

# ALC Centrifugal Pump

## Application

The ALC centrifugal pump is designed for food, pharmaceutical, chemical and other industries where acid-resistant steel is required for the products to be pumped. The impeller, together with the volute pump casing, pumps the products gently and efficiently. ALC is available in three sizes, ALC-1, ALC-2 and ALC-3.

## Standard design

The ALC pump consists of a standard motor, adaptor, back plate, impeller, impeller screw, pump casing and shaft seal.

The sanitary version of ALC has a stainless steel shroud for protection of the motor, and the complete unit is supported on three adjustable legs. (Pump with 22 kW motor is without shroud).

## Shaft seal

Mechanical single or flushed seal with stationary seal ring of carbon and rotating seal ring of silicon carbide.

## Materials

Product wetted

steel parts: Acid-resistant steel AISI 316L.

Other steel parts: Stainless steel AISI 304.

Adaptor: Cast iron.  
Zinc sprayed and coated with two-component lacquer.

Legs

(Sanitary version): Stainless steel AISI 304 or nylon.

Product wetted

seals: EPDM rubber.

Finish: Semi bright.

## Technical data

Max. inlet pressure: 400 kPa (4 bar).

Max. outlet pressure: 1200 kPa (12 bar).

Temperature range: -10°C to + 140°C (EPDM).

Flushed seal:

Water pressure: Normally atmospheric (max. 1 bar).

Water consumption: Approx. 0.25-0.5 l/min.

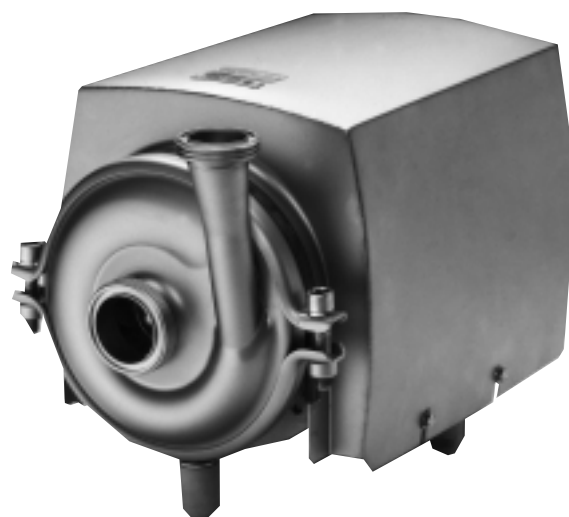


Fig. 1. ALC-1, with shroud and legs.

## Motor

Standard foot-flanged motor according to the IEC metric standard 2 poles = 3000/3600 rpm. at 50/60 Hz. IP 55 (with drain holes with labyrinth plug), insulation class F.

## Voltage and frequency

(3 ~, 50 Hz, 220-240V Δ/380-420VY ≤ 4 kW)  
(3 ~, 60 Hz, 250-280V Δ/440-480VY ≤ 4 kW)

(3 ~, 50 Hz, 380-420V Δ/660-690VY ≥ 5.5 kW)  
(3 ~, 60 Hz, 440-480V Δ ≥ 5.5 kW)

