

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 inlet body, 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

<i>Surface finish</i>		
<i>External</i>	<i>Matt</i>	
<i>Internal</i>	<i>Bright polish except for electropolished impeller</i>	
<i>Connections</i>		
	<i>DIN 11851</i>	
	<i>Aseptic flange DIN 11864</i>	
	<i>CLAMP</i>	
	<i>SMS</i>	
	<i>(other connections available on request)</i>	
<i>Operating limits</i>		
<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.

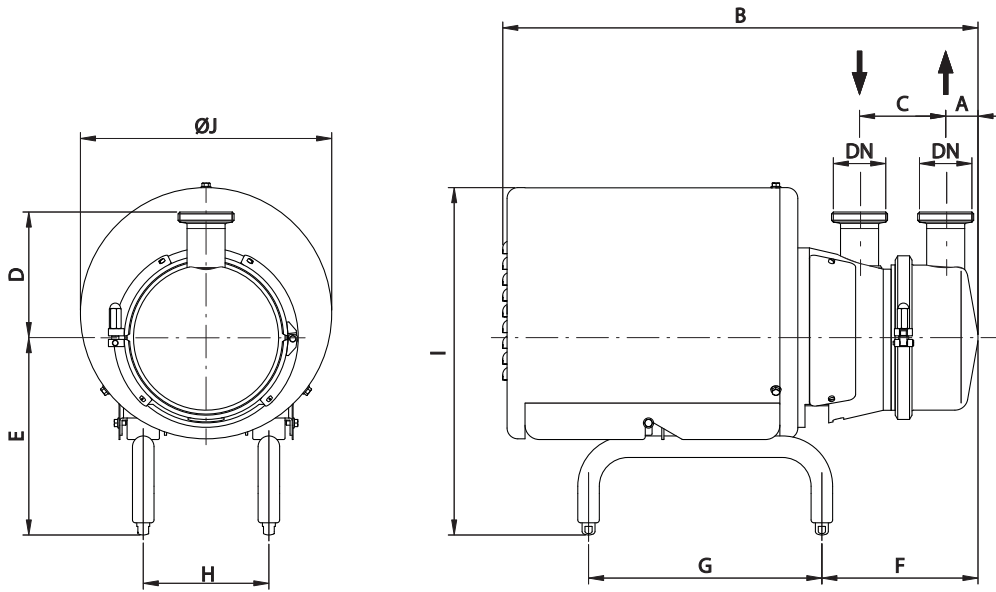
3 phases, 50 Hz, 220-240 V Δ / 380-420 V Y, ≤ 4 kW
3 phases, 50 Hz 380-420 V Δ / 660-690 V Y, ≥ 5,5 kW

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
A-50	0,75	80	32 1¼"	37	529	86	125	217	150	275	133	395	290	27
A-80	2,2	100	40 1½"	45	662	120	175	266	211	325	175	475	350	56
	3	100	40 1½"	45	662	120	175	266	211	325	175	475	350	59
	4	112	40 1½"	45	662	120	175	278	211	325	175	487	350	67
A-150	4	112	50 2"	45	662	120	175	278	218	325	175	487	350	66
	5,5	132	50 2"	45	812	120	175	293	242	375	216	526	400	86
	7,5	132	50 2"	45	812	120	175	293	242	375	216	526	400	98
A-200	11	160	65 3"	60	1073	150	225	367	332	475	267	642	500	151
	15	160	65 3"	60	1073	150	225	367	332	475	267	642	500	170

