DIN 53507	> 6 N/mm
Hardness DIN 53505	50 ± 5 Shore A
Tension Set 100% Tension 24 h, RT	< 5 %
Operating Temperature	0 to 80°C
Application	Municiple waste Water

Oxygen Transfer Efficiency and Headloss

Disc Diffuser HD 270



Air Flow

- The operating conditions depend on the selected material and the slot
- Non-standard slots are provided on request
- Shutdown of operation is highly recommended for air flow rates lower than minimum rate
- Overload air flow rate should not be applied longer than 10 min. per day.

Type	Operation Conditions m_N^3/h	Max. Overload / Maintenance m_N^3/h
HD 270	1.5 - 6	10
HD 340	2 - 10	15

Other lengths may be available on request.

Tube Diffuser

TD-63/2050 / TD-63/2075 / TD-63/2100

Product Characteristics

- Low Installation Cost
- High Reliability
- Great Performance
- Low Mainenance
- Cost Effective Design

Dimensions

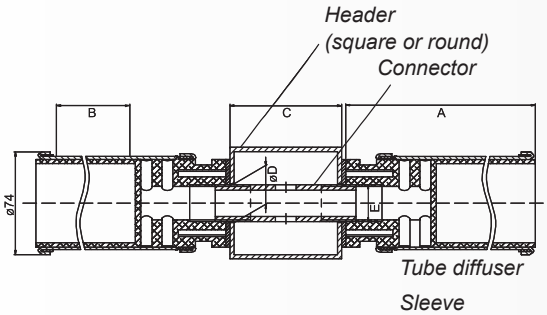
Type	Perforation Length mm	Total Length mm	Tube Diameter mm	ID-Sleeve mm	Perforated Area m^2	Total Weight Kg
TD-63/2050	500	560	63	64-66	0.09	0.8
TD-63/2075	750	810	63	64-66	0.135	1.1
TD-63/2100	1000	1060	63	64-66	0.18	1.3

Dimensions for Threads and Double Nipple

connector	colour code diffusser	double nipple length for square tube 80 x 80 mm	double nipple length for sguare tube 100 x 100 mm	double nipple length for tube DN 100 (114.3 mm) mm
1" Whitworth	Blue	130	150	190
$^3/_4$" Whitworth	Green	130	150	-

Two tube diffuesers are assembled at one tube or square tube by a connector. The tube requires a rubber element adjusted to its diameter. Double nipples for other tube diameters on request.

Connection of the membrane to the support tube:
Standard secure clamp (Stainless steel, 1.4301). Exchange of the membrane is possible without dismounting of the supporting body.
Gasket for Square Tube: 4mm EPDM flat-gasket
Gasket for tube DN 100: EPDM gasket