## Motor size

50Hz: 1.5, 2.2, 3.0, 4.0, 5.5, 7.5, 11.0, 15.0, 18.5, 22.0 kW

60Hz: 1.75, 2.5, 3.5, 4.6, 6.3, 8.6, 12.5, 17.0, 21.0, 25.0 kW

**Dimensions (mm) - Sanitary version**

**ALC-1**

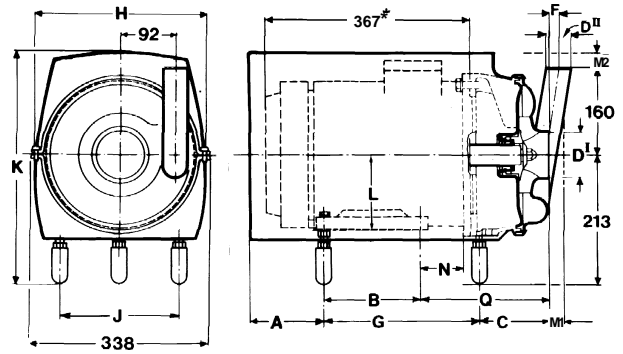
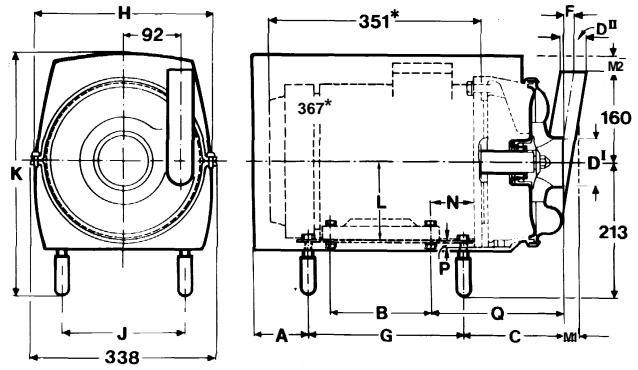
Size	Motor					
	1.5 kW	2.2 kW	3 kW	4 kW	5.5 kW	7.5 kW
A	83	83	99	99	176	176
B	100	125	140	140	140	178
C	95	95	129	129	81	81
F	15	15	15	15	15	15
G	204	204	214	214	254	254
H	254	254	266	266	340	340
J	140	140	160	190	216	216
K	347	347	372	372	390	390
L	90	90	100	112	132	132
N	46	46	53	59	75	75
P	56	56	46	34	18	18
Q	145	145	162	169	208	208
Weight (kg)	32	35	41	46	68	68

**ALC-2**

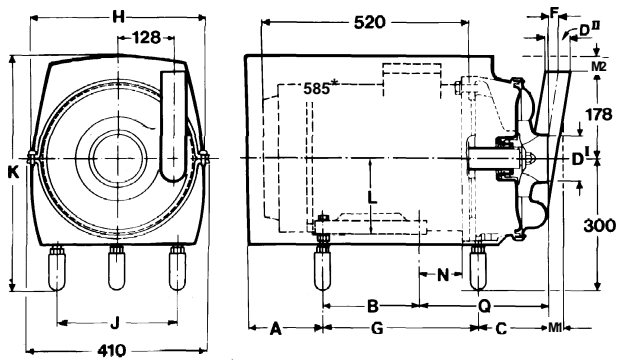
Size	Motor					
	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW	22 kW
A	176	176	243	243	199	-
B	140	178	210	210	254	241
C	95	95	111	111	111	111
F	47	47	47	47	47	47
G	256	294	358	358	402	402
H	340	340	382	382	382	-
J	216	216	254	254	254	279
K	478	478	532	532	532	-
L	132	132	160	160	160	180
N	75	75	88	88	88	101
P	50	50	22	22	22	22
Q	209	209	258	258	258	271
Weight (kg)	75	75	122	130	141	168

**ALC-3**

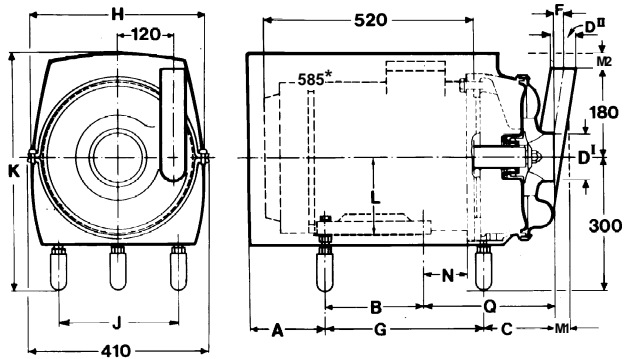
Size	Motor					
	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW	22 kW
A	176	176	243	243	199	-
B	140	178	210	210	254	241
C	102	102	118	118	118	118
F	23	23	23	23	23	23
G	256	294	358	358	402	402
H	340	340	382	382	382	-
J	216	216	254	254	254	279
K	478	478	532	532	532	-
L	132	132	160	160	160	180
N	75	75	88	88	88	101
P	50	50	22	22	22	22
Q	216	216	265	265	265	278
Weight (kg)	83	83	130	135	142	187



