

## Environmental Technology

Linear Diaphragm Pumps  
Membrane Diffusers  
Side Channel Blowers  
AODD Pumps

[www.bibus.uk](http://www.bibus.uk)



## BIBUS (UK) Ltd

We are part of the BIBUS Group consisting of 50+ subsidiaries across 29 countries with business segments in technology, materials, electronics, and core competencies in engineering, logistics & service in Pneumatics, Mechatronics, and Environmental Technology.

BIBUS (UK) Ltd is part of the technology group, providing sales, distribution and technical support of SECOH Sangyo linear diaphragm air pump, FPZ side channel blowers, Jager fine bubble membrane diffusers and Yamada AODD pumps used in process and wastewater treatment industries.

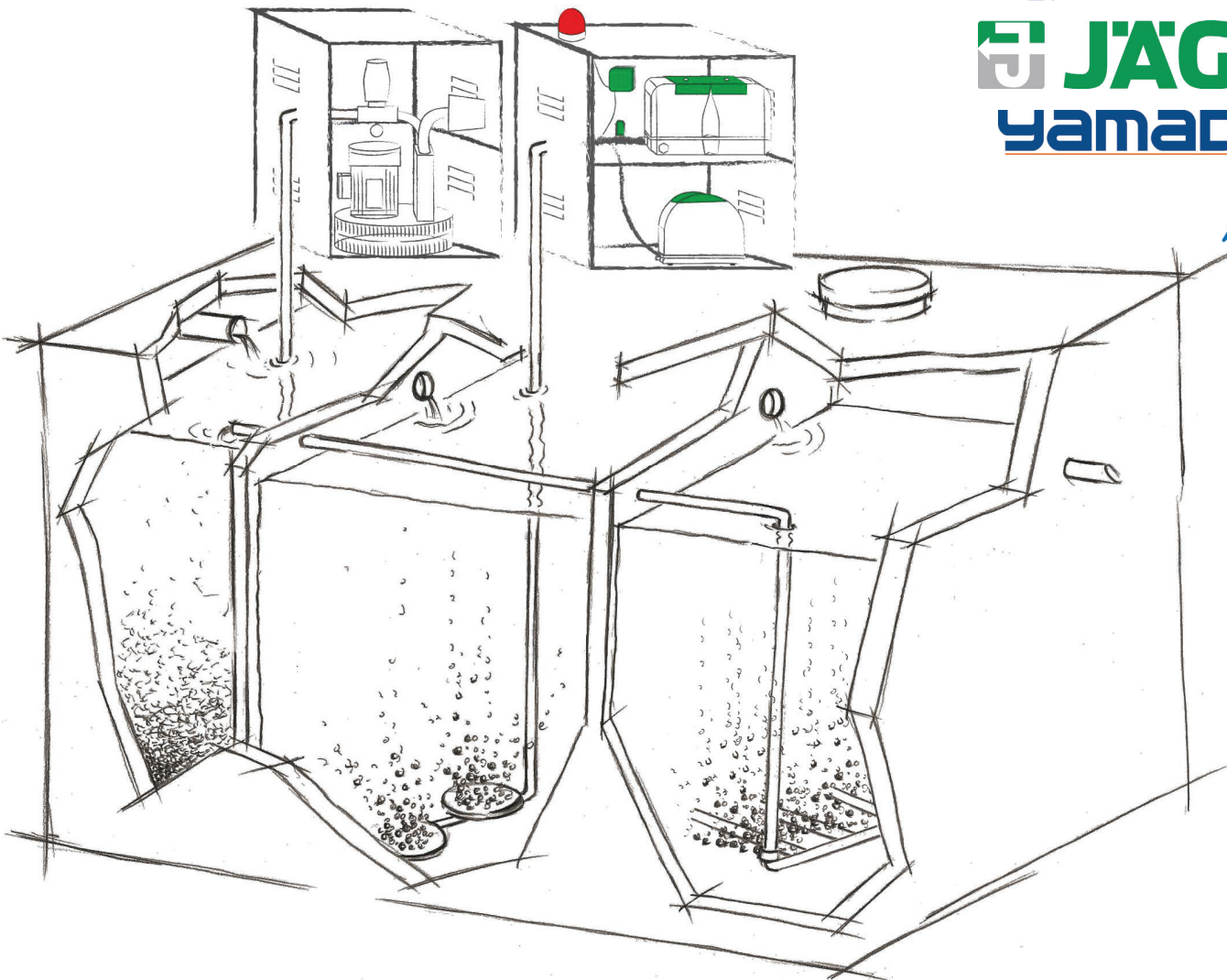
**BIBUS (UK) Ltd** complies with NQA ISO 9001 standards assuring product & service quality.

### Water Treatment and Environmental Technology

Environmental Technology is one of the core competencies of the BIBUS group. Our products are commonly used in the process of aeration found in decentralised wastewater treatment plants. Over 20 years of experience and an international network of supply partners enables us to offer the right solution for your application.



**Our Environmental Technologies Suppliers include:**



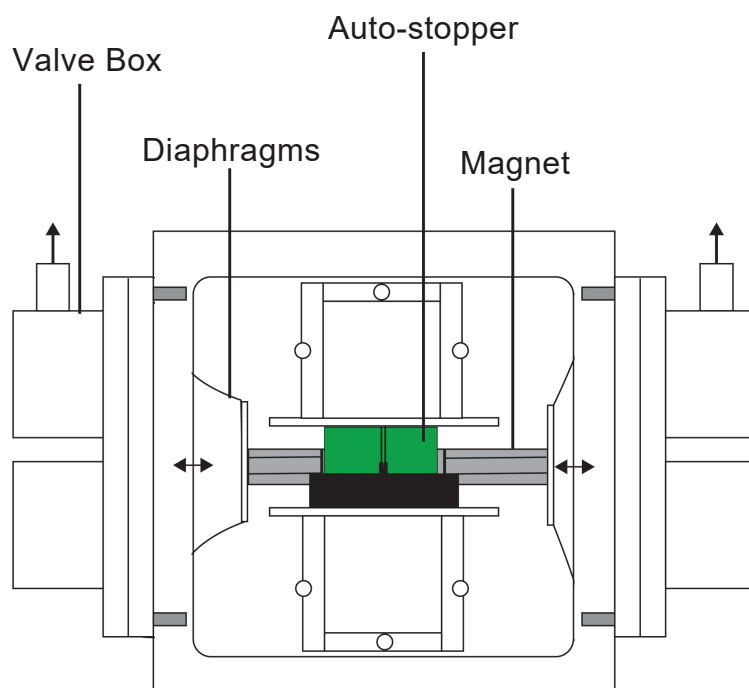


## Operating Principle

Linear diaphragm pumps work on the principle of a magnetic shuttle held by the diaphragms of opposed heads. On either side of the shuttle is an electromagnet which is energised by an alternating voltage oscillating at 50 or 60 Hz.

