

**I Application**

Aspir pump is a sanitary side-channel self-priming pump suitable for use in the food-processing, pharmaceutical and chemical industries. It is specially designed for pumping products containing air or gas, and it can also be used for negative suction with prior priming as well as in filtration equipment. It can be used to pump wine, oil, syrups, volatile products such as alcohol, acetone and other solvents, or products at temperatures close to the boiling point. However, the main use of this pump is for CIP return.

**I Operating principle**

The impeller is housed between the suction casing and the diffuser, it rotates in conjunction with the pump shaft. Due to this arrangement, the rotation of the impeller and the position of the side channel, negative pressure is created inside the suction casing, which generates the suction force of the pump. At the same time, the fluid receives energy in the form of kinetic energy and pressure energy, and this impels it through the discharge casing.

**I Design and features**

Aspir is a range of centrifugal pumps made of a cold-formed stainless steel discharge casing, cast stainless steel suction casing, diffuser and lantern, star-shaped fixed impeller, and an external mechanical seal that prevents any contact of the spring with the product. The motor complies with the IEC standards, it is protected with a stainless steel shroud made of stainless steel sheet and provided with the height adjustable hygienically designed legs.

**I Technical specifications**

Materials:

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Parts in contact with the product   | Stainless steel AISI 316L (1.4404) |
| Other steel parts                   | Stainless steel AISI 304 (1.4301)  |
| Gaskets in contact with the product | EPDM                               |

Mechanical seal:

|                 |                       |
|-----------------|-----------------------|
| Rotary part     | Silicon carbide (SiC) |
| Stationary part | Carbon (C)            |
| Gaskets         | EPDM                  |

Mechanical seal



**I Technical specification***Surface finish:*

|                 |  |
|-----------------|--|
| <i>External</i> | <i>Matt</i>  |
| <i>Internal</i> | <i>Bright polish except for electropolished impeller</i> |

*Connections*

*DIN 11851*  
*Aseptic flange DIN 11864*  
*CLAMP*  
*SMS*  
*(other connections available on request)*

*Operating limits:*

|                                  |                                  |                        |
|----------------------------------|----------------------------------|------------------------|
| <i>Nominal pressure</i>          | <i>1000 kPa (10 bar)</i>         | <i>145 PSI</i>         |
| <i>Temperature range</i>         | <i>-10°C to +120 °C</i>          | <i>14 °F to 248 °F</i> |
|                                  | <i>+140°C (SIP, max.30 min.)</i> | <i>284 °F</i>          |
| <i>Maximum flow</i>              | <i>54 m³/h</i>                   | <i>238 US GPM</i>      |
| <i>Maximum differential head</i> | <i>50 m</i>                      | <i>164 ft</i>          |
| <i>Maximum suction height</i>    | <i>4 m</i>                       | <i>13 ft</i>           |
| <i>Maximum speed</i>             | <i>1800 rpm</i>                  |                        |

**I Motor**

*Triphasic induction motor with B5 flange and B3 legs, in compliance with the IEC standards,  
 4 poles = 1500/1800 rpm, IE-2 / IE-3 efficiency class, IP 55 protection and F-class insulation.*

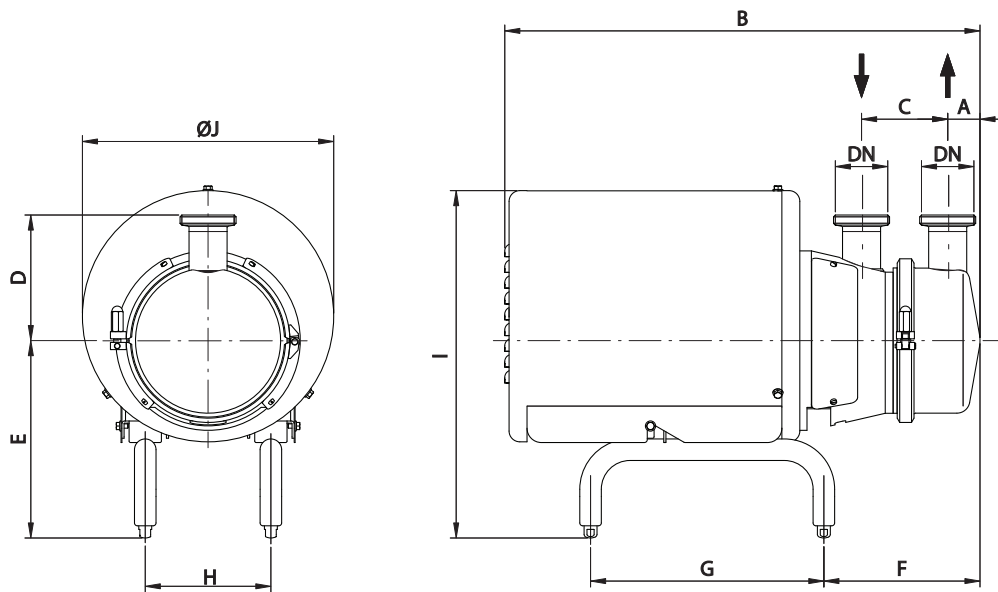
*3 phases, 50 Hz, 220-240 V Δ / 380-420 V Y, ≤ 4 kW*  
*3 phases, 50 Hz 380-420 V Δ / 660-690 V Y, ≥ 5,5 kW*