a. ALC-1



b. ALC-2



c. ALC-3

**Fig. 2. Dimensions - Sanitary version.**

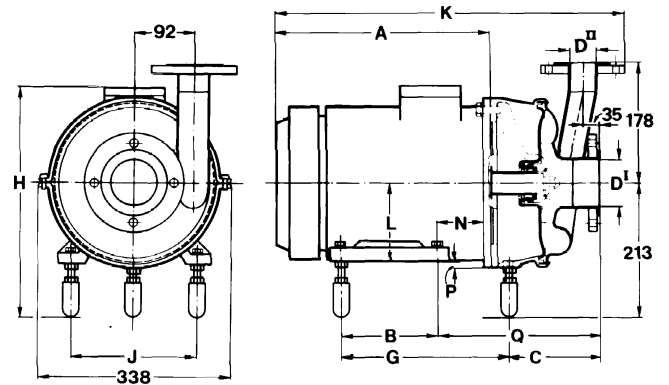
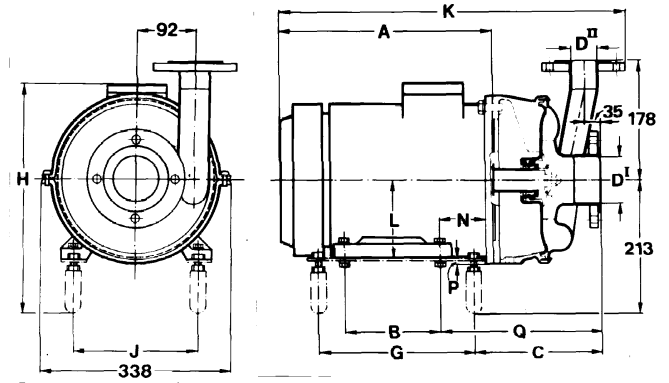
Dimensions and weights for pumps with ABB motors.

\* = Max. motor length.

## Dimensions (mm) - Industrial version

### ALC-1

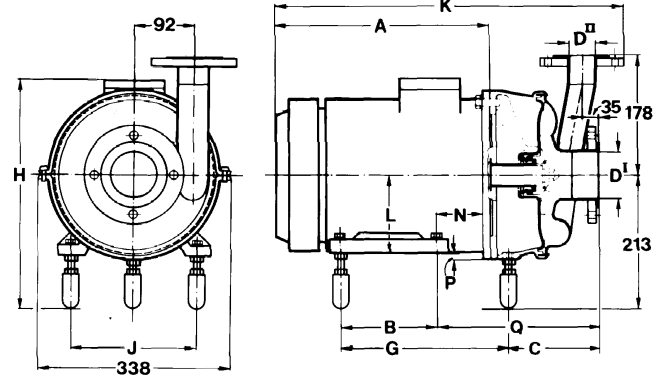
Size	Motor					
	1.5 kW	2.2 kW	3 kW	4 kW	5.5 kW	7.5 kW
A	245	270	298	301	367	367
B	100	125	140	140	140	178
C	145	145	179	178	131	131
G	204	204	214	214	254	254
H	335	335	351	369	379	379
J	140	140	160	190	216	216
K	444	469	494	497	583	583
L	90	90	100	112	132	132
N	46	46	53	59	75	75
P	56	56	46	34	18	18
Q	195	195	212	219	258	258
Weight (kg)	25	28	34	41	56	61



a. ALC-1

### ALC-2

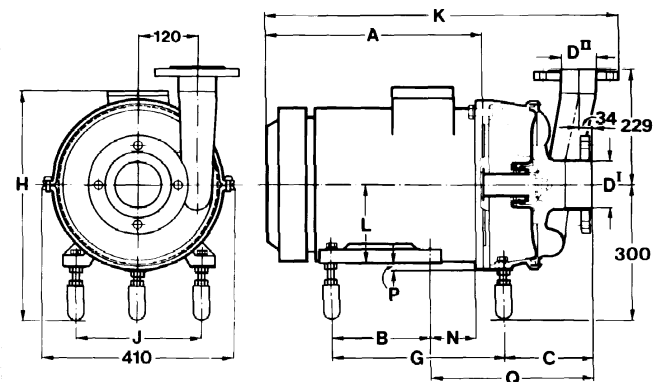
Size	Motor					
	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW	22 kW
A	367	367	475	475	520	585
B	140	178	210	210	254	241
C	111	111	111	111	111	111
F	47	47	47	47	47	47
G	358	358	358	358	358	358
H	466	466	524	524	524	540
J	216	216	254	254	254	279
K	583	583	765	765	810	875
L	132	132	160	160	160	180
N	75	75	88	88	88	101
P	50	50	22	22	22	22
Q	209	209	258	258	258	271
Weight (kg)	61	66	105	105	128	178



b. ALC-2

### ALC-3

Size	Motor					
	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW	22 kW
A	367	367	475	475	520	585
B	140	178	210	210	254	241
C	175	175	175	175	175	175
G	358	358	358	358	402	402
H	466	466	524	524	524	540
J	216	216	254	254	254	279
K	583	583	748	748	793	858
L	132	132	160	160	160	180
N	75	75	88	88	88	101
P	50	50	22	22	22	22
Q	273	273	322	322	322	335
Weight (kg)	62	67	106	106	129	179



c. ALC-3

Fig. 3. Dimensions - Industrial version.