The oscillating motion of the magnet moves a controlled air volume through the valve boxes and pump base labyrinth to finally discharge pulse-free air.

SECOH models JDK-60 to JDK-500 incorporate a re-set auto-stopper device to protect the pump motor drive unit from normal diaphragm wear & tear.



## Advantages of Secoh

- Reduced Power Consumption
- Optimum Airflow Performance rated @ 200 mbar for JDK-40 to 120 and up to 300 mbar for JDK-150 to 500
- JDK-150 to 500 models supplied with Pressure Relief Valve set to 250 mbar
- Available with LED Service Light, Signal Cable or Alarm Box
- Compact Design
- Self-Aligning Magnet for Simple Servicing
- Long-Life Expectancy
- Low Noise Level
- Completely Oil-free
- Pulsation-free Airflow
- Annual Service Suggested

## Selecting the Blower Size

Different manufacturers' pumps perform differently. Therefore, we recommend comparing performance data to ensure an accurate replacement.

We are happy to advise the correct pump for your application.







# JDK Series

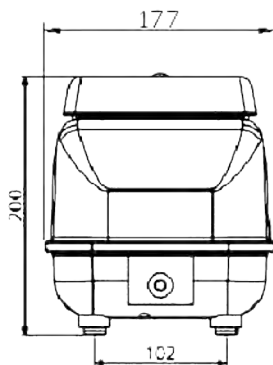
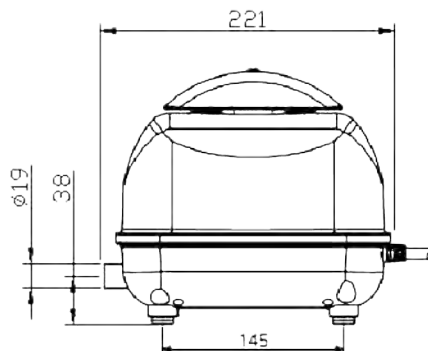
## JDK - 40 / JDK - 50

### Product Characteristics

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



### Dimensions



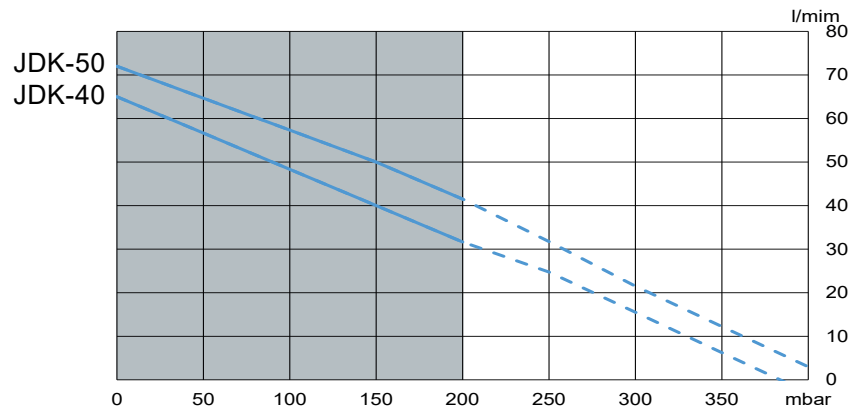
### Technical Data

| Model             |       |           | JDK-40          | JDK-50 |
|-------------------|-------|-----------|-----------------|--------|
| Airflow           | 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

230V / 50 Hz, optimal operating span



### Includes

- 3/4" Elbow Connection Hose Included



### Spare Parts / Accessories

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

| Available Models | LED Service Light | Signal Cable | Low-Pressure Alarm |
|------------------|-------------------|--------------|--------------------|
| JDK-40 / 50      |                   |              | ✓                  |





# JDK Series

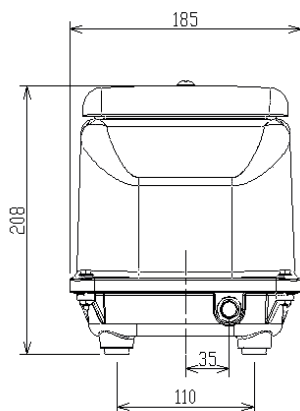
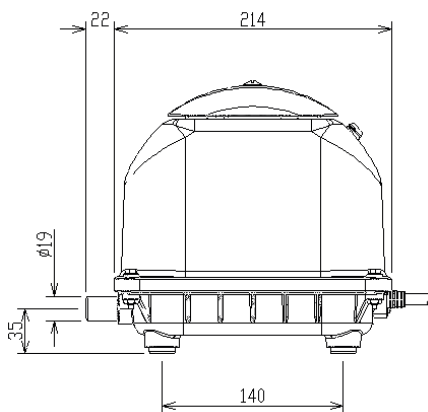
## JDK - 60 / JDK - 80

### Product Characteristics

- Compact Design
- Low Energy Consumption
- Protective Switch
- Aluminium Housing



### Dimensions



### Includes

- 3/4" Elbow Connection Hose Included



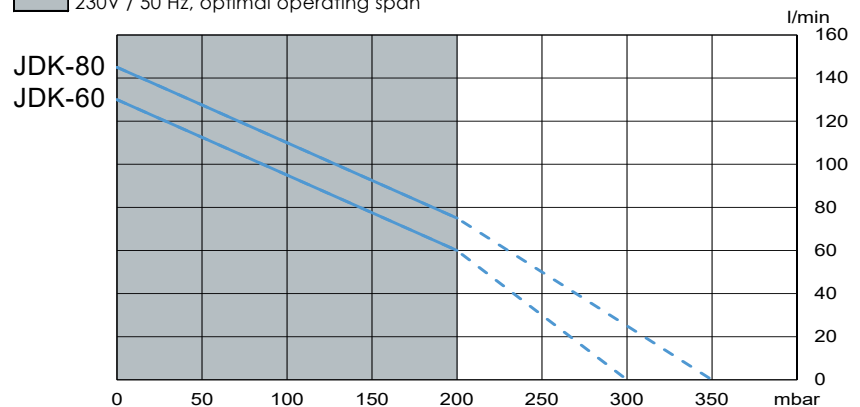
### Technical Data

| Model             |       |           | JDK-60          | JDK-80 |
|-------------------|-------|-----------|-----------------|--------|
| Airflow           | 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           | SE22       |
| Diaphragm Sets        | SE24       |
| Filters               | SE28       |
| Magnets               | SE23       |
| Autostopper           | SK53204150 |
| Accessories           |            |
| Pressure Gauge        | BP1        |
| Pressure Relief Valve | SE11       |

| Available Models | LED Service Light | Signal Cable | Low-Pressure Alarm |
|------------------|-------------------|--------------|--------------------|
| JDK-80 / 60      | ✓                 | ✓            | ✓                  |