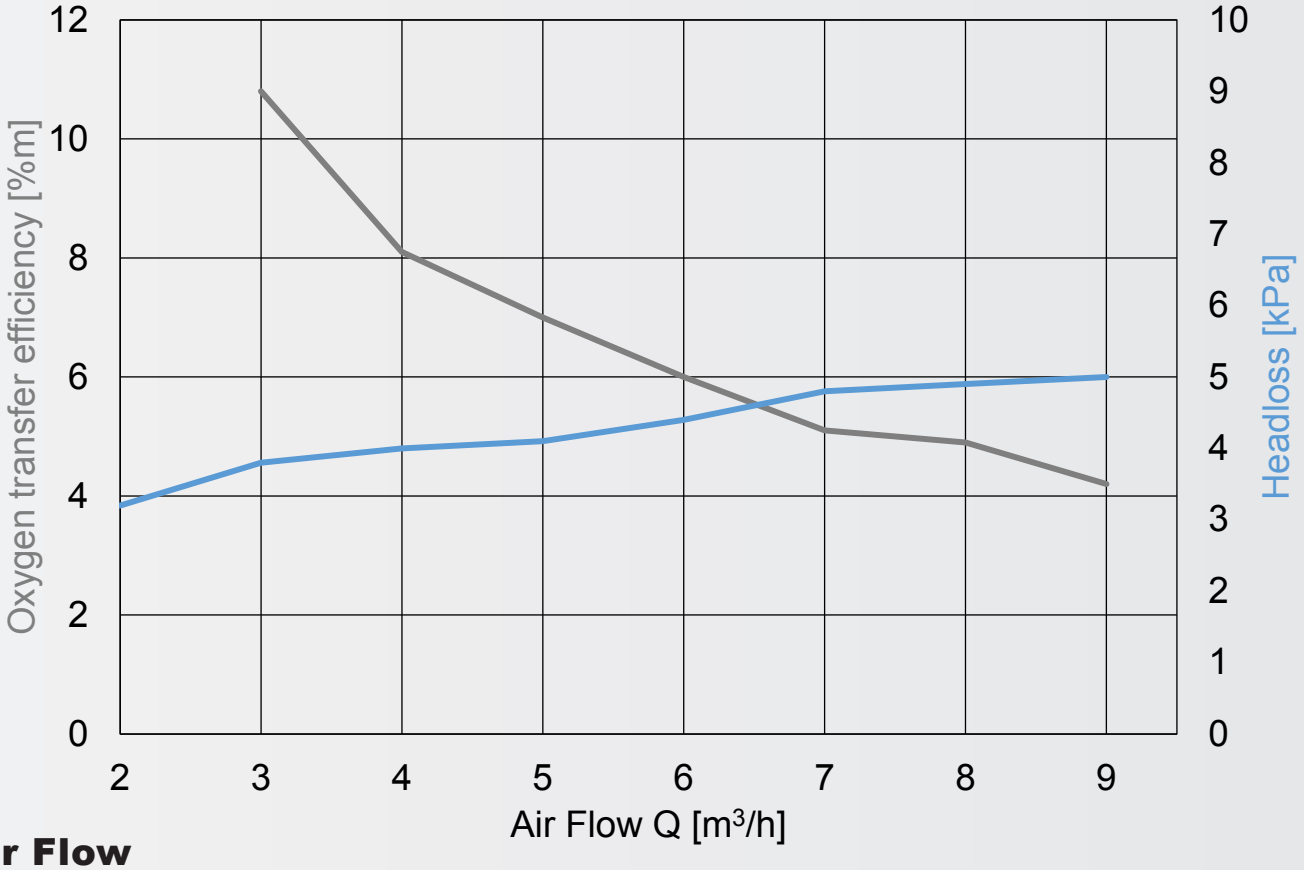
A	1060				810				560				Diffuser length
B	1000				750				500				Perforation length
C	80		100		80		100		80		100		Square tube
D	28	35	28	35	28	35	28	35	28	35	28	35	straight-Drilled Hole
E	$^3/_4$	1"	$^3/_4$	1"	$^3/_4$	1"	$^3/_4$	1"	$^3/_4$	1"	$^3/_4$	1"	Thread

Properties of Membranes

Material	EPDM 7311 / 003
Colour	Black
Wall Thickness	1.9 mm ± 0.2 mm
Diameter	65 mm ± 1.9 mm
Density DIN 53479	<1.15 g/cm^3
Tensil Strength DIN 53504	> 8 N/mm^2
Elongation on break DIN 53504	> 500 %
Tear strength DIN 53507	> 8 N/mm
Hardness DIN 53505	40 ± 5 Shore A
Tension set 100% Tension 24 h, RT	< 4 %
Operating temperature	0 to 80°C
Application	Municiple Waste Water

Oxygen Transfer Efficiency and Headloss

Tube Diffuser TD 63/2100 with Hose



Air Flow

- The operating conditions depend on the selected material and the slot
- Non-standard slots are provided on request
- Shutdown of operation is highly recommended for air flow rates lower than minimum rate
- Overload air flow rate should not be applied longer than 10 min. per day.

Type	Operation Conditions m_N^3/h	Max. Overload / Maintenance m_N^3/h
TD-63/2050	1 - 6	10
TD-63/2075	2 -9	15
TD-63/2100	3 - 12	20

Engineering

Logistics

Service

BIBUS®
SUPPORTING YOUR SUCCESS

BIBUS (UK) Ltd
Unit 20 Soho Mills
Wooburn Green
Bucks
HP10 0PF
Tel. +44 1628 533 300
Fax. +44 1628 533 377
info@bibus.co.uk
www.bibus.co.uk

Designer: Owen Hennessey - Printed: 09/2014