Dimensions and weights for pumps with ABB motors.

## Volumetric flow

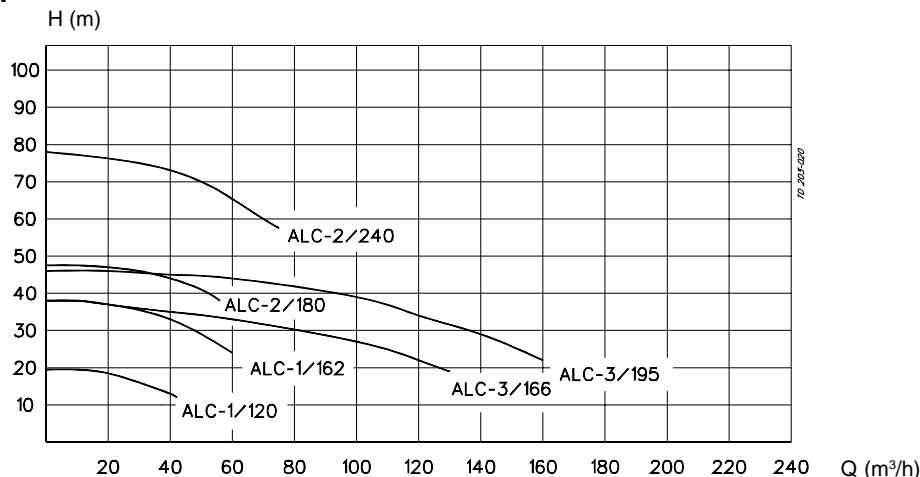


Fig. 4. Flow chart.

### Connections (mm)

#### Sanitary version

##### ALC-1

D <sup>I</sup> 63.5 D <sup>II</sup> 51	ISO Clamp	ISO Male	DIN Male	SMS Male	BS Male
M <sup>I</sup>	21	21	25	24	22
M <sup>II</sup>	21	21	22	20	22

##### ALC-2

D <sup>I</sup> 76.1 D <sup>II</sup> 63.5	ISO Clamp	ISO Male	DIN Male	SMS Male	BS Male
M <sup>I</sup>	21	21	30	24	22
M <sup>II</sup>	12	21	27	24	22

D <sup>I</sup> 63.5 D <sup>II</sup> 51	ISO Clamp	ISO Male	DIN Male	SMS Male	BS Male
M <sup>I</sup>	60	60	64	63	61
M <sup>II</sup>	21	21	22	20	22

##### ALC-3

D <sup>I</sup> 101.6 D <sup>II</sup> 76.1	ISO Clamp	ISO Male	DIN Male	SMS Male	BS Male
M <sup>I</sup>	21	21	30	35	27
M <sup>II</sup>	21	21	30	24	22

### Options

#### Equipment

- Impeller with reduced diameter.
- Motor for other voltage or frequency.
- Flameproof motor (*industrial version only*).
- Flushed shaft seal.
- 1500 rpm. motor.
- Counter flanges, collars, bolts and seal ring for flanged connections, (*industrial version*).
- Noise reducing shroud.
- Stainless steel shroud for 22 kW motor.

#### Material grades

- Product wetted seals of Nitrile (NBR) or Fluorinated rubber (FPM).
- Stationary seal ring of Silicon Carbide.

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### Industrial version

#### ALC-1, ALC-3

Size	Inlet D <sup>I</sup> DIN 2642 BS 4505	Outlet D <sup>II</sup> DIN 2642 BS 4505
ALC-1 ALC-3	NW 65 NW 100	NW 50 NW 80

#### ALC-2

Dim.	D <sup>I</sup> Conn. NW 65 DIN 2642 BS 4505	D <sup>II</sup> Conn. NW 50 DIN 2642 BS 4505	D <sup>I</sup> Conn. NW 80 DIN 2642 BS 4505	D <sup>II</sup> Conn. NW65 DIN 2642 BS 4505
M <sup>I</sup>	76	-	50	-
M <sup>II</sup>	-	20	-	42

### Ordering

Please state the following when ordering:

- Pump type.
- Connections.
- Motor size.
- Voltage and frequency
- Flow rate, pressure and temperature.
- Density and viscosity of the product.
- Options.

**Note!** For further details, see also PD 65036 and instruction, IM 70784.

The information contained herein is correct at the time of issue, but may be subject to change without prior notice.

**Alfa Laval**