



ALFEN[®]

WET ROTOR CIRCULATION PUMPS



ALFEN WET ROTOR CIRCULATION PUMPS

ALF series circulation pumps are wet rotor, single-stage, glandless and flange type pumps. These pumps can function without any problem in an environment at temperature of 40C° and up to 120C° fluid temperature.

In single-speed and three-speed models, pump motors are designed in a manner to operate at a three –phase network with voltage of 380V and frequency of 50Hz. Besides, for single-speed 40.4 and 50/1.4, there are models that operate at 220V mono phase network. Variable speed models are for use at 220V mono phase network.

The pump body is made of GG20 cast iron and the pipe connection terminals are flanged. In single-speed models, it has a 6 bar and in 3-speed and variable-speed models, it has a 6/10 bar operating pressure standard.

The pump impeller is made of a special thermoplastic reinforced with glass fiber resistant to hot water.

Bearings are lubricated with water. During this study, the noise level was allowed to decrease below 40Db(A).

The protection class of pumps is IP41 and their isolation class is H.

The speed of motor can be changed interruptedly by means of frequency convertor. The desired delivery height can be adjusted by means of potentiometer on the body.

Mounting types of wet rotor pumps

On all the wet rotor pumps, motor and pump shaft is carried by means of carbon bearings. For this reason, there is not a structural element that supports axial movement of rotor.

For the above stated reasons, during mounting of wet rotor pumps, positions to impose axial load on the rotor must be avoided and the pump shaft must always be mounted in a way parallel to the ground.

Selection of Pump

The flow rate Q_p determined from pump's heat need is marked on horizontal axis, from general chart, and a parallel line is drawn from that point to vertical axis. The pressure loss value " H_p ", for the system is marked on vertical axis and a parallel line is drawn from that point to horizontal axis. The intersection point of these two lines is the operating point. Pump is selected according to this point.

For the best performance and economical energy consumption, it is recommended to select the pump according to performance curve at the second speed.

For systems that use coal: $Q_p = T / 2,5$

For system that use fuel-oil: $Q_p = T / 2$

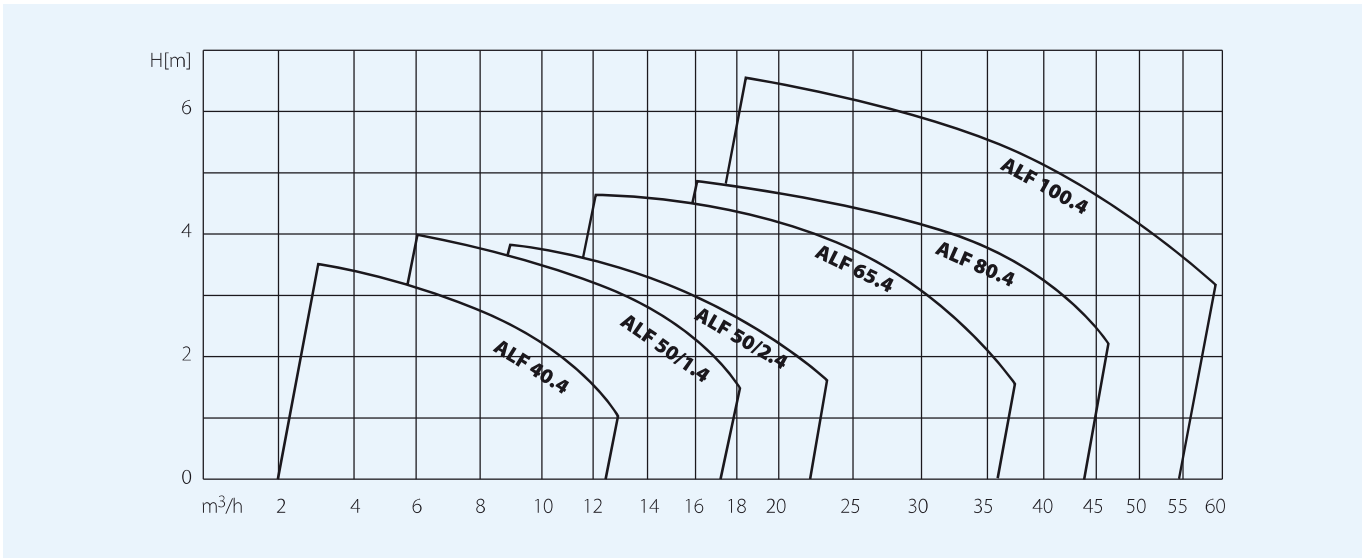
For 90C°-70C° systems that use gas as a fuel: $Q_p = Q_k / 20.000$