# JDK Series

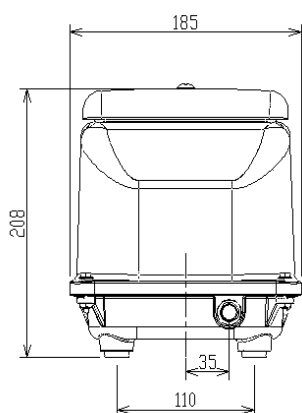
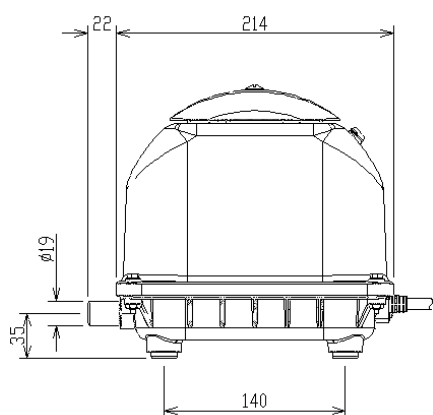
JDK - 100 / JDK - 120

## Product Characteristics

- Compact Design
- Low Energy Consumption
- Protective Switch
- Aluminium Housing



## Dimensions



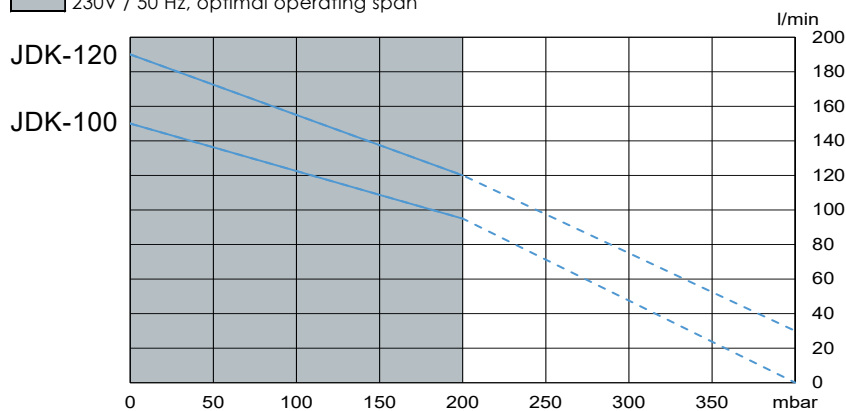
## Technical Data

| Model             |       |           | JDK-100         | JDK-120 |
|-------------------|-------|-----------|-----------------|---------|
| Airflow           | 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



## Includes

- 3/4" Elbow Connection Hose Included



## Spare Parts / Accessories

| Spares                | BIBUS Code |
|-----------------------|------------|
| Service Kit           | SE31       |
| Diaphragm Sets        | SE24       |
| Filters               | SE28       |
| Magnets               | SE23       |
| Autostopper           | SK5205100* |
| Accessories           |            |
| Pressure Gauge        | BP1        |
| Pressure Relief Valve | SE11       |

\*JDK-100 - SK53204150

| Available Models | LED Service Light | Signal Cable | Low-Pressure Alarm |
|------------------|-------------------|--------------|--------------------|
| JDK-100 / 120    | ✓                 | ✓            | ✓                  |





# JDK Series

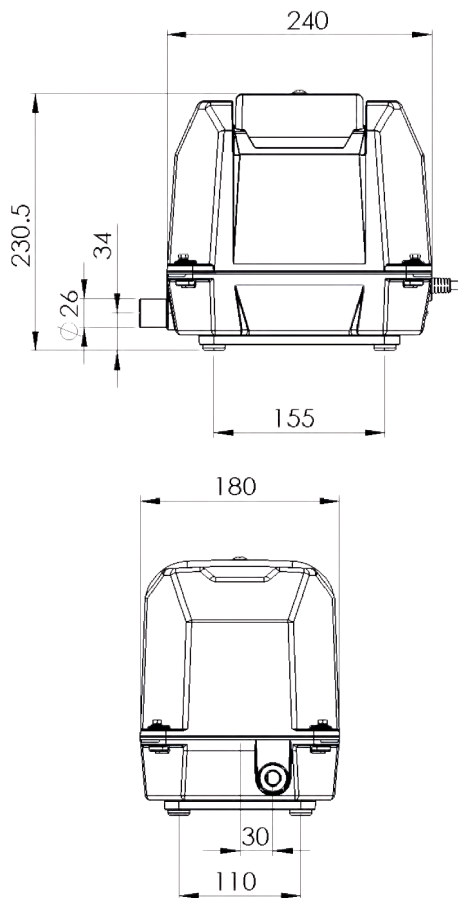
JDK - 150 / JDK - 200 / JDK - 250

## Product Characteristics

- Simple Maintenance
- Aluminium Housing
- Thermal Trip
- Can run continuously @ 300 mbar



## Dimensions



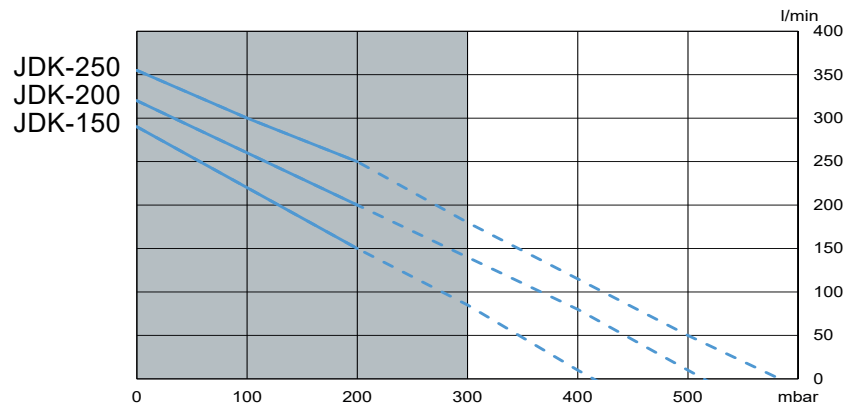
## Technical Data

| Model             |       |           | JDK-150           | JDK-200 | JDK-250 |
|-------------------|-------|-----------|-------------------|---------|---------|
| Airflow           | 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

