



KSA9001:2001/ISO9001:2000

COOLANT PUMPS

Stainless steel

Multi-Stage Centrifugal Pumps

Vertical Immersible pumps

ACRK

ACHK

ASPK

Horizontal Suction pumps

ACH



A-RYUNG MACHINERY IND. CO., LTD.

Coolant pumps

stainless steel

Multi-stage Centrifugal pumps

- ❖ Vertical Immersible pumps
- ❖ Horizontal Suction pumps

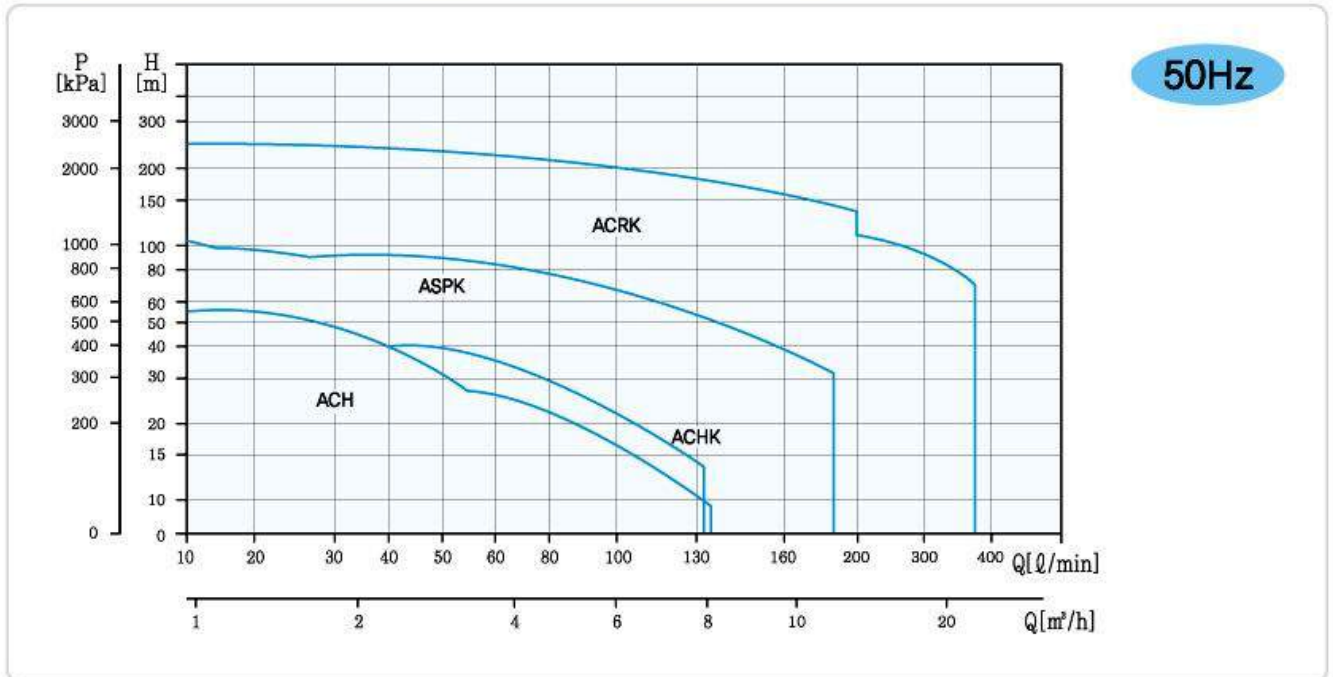
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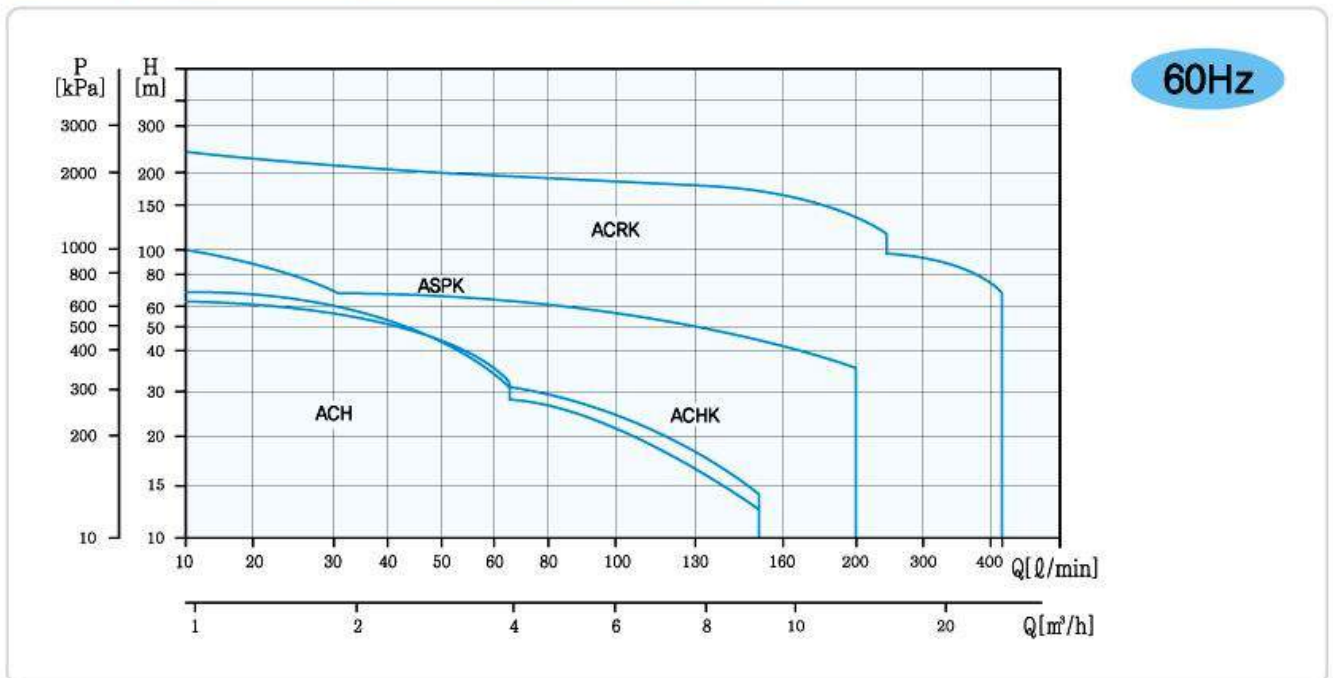
Multi-centrifugal pumps

General data

ACRK, ACHK, ASPK, ACH Performance range 성능범위



ACRK, ACHK, ASPK, ACH Performance range 성능범위



1. A-RYUNG 표준Motor로 시험한 Data임.
2. 시험액 : 기포가 없는 유체온도 20℃청수
3. 점도(Viscosity) = 1mm²/s(1cSt)물 기준

1. The performance result is tested by A-RYUNG standard motor.
2. Testing liquid : clean water in temperature 20℃ without foam
3. Viscosity : water standard is 1mm²/s(1cSt)

Products range

Self-priming pumps



Description		ACRK2	ACRK4	ACRK8	ACRK16
Range 50Hz					
Normal volume	(m ³ /h)	2	4	8	16
Normal volume	(ℓ/min)	33,3	67	133	267
Volume range	(ℓ/min)	16,7~58	33,3~133	100~200	133~367
Max. pressure	(bar)	24	21,8	22	11,8
Motor output	(kW)	0,37~3,0	0,37~4,0	0,75~7,5	1,1~7,5
Temperature range	(°C)	0~90	0~90	0~90	0~90
Range 60Hz					
Normal volume	(m ³ /h)	2	4	6	8
Normal volume	(ℓ/min)	33,3	67	133	267
Volume range	(ℓ/min)	16,7~75	43,3~150	117~242	167~433
Max. pressure	(bar)	24	17	19,5	10,6
Motor output	(kW)	0,37~4,0	0,75~4,0	1,5~7,5	1,5~7,5
Temperature range	(°C)	0~90	0~90	0~90	0~90
Material variants					
Pump head		GC25	GC25	GC25	GC25
Chamber		SUS304	SUS304	SUS304	SUS304
Impeller		SUS304	SUS304	SUS304	SUS304
Base		-	-	-	-
Pipe connection					
In-let					
Out-let		PS 1 1/4"	PS 1 1/4"	PS 2"	PS 2"
Flange		-	-	-	-
Mechanical Seal					
TC/Sic seal type		Ø12	Ø12	Ø16	Ø16

Multi-centrifugal pumps

General data

Products range

Self-priming pumps



Description		ACHK2	ACHK4	ACH2	ACH4
Range 50Hz					
Normal volume	(m ³ /h)	2	4	2	4
Normal volume	(ℓ/min)	33,3	67	33,3	67
Volume range	(ℓ/min)	16~58,3	33,3~133	16~58,3	33,3~133
Max. pressure	(bar)	5,6	4,6	5,6	4,6
Motor output	(kW)	0,37~1,1	0,37~1,1	0,37~1,1	0,37~1,1
Temperature range	(°C)	-10~90	-10~90	-10~90	-10~90
Range 60Hz					
Normal volume	(m ³ /h)	2	4	2	4
Normal volume	(ℓ/min)	33,3	67	33,3	67
Volume range	(ℓ/min)	25~67	43,3~150	25~67	43,3~150
Max. pressure	(bar)	6,8	4,0	6,8	4,0
Motor output	(kW)	0,37~1,1	0,55~1,1	0,37~1,1	0,55~1,1
Temperature range	(°C)	-10~90	-10~90	-10~90	-10~90
Material variants					
Pump head		GC25	GC25	GC25	GC25
Chamber		SUS304	SUS304	SUS304	SUS304
Impeller		SUS304	SUS304	SUS304	SUS304
Base		-	-	SS41	SS41
Pipe connection					
In-let		-	-	PS 1"	PS 1"/ 1 1/2"
Out-let		PS 3/4"	PS 3/4"	PS 1"	PS 1"
Flange		-	-	-	-
Mechanical Seal					
Carbon / Sic seal type		Ø16	Ø16	Ø16	Ø16

Products range

Self-priming pumps

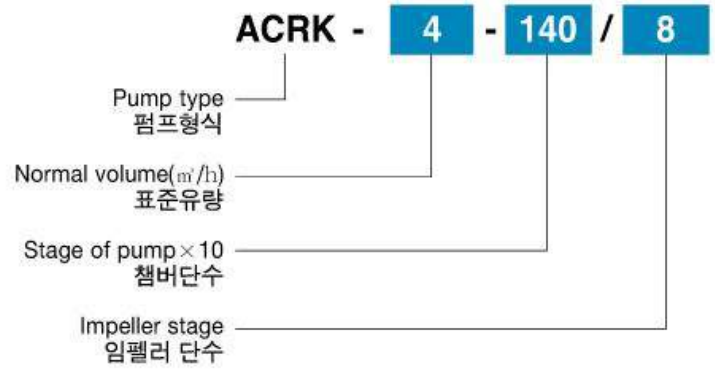


Description		ASPK-2	ASPK-4	ASPK-8
Range 50Hz				
Normal volume	(m ³ /h)	2	4	8
Normal volume	(ℓ/min)	33,3	67	133
Volume range	(ℓ/min)	16,7~58	33,3~133	100~200
Max. pressure	(bar)	24	21,8	22
Motor output	(kW)	0,37~3,0	0,37~4,0	0,75~7,5
Temperature range	(°C)	0~90	0~90	0~90
Range 60Hz				
Normal volume	(m ³ /h)	2	4	6
Normal volume	(ℓ/min)	33,3	67	133
Volume range	(ℓ/min)	16,7~75	43,3~150	117~242
Max. pressure	(bar)	24	17	19,5
Motor output	(kW)	0,37~4,0	0,75~4,0	1,5~7,5
Temperature range	(°C)	0~90	0~90	0~90
Material variants				
Pump head		GC25	GC25	GC25
Chamber		SUS304	SUS304	SUS304
Impeller		SUS304	SUS304	SUS304
Base		-	-	-
Pipe connection				
In-let		-	-	-
Out-let		PS 1 1/4"	PS 1 1/4"	PS 2"
Flange		-	-	-
Mechanical Seal				
TC/Sic seal type		Ø12	Ø12	Ø12

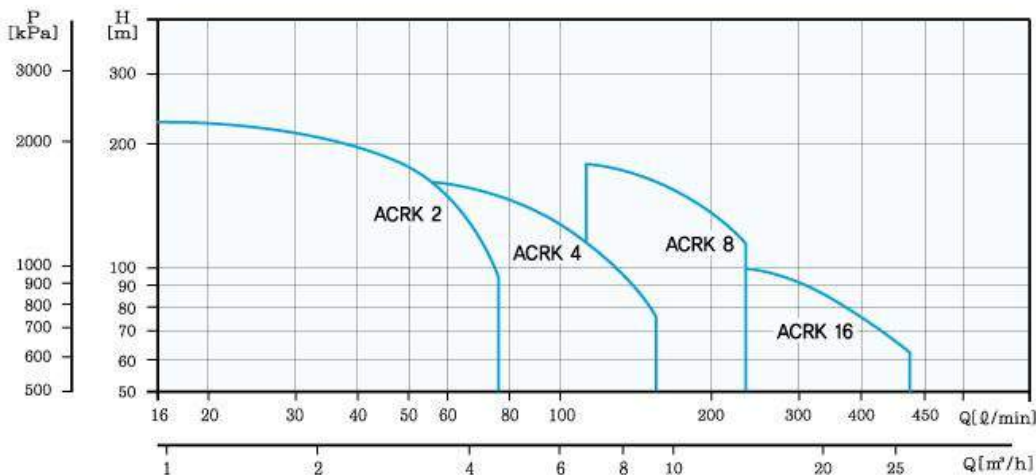
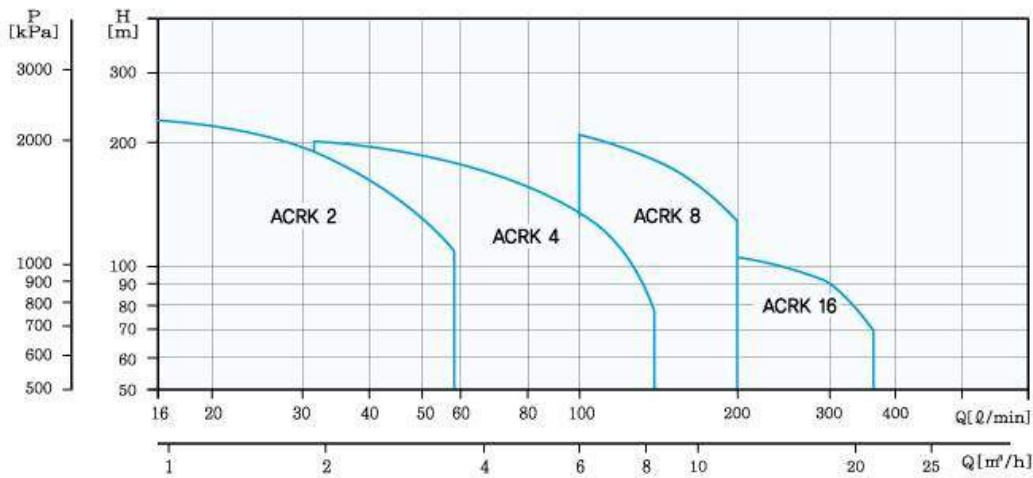
Multi-centrifugal pumps

Immersible pumps

ACRK Series



Performance range 성능범위



ACRK Series

Product description 적용범위

ACRK Series는 고양정 다단원심펌프로서 높은압력을 요하는 고정밀, 고기능의 공작기계에 주로사용되어 가공물을 냉각시키거나 세척하는데 매우 적합하다.