**I Options**

*Heavy-duty impeller.*  
*Pump casing with drain port.*  
*Different types of connections.*  
*SiC/SiC mechanical seal.*  
*Gaskets: FPM and PTFE.*  
*Motor with other voltages and frequencies.*  
*Motor for explosive atmospheres or with enhanced safety level.*  
*ATEX certification.*  
*Internal flow by-pass.*



**I Dimensions: ASPIR**

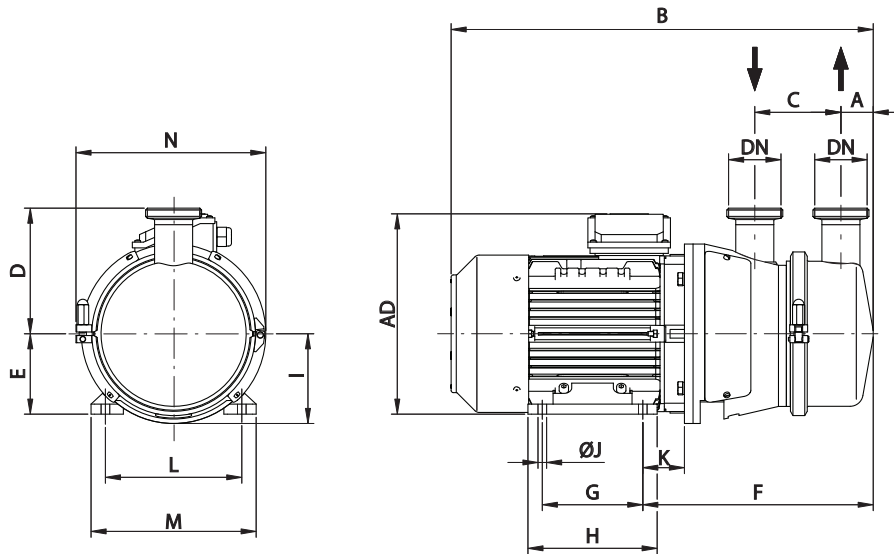


|              | kW   | Motor | DN        | A  | B    | C   | D   | E   | F   | G   | H   | I   | ØJ  | kg  |
|--------------|------|-------|-----------|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>A-50</b>  | 0,75 | 80    | 32<br>1½" | 37 | 529  | 86  | 125 | 217 | 150 | 275 | 133 | 395 | 290 | 27  |
| <b>A-80</b>  | 2,2  | 100   | 40<br>1½" | 45 | 662  | 120 | 175 | 266 | 211 | 325 | 175 | 475 | 350 | 56  |
|              | 3    | 100   | 40<br>1½" | 45 | 662  | 120 | 175 | 266 | 211 | 325 | 175 | 475 | 350 | 59  |
|              | 4    | 112   | 40<br>1½" | 45 | 662  | 120 | 175 | 278 | 211 | 325 | 175 | 487 | 350 | 67  |
| <b>A-150</b> | 4    | 112   | 50<br>2"  | 45 | 662  | 120 | 175 | 278 | 218 | 325 | 175 | 487 | 350 | 66  |
|              | 5,5  | 132   | 50<br>2"  | 45 | 812  | 120 | 175 | 293 | 242 | 375 | 216 | 526 | 400 | 86  |
|              | 7,5  | 132   | 50<br>2"  | 45 | 812  | 120 | 175 | 293 | 242 | 375 | 216 | 526 | 400 | 98  |
| <b>A-200</b> | 11   | 160   | 65<br>3"  | 60 | 1073 | 150 | 225 | 367 | 332 | 475 | 267 | 642 | 500 | 151 |
|              | 15   | 160   | 65<br>3"  | 60 | 1073 | 150 | 225 | 367 | 332 | 475 | 267 | 642 | 500 | 170 |

Dimensions for pumps with DIN 11851, Clamp and SMS connections.



**I Dimensions: ASPIR without shroud and without legs**



|              | kW   | Motor | DN        | A  | B   | C   | D   | E   | F   | G   | H   | AD  | I   | ØJ | K  | L   | M   | N   | kg  |
|--------------|------|-------|-----------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|
| <b>A-50</b>  | 0,75 | 80    | 32<br>1¼" | 37 | 422 | 86  | 125 | 80  | 235 | 100 | 125 | 220 | 100 | 9  | 40 | 125 | 160 | 200 | 21  |
| <b>A-80</b>  | 2,2  | 100   | 40<br>1½" | 45 | 568 | 120 | 175 | 100 | 314 | 140 | 180 | 265 | 125 | 12 | 50 | 160 | 200 | 261 | 47  |
|              | 3    | 100   | 40<br>1½" | 45 | 568 | 120 | 175 | 100 | 314 | 140 | 180 | 265 | 125 | 12 | 50 | 160 | 200 | 261 | 50  |
|              | 4    | 112   | 40<br>1½" | 45 | 590 | 120 | 175 | 112 | 323 | 140 | 180 | 291 | 125 | 12 | 57 | 190 | 230 | 261 | 58  |
| <b>A-150</b> | 4    | 112   | 50<br>2"  | 45 | 590 | 120 | 175 | 112 | 323 | 140 | 180 | 291 | 125 | 12 | 57 | 190 | 230 | 265 | 57  |
|              | 5,5  | 132   | 50<br>2"  | 45 | 640 | 120 | 175 | 132 | 362 | 140 | 228 | 332 | 150 | 12 | 73 | 216 | 255 | 300 | 75  |
|              | 7,5  | 132   | 50<br>2"  | 45 | 678 | 120 | 175 | 132 | 362 | 178 | 228 | 332 | 150 | 12 | 73 | 216 | 255 | 300 | 87  |
| <b>A-200</b> | 11   | 160   | 65<br>3"  | 60 | 842 | 150 | 225 | 160 | 455 | 210 | 306 | 402 | 175 | 15 | 88 | 254 | 314 | 350 | 132 |
|              | 15   | 160   | 65<br>3"  | 60 | 887 | 150 | 225 | 160 | 455 | 254 | 306 | 402 | 175 | 15 | 88 | 254 | 314 | 350 | 151 |

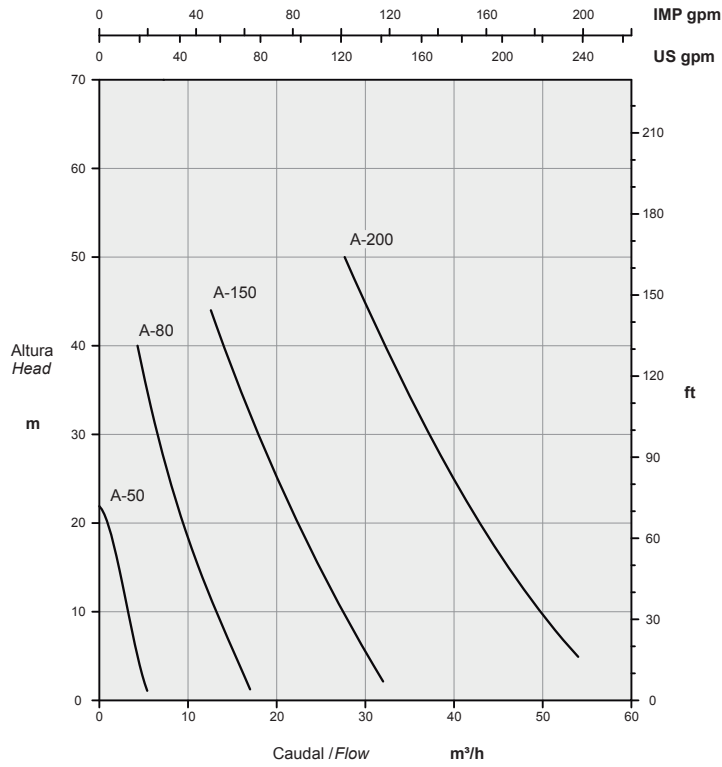
Dimensions for pumps with DIN 11851, Clamp and SMS connections.



**I Performance charts**

50 Hz

1450 rpm



60 Hz

1750 rpm