230V / 50 Hz, optimal operating span



## Includes

- 1" - 3/4" Pressure Relief Valve & Elbow Hose\*



\*Can be cut to 1" - 1" and to remove elbow

## Spare Parts / Accessories

| Spares                | BIBUS Code |
|-----------------------|------------|
| Service Kit           | SE40       |
| Diaphragm Sets        | SE41       |
| Filters               | SE42       |
| Magnets               | SE43 / 44  |
| Autostopper           | SK53204150 |
| Accessories           |            |
| Pressure Gauge        | BP1        |
| Pressure Relief Valve | SE45-L     |

| Available Models    | LED Service Light | Signal Cable | Low-Pressure Alarm |
|---------------------|-------------------|--------------|--------------------|
| JDK-150 / 200 / 250 | ✓                 | ✓            |                    |





# JDK Twin Series

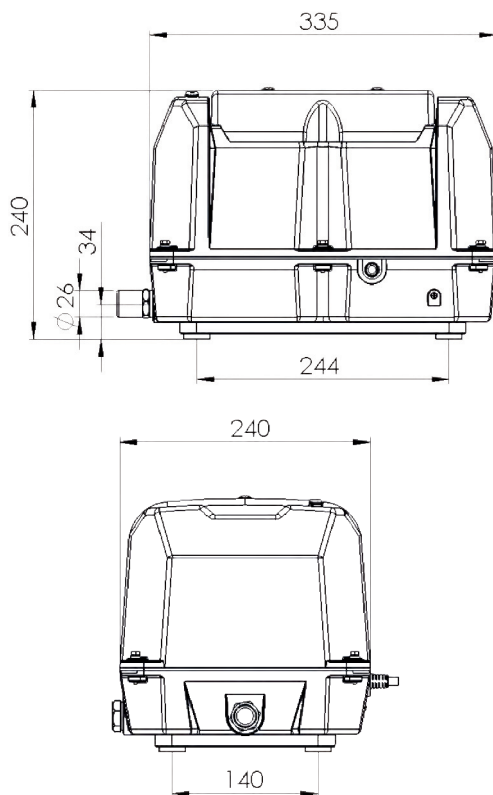
JDK - 300 / JDK - 400 / JDK - 500

## Product Characteristics

- Simple Maintenance
- Aluminium Housing
- Thermal Trip
- Can run continuously @ 300 mbar



## Dimensions



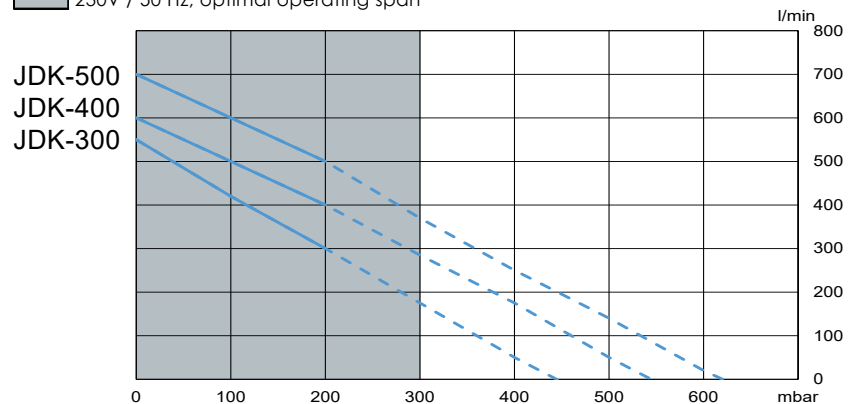
## Technical Data

| Model             |       |           | JDK-300           | JDK-400 | JDK-500 |
|-------------------|-------|-----------|-------------------|---------|---------|
| Airflow           | 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 X 238.5 |         |         |
| Connection        | mm    | ø outside | 27                |         |         |
| Net Weight        | Kg    |           | 18                |         |         |

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

## Performance Data

230V / 50 Hz, optimal operating span



## Includes

- 1" - 3/4" Pressure Relief Valve & Elbow Hose\*



\*Can be cut to 1" - 1" and to remove elbow

## Spare Parts / Accessories

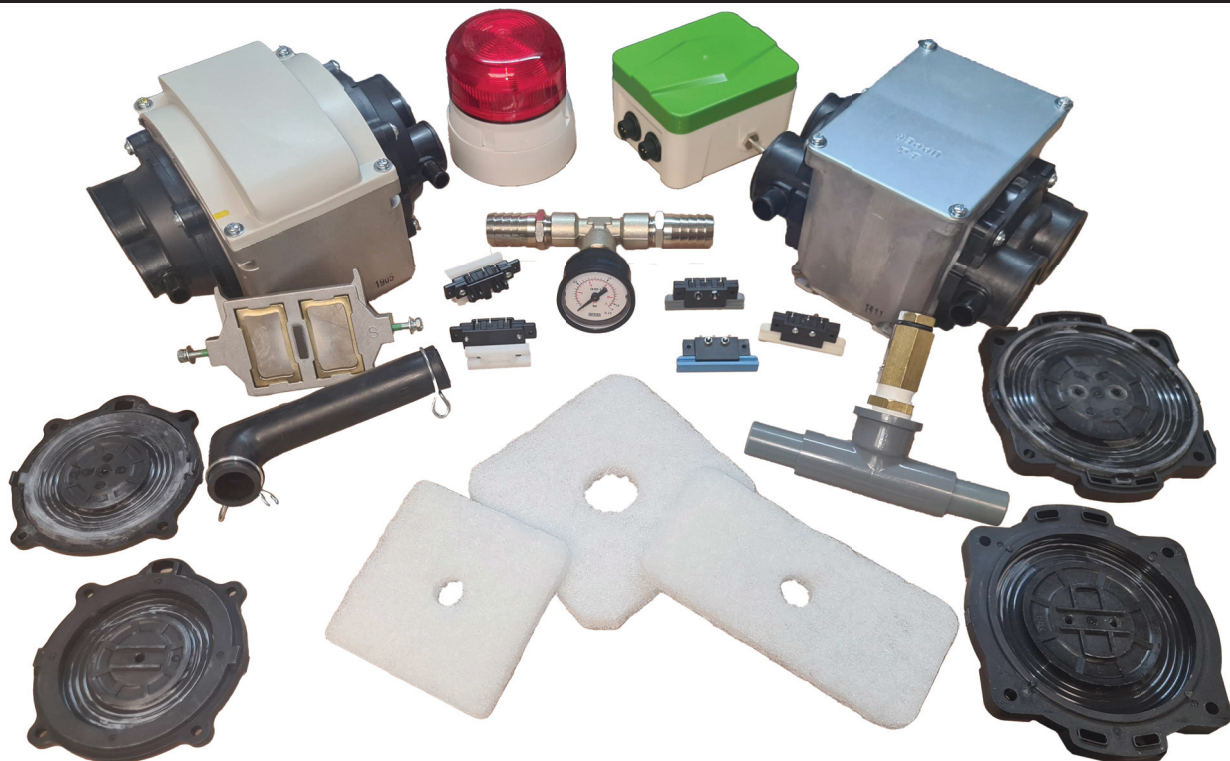
| Spares                | BIBUS Code  |
|-----------------------|-------------|
| Service Kit           | SE40*       |
| Diaphragm Sets        | SE41*       |
| Filters               | SE42*       |
| Magnets               | SE43 / 44*  |
| Autostopper           | SK53204150* |
| Accessories           |             |
| Pressure Gauge        | BP1         |
| Pressure Relief Valve | SE45-L      |

