

**VAB 040-032-110 0152KI T81MVCCO OA**

Vitacast Bloc - Hygienic centrifugal pump

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**Operating data**

|                              |  |   |                         |
|------------------------------|--|---|-------------------------|
| Requested flow rate          | 6.00 m <sup>3</sup> /h   | Actual flow rate                                      | 6.00 m <sup>3</sup> /h  |
| Requested developed head     | 11.70 m  | Actual developed head                                 | 11.70 m                 |
| Pumped medium                | + Starch suspension<br>+ waterige suspensie met droge substantie             | Efficiency  | 46.3 %                  |
| Pumped medium details        | Not containing chemical and mechanical substances which affect the materials | Power absorbed  | 0.45 kW                 |
| Max. ambient air temperature | 20.0 °C  | Pump speed of rotation                                | 2616 rpm                |
| Min. ambient air temperature | 20.0 °C  | NPSH required   | 0.67 m                  |
| Fluid temperature            | 60.0 °C  | Permissible operating pressure                        | 10.00 bar.g             |
| Fluid density                | 1100 kg/m <sup>3</sup>   | Discharge press.                                      | 1.26 bar.g              |
| Fluid viscosity              | 1.10 mm <sup>2</sup> /s  | Shutoff head  | 12.95 m                 |
| Suction pressure max.        | 0.00 bar.g   | Min. allow. flow for continuous stable operation      | 0.86 m <sup>3</sup> /h  |
| Mass flow rate               | 1.83 kg/s  | Min. allow. mass flow for continuous stable operation | 0.26 kg/s               |
| Max. power on curve          | 0.55 kW  | Max. allow. mass flow                                 | 3.16 kg/s               |
|                              |  | Design  | Single system 1 x 100 % |

**Design**

The pump conforms to the regulations of EGV 1935/2004.

|  |                               |                                  |   |
|--|-------------------------------|----------------------------------|---|
| Design   | Close-coupled                 | Direction of rotation            | Clockwise   |
| Orientation                                    | Horizontal                    | Spring Shrouding                 | open  |
| Suction nominal dia.                           | DN 40                         | Material code                    | Q1Q1VGG   |
| Suction nominal pressure                       | PN 10                         | Shaft seal code                  | T81   |
| Suction position                               | axial                         | Sealing plan                     | I Single-acting mechanical seal(internal circulation) |
| Connection standard                            | DIN 11851 (Milk thread)       | Seal chamber design              | Standard seal chamber                                 |
| Discharge nominal dia.                         | DN 32                         | Impeller diameter                | 110.0 mm  |
| Discharge nominal pressure                     | PN 10                         | Free passage size                | 4 mm  |
| Discharge position                             | top (0°/360°)                 | Direction of rotation from drive | Clockwise   |
| Discharge flange drilled according to standard | DIN 11851 (Milk thread)       | Silicon free pump assembly       | Yes   |
| Counter Flange                                 | No                            | Bearing bracket construction     | Close-coupled   |
| Shaft seal                                     | Single acting mechanical seal | Bearing type                     | Anti-friction bearings                                |
| Shaft seal manufacturer                        | Roten                         | Lubrication type                 | Grease  |
| Shaft seal type                                | Uniten 3                      | Color                            | White aluminium (similar RAL 9006)                    |
| Mechanical Seal Form                           | Unbalanced                    | Support or motor foot            | 3 point ball feet                                     |
|  |                               | Motor shroud                     | Without   |
|  |                               | Surface finish wetted parts      | 3.2 µm  |