이펌프는 NC,CNC Lathe, Machining center, Grinding machine등 공작기계의 냉각장치, 산업용 Washing machine, Filtering 시스템 등에 적용된다.

펌프의 중요한 부분의 재질은 스테인레스 스틸로 제작되어있으며, 볼스재질(FKM) 메카니컬 실이 장착되어 온도에 강하고 내구성이 좋다.

ACRK series is high-pressure, multi-staged centrifugal pump. This pump is used machine and tools for high precision and performance to make cool the processing materials and wash out the sludge.

The application range of this type is for cooling systems of NC, CNC, lathe, machining center, grinding machine, and filtering systems and washing machine.

The major raw materials consists of stainless steel, and the mechanical seal is made FKM that endures high temperature and keeps long-life performance.

Pumped liquids 사용액체

사용액체는 고형입자, 연마슬러지 및 섬유질 성분이 없이 깨끗해야 하며, 폭발위험이 없고 점성이 낮고 펌프의 재질에 손상을 주지 않는 액체이어야 한다.

사용액체의 비중이나 점도가 수용성 절삭유보다 높은 경우 필요시에는 Motor의 동력을 적절하게 증가 시켜야 한다.

The using liquids should be clean, non-explosive and low viscosity without solid particles, sludge, and fibres, additionally not affects original elements of pump.

If the viscosity and gravity of using liquids is higher than soluble cutting water, the motor power has to be increased according to working conditions.

Pump 펌프

이 펌프는 Tank나 용기의 깊이가 깊을 경우 빈 Chamber를 이용하여 침수깊이를 조정할 수가 있다.

주의) 빈 Chamber의 수가 많을수록 압력저하를 가져올 수 있음.
 펌프 설치시 이물질의 혼입으로 인한 흡입저하를 방지 하기위해 Tank의 배출측과 흡입측 사이에 격판을 설치 하여 배출된 유체가 곧바로 흡입되지 않도록 시스템을 구성하여야 한다.

This pump can be installed additional empty chambers when the tank is deeper.

Caution) Because more chambers installing causes low pressure, when the pump is equiped, the separating plate has to be installed between tank outlet area and inlet area to avoid low sucking performance.

Motor 모터

이 펌프는 Fan cooling 방식으로 된 표준 Motor를 사용하고 있다 이 Motor의 주요 규격(Dimension)은 일반표준에 따라 제작 되었다.

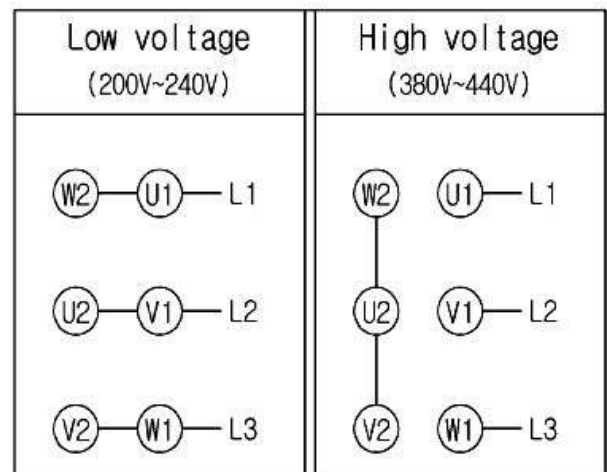
The motor is used standard fan cooling system and standard dimension.

- Enclosure class : IP54
- 보호등급
- Insulation class : F
- 절연계급
- Standard voltage 50Hz : 3Ø 200-230/380-415V
- 표준전압
- Standard voltage 60Hz : 3Ø 220-240/380-440V
- 표준전압

The specific voltage and motor can be produced by user's order.
 The standard starting panel should be connected when using 3Ø motor.

기타 비표준 사용전압 및 고효율 Motor도 주문에 의해 제작이 가능하다.
 3Ø Motor에는 반드시 규격에 맞는 기동조작반이 연결 되어야 한다.

Motor connection 결선도 (Free voltage)



Multi-centrifugal pumps

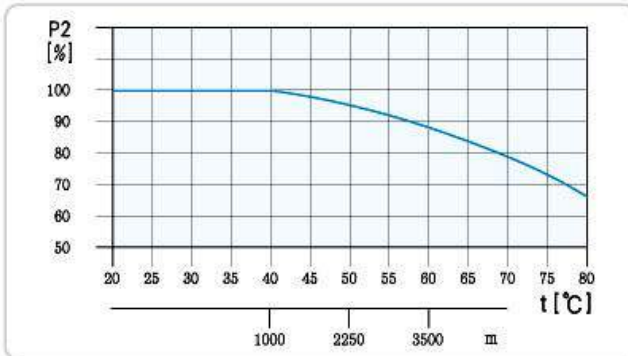
Immersible pumps

ACRK Series

Max. Ambient temperature 최고 주위온도

주위온도가 40℃ 이상 또는 고도가 1000m 이상 되는 곳에서 Motor을 설치할 때는 공기의 낮은 밀도에 따른 낮은 냉각성능을 고려하여 Motor 출력을 정격 출력보다 낮추어야 한다.

Because of low cooling effects by low density of the air on condition of ambient temperature above 40℃ or altitude over 1000m, the output of motor should be lowered more below than standard capacity.



Example) When the pump should be installed sea level 3500m and ambient temperature 60℃, The performance ability drops 80%.

예) 위 표에서 보는바와 같이 P2의 경우 펌프가 고도 3500m, 온도 60℃인 주위 환경에 설치되었을 경우 펌프의 성능이 80%로 감소된 것으로 나타남.

Sound pressure level 소음

Motor (kw)	Sound pressure level(dB)	
	50Hz	60Hz
0.37	< 70	< 70
0.55	< 70	< 70
0.75	< 70	< 70
1.1	< 70	71
1.5	< 70	71
2.2	< 70	71
3.0	< 70	71
4.0	73	71
5.5	73	78
7.5	73	78

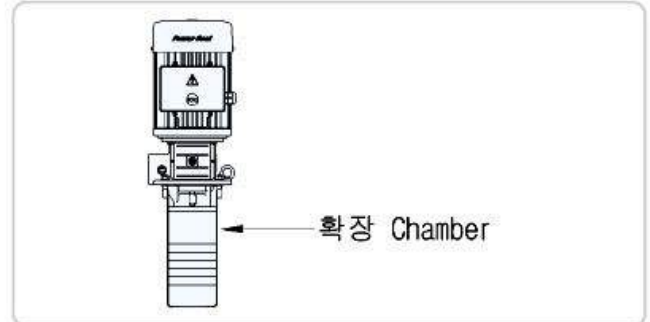
Shaft seal 메카니컬실

The proper shaft seal is decided by pressure needed, pump model, mechanical seal type and temperature of using liquid.

실제의 운전범위는 사용압력, 펌프형식, 메카니컬 실 Type 그리고 사용 액체의 온도에 따라 결정된다.

Seal division	Max. pressure (bar)	Max. temperature (°C)
TC/Sic Viton (FKM)	25	0-120

Installation 설치시 유의사항

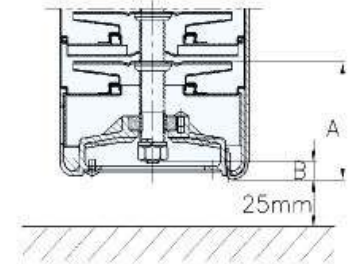


This ACRK pump can lengthen immersion depth with Extension of chamber.

ACRK 펌프는 빈 Chamber를 이용하여 침수 깊이를 연장할 수 있다

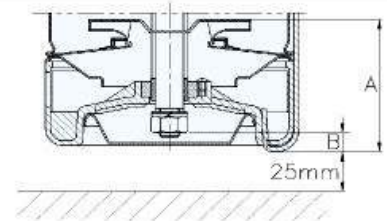
ACRK 2

ACRK 4



ACRK 8

ACRK 16



This ACRK pump can lengthen immersion depth with adding of chamber. 이 펌프는 스트레이너 밑부분에서 위쪽 A mm까지를 최저치로하여 최대성능을 발휘하도록 설계되었다.

This pump is designed highest performance operating from strainer bottom to A mm upper minimum length. The liquid should be filled between A and B to protect damage of seal without filling liquid by idle pumping.

A 와 B mm (Bottom에서 Strainer 바닥) 사이에 액체가 충전되었을때 Pumping을 하여 공회전에 의한 Seal 파손을 방지할 수 있다.

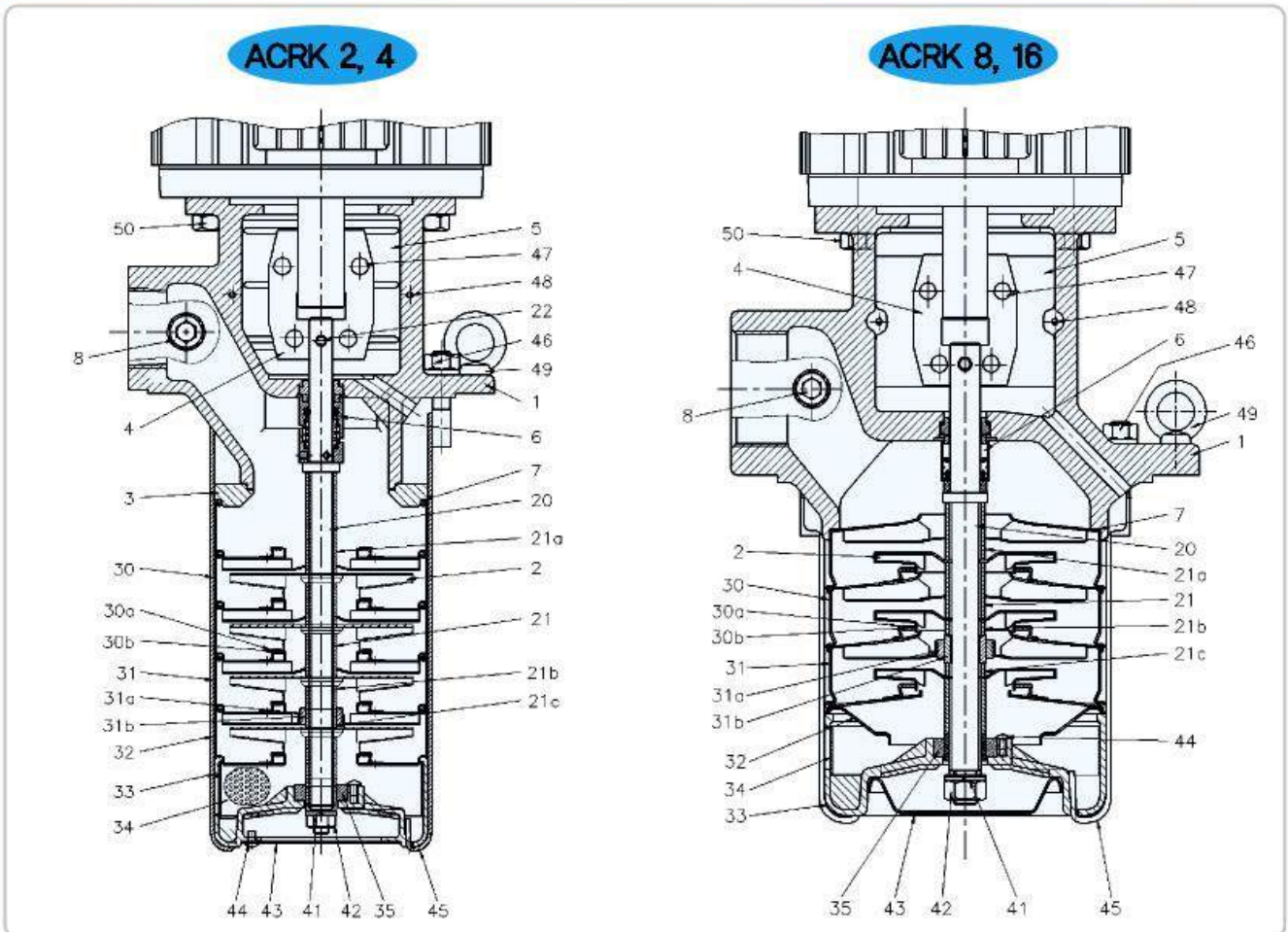
Pump type	A (mm)	B (mm)
ACRK2, 4	55.9 / 63.4	10.3
ACRK8, 16	83.3 / 94.4	12.0

The gap between tank bottom and pump bottom should be kept minimum 25mm.

펌프와 Tank 바닥 사이는 최소한 25mm 이상 간격을 두어야한다.

ACRK Series

Sectional drawing 부품도



No.	Part name	Spec.	Material
1	Pump body	-	GC25
2	Impeller	-	SUS304
3	Adapter	Ø111 × 12t	GCD45
4	Coupling	-	SC360
5	Coupling cover	-	SUS304
6	Mechanical seal	Ø12, Ø16	Sic + T,C
7	Packing	-	TEFLON
8	Air vent screw	PT 1/2"	SUS304
20	Shaft	-	SUS304
21	Spacer	-	SUS304
21a	Spacer(a)	-	SUS304
21b	Spacer(b)	-	SUS304
21c	Spacer(c)	-	SUS304
22	Shaft pin	-	SUS304
30	Middle chamber	-	SUS304
30a	Teflon housing	-	SUS304
30b	Teflon bushing	-	TEFLON

No.	Part name	Spec.	Material
31	Bearing chamber	-	SUS304
31a	Bearing chamber bushing	-	Sic
31b	T/C Bearing	-	T,C
32	Bottom chamber	-	SUS304
33	Suction chamber	-	SCS13
34	Circle strainer	-	SUS304
35	Bearing bushing	-	CERAMIC
41	Washer	M8, M12	SUS304
42	Nylon nut	M8, M12	SUS304
43	Strainer	-	SUS304
44	Set screw	M4 × 6L	SUS304
45	Band	-	SUS304
46	Nut	M10, M12	SUS304
47	Wrench bolt	-	SUS304
48	Set screw	M4 × 6L	SUS304
49	Eye bolt	M8	S20C
50	Bolt	M8, M10	SUS304

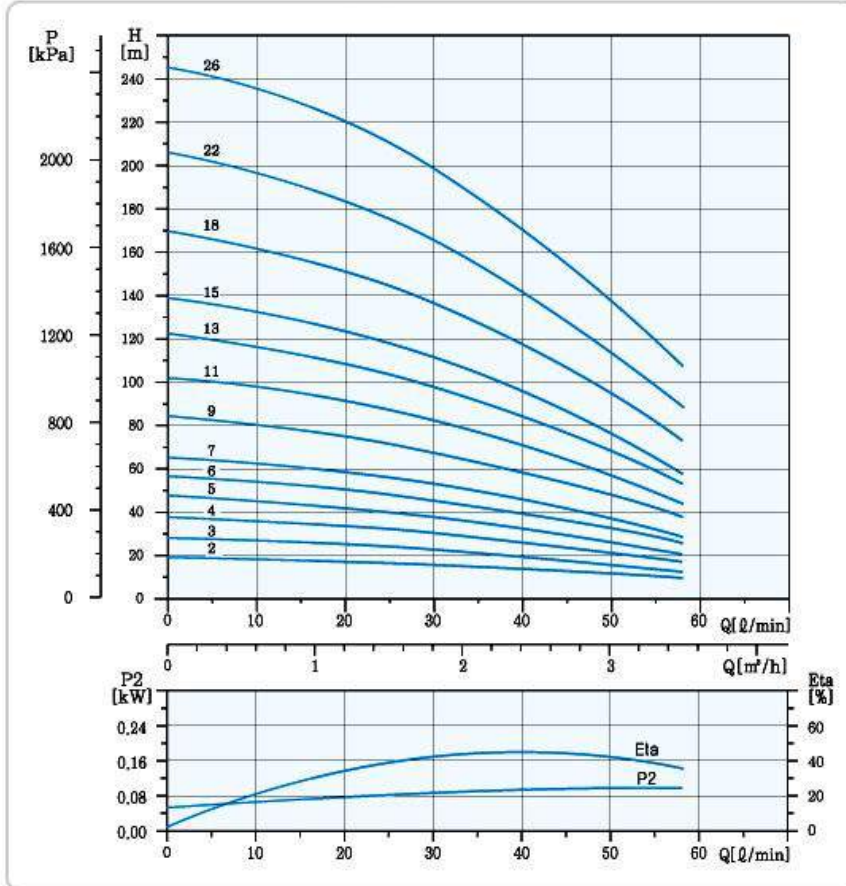
Multi-centrifugal pumps

Immersible pumps

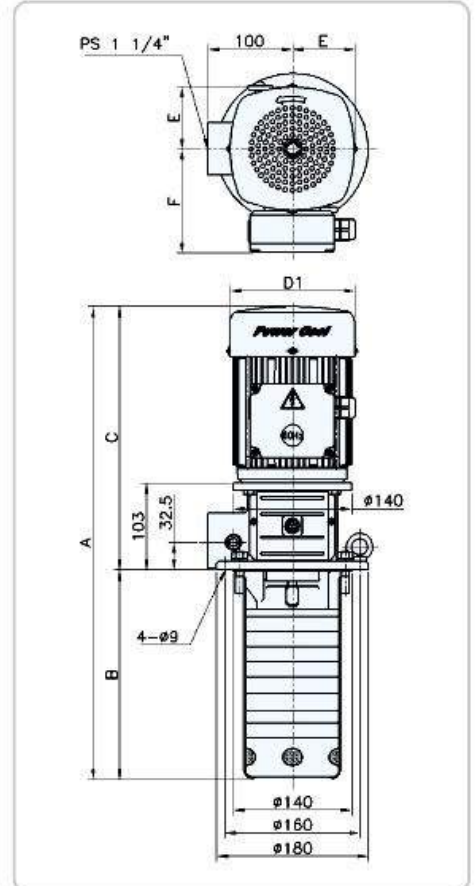
ACRK 2

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame No.	(P2) kW		
ACRK 2-20/2	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACRK 2-30/3	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACRK 2-40/4	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACRK 2-50/5	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACRK 2-60/6	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACRK 2-70/7	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACRK 2-90/9	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACRK 2-110/11	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACRK 2-130/13	F90	1.50	5.64-4.90 / 2.97-2.72	81
ACRK 2-150/15	F90	1.50	5.64-4.90 / 2.97-2.72	81
ACRK 2-180/18	F90S	2.20	7.52-6.54 / 3.96-3.62	86
ACRK 2-220/22	F90S	2.20	7.52-6.54 / 3.96-3.62	86
ACRK 2-260/26	F90M	3.00	10.72-9.32 / 5.64-5.16	85

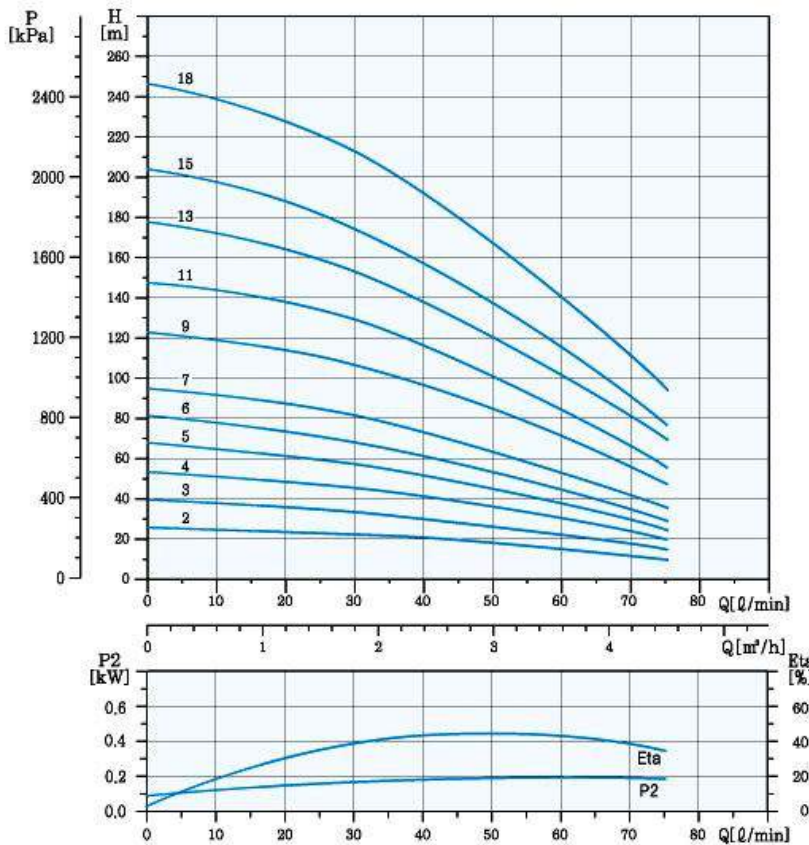
Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	E	F	
488	160	328	148	74	123	12.7
506	178	328	148	74	123	13.2
524	196	328	148	74	123	13.8
542	214	328	148	74	123	14.1
575	232	343	148	74	123	15.2
593	250	343	148	74	123	15.5
654	286	368	148	74	123	17.6
690	322	368	148	74	123	18.2
716	358	358	183	91.5	148	26.9
752	394	358	183	91.5	148	27.5
823	448	375	183	91.5	148	30.5
895	520	375	183	91.5	148	31.6
982	592	390	183	91.5	148	38.2

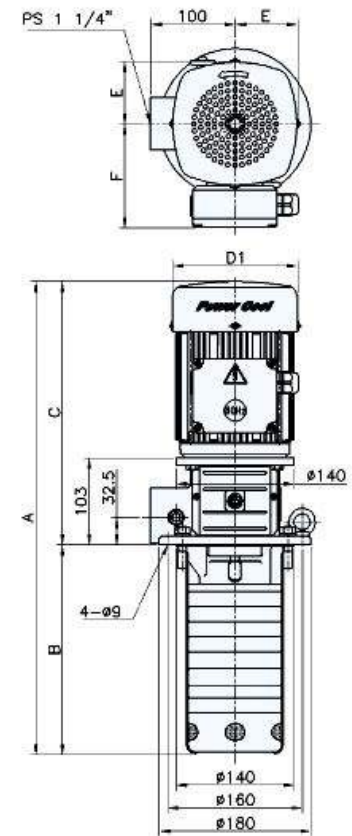
ACRK 2

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame No.	(P2) kW		
ACRK 2-20/2	F80	0.37	2.20-2.02 / 1.27-1.10	68
ACRK 2-30/3	F80S	0.55	2.73-2.50 / 1.58-1.37	73
ACRK 2-40/4	F80M	0.75	3.95-3.62 / 2.29-1.98	74
ACRK 2-50/5	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACRK 2-60/6	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACRK 2-70/7	F90	1.50	6.15-5.64 / 3.56-3.08	81
ACRK 2-90/9	F90S	2.20	8.20-7.52 / 4.75-4.10	86
ACRK 2-110/11	F90S	2.20	8.20-7.52 / 4.75-4.10	86
ACRK 2-130/13	F90M	3.00	11.69-10.72 / 6.77-5.85	85
ACRK 2-150/15	F90M	3.00	11.69-10.72 / 6.77-5.85	85
ACRK 2-180/18	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 2-220/18	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 2-260/18	F90L	4.00	14.13-12.96 / 8.18-7.07	85

Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	E	F	
488	160	328	148	74	123	12.7
506	178	328	148	74	123	13.5
539	196	343	148	74	123	14.6
582	214	368	148	74	123	16.3
600	232	368	148	74	123	16.7
608	250	358	183	91.5	148	24.9
661	286	375	183	91.5	148	29.4
697	322	375	183	91.5	148	30.1
748	358	390	183	91.5	148	34.5
784	394	390	183	91.5	148	35.2
853	448	405	183	91.5	148	37.3
925	520	405	183	91.5	148	37.7
997	592	405	183	91.5	148	38.1

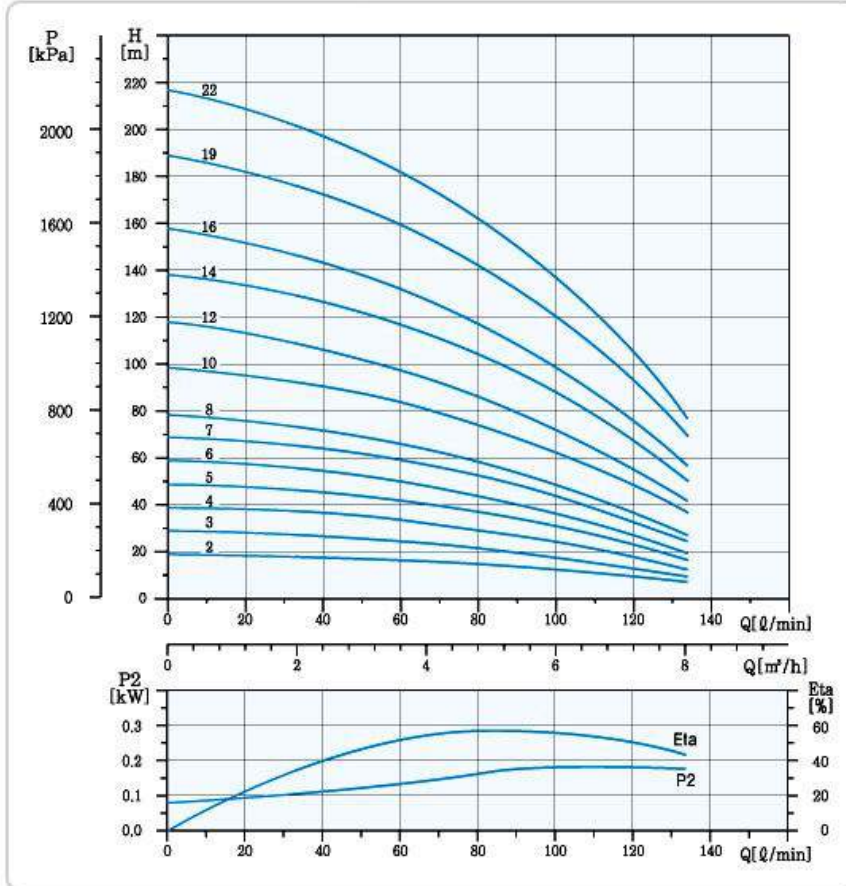
Multi-centrifugal pumps

Immersible pumps

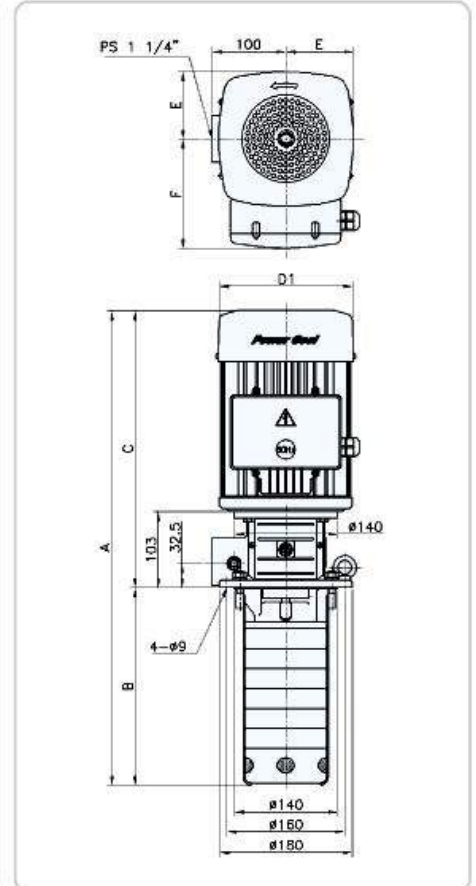
ACRK 4

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame No.	(P2) kW		
ACRK 4-20/2	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACRK 4-30/3	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACRK 4-40/4	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACRK 4-50/5	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACRK 4-60/6	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACRK 4-70/7	F90	1.50	5.64-4.9 / 2.97-2.72	81
ACRK 4-80/8	F90	1.50	5.64-4.9 / 2.97-2.72	81
ACRK 4-100/10	F90S	2.20	7.52-6.54 / 3.96-3.62	86
ACRK 4-120/12	F90S	2.20	7.52-6.54 / 3.96-3.62	86
ACRK 4-140/14	F90M	3.00	10.72-9.32 / 5.64-5.16	85
ACRK 4-160/16	F90M	3.00	10.72-9.32 / 5.64-5.16	85
ACRK 4-190/19	F90L	4.00	12.95-11.26 / 6.82-6.24	85
ACRK 4-220/22	F90L	4.00	12.95-11.26 / 6.82-6.24	85

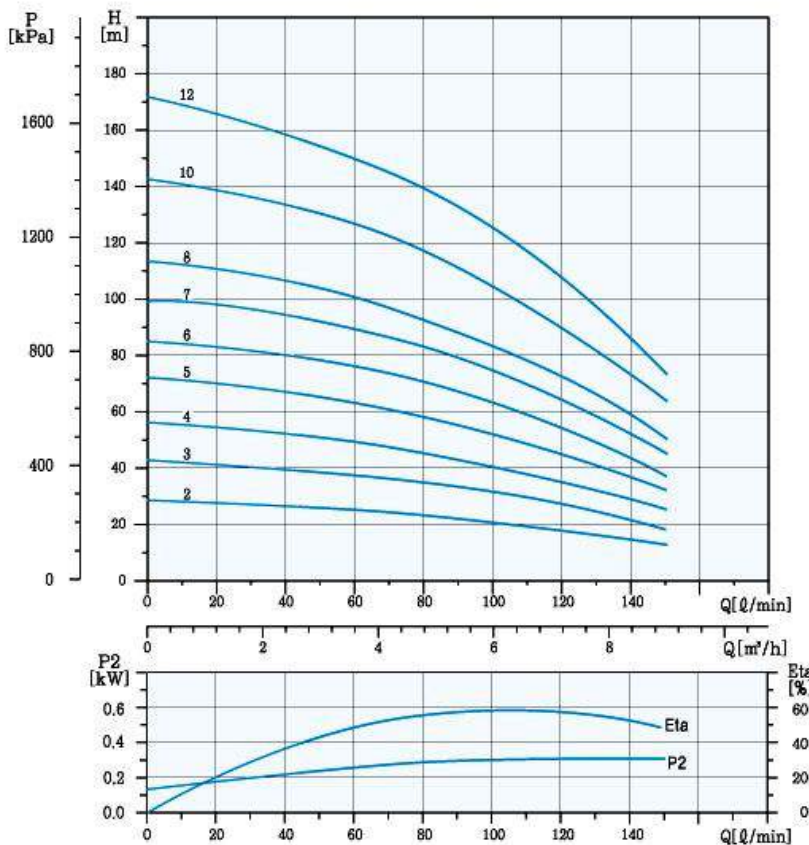
Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	E	F	
515	187	328	148	74	123	12.6
542	214	328	148	74	123	13.5
584	241	343	148	74	123	14.8
636	268	368	148	74	123	16.6
663	295	368	148	74	123	17.1
680	322	358	183	91.5	148	26.8
707	349	358	183	91.5	148	27.2
778	403	375	183	91.5	148	30.5
832	457	375	183	91.5	148	31.3
901	511	390	183	91.5	148	36.0
955	565	390	183	91.5	148	36.9
1051	646	405	183	91.5	148	40.3
1132	727	405	183	91.5	148	41.4

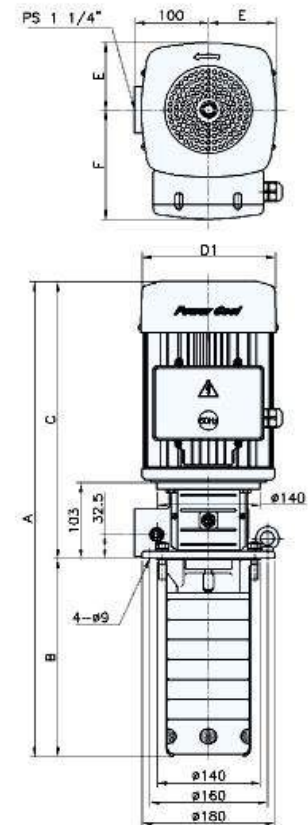
ACRK 4

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame No.	(P2) kW		
ACRK 4-20/2	F80M	0.75	3.95-3.62 / 2.29-1.98	74
ACRK 4-30/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACRK 4-40/4	F90	1.50	6.15-6.64 / 3.56-3.08	81
ACRK 4-50/5	F90S	2.20	8.20-7.52 / 4.75-4.10	86
ACRK 4-60/6	F90S	2.20	8.20-7.52 / 4.75-4.10	86
ACRK 4-70/7	F90M	3.00	11.69-10.72 / 6.77-5.85	85
ACRK 4-80/8	F90M	3.00	11.69-10.72 / 6.77-5.85	85
ACRK 4-100/10	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 4-120/12	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 4-140/12	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 4-160/12	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 4-190/12	F90L	4.00	14.13-12.96 / 8.18-7.07	85
ACRK 4-220/12	F90L	4.00	14.13-12.96 / 8.18-7.07	85

Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	E	F	
530	187	343	148	74	123	14.0
582	214	368	148	74	123	15.8
599	241	358	183	91.5	148	25.6
643	268	375	183	91.5	148	28.5
670	295	375	183	91.5	148	29.0
712	322	390	183	91.5	148	33.2
739	349	390	183	91.5	148	33.6
808	403	405	183	91.5	148	37.9
862	457	405	183	91.5	148	38.7
916	511	405	183	91.5	148	39.1
970	565	405	183	91.5	148	39.4
1051	646	405	183	91.5	148	40.0
1132	727	405	183	91.5	148	40.4

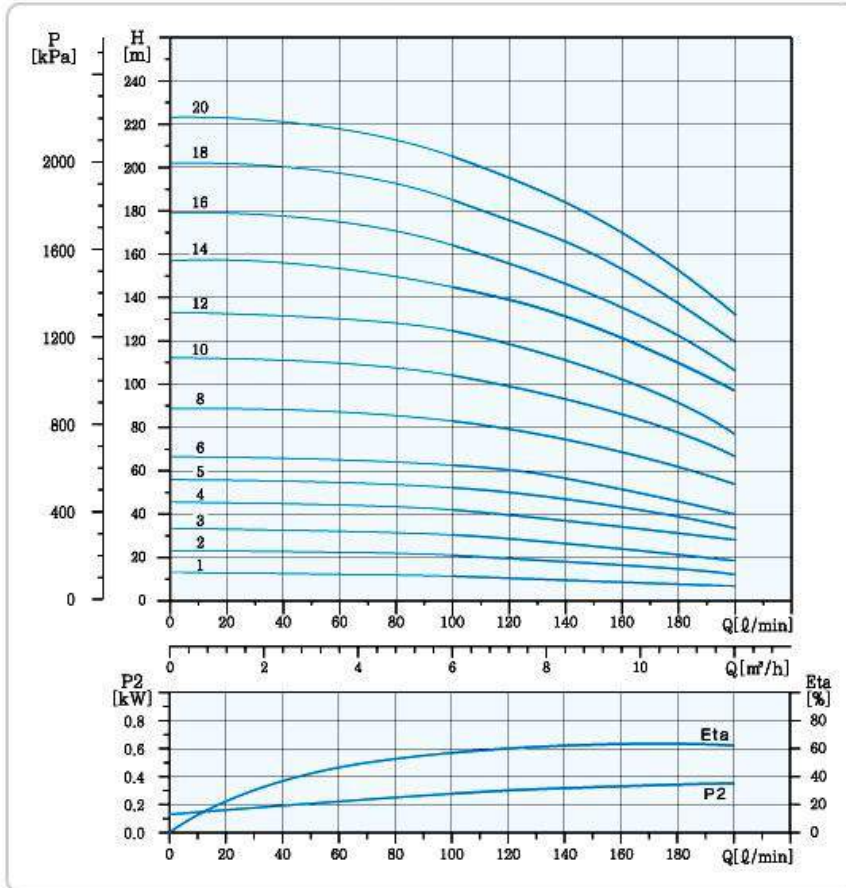
Multi-centrifugal pumps

Immersible pumps

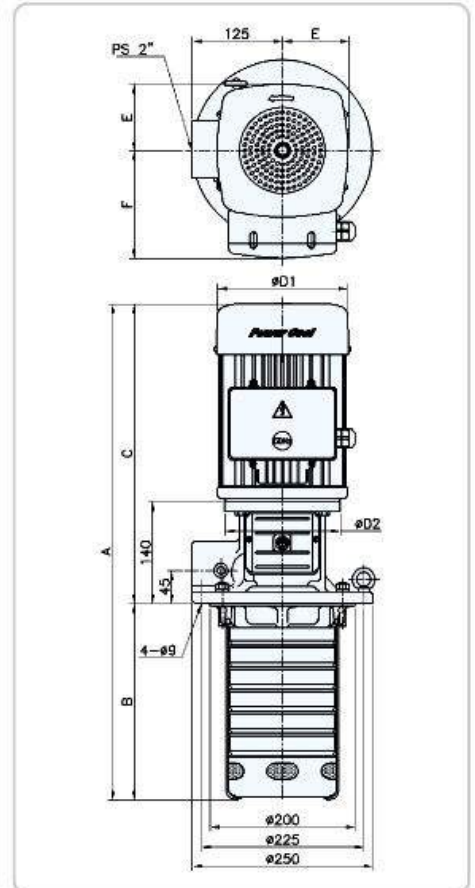
ACRK 8

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

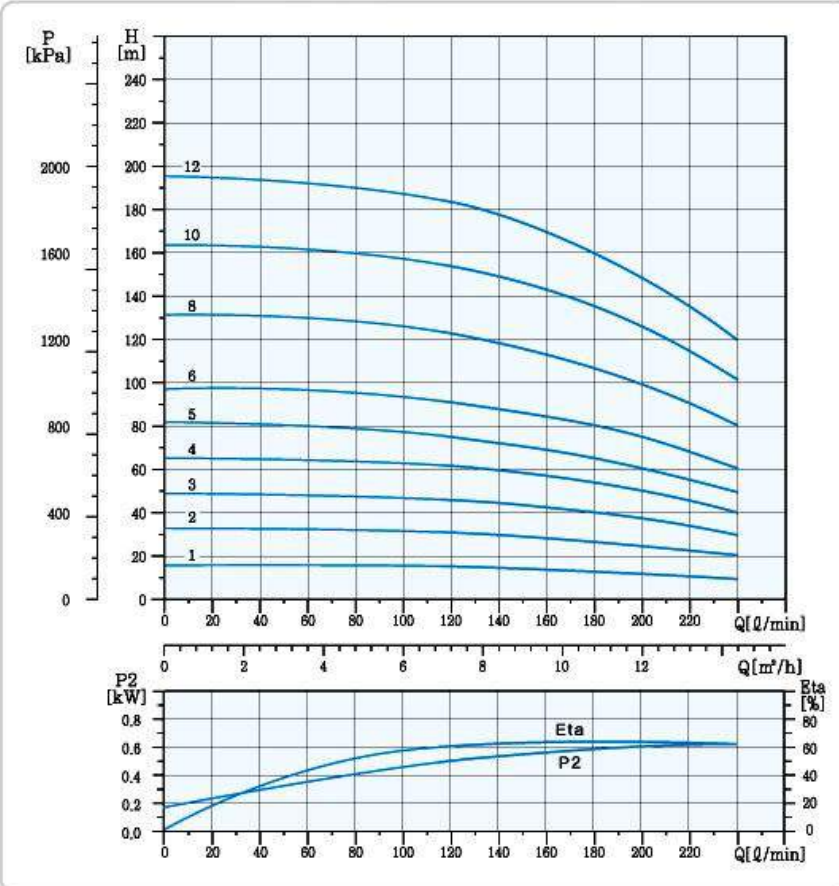
Dimensions

Pump type	Motor		Current (A)	Motor Efficiency (%)	Dimensions (mm)							Net weight (kg)
	Frame NO.	(P2) kW			A	B	C	D1	D2	E	F	
ACRK 8-20/1	F80M	0.75	3.62-3.15 / 1.91-1.74	74	530	150	380	148	160	74	123	23
ACRK 8-20/2	F80M	0.75	3.62-3.15 / 1.91-1.74	74	530	150	380	148	160	74	123	23
ACRK 8-30/3	F80L	1.10	4.48-3.90 / 2.36-2.16	80	585	180	405	148	160	74	123	25
ACRK 8-40/4	F90	1.50	5.64-4.90 / 2.97-2.72	81	605	210	395	183	160	91.5	148	32
ACRK 8-50/5	F90S	2.20	7.52-6.54 / 3.96-3.62	86	652	240	412	183	160	91.5	148	36
ACRK 8-60/6	F90S	2.20	7.52-6.54 / 3.96-3.62	86	682	270	412	183	160	91.5	148	37
ACRK 8-80/8	F90M	3.00	10.72-9.32 / 5.64-5.16	85	757	330	427	183	160	91.5	148	41
ACRK 8-100/10	F90L	4.00	12.95-11.26 / 6.82-6.24	85	832	390	442	183	160	91.5	148	44
ACRK 8-120/12	F90L	4.00	12.95-11.26 / 6.82-6.24	85	892	450	442	183	160	91.5	148	45
ACRK 8-140/14	F132S	5.50	16.50-14.35 / 8.68-7.95	86	1003	510	493	248	300	124	185	70
ACRK 8-160/16	F132S	5.50	16.50-14.35 / 8.68-7.95	86	1063	570	493	248	300	124	185	72
ACRK 8-180/18	F132M	7.50	22.46-19.53 / 11.82-10.82	86	1153	630	523	248	300	124	185	77
ACRK 8-200/20	F132M	7.50	22.46-19.53 / 11.82-10.82	86	1213	690	523	248	300	124	185	78

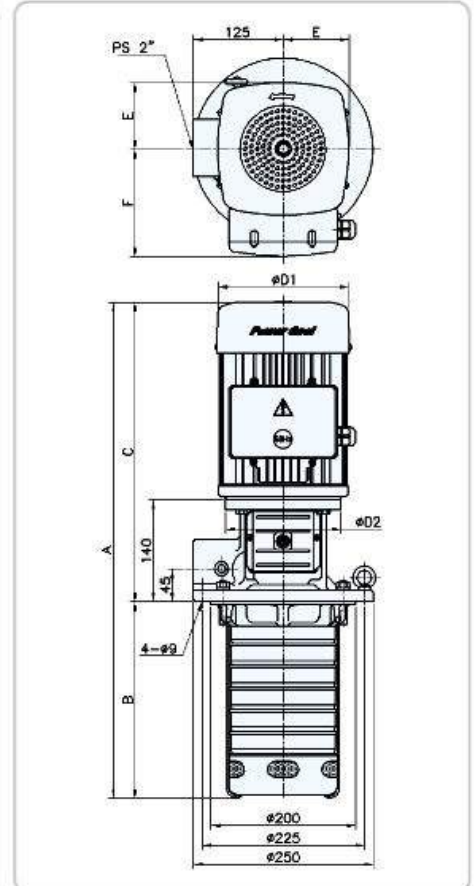
ACRK 8

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Dimensions

Pump type	Motor		Current (A)	Motor Efficiency (%)	Dimensions (mm)							Net weight (kg)
	Frame NO.	(P2) kW			A	B	C	D1	D2	E	F	
ACRK 8-20/1	F80M	0.75	3.95-3.62 / 2.29-1.98	74	530	150	380	148	160	74	123	29
ACRK 8-20/2	F90	1.50	6.15-5.64 / 3.56-3.08	81	545	150	395	183	160	91.5	148	32
ACRK 8-30/3	F90S	2.20	8.20-7.52 / 4.75-4.10	86	592	180	412	183	160	91.5	148	35
ACRK 8-40/4	F90M	3.00	11.69-10.72 / 6.77-5.85	85	637	210	427	183	160	91.5	148	39
ACRK 8-50/5	F90M	3.00	11.69-10.72 / 6.77-5.85	85	667	240	427	183	160	91.5	148	40
ACRK 8-60/6	F90L	4.00	14.13-12.96 / 8.18-7.07	85	712	270	442	183	160	91.5	148	41
ACRK 8-80/8	F132S	5.50	18.00-16.51 / 10.42-9.00	86	823	330	493	248	300	124	185	66
ACRK 8-100/10	F132M	7.50	24.50-22.47 / 14.18-12.25	86	913	390	523	248	300	124	185	72
ACRK 8-120/12	F132M	7.50	24.50-22.47 / 14.18-12.25	86	973	450	523	248	300	124	185	74

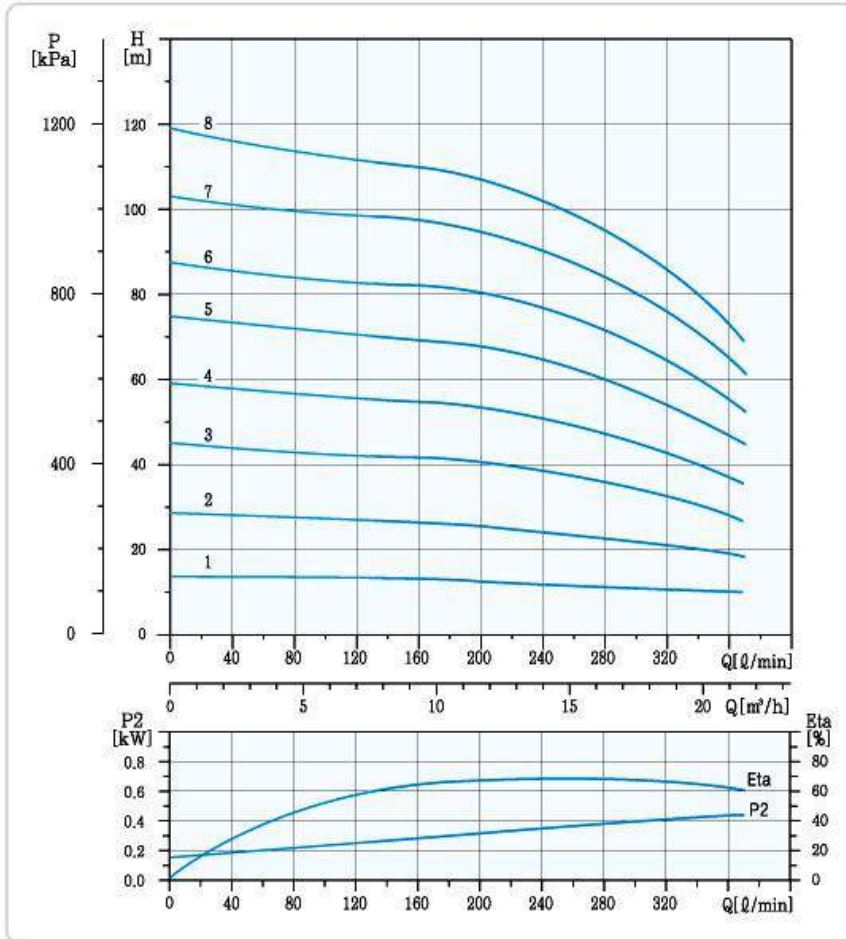
Multi-centrifugal pumps

Immersible pumps

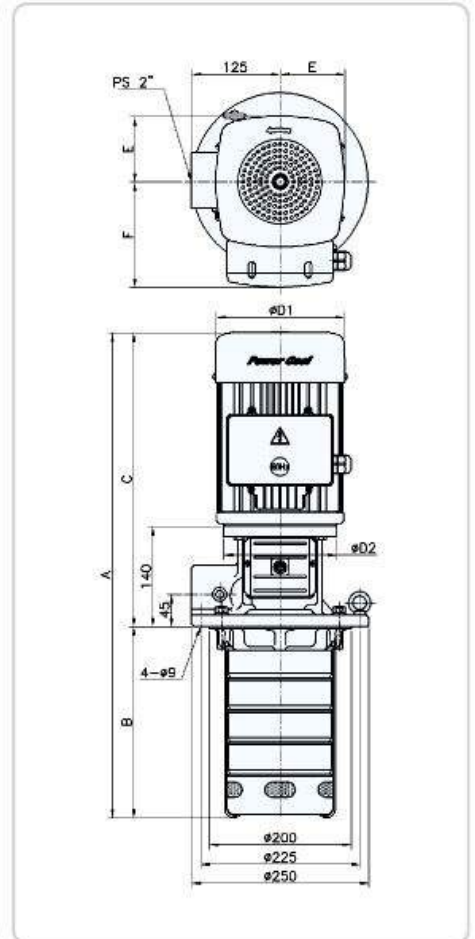
ACRK 16

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

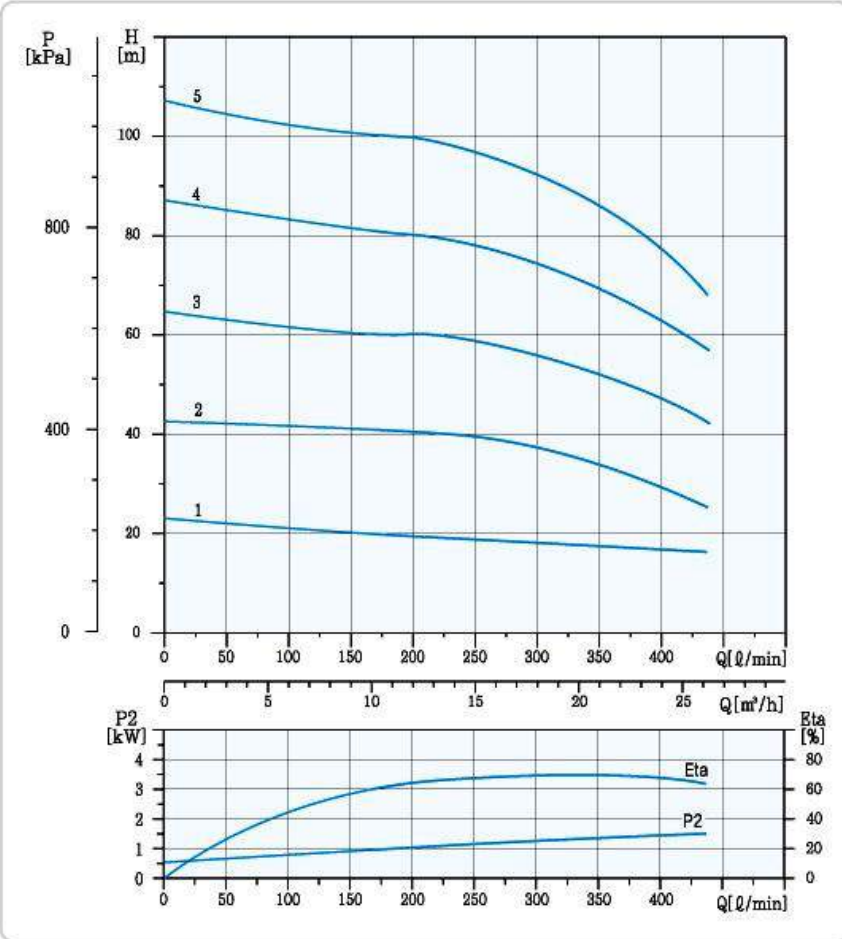
Dimensions

Pump type	Motor		Current (A)	Motor Efficiency (%)	Dimensions (mm)							Net weight (kg)
	Frame NO.	(P2) kW			A	B	C	D1	D2	E	F	
ACRK 16-20/1	F80L	1.10	4.48-3.90 / 2.36-2.16	80	586	181	405	148	160	74	123	32
ACRK 16-20/2	F90S	2.20	7.52-6.54 / 3.96-3.62	86	593	181	412	183	160	91.5	148	35
ACRK 16-30/3	F90M	3.00	10.72-9.32 / 5.64-5.16	85	653	226	427	183	160	91.5	148	39
ACRK 16-40/4	F90L	4.00	12.95-11.26 / 6.82-6.24	85	713	271	442	183	160	91.5	148	41
ACRK 16-50/5	F132S	5.50	16.50-14.35 / 8.68-7.95	86	809	316	493	248	300	124	185	65
ACRK 16-60/6	F132S	5.50	16.50-14.35 / 8.68-7.95	86	854	361	493	248	300	124	185	66
ACRK 16-70/7	F132M	7.50	22.46-19.53 / 11.82-10.82	86	929	406	523	248	300	124	185	73
ACRK 16-80/8	F132M	7.50	22.46-19.53 / 11.82-10.82	86	974	451	523	248	300	124	185	74

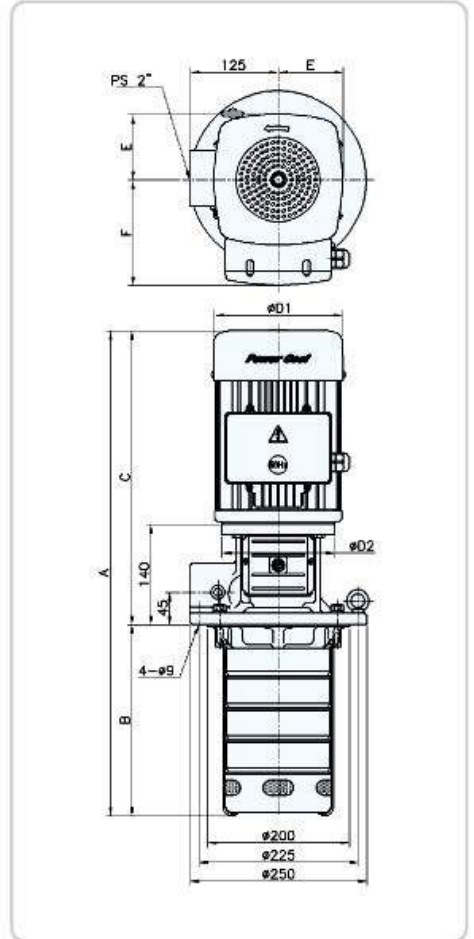
ACRK 16

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACRK 16-20/1	F90	1.5	6.15-5.64 / 3.56-3.08	81
ACRK 16-20/2	F90M	3.0	11.69-10.72 / 6.77-5.85	85
ACRK 16-30/3	F132S	5.5	18.00-16.51 / 10.42-9.00	86
ACRK 16-40/4	F132M	7.5	24.50-22.47 / 14.18-12.25	86
ACRK 16-50/5	F132M	7.5	24.50-22.47 / 14.18-12.25	86

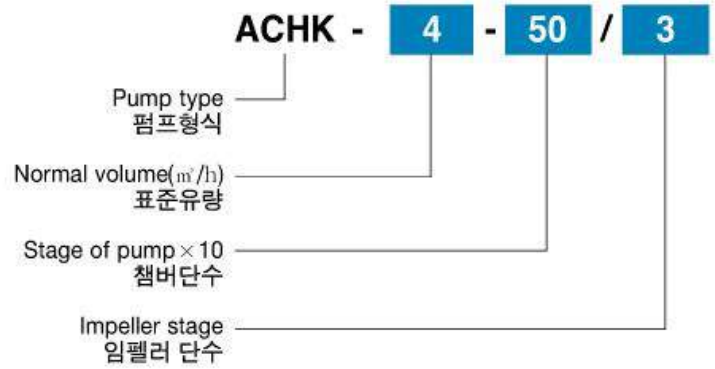
Dimensions

Dimensions (mm)							Net weight (kg)
A	B	C	D1	D2	E	F	
576	181	395	183	160	91.5	148	42
608	181	427	183	160	91.5	148	46
719	226	493	248	300	124	185	64
794	271	523	248	300	124	185	69
839	316	523	248	300	124	185	70

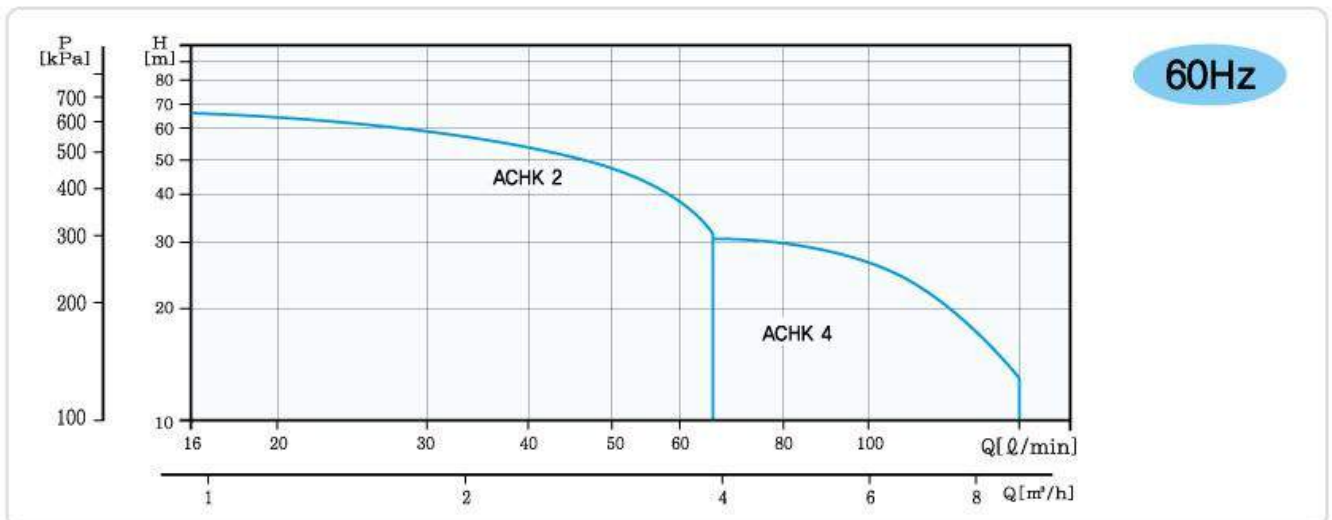
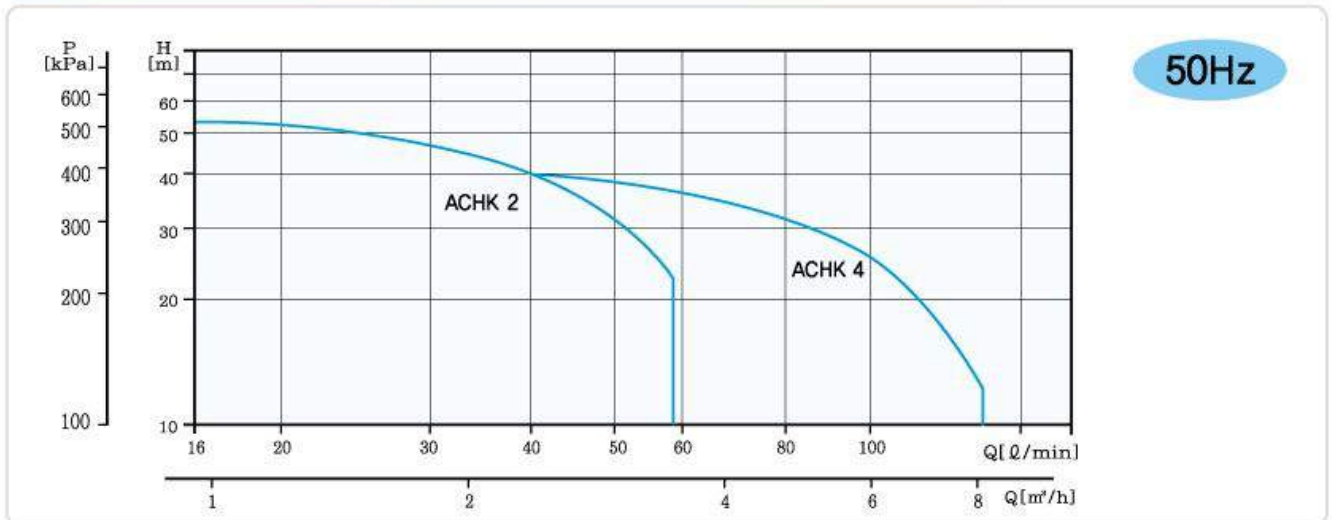
Multi-centrifugal pumps

Immersible pumps

ACHK Series



Performance range 성능범위



ACHK Series

Product description 적용범위

ACHK Series는 중간 압력용 다단원심펌프로서 고정밀, 고기능의 공작기계에 주로 사용되어 가공물을 냉각시키거나 세척하는데 매우 적합하다. ACHK Series는 설치에 제한을 받는 공간에 사용이 적합하도록 콤팩트하게 설계되었다.

이 펌프는 NC,CNC Lathe, Machining center, Grinding machine등 공작기계의 냉각장치, 산업용 Washing machine, Filtering 시스템 등에 적용된다. 펌프의 중요한 부분의 재질은 스테인레스 스틸로 제작되어있으며, 불소재질(FKM) 메카니컬 실이 장착되어 온도에 강하고 내구성이 좋다.

The ACHK series is for intermediating pressure, multi-staged centrifugal pump, and it is very useful to make cool and to wash the processing materials.

This pump is designed compact to install in a small space, and applying to NC, CNC, lathe, machining center, grinding machine, as a cooling system, industrial washing machine and filtering systems. The major raw material is made stainless steel, and the mechanical seal is FKM(Viton rubber) so it is very strong about high temperature and endurance.

Pumped liquids 사용액체

사용액체는 고형입자, 연마슬러지 및 섬유질 성분이 없이 깨끗해야 하며, 폭발위험이 없고 점성이 낮고 펌프의 재질에 손상을 주지 않는 액체이어야 한다. 사용액체의 비중이나 점도가 수용성 절삭유보다 높은 경우 필요시에는 Motor의 동력을 적절하게 증가 시켜야 한다.

The using liquids should be clean, non-explosive and low viscosity without solid particles, sludge, and fibres, additionally not affects original elements of pump. If the viscosity and gravity of using liquids is higher than soluble cutting water, the motor power has to be increased according to working conditions.

Pump 펌프

이 펌프는 Tank나 용기의 깊이가 깊을 경우 빈 Chamber를 이용하여 침수깊이를 조정할 수가 있다.

주의) 빈 Chamber의 수가 많을수록 압력저하를 가져올 수 있음. 펌프 설치시 이물질의 혼입으로 인한 흡입저하를 방지 하기위해 Tank의 배출측과 흡입측 사이에 격판을 설치 하여 배출된 유체가 곧바로 흡입되지 않도록 시스템을 구성하여야 한다.

This pump can be installed additional empty chambers when the tank is deeper.

Caution) Because more chambers installing causes low pressure, when the pump is equiped, the separating plate has to be installed between tank outlet area and inlet area to avoid low sucking performance.

Motor 모터

이 펌프는 Fan cooling 방식으로된 표준 Motor를 사용하고 있다 이 Motor의 주요 규격(Dimension)은 일반표준에 따라 제작 되었다.

The motor is used standard fan cooling system and standard dimension.

Enclosure class : IP54
보호등급

Insulation class : F
절연등급

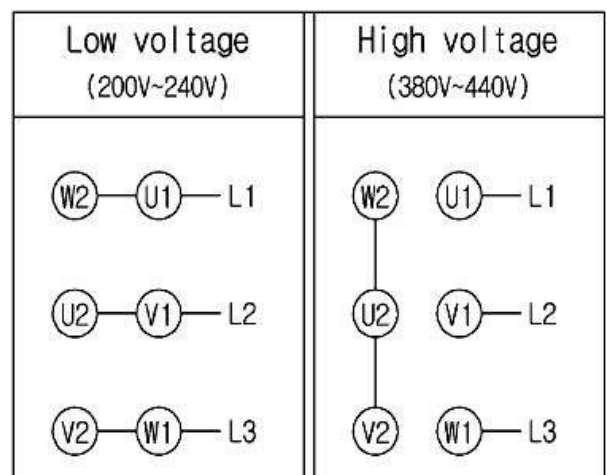
Standard voltage 50Hz : 3Ø 200-230/380-415V
표준전압

Standard voltage 60Hz : 3Ø 220-240/380-440V
표준전압

The specific voltage and motor can be produced by user's order. The standard starting panel should be connected when using 3Ø motor.

기타 비표준 사용전압 및 고효율 Motor도 주문에 의해 제작이 가능하다. 3Ø Motor에는 반드시 규격에 맞는 기동조작반이 연결 되어야 한다.

Motor connection 결선도 (Free voltage)



Multi-centrifugal pumps

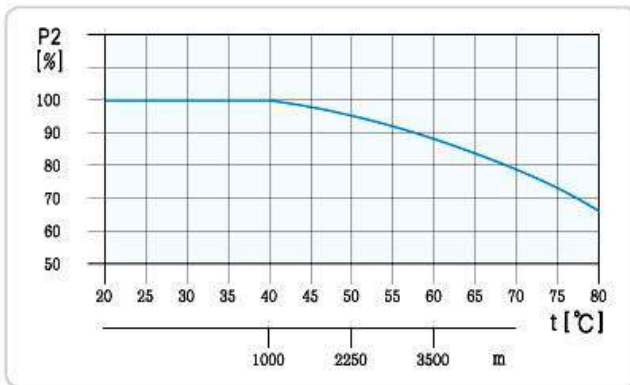
Immersible pumps

ACHK Series

Max. Ambient temperature 최고 주위온도

주위온도가 40℃ 이상 또는 고도가 1000m 이상 되는 곳에서 Motor을 설치할 때는 공기의 낮은 밀도에 따른 낮은 냉각성을 고려하여 Motor 출력을 정격 출력보다 낮추어야 한다.

Because of low cooling effects by low density of the air on condition of ambient temperature above 40℃ or altitude over 1000m, the output of motor should be lowered more below than standard capacity.



Example) When the pump should be installed sea level 3500m and ambient temperature 60℃, The performance ability drops 80%.

예) 위 표에서 보는바와 같이 P2의 경우 펌프가 고도 3500m, 온도 60℃인 주위 환경에 설치되었을 경우 펌프의 성능이 80%로 감소된 것으로 나타남.

Sound pressure level 소음

Motor (kW)	Sound pressure level(dB)	
	50Hz	60Hz
0,37	< 70	< 70
0,55	< 70	< 70
0,75	< 70	< 70
1,10	< 70	71

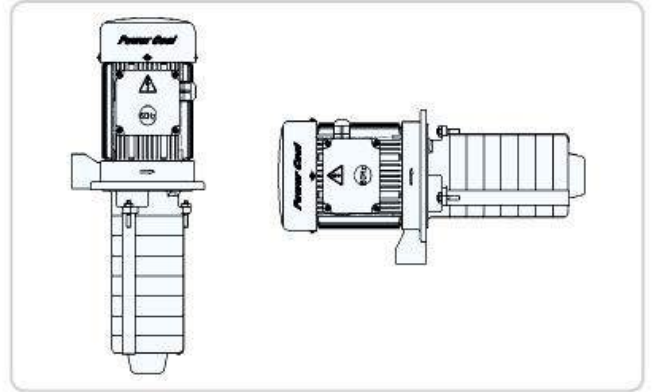
Shaft seal 메카니컬실

The proper shaft seal is decided by pressure needed, pump model, mechanical seal type and temperature of using liquid.

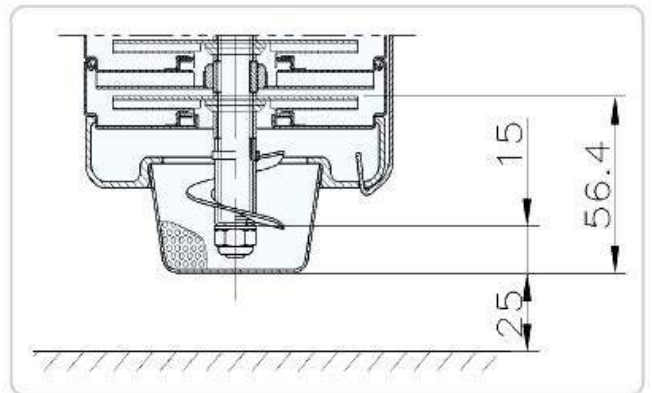
실제의 운전범위는 사용압력, 펌프형식, 메카니컬 실 Type 그리고 사용 액체의 온도에 따라 결정된다.

Seal division	Max. pressure (bar)	Max. temperature (°C)
Carbon / Sic Viton(FKM)	10	0~120

Installation 설치시 유의사항



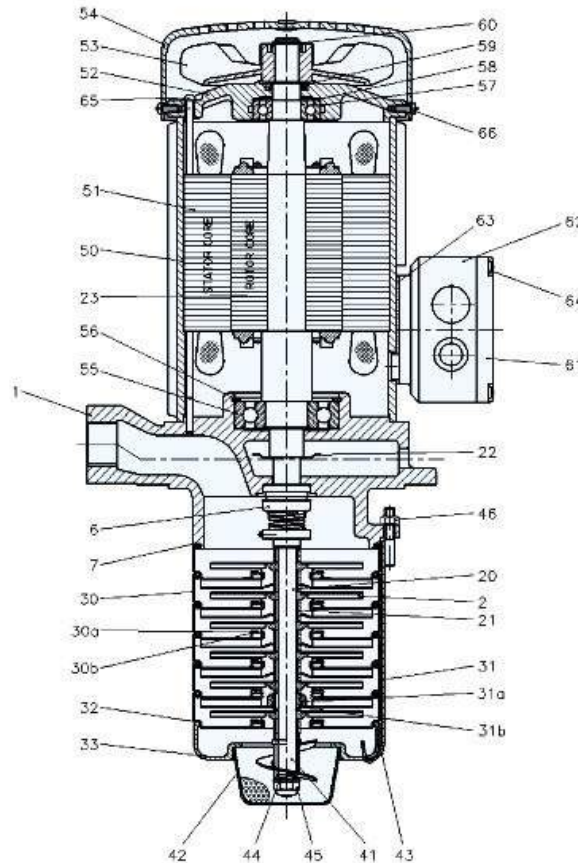
- The ACHK Series should be installed 1/8" blocking plug at drain hole when combining with horizontal method.
- ACHK Series pump를 수평으로 설치하게 되면 Drain hole을 1/8" 막음 플러그를 장착하여야 한다.



- This type is designed minimum 15mm gap between strainer bottom and pump bottom.
- The liquid should be filled 56,4mm between tank bottom and strainer bottom to protect damage of seal by screwing with idle pumping.
- The gap between tank bottom and pump bottom should be kept minimum 25mm.
- 이 펌프는 스트레이너 밑부분에서 위쪽으로 15 mm까지를 최저치로 설계되었다.
- Bottom에서 Strainer 바닥사이 56,4mm 에 액체가 충만되었을때 내장된 Screw가 Pumping을 하여 공회전에 의한 Seal 파손을 방지할 수 있다.
- 펌프와 Tank 바닥과의 사이는 25mm 이상 간격을 두어야한다

ACHK Series

Sectional drawing 부품도



Part list

No.	Part name	Spec.	Material
1	Pump head	-	GC25
2	Impeller	-	SUS304
6	Mechanical seal	Ø16	Carbon + sic
7	Packing	-	TEFLON
20	Shaft	-	SUS304
21	Spacer	-	SUS304
23	Rotor core	Ø66	Si & Cu
30	Middle chamber	-	SUS304
30a	Teflon housing	-	SUS304
30b	Teflon bushing	-	TEFLON
31	Bearing chamber	-	SUS304
31a	Bearing chamber bushing	-	Sic
31b	T/C Bearing	-	T.C
32	Bottom chamber	-	SUS304
33	Suction chamber	-	SCS13
41	Jumping screw	-	SUS304
42	Strainer	-	SUS304
43	Band	-	SUS304
44	Washer	Ø8	SUS304

No.	Part name	Spec.	Material
45	Nylon nut	M8	SUS304
46	Nut	M6	SUS304
50	Motor frame	Ø122	AL6061
51	Stator core	-	Si
52	Motor end cover	Ø122	GC25
53	Fan	-	PLASTIC
54	Fan cover	Ø122	NYLON
55	Ball bearing	#6305zz	-
56	Snap-ring	Ø62(C-Type)	STC5
57	Ball bearing	#6204zz	-
58	Wave washer	#6204zz	-
59	V-packing	-	NBR
60	Snap-ring	Ø14(C-Type)	STC5
61	Terminal box cover	-	ZnDC
62	Terminal box	-	ZnDC
63	Terminal box packing	-	NBR
64	Set screw	M4 x 15L	SUS304
65	Round head (+) bolt	M5	S20C
66	Set screw	M4 x 8L	SUS304

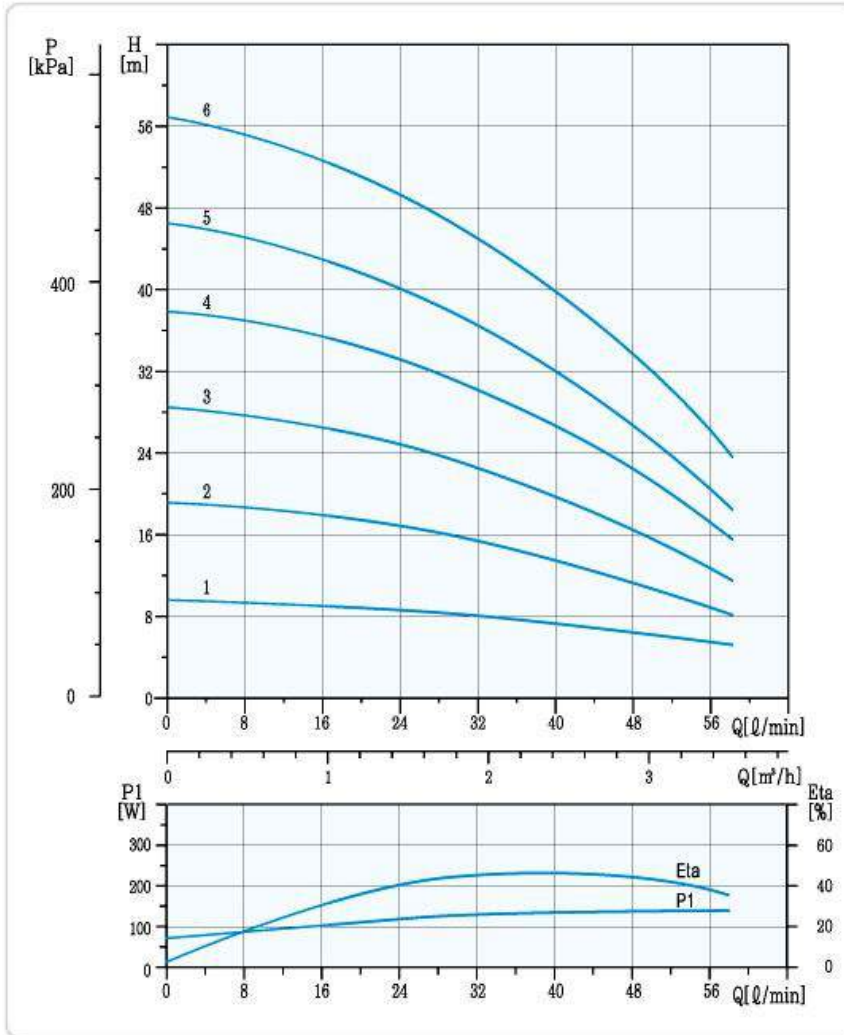
Multi-centrifugal pumps

Immersible pumps

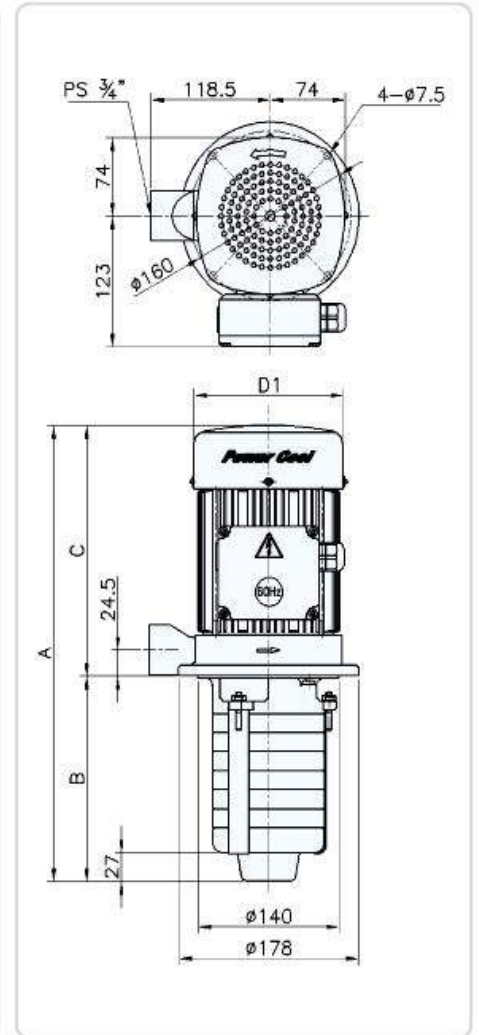
ACHK 2

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACHK 2-30/1	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACHK 2-30/2	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACHK 2-30/3	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACHK 2-40/4	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACHK 2-50/5	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACHK 2-60/6	F80L	1.1	4.48-3.90 / 2.36-2.16	80
ACHK 2-90/6	F80L	1.1	4.48-3.90 / 2.36-2.16	80
ACHK 2-100/6	F80L	1.1	4.48-3.90 / 2.36-2.16	80
ACHK 2-110/6	F80L	1.1	4.48-3.90 / 2.36-2.16	80

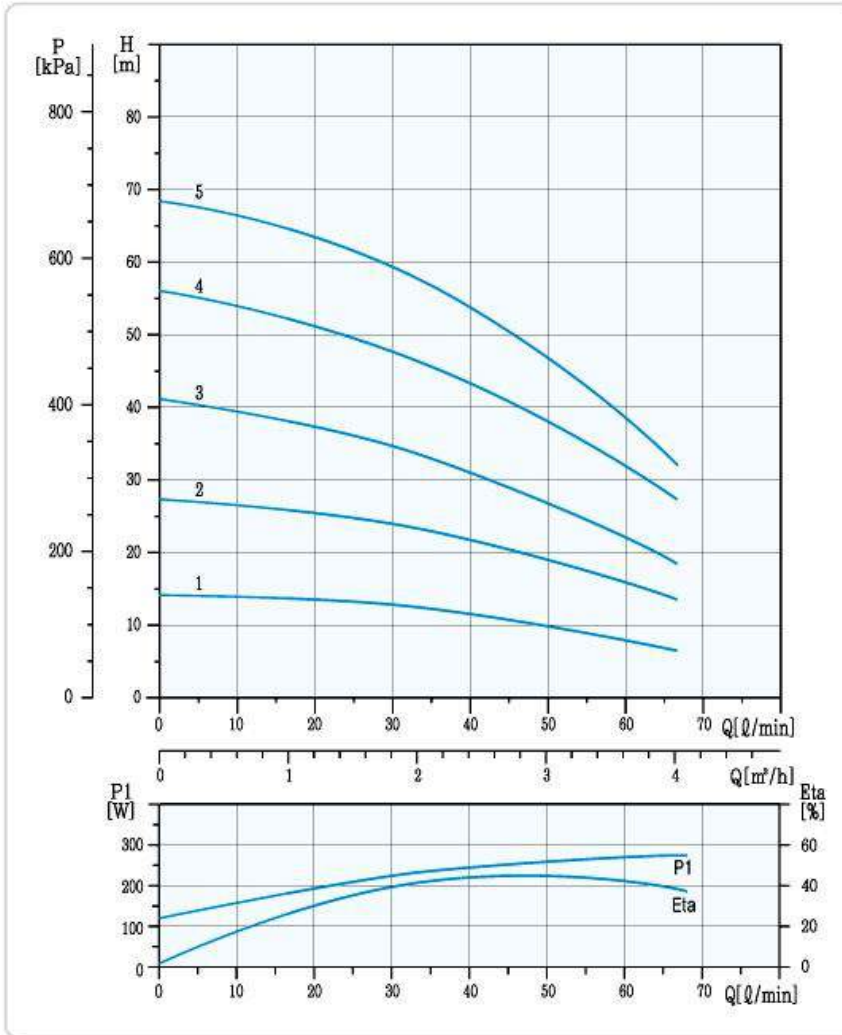
Dimensions

Dimensions (mm)				Net weight (kg)
A	B	C	D1	
386	140	246	148	10.7
386	140	246	148	10.8
386	140	246	148	11.1
386	158	246	148	11.5
437	176	261	148	11.8
480	194	286	148	14.3
534	248	286	148	15.1
552	266	286	148	15.5
570	284	286	148	15.6

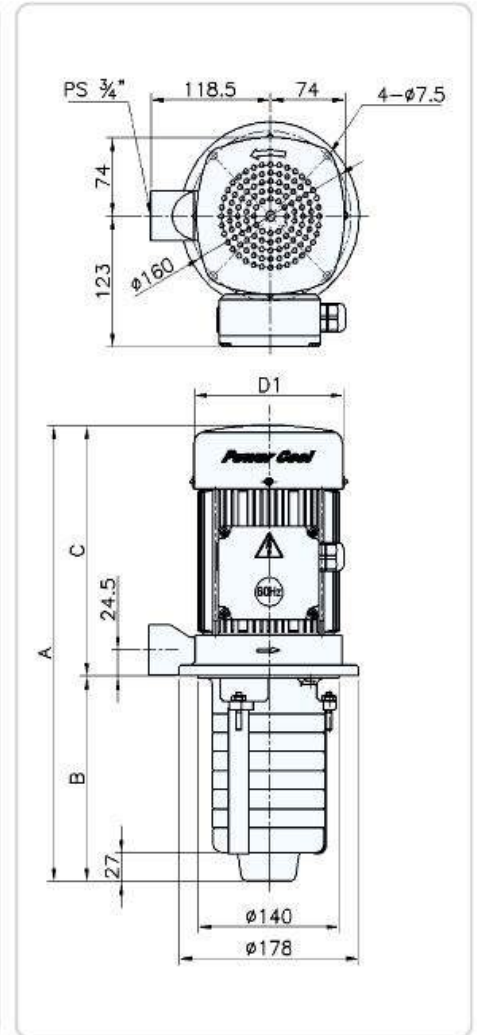
ACHK 2

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACHK 2-30/1	F80	0.37	2.20-2.02 / 1.27-1.10	68
ACHK 2-30/2	F80S	0.55	2.73-2.50 / 1.58-1.37	73
ACHK 2-30/3	F80M	0.75	3.95-3.62 / 2.29-1.98	74
ACHK 2-40/4	F80L	1.1	4.89-4.48 / 2.83-2.45	80
ACHK 2-50/5	F80L	1.1	4.89-4.48 / 2.83-2.45	80
ACHK 2-60/5	F80L	1.1	4.89-4.48 / 2.83-2.45	80
ACHK 2-90/5	F80L	1.1	4.89-4.48 / 2.83-2.45	80
ACHK 2-100/5	F80L	1.1	4.89-4.48 / 2.83-2.45	80
ACHK 2-110/5	F80L	1.1	4.89-4.48 / 2.83-2.45	80

Dimensions

Dimensions (mm)				Net weight (kg)
A	B	C	D1	
386	140	246	148	10.9
386	140	246	148	11.0
401	140	261	148	11.1
444	158	286	148	12.5
462	176	286	148	12.8
480	194	286	148	14.6
534	248	286	148	15.1
552	266	286	148	15.4
570	284	286	148	15.6

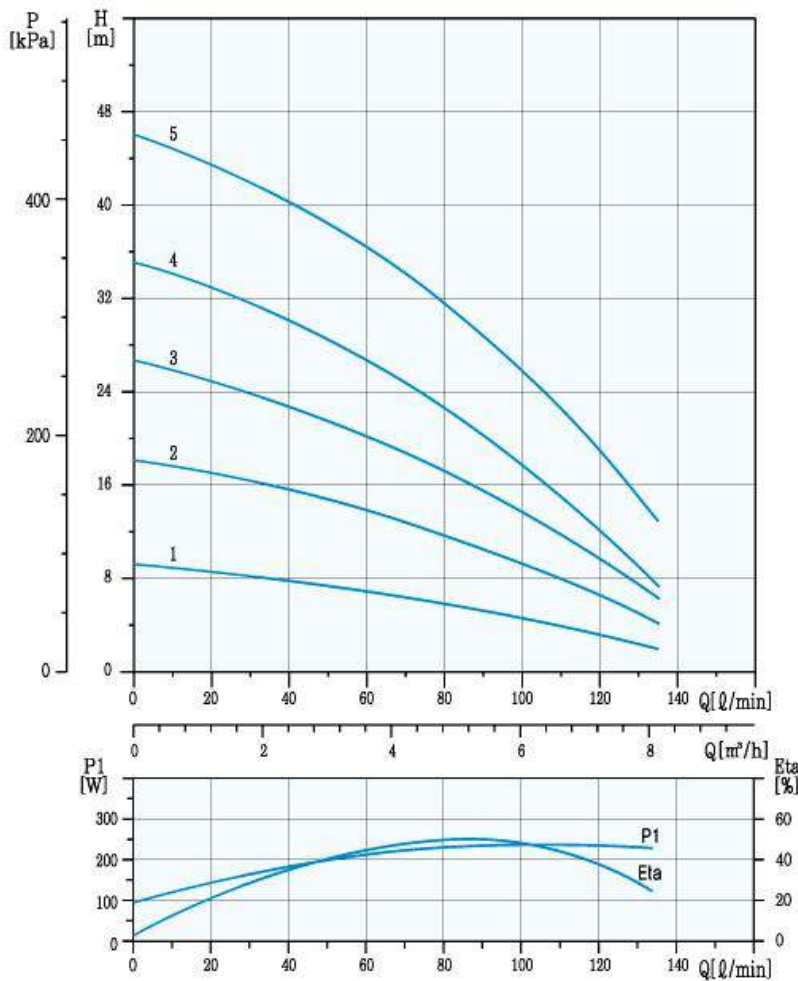
Multi-centrifugal pumps

Immersible pumps

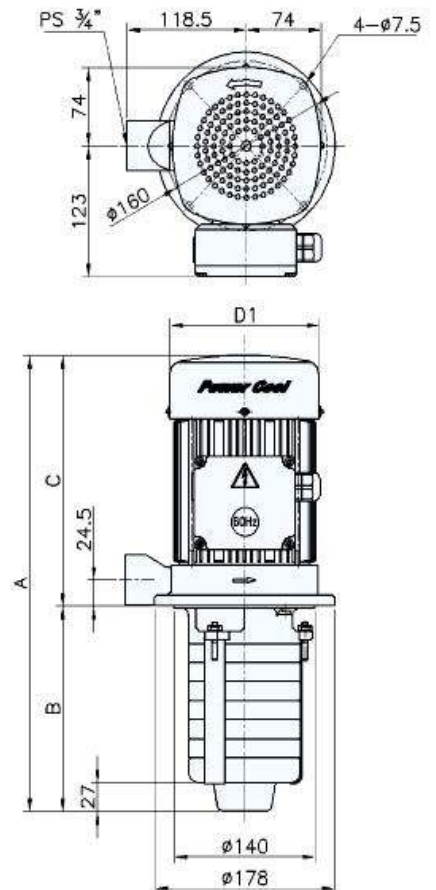
ACHK 4

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACHK 4-20/1	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACHK 4-20/2	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACHK 4-30/3	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACHK 4-40/4	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACHK 4-50/5	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACHK 4-60/5	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACHK 4-70/5	F80L	1.10	4.48-3.90 / 2.36-2.16	80
ACHK 4-80/5	F80L	1.10	4.48-3.90 / 2.36-2.16	80

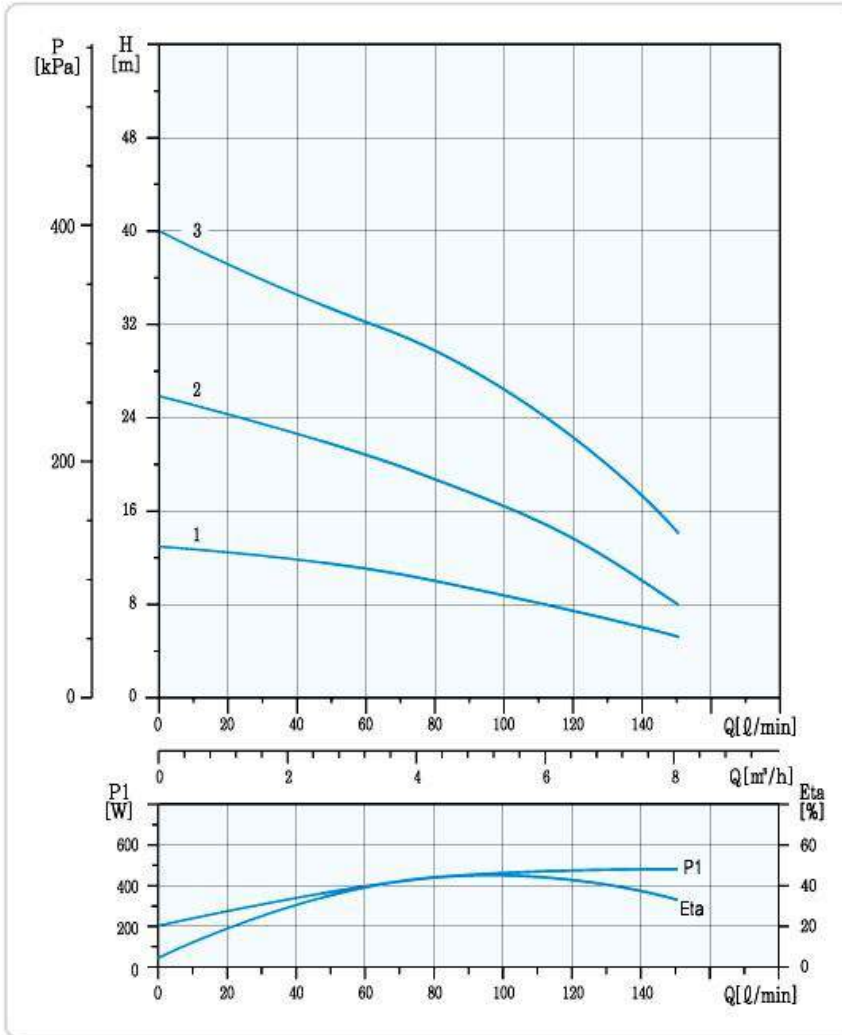
Dimensions

Dimensions (mm)				Net weight (kg)
A	B	C	D1	
386	140	246	148	10.6
386	140	246	148	10.7
428	167	261	148	11.4
480	194	286	148	13.0
507	221	286	148	14.7
534	248	286	148	15.3
561	275	286	148	16.4
588	302	286	148	16.7

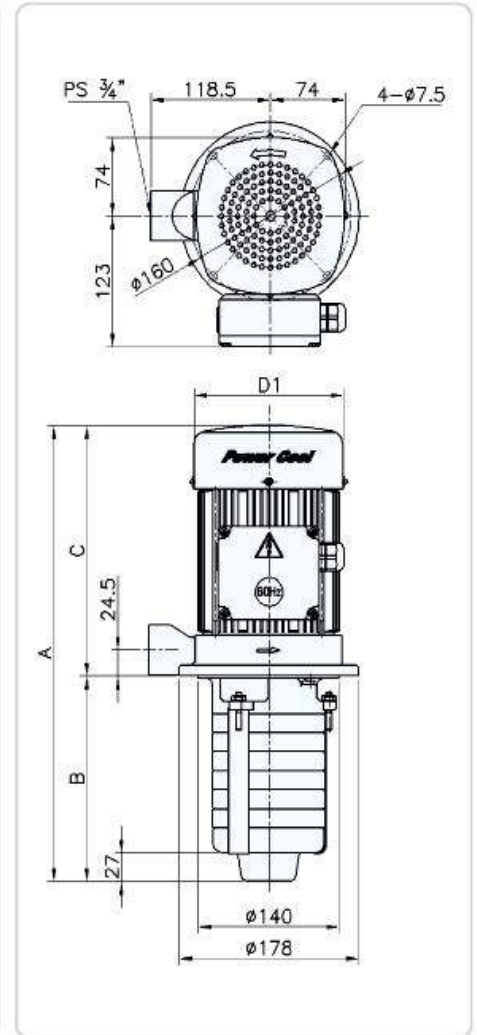
ACHK 4

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACHK 4-20/1	F80S	0.55	2.73-2.50 / 1.58-1.37	73
ACHK 4-20/2	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-30/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-40/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-50/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-60/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-70/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACHK 4-80/3	F80L	1.10	4.89-4.48 / 2.83-2.45	80

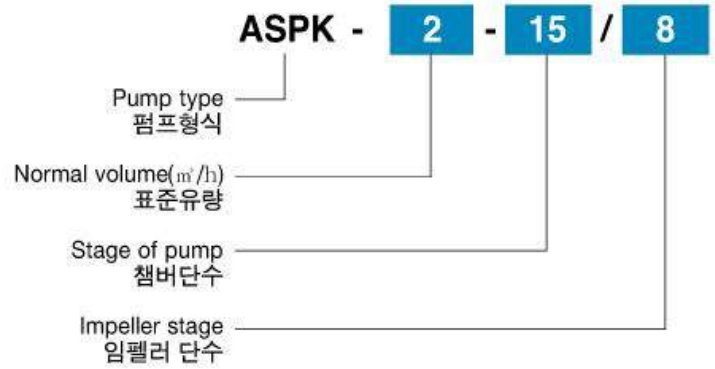
Dimensions

Dimensions (mm)				Net weight (kg)
A	B	C	D1	
386	140	246	148	10.8
426	140	286	148	10.9
453	167	286	148	12.4
480	194	286	148	14.3
507	221	286	148	14.6
534	248	286	148	15.1
561	275	286	148	16.4
588	302	286	148	16.8

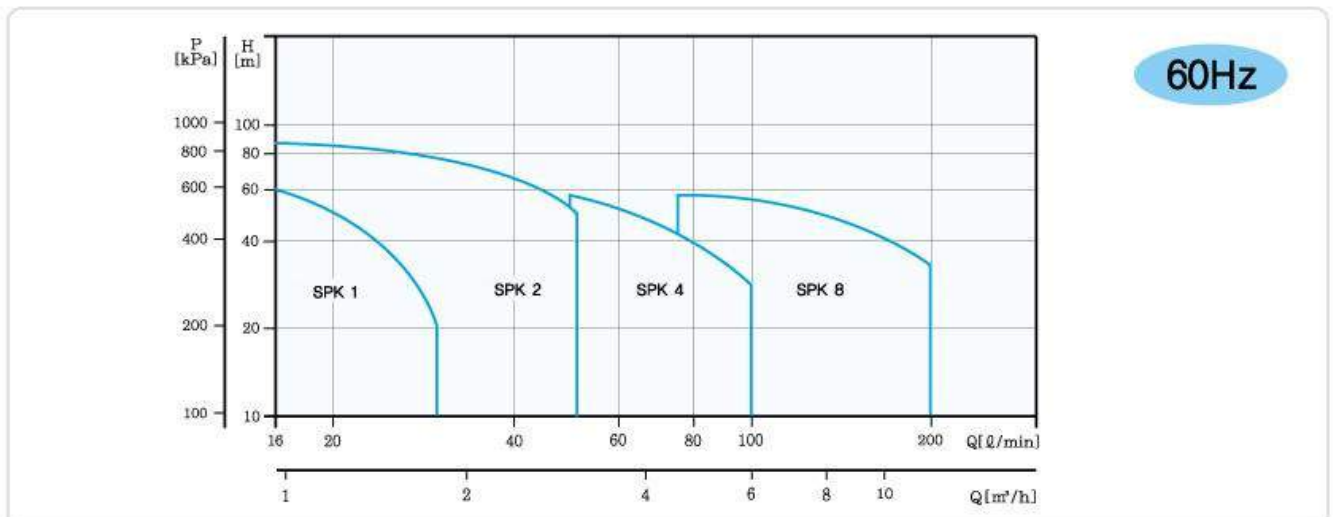
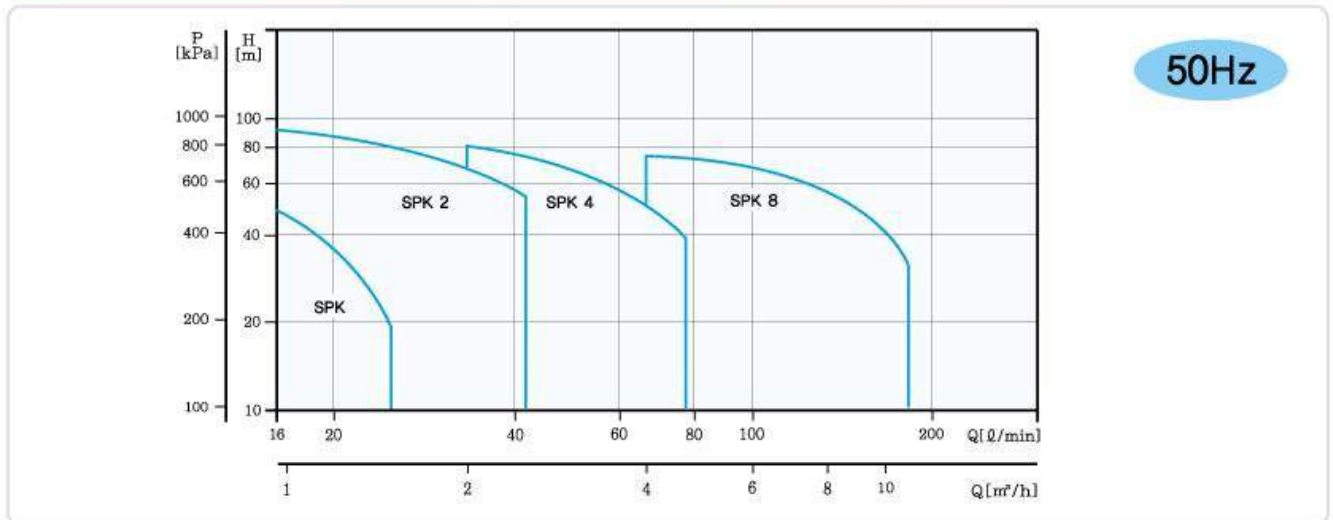
Multi-centrifugal pumps

Immersible pumps

ASPK Series



Performance range 성능범위



ASPK Series

Product description 적용범위

ASPK Series는 고압력용 다단원심펌프로서 고정밀, 고기능의 공작기계에 주로 사용되어 가공물을 냉각시키거나 세척하는데 매우 적합하다.

이 펌프는 NC,CNC Lathe, Machining center, Grinding machine등 공작기계의 냉각장치, 산업용 Washing machine, Filtering 시스템 등에 적용된다.

펌프의 중요한 부분의 재질은 스테인레스 스틸로 제작되어있으며, 불소재질(FKM) 메카니컬 실이 장착되어 온도에 강하고 내구성이 좋다.

The ASPK series is for High pressure, multi-staged centrifugal pump, and it is very useful to make cool and to wash the processing materials.

This pump is designed compact to install in a small space, and applying to NC, CNC, lathe, machining center, grinding machine, as a cooling system, industrial washing machine and filtering systems.

The major raw material is made stainless steel, and the mechanical seal is FKM(Viton rubber) so it is very strong about high temperature and endurance.

Pumped liquids 사용액체

사용액체는 고형입자, 연마슬러지 및 섬유질 성분이 없이 깨끗해야 하며, 폭발위험이 없고 점성이 낮고 펌프의 재질에 손상을 주지 않는 액체이어야 한다.

사용액체의 비중이나 점도가 수용성 절삭유보다 높은 경우 필요시에는 Motor의 동력을 적절하게 증가 시켜야 한다.

The using liquids should be clean, non-explosive and low viscosity without solid particles, sludge, and fibres, additionally not affects original elements of pump.

If the viscosity and gravity of using liquids is higher than soluble cutting water, the motor power has to be increased according to working conditions.

Pump 펌프

이 펌프는 Tank나 용기의 깊이가 깊을 경우 빈 Chamber를 이용하여 침수깊이를 조정할 수가 있다.

주의) 빈 Chamber의 수가 많을수록 압력저하를 가져올 수 있음.
 펌프 설치시 이물질의 혼입으로 인한 흡입저하를 방지 하기위해 Tank의 배출측과 흡입측 사이에 격판을 설치하여 배출된 유체가 곧바로 흡입되지 않도록 시스템을 구성하여야 한다.

This pump can be installed additional empty chambers when the tank is deeper.

Caution) Because more chambers installing causes low pressure, when the pump is equiped, the separating plate has to be installed between tank outlet area and inlet area to avoid low sucking performance.

Motor 모터

이 펌프는 Fan cooling 방식으로된 표준 Motor를 사용하고 있다 이 Motor의 주요 규격(Dimension)은 일반표준에 따라 제작 되었다.

The motor is used standard fan cooling system and standard dimension.

Enclosure class : IP54
 보호등급

Insulation class : F
 절연등급

Standard voltage 50Hz : 3Ø 200-230/380-415V
 표준전압

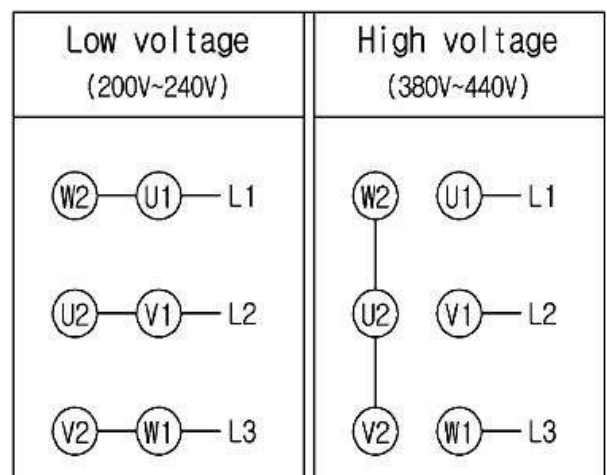
Standard voltage 60Hz : 3Ø 220-240/380-440V
 표준전압

The specific voltage and motor can be produced by user's order. The standard starting panel should be connected when using 3Ø motor.

기타 비표준 사용전압 및 고효율 Motor도 주문에 의해 제작이 가능하다.

3Ø Motor에는 반드시 규격에 맞는 기동조작반이 연결 되어야 한다.

Motor connection 결선도 (Free voltage)



Multi-centrifugal pumps

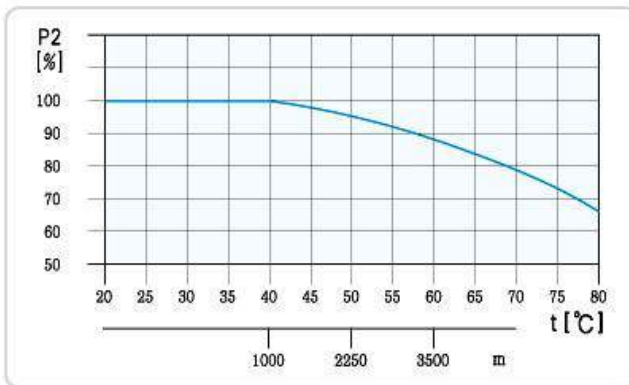
Immersible pumps

ASPK Series

Max. Ambient temperature 최고 주위온도

주위온도가 40℃ 이상 또는 고도가 1000m 이상 되는 곳에서 Motor을 설치할 때는 공기의 낮은 밀도에 따른 낮은 냉각성능을 고려하여 Motor 출력을 정격 출력보다 낮추어야 한다.

Because of low cooling effects by low density of the air on condition of ambient temperature above 40℃ or altitude over 1000m, the output of motor should be lowered more below than standard capacity.



Example) When the pump should be installed sea level 3500m and ambient temperature 60℃, The performance ability drops 80%.

예) 위 표에서 보는바와 같이 P2의 경우 펌프가 고도 3500m, 온도 60℃인 주위 환경에 설치되었을 경우 펌프의 성능이 80%로 감소된 것으로 나타남.

Sound pressure level 소음

Motor (kW)	Sound pressure level(dB)	
	50Hz	60Hz
0,37	< 70	< 70
0,55	< 70	< 70
0,75	< 70	< 70
1,1	< 70	71
1,5	< 70	71
2,2	< 70	71

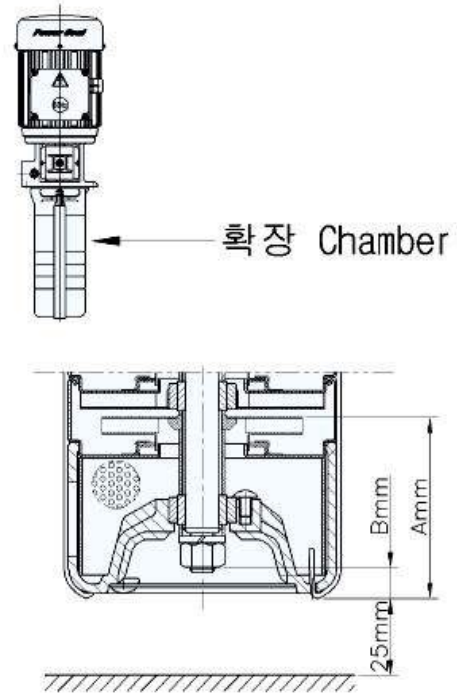
Shaft seal 메카니컬실

The proper shaft seal is decided by pressure needed, pump model, mechanical seal type and temperature of using liquid.

실제의 운전범위는 사용압력, 펌프형식, 메카니컬 실 Type 그리고 사용 액체의 온도에 따라 결정된다.

Seal division	Max. pressure (bar)	Max. temperature (°C)
TC/Sic Viton(FKM)	25	0~120

Installation 설치시 유의사항

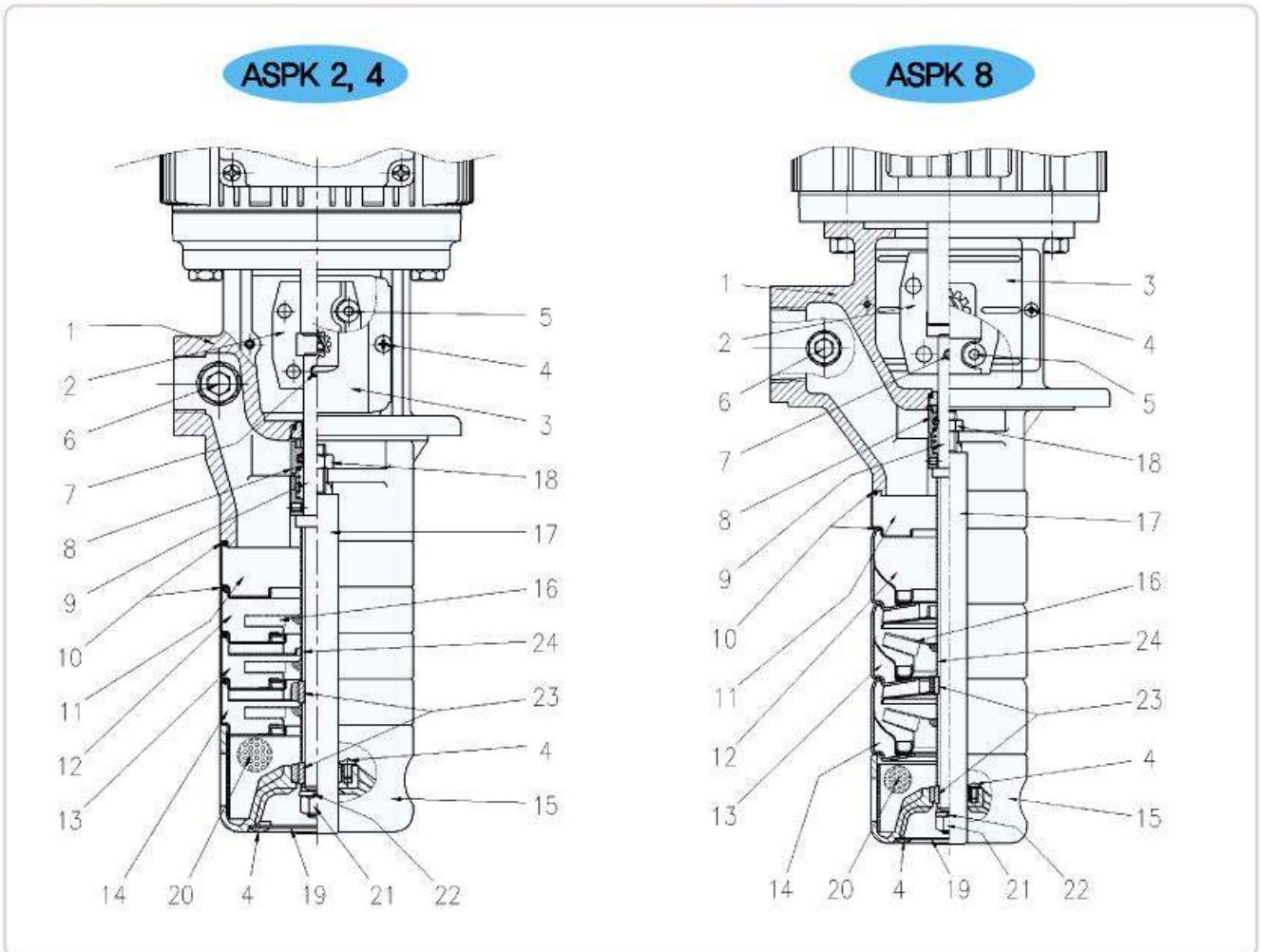


PUMP