\*Twin models require 2 parts per unit

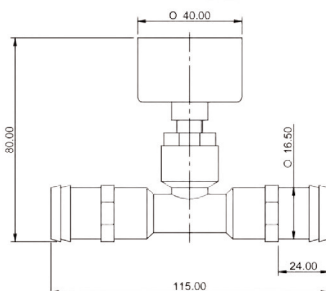
| Available Models    | LED Service Light | Signal Cable | Low-Pressure Alarm |
|---------------------|-------------------|--------------|--------------------|
| JDK-300 / 400 / 500 | ✓                 | ✓            |                    |



## Spare Kits and Accessories



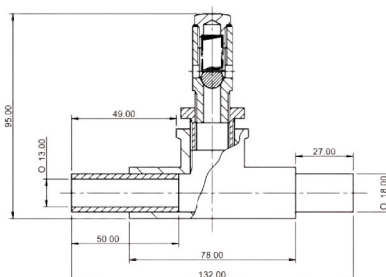
### Back Pressure Gauge (BP1)



|                               |                  |
|-------------------------------|------------------|
| <b>Pressure Gauge Range</b>   | 0 - 0.6 bar      |
| <b>Dimensions (L x W x H)</b> | 115 x 40 x 80 mm |
| <b>Connection</b>             | 19Ø mm           |
| <b>Net weight</b>             | 0.25 kg          |



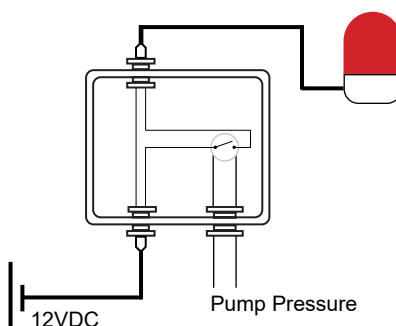
### Pressure Relief Valve - JDK-50 / 120 (SE11)



|                                |                  |
|--------------------------------|------------------|
| <b>Pressure Relief Setting</b> | 0.20 bar         |
| <b>Dimensions (L x W x H)</b>  | 132 x 30 x 95 mm |
| <b>Connection</b>              | 19Ø mm           |
| <b>Net weight</b>              | 0.5 kg           |



### Pressure Alarm Box (BJD-HL)



| Model                      |       | BJD-HL  |
|----------------------------|-------|---------|
| <b>Frequency</b>           | Hz    | 50/60   |
| <b>HIGH Alarm Pressure</b> | kPa   | > 2     |
| <b>LOW Alarm Pressure</b>  | kPa   | < 7     |
| <b>Voltage*</b>            | VAC   | 100-240 |
| <b>Power Consumption</b>   | W     | 3       |
| <b>Noise Level</b>         | dB(A) | 70      |
| <b>Net Weight</b>          | Kg    | 0.9     |







# Disc Diffusers

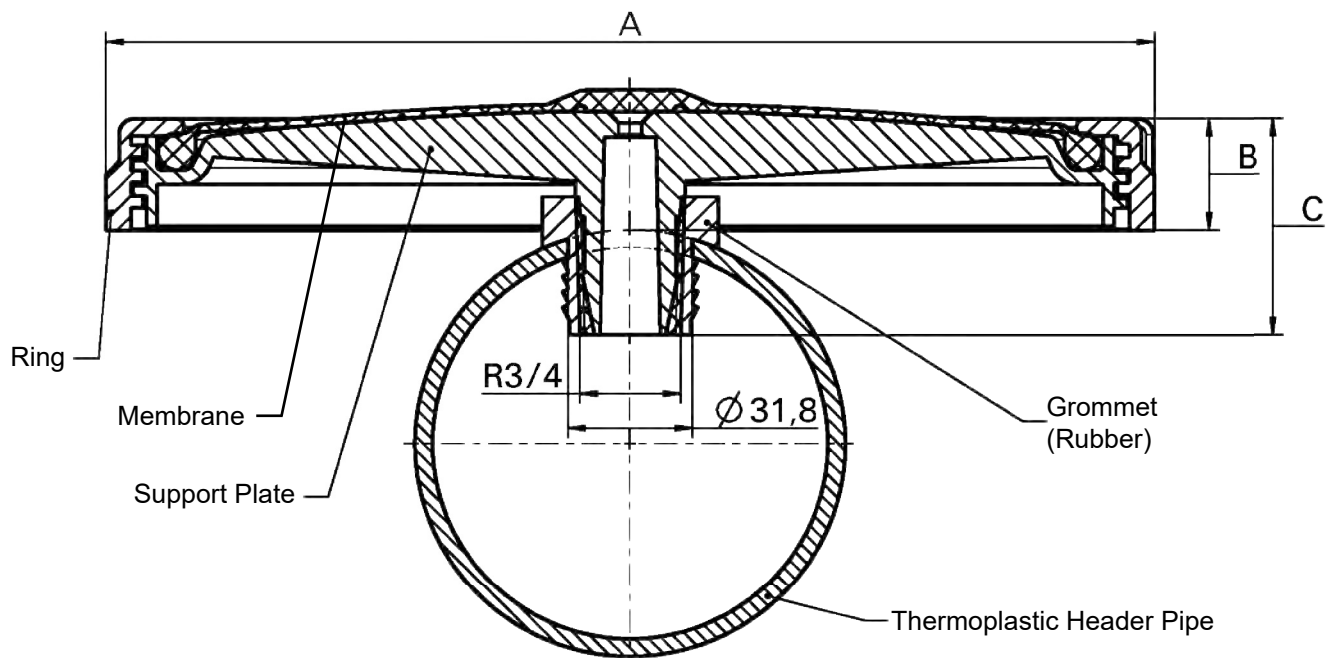
HD 270 / HD 340

## Product Characteristics

- Low Installation Cost
- High Reliability
- Great Oxygen Transfer Efficiency Rate
- Low Maintenance
- Cost Effective Design