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**Driver, accessories**

|  |   |   |  |
|--|---|---|--|
| Driver type                                    | Electric motor                                  | Motor enclosure   | IP55                                   |
| Drive standard mech.                           | IEC   | Cos phi at 4/4 load   | 0.78                                   |
| Model (make)                                   | KSB-Motor                                       | Motor efficiency at 4/4 load  | 84.2 %                                 |
| Drive supplied by                              | Standard motor supplied by KSB - mounted by KSB | Temperature sensor  | 1 PTC resistor                         |
| Motor const. type                              | V1  | Terminal box position   | 0°/360° (top)<br>Viewed from the drive |
| Motor size                                     | 90S   | Motor winding   | 230 / 400 V                            |
| Efficiency class                               | Efficiency class IE3 acc. to IEC60034-30-1      | Number of poles   | 2                                      |
| Speed control selection                        | Speed adjustment                                | Connection mode   | Star                                   |
| Frequency                                      | 50 Hz   | Motor cooling method  | Surface cooling                        |
| Designed for operation with frequency inverter | Yes   | Motor material  | Aluminium                              |
| Rated voltage                                  | 400 V   | Frequency inverter operation allowed  | FI allowed                             |
| Rated power P2                                 | 1.50 kW   | Motor noise pressure level  | 68 dBA                                 |
| Available reserve                              | 198.93 %  | Motor data can vary from type plate information. Motor data describes KSB's choice functional specification and is used for pump selection. |  |
| Rated current                                  | 3.3 A   | EAC Approval  | Yes                                    |
| Starting current ratio                         | 8.5   |   |  |
| Insulation class                               | F to IEC 34-1                                   |   |  |

**Materials C**

|                       |                          |                          |                        |
|-----------------------|--------------------------|--------------------------|------------------------|
| Circular casing (103) | Stainless steel 1.4409   | Taper locking ring (515) | Stainless steel 1.4301 |
| Discharge cover (163) | Stainless steel 1.4409   | Cover plate (68-3)       | Stainless steel 1.4301 |
| Shaft (210)           | CrNiMo steel 1.4404      | Motor shroud (683)       | Without                |
| Impeller (230)        | Stainless steel 1.4409   | Impeller nut (922)       | CrNiMo steel 1.4404    |
| O-Ring (412)          | FKM 75 with FDA approval |                          |                        |

**Packaging**

|                       |                               |                         |       |
|-----------------------|-------------------------------|-------------------------|-------|
| Packaging category    | A0 Packing acc. to KSB choice | Packaging for transport | Truck |
| Packaging for storage | Indoor                        |                         |       |

