## Progressive cavity pump

## BN 2-24 / A6-J0-J0-R0-GAM

### Application data

C 000 XXX001

| | |
|---|---|
| **Conveyed product** | Caustic Soda (20%) |
| **Remark** | WEP tag # 19-J-769B<br>PROJECT - WORPAR<br>ITEM NBR - PW534NA2<br>eB NBR - 100212288.000<br>DATE - 18.10.2021 |
| **Flowability** | flowable |
| **Viscosity** | 5.218 cPs |
| **Solids content** | not specified |
| **Size of solids** | not specified |
| **Density** | 1.219 |
| **Product temperature** | 50°F - 176°F |
| **pH value** | 5-9 |
| **Kind of operation** | continuous |
| **Operating hours** | 8 h/day |
| **Location** | outdoor, humid atmosphere |
| **Altitude of installation** | up to 1000 m assumed |
| **Surrounding temperature** | normal (32-104F) |

### Performance data

| | **Capacity** | **Pressure** | **Speed** |
|---|---|---|---|
| | 1.6 USGPM | 144 psi | 59 rpm |
| | 8 USGPM | 144 psi | 269 rpm |
| **Starting torque** | 100 lb.ft | | |
| **Req. operating power at pump shaft** | 2 HP | | |
| **Inlet pressure** | flooded suction (up to 0,5bar) | | |
| **NPSHr** | 17 ft | | |

Tolerances according to SEEPEX standards.

### Materials and executions

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|---|---|
| **Installation** | horizontal |
| **Direction of rotation** | counter clockwise (left) |
| **Lantern - Design** | with cover plates |
| **Lantern - Material** | EN-JL 1040 (gci-25) |
| **Lantern - Flange diameter** | 160 mm |
| **Suction casing - Design** | standard |
| **Suction casing - Material** | 1.4408 / ASTM A351 grade CF8M |
| **Pressure branch - Design** | standard |
| **Pressure branch - Material** | 1.4404 / AISI 316L |
| **Position of branch** | position 1 |
| **Suction connection** | NPS 3, drilled acc. to ASME B 16.5, Class 150, RF |
| **Pressure connection** | NPS 2, ASME B 16.5, Class 300, RF |
| **Joint - Design** | pin joint with joint sleeve, grease filled |
| **Joint - Material** | standard, holding bands 1.4401 |
| **Joint - Universal joint sleeve: material** | EPDM |
| **Joint - Joint Grease** | joint grease SEEPEX 30321 |
| **Coupling rod - Design** | standard |
| **Coupling rod - Material** | 1.4404 / AISI 316L |
| **Rotor - Design** | Undersize acc. to GI.ROT.02 |
| **Rotor - Undersize** | -0.4 mm |
| **Rotor - Material** | 1.4404 / AISI 316L |
| **Rotor - Coating** | ductile chromium coating |
| **Stator - Design** | standard, with TSE, sensor sleeve 1.4404 |
| **Stator - Material** | EPDM |
| **Shaft sealing** | mechanical seal |
| **Code** | GAM - single acting mechanical seal |

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| **Quench** | design 3<br>With refillable supply tank. Quench chamber is filled with SEEPEX 50300 (glycerine) or for food applications with SEEPEX 60200, container is empty and has to be filled before commissioning.<br>- capacity of supply tank: approx. 140 ml<br>- materials of construction: nickel plated brass, plexiglass, NBR |
| **Shaft diameter** | 45 mm |
| **Make** | Burgmann |
| **Rotating/stationary seal face** | SiC SiC |
| **Elastomers** | FPM |
| **Spring** | 1.4571 / AISI 316Ti |
| **Metal parts** | 1.4571 / AISI 316Ti |
| **Type** | MG1-G60 Q1Q1 VGG |
| **Casing - material** | 1.4408 / ASTM A351 grade CF8M |
| **Casing - connection standard** | NPT |
| **Plug-in Shaft - Design** | standard |
| **Plug-in Shaft - Material** | 1.4404 / AISI 316L |
| **Plug-in Shaft - Drilling diameter** | 30 |
| **Plug-in Shaft - Drilling depth** | 55 |
| **Bolting - Design** | completely stainless steel |
| **Painting - Number of colors** | single-colored |
| **Painting - Painted components** | complete combination |
| **Painting - Color** | Epoxy System (SEEPEX Blue) |
| **Painting - Surface protection** | std. surface protection C2 (NDFT 95 µm) |

## Drive

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|---|---|
| **Drive Type** | Gear motor at freq. inv. |
| **Type** | Gearmotor |
| **Make** | Nord |
| **Model** | SK22FVL-100LP/4 |
| **Mounting position** | M1 |
| **Ratio (i)** | 6.51 |
| **Speed** | 272 rpm |
| **Flange diameter** | 160 mm |
| **Shaft diameter** | 30 mm |
| **Shaft length** | 55 mm |
| **Shaft drawing** | 716/0050-006B4 |

| | **Norm** | **Min** | **Max** |
|---|---|---|---|
| **Speed** | 272 rpm | 59 rpm | 269 rpm |
| **Motor speed** | 1770 rpm | 385 rpm | 1754 rpm |
| **Frequency** | 60 Hz | 13 Hz | 59 Hz |

| | |
|---|---|
| **Rated output** | 3 HP |
| **Power factor** | 0.79 |
| **Rated speed** | 1770 rpm |
| **Starting** | direct on frequency inverter |
| **Efficiency class** | premium efficiency |
| **Winding protection** | TW - Thermostat |
| **Voltage** | 3x230/460 VAC |
| **Frequency** | 60Hz |
| **Rated current** | 7,68 / 3,84 |
| **Thermal class** | F |
| **Enclosure** | IP55 / TEFC |
| **Other** | Magnetic Drain plug |
| **Gear accessories** | Oil sight glass |
| **Gear sealing** | Sealing ring Viton and syn. Oil |
| **Remark for drive** | Motor:<br>- 20:1 CT turndown capable (4-80 Hz) |

The frequency inverter has to follow a linear U/f characteristic curve (constant torque).
It’s essential to have a minimum overload capability of 150% for at least 60 seconds. (see technical data sheet)

## Baseplate

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|---|---|
| **Design** | design B with side feet w/ drain connection |
| **Material** | steel, painted |
| **GPU Type Code** | B-ST-LS |

## TSE

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|---|---|
| **Design** | standard design, pump sided parts for hook up to a 4-20ma connection<br>with prosense connection head, prosense transmitter, niples and reducer. |
| **Voltage** | not available |
| **Temperature coefficient** | Pt100 |
| **Material sensor sleeve** | 1.4404 / AISI 316L |
| **Material connection head** | aluminium |

## Accessories

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|---|---|
| **Design** | Metal Name Tag<br>in addition to seepex info must also have info below<br>WEP TAG: 19-J-769B  DESMET TAG: PW534NA2 |

## Quality Assurance

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|---|---|
| **Design** | Certified GA Drawing |
| **Document Standard** | standard |
| **QA Testing Standard** | standard |

## Documentation