## Dimensions

| Type   | Height (C)<br>mm | Diameter Total (A)<br>mm | Diameter Effective<br>mm | Overall Height Membrane (B)<br>mm | Perforated Area<br>m <sup>2</sup> | Disc Material | Membrane Material | Total Weight<br>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<br>mm | Diameter Straight-Drilled Hole<br>mm | Material     | Colour |
|------------------|---|--------------------------------------|--------------|--------|
| Universal Saddle | 2-8   | 31.8 (1 1/4")                        | EPDM 75 Sh A | Black  |



## Properties of Membranes

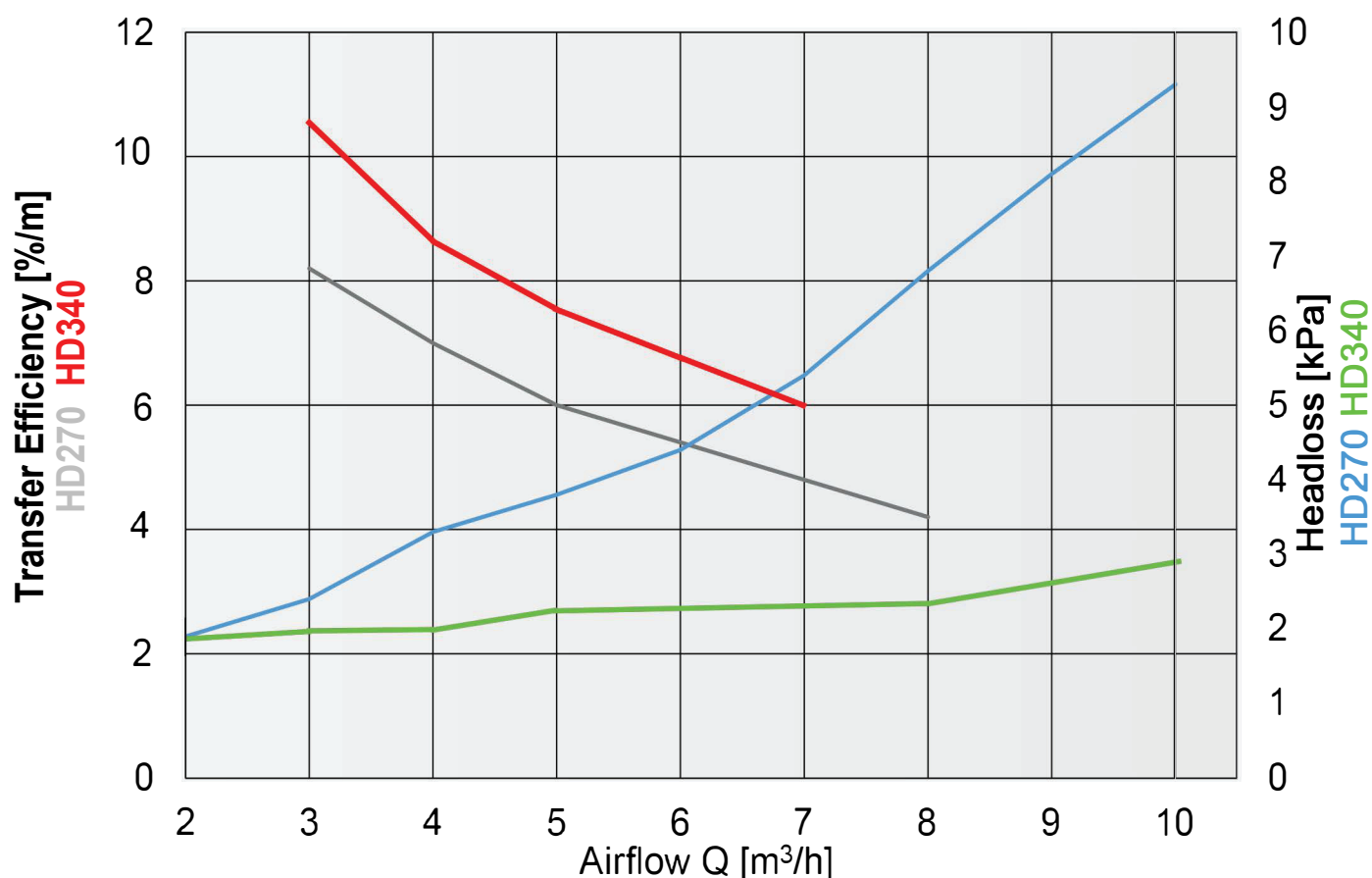
|                                   |                        |
|-----------------------------------|------------------------|
| Material                          | EPDM F 053 A           |
| Colour                            | Black                  |
| Wall Thickness                    | 2.0 mm ± 0.15 mm       |
| Density DIN 53479                 | <1.2 g/cm <sup>3</sup> |
| Tensile Strength DIN 53504        | > 7 N/mm <sup>2</sup>  |
| 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                       | Municipal Waste Water  |

## Accessories



## Oxygen Transfer Efficiency and Headloss

### Disc Diffusers HD270 / HD340



## Airflow

- 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 airflow rates lower than the minimum rate
- Overload airflow rate should not be applied for longer than 10 minutes per day.

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





# Tube Diffuser

TD65-500 / TD65-750 / TD65-1000

## Product Characteristics

- Low Installation Cost
- High Reliability
- Great Oxygen Transfer Efficiency Rate
- Low Maintenance
- Cost Effective Design

Other lengths and materials may be available on request.

## Dimensions

| Type      | Perforation Length mm | Total Length mm | Tube Diameter mm | ID-Sleeve mm | Perforated Area m <sup>2</sup> | Total Weight Kg |
|-----------|-----------------------|-----------------|------------------|--------------|--------------------------------|-----------------|
| TD65-500  | 500                   | 560             | 63               | 64-66        | 0.09                           | 0.8             |
| TD65-750  | 750                   | 810             | 63               | 64-66        | 0.135                          | 1.1             |
| TD65-1000 | 1000                  | 1060            | 63               | 64-66        | 0.18                           | 1.3             |

## Dimensions for Threads and Double Nipple

| Connector      | Colour Code Diffuser | Double Nipple Length for Square Tube 80 x 80 mm | Double Nipple Length for Square Tube 100 x 100 mm | Double Nipple Length for Tube DN 100mm (114.3 mm) |
|----------------|----------------------|---|---|---|
| 1" Whitworth   | Black                | 130   | 150   | 190   |
| 3/4" Whitworth | Black                | 130   | 150   | -   |

Two tube diffusers are assembled at one round or square supporting tube by a connector.