**Nameplates**

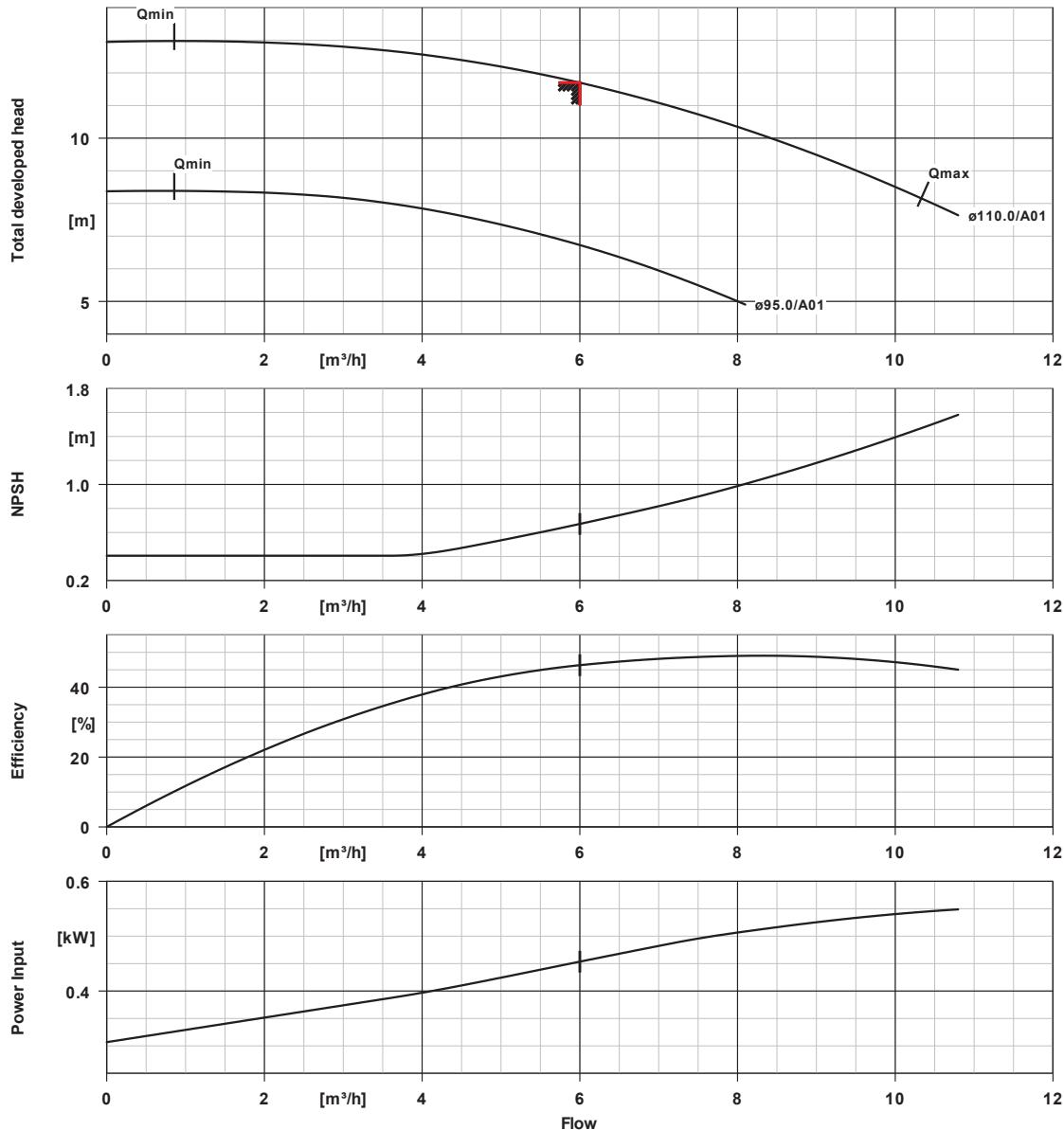
|                     |               |
|---------------------|---------------|
| Nameplates language | International |
|---------------------|---------------|

## Performance curve



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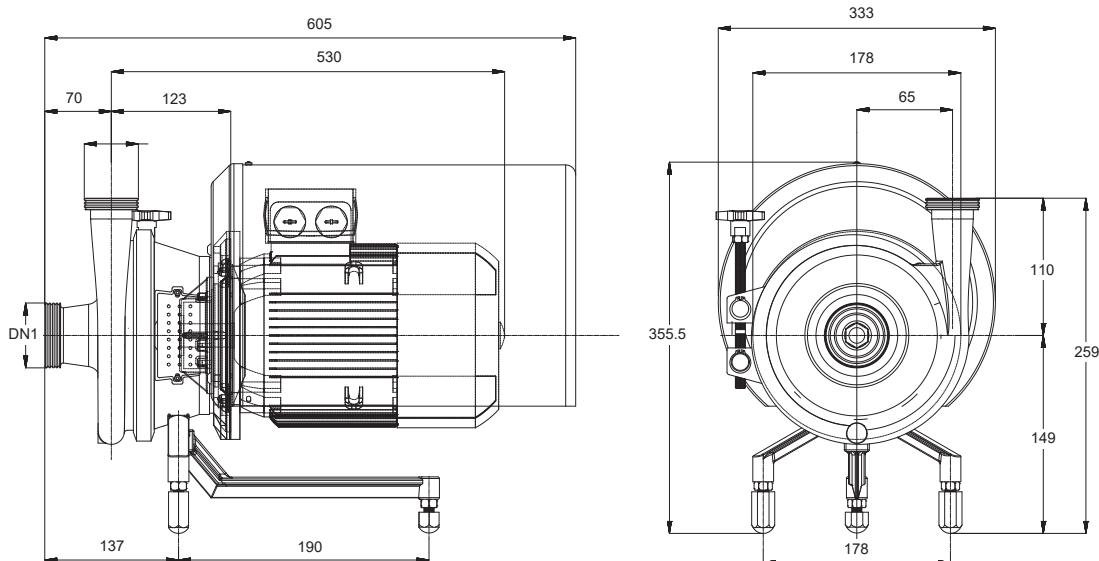
### Curve data