The result from these three calculations is in m3/h.

Q_p : Flow rate of pump (m3/h)

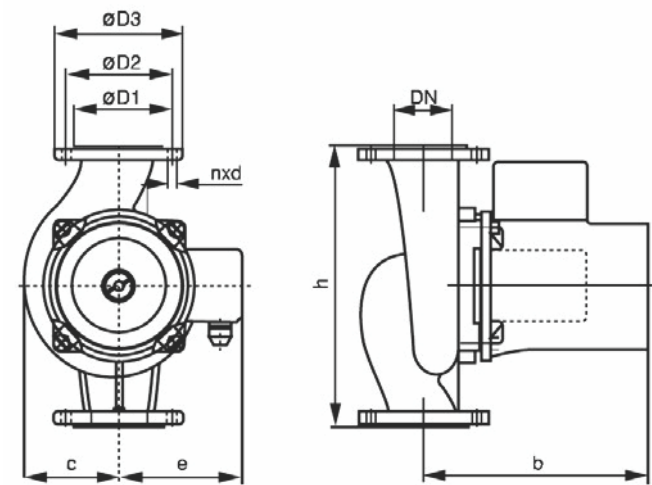
Q_k : Heat need of installation per hour (kcal/h)

T: Heating area of used boiler (in coal fired and liquid fuel boilers)



PUMP DIMENSIONS

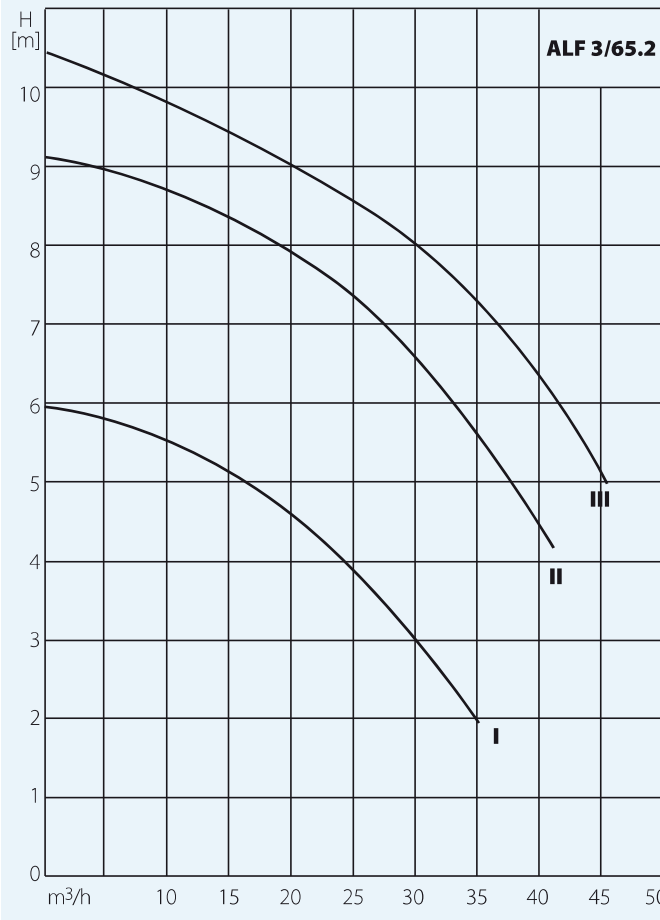
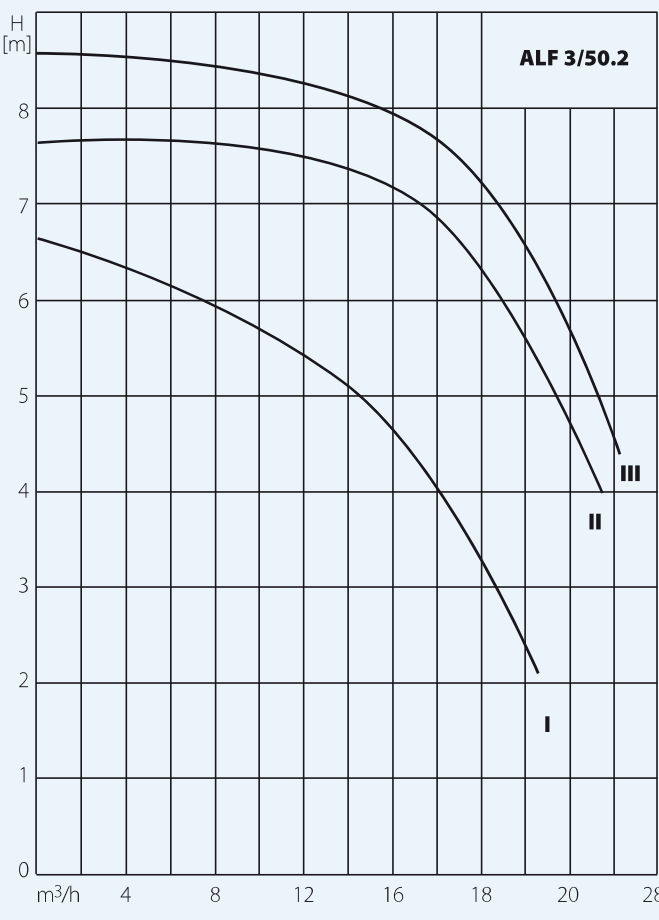
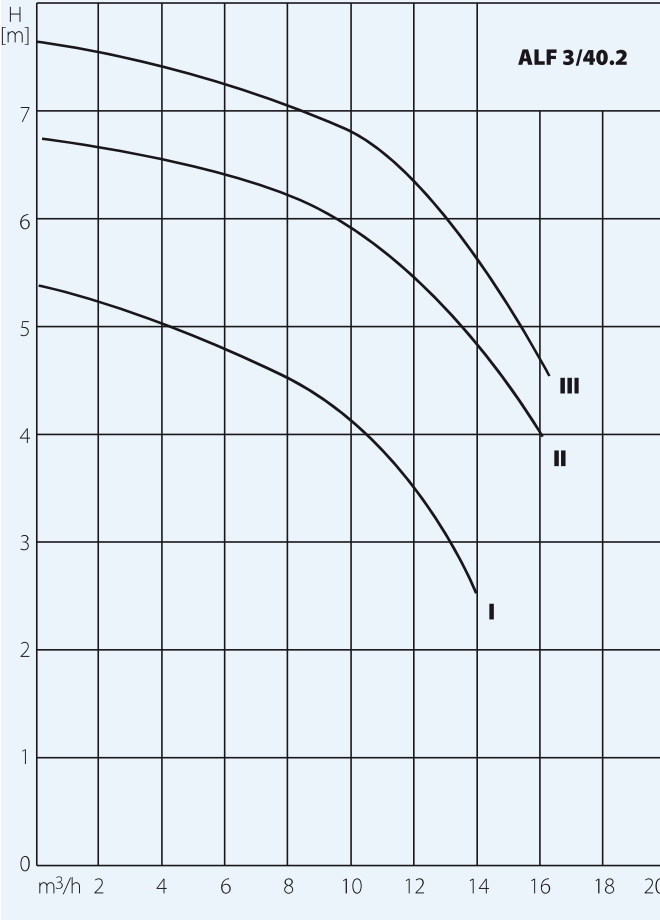
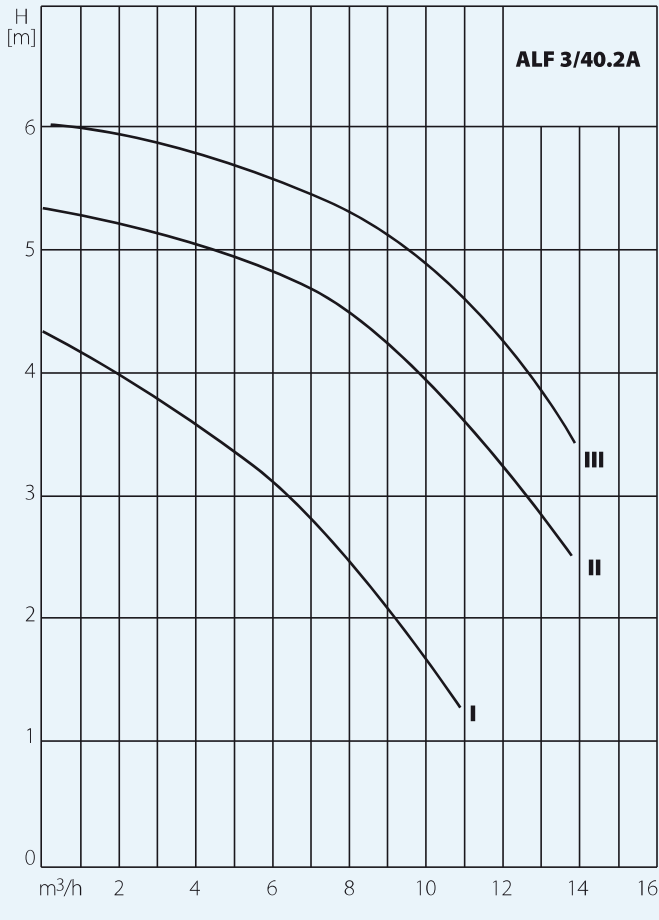
Pump Type	DN	D1	D2	D3	n x d	c	e	b	h	Weight
ALF 40.4	40	80	100	130	4 x 14	97	95	200	250	16
ALF 50/1.4	50	90	110	140	4 x 14	97	95	204	297	19
ALF 50/2.4	50	90	110	140	4 x 14	101	95	233	297	21
ALF 65.4	65	110	130	160	4 x 14	125	112	264	337	35
ALF 80.4	80	128	150	190	4 x 18	135	112	268	347	41
ALF 100.4	100	148	170	210	4 x 18	146	112	272	357	48



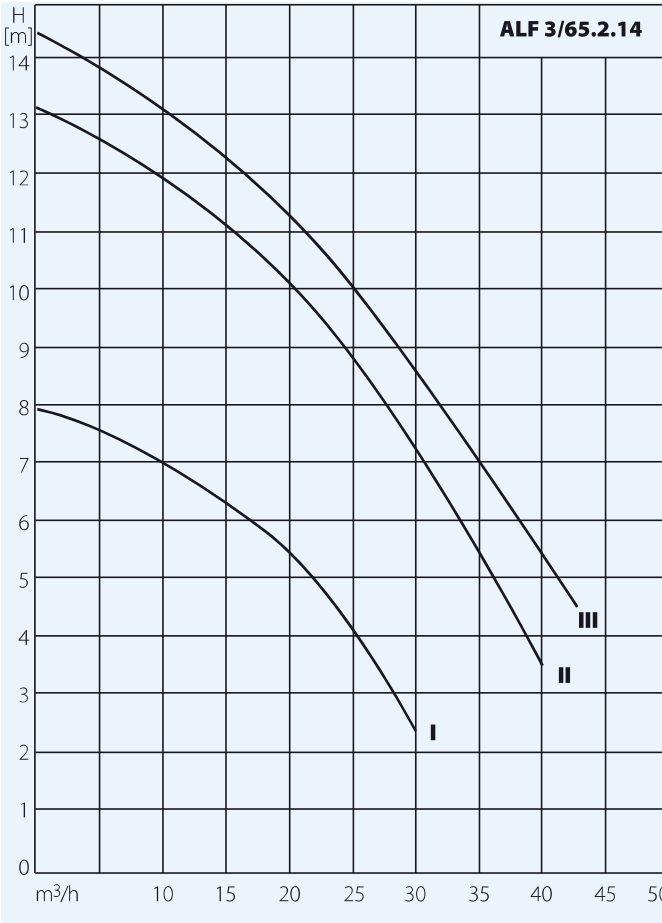
Technical Specifications of Pump

Pump Type	Speed (d/min)	Motor Power (W)	Current (A) (3-380 V)
ALF 40.4	1420	240	0.5
ALF 50/1.4	1420	320	0.7
ALF 50/2.4	1420	450	1.0
ALF 65.4	1420	680	1.5
ALF 80.4	1420	890	1.9
ALF 100.4	1420	1370	3.1

Pump Type	Speed (d/min)	Motor Power (W)	Current (A) (3-380 V)
ALF 40.4M	1420	240	0.5
ALF 50/1.4M	1420	320	0.7



Three Speed Wet Rotor Circulation Pumps

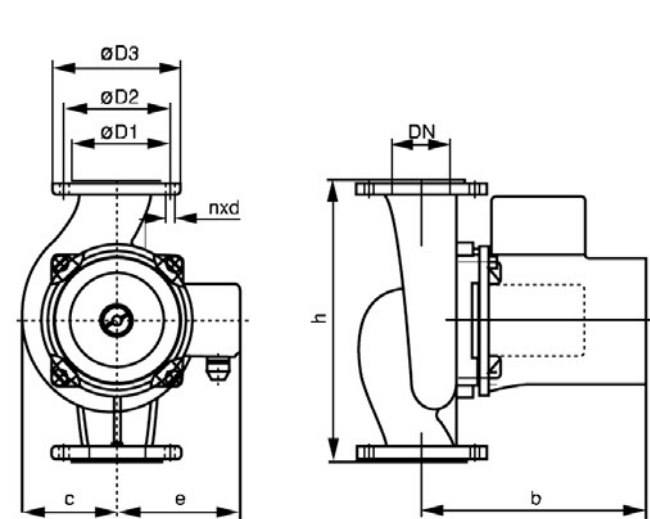


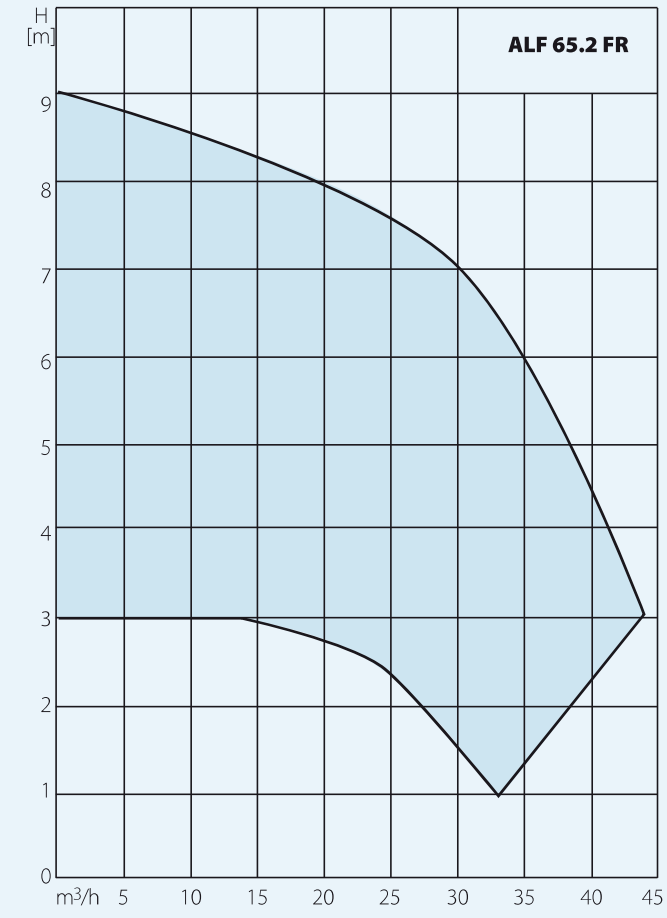
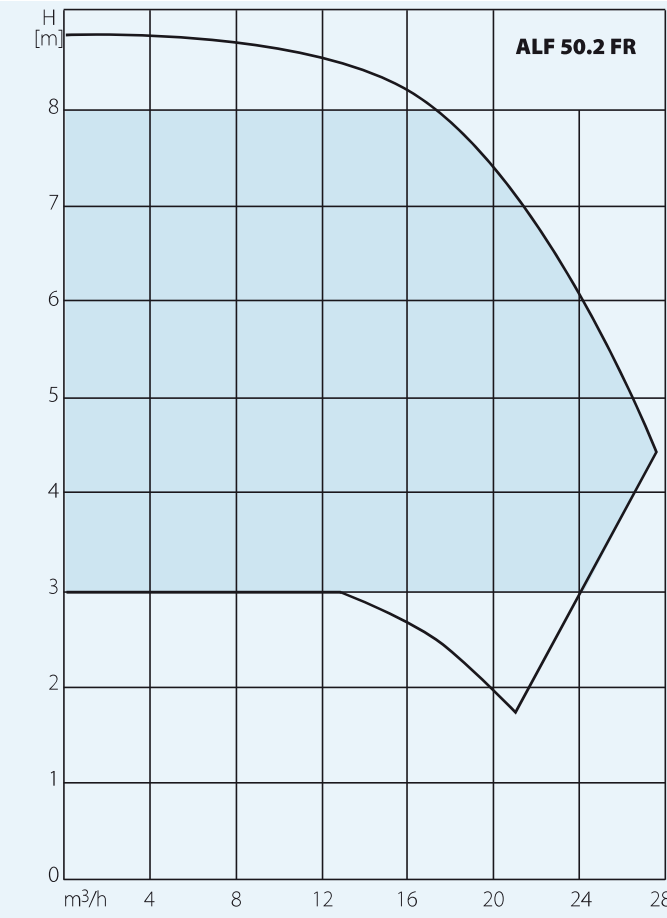
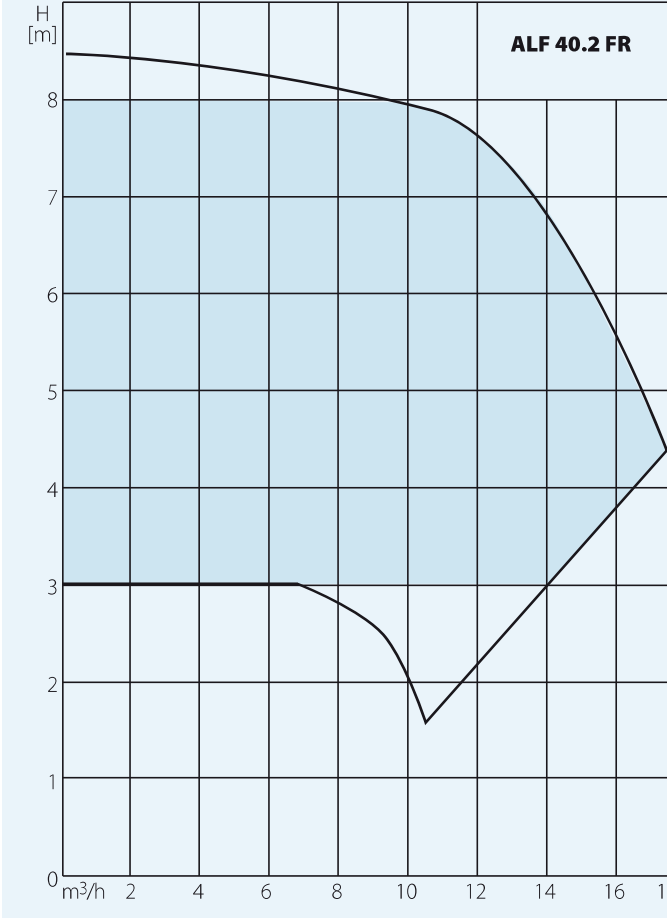
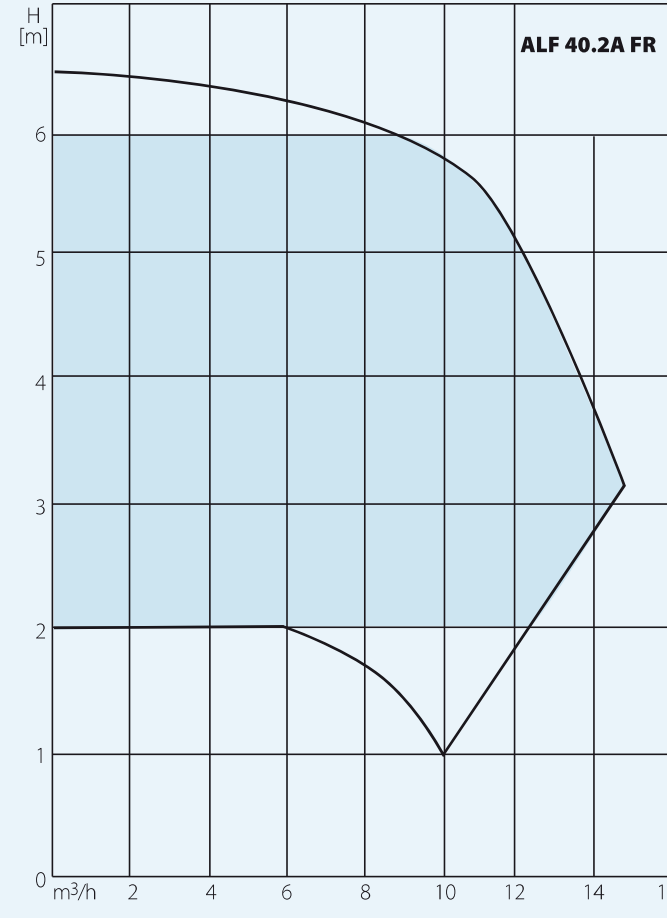
Technical Specifications of Pump

Pump Type	Speed Stage	Speed (d/min)	Motor Power (W)	Current (A) (3~380 V)
ALF 3/40.2A	1	1890	150	0.3
	2	2430	260	0.5
	3	2700	282	0.6
ALF 3/40.2	1	2220	255	0.5
	2	2660	385	0.9
	3	2800	400	1.0
ALF 3/50.2	1	2390	475	1.0
	2	2680	620	1.4
	3	2850	695	1.8
ALF 3/65.2	1	1680	615	1.4
	2	2240	1220	2.5
	3	2480	1390	3.0
ALF 3/65.2.14	1	1680	670	1.6
	2	2250	1300	2.8
	3	2590	1360	3.0

PUMP DIMENSIONS

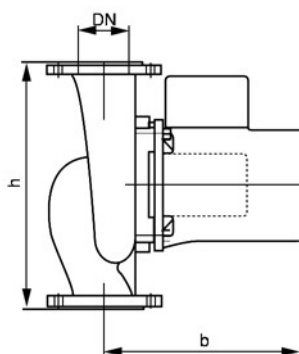
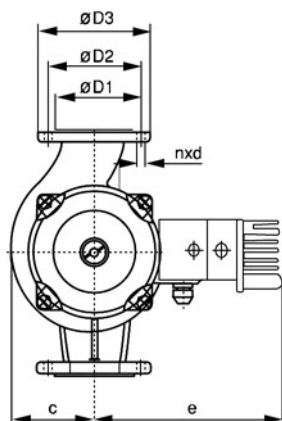
Pump Type	DN	D1	D2	D3	n x d	c	e	b	h	Weight
ALF 3/40.2A	40	80	100	130	4 x 14	79	137	232	250	18
ALF 3/40.2	40	80	100	130	4 x 14	79	137	232	250	19
ALF 3/50.2	50	90	110	140	4 x 14	100	137	249	280	24
ALF 3/65.2	65	110	130	160	4 x 14	118	156	276	340	38
ALF 3/65.2.14	65	110	130	160	4 x 14	125	156	264	337	38





PUMP DIMENSIONS

Pump Type	DN	D1	D2	D3	n x d	c	e	b	h	Weight
ALF 40.2A FR	40	80	100	130	4 x 14	79	200	232	250	14
ALF 40.2 FR	40	80	100	130	4 x 14	79	200	232	250	14
ALF 50.2 FR	50	90	110	140	4 x 14	100	200	249	280	18
ALF 65.2 FR	65	110	130	160	4 x 14	340	276	118	239	20

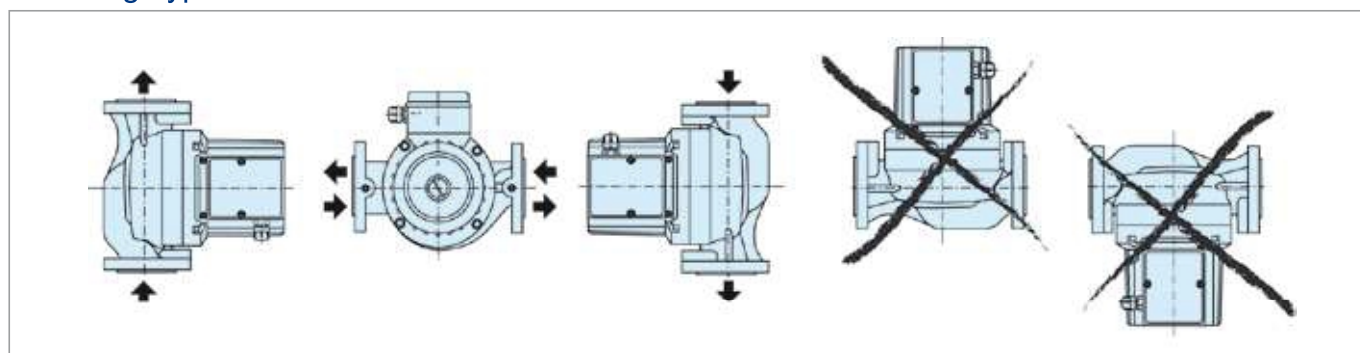


Technical Specifications of Pump

Pump Type	Speed (d/min)	Motor Power (W)	Current (A) (1-230 V)
ALF 40.2A FR	1870-3050	85-550	0.6-3.4
ALF 40.2 FR	1830-2990	150-710	1.1-4.6
ALF 50.2 FR	2090-2980	245-970	1.6-6.3
ALF 65.2 FR	2000-3000	285-1085	1.8-6.8



Mounting Types





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