The tube requires a rubber gasket adjusted to its diameter.

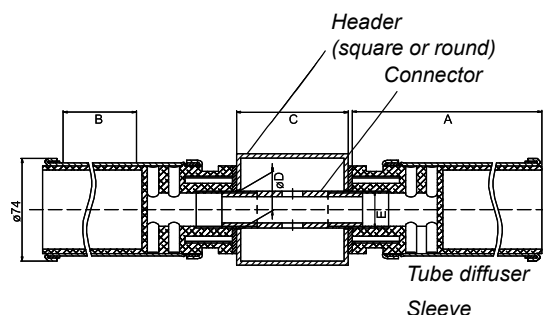
Double nipples for other tube diameters are available on request.

### Connection of the membrane to the support tube:

Standard secure clamp (Stainless steel, 1.4301). Exchange of the membrane is possible without the dismantling 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 | <sup>3</sup> / <sub>4</sub> | 1" | <sup>3</sup> / <sub>4</sub> | 1" | <sup>3</sup> / <sub>4</sub> | 1" | <sup>3</sup> / <sub>4</sub> | 1" | <sup>3</sup> / <sub>4</sub> | 1" | <sup>3</sup> / <sub>4</sub> | 1" | Thread                |



## Properties of Membranes

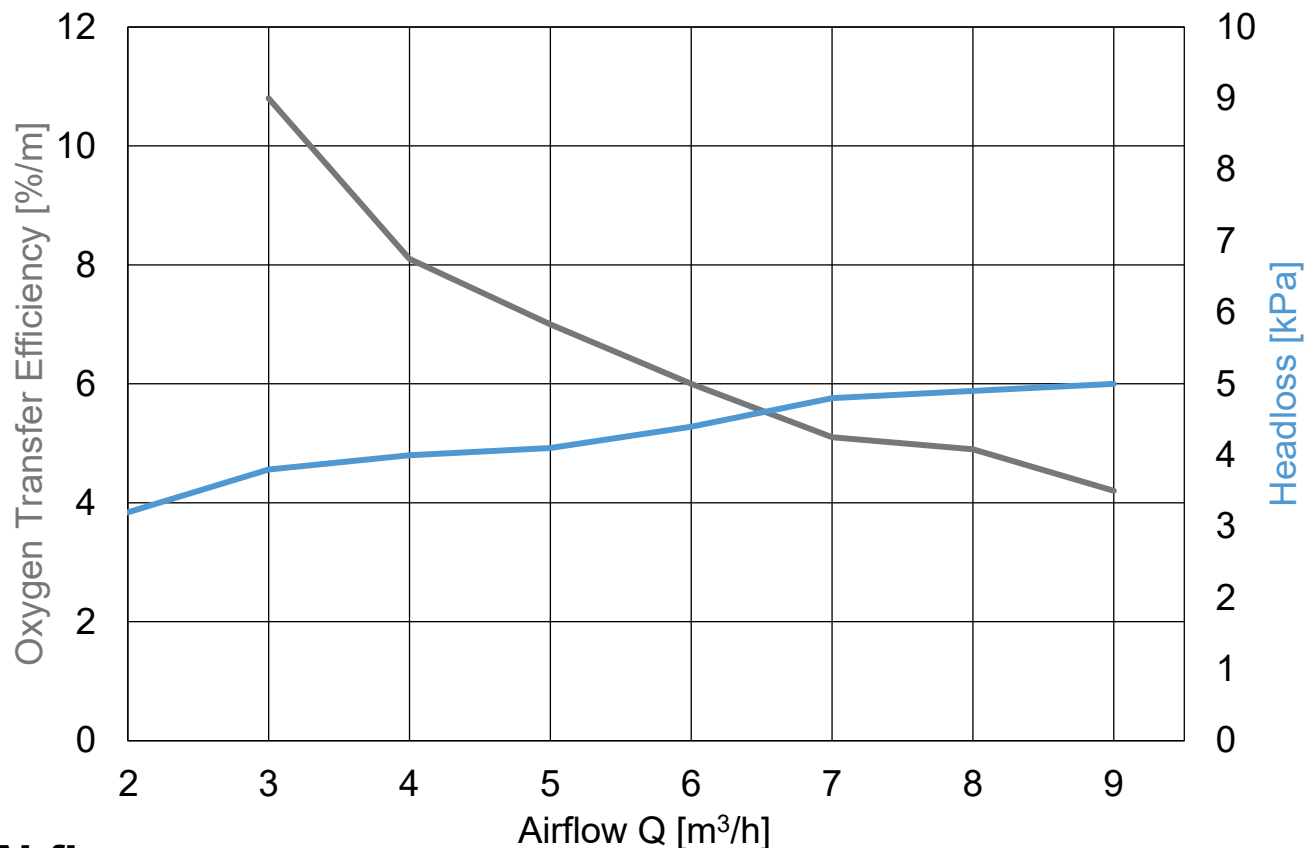
|                                   |                         |
|-----------------------------------|-------------------------|
| Material                          | EPDM 7311 / 003         |
| Colour                            | Black                   |
| Wall Thickness                    | 1.9 mm ± 0.2 mm         |
| Diameter                          | 65 mm ± 1.9 mm          |
| Density DIN 53479                 | <1.15 g/cm <sup>3</sup> |
| Tensile Strength DIN 53504        | > 8 N/mm <sup>2</sup>   |
| Elongation at 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                       | Municipal Waste Water   |

## Accessories



## Oxygen Transfer Efficiency and Headloss

### Tube Diffuser TD65-1000 with Hose



### Airflow

- 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 airflow rates lower than the minimum rate
- Overload airflow rate should not be applied for longer than 10 minutes per day.

| Type      | Operation Conditions<br>$m_N^3/h$ | Max. Overload / Maintenance<br>$m_N^3/h$ |
|-----------|-----------------------------------|--|
| TD65-500  | 1 - 6                             | 10                                       |
| TD65-750  | 2 - 9                             | 15                                       |
| TD65/1000 | 3 - 12                            | 20                                       |