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

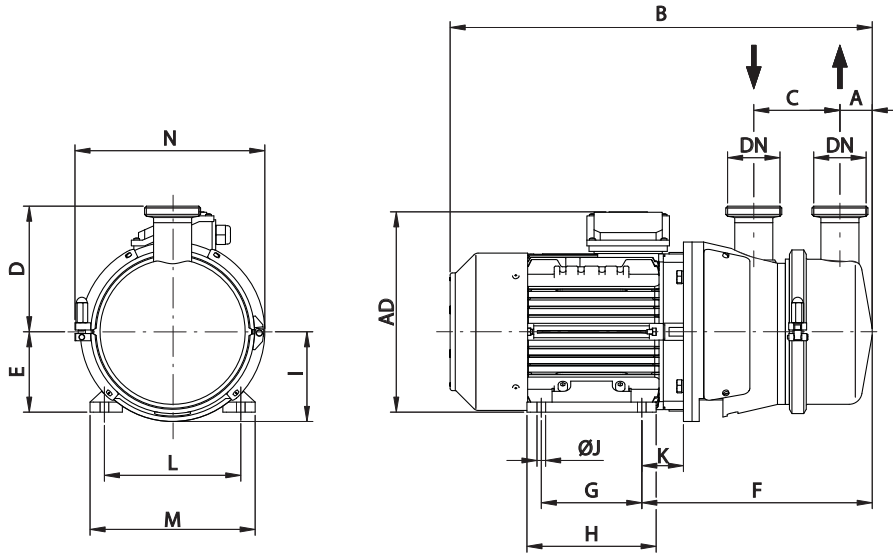


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I Dimensions: ASPIR without shroud and without legs



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



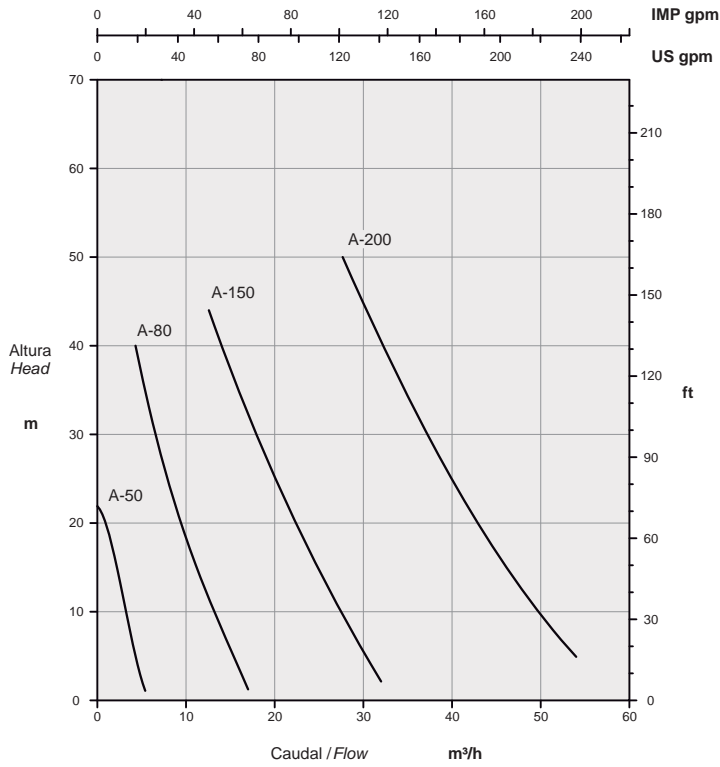
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I Performance charts

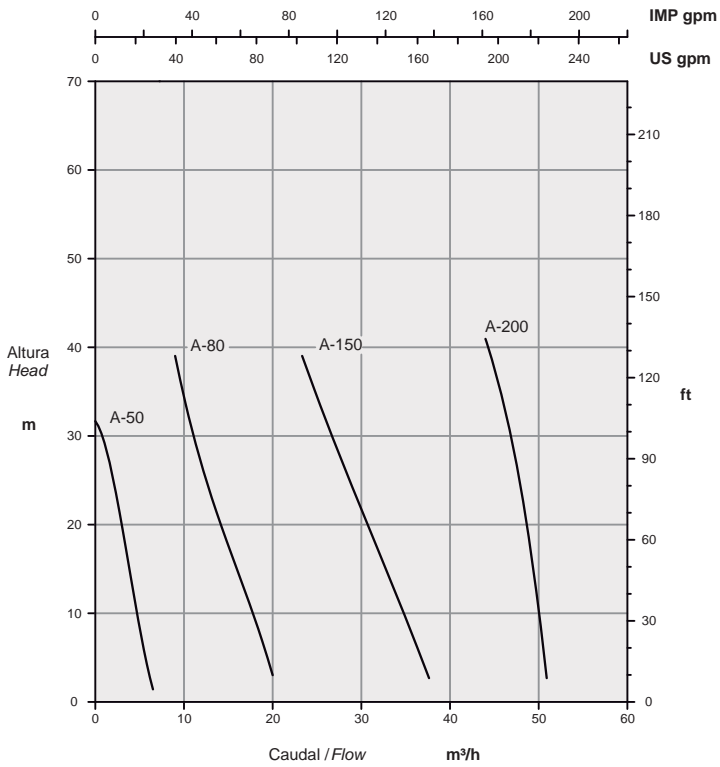
50 Hz

1450 rpm



60 Hz

1750 rpm



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