|                      |                         |                             |               |
|----------------------|-------------------------|-----------------------------|---------------|
| Speed of rotation    | 2616 rpm                | Requested developed head    | 11.70 m       |
| Fluid density        | 1100 kg/m <sup>3</sup>  | Efficiency                  | 46.3 %        |
| Viscosity            | 1.10 mm <sup>2</sup> /s | Power absorbed              | 0.45 kW       |
| Flow rate            | 6.00 m <sup>3</sup> /h  | NPSHR                       | 0.67 m        |
| Requested flow rate  | 6.00 m <sup>3</sup> /h  | Curve number                | VA-32110-2900 |
| Total developed head | 11.70 m                 | Effective impeller diameter | 110.0 mm      |

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*Drawing is not to scale*

*Dimensions in mm*

**Motor**

|                          |  |
|--------------------------|--|
| Motor manufacturer       | KSB-Motor                              |
| Motor size               | 90S                                    |
| Motor power              | 1.50 kW                                |
| Number of poles          | 2                                      |
| Speed of rotation        | 2969 rpm                               |
| Position of terminal box | 0°/360° (top)<br>Viewed from the drive |

**Connections**

|                            |                                 |
|----------------------------|---------------------------------|
| Suction nominal size DN1   | DN 40 / DIN 11851 (Milk thread) |
| Discharge nominal size DN2 | DN 32 / DIN 11851 (Milk thread) |
| Nominal pressure suct.     | PN 10                           |
| Rated pressure disch.      | PN 10                           |

**Weight net**

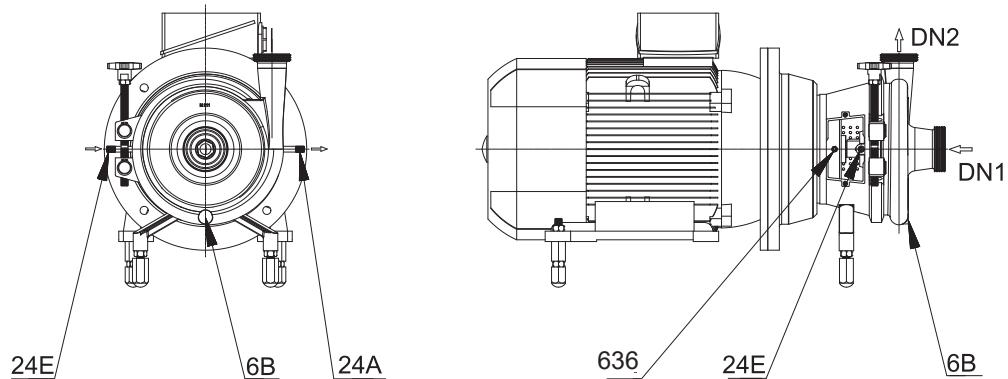
|       |       |
|-------|-------|
| Pump  | 11 kg |
| Motor | 18 kg |
| Total | 29 kg |

Connect pipes without stress or strain!

**For auxiliary connections see separate drawing.**

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## Connections

|                               |       |              |
|-------------------------------|-------|--------------|
| 6B Pumped liquid drain        | G 3/8 | Not executed |
| 24E/24A Quench liquid in/out  | G 1/4 | Not executed |
| 10E/10A Sealing liquid in/out | G 1/4 | Not executed |
| 636 Lubrication for bearing   |       | Not executed |