## Operating Principle

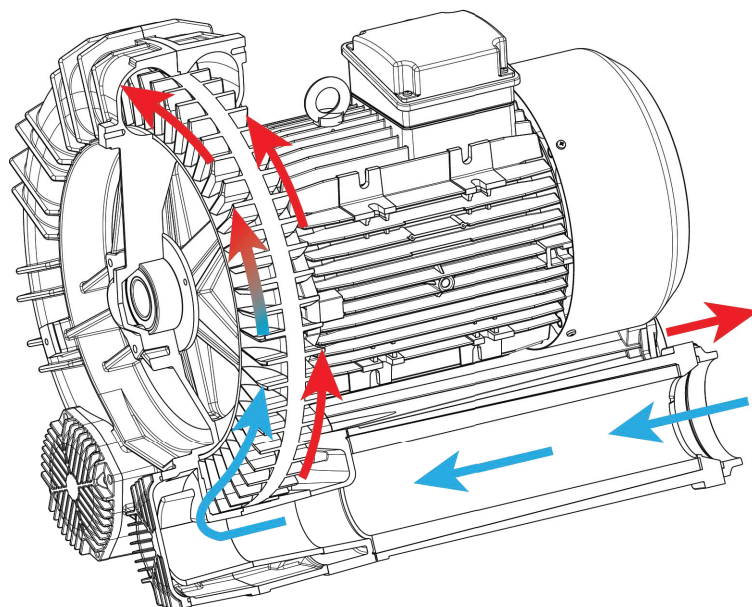
A side channel blower consists of an impeller with blades mounted directly to a motor shaft and located in a close tolerance housing. When the impeller is rotating, the channels in the impeller push air forward by centrifugal movement and produce's pressure or partial vacuum through silencer tubes.

## Advantages of FPZ

- No Contact among Parts
- Low Noise Level
- No Pulsation
- No Fluid Contamination
- Compact Size

## Technical Specifications

- Aluminium Alloy Construction
- Low Noise Level
- Pressure & Vacuum Applications
- Electric Motors
- High Efficiency: IE3
- IP55 Motors Insulation Class F
- PTO Thermal Protection
- Single Phase Motor up to 2.2kW
- Three Phase Motor up to 26kW
- Special Voltages IEC 60038



## Selecting the Blower Size

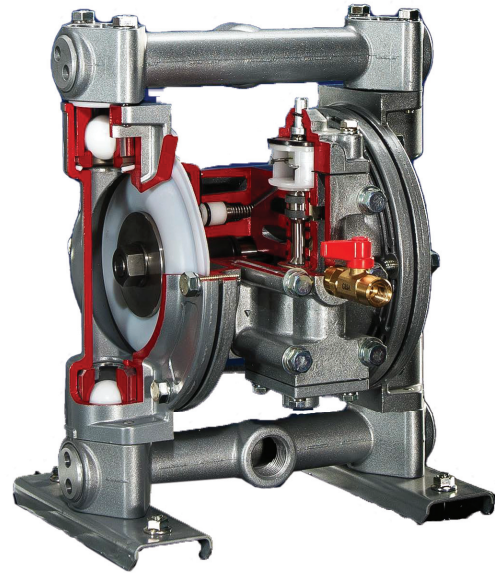
Different manufacturers' pumps perform differently. Therefore, we recommend comparing performance data to ensure an accurate replacement. We are happy to advise the correct pump for your application.





## Operating Principle

AODD pumps operate by the alternated back-and-forth movement of two flexible diaphragms mounted on a common shaft. A given amount of air pressure and air volume is required to deliver the appropriate amount of fluid. AODD pumps are capable of handling abrasive, highly viscous fluids, sludges, slurries, and shear-sensitive fluids.



## Advantages of Yamada

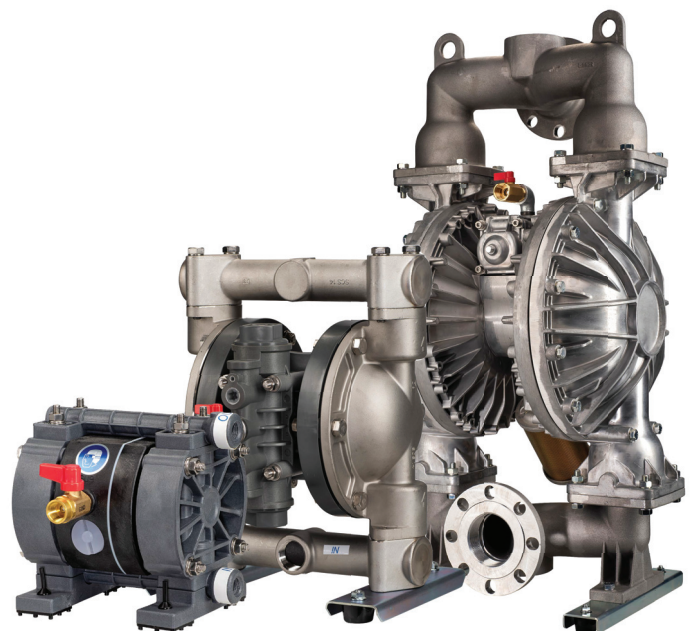
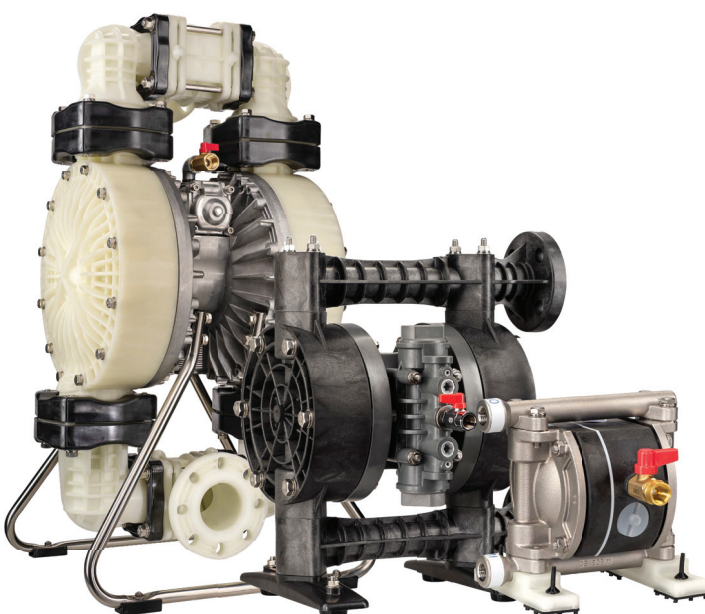
- Can handle a variety of fluids with particles
- Self Priming
- Explosion Proof
- Constant Pumping
- Variable Flow Rates & Discharge Pressure
- Simple Installation
- Submersible
- Low Maintenance

## Applicable Sectors

- Paints
- Ink & Printing
- Ceramics
- Marine & Ship Building
- Mining
- Waste Water
- Cosmetics
- Construction

## Selecting the Pump Size

Different manufacturers' pumps perform differently. Therefore, we recommend comparing performance data to ensure an accurate replacement. With a wide range of materials available depending on the application and fluid being pumped, we are happy to help advise the correct pump.





Engineering  
Logistics  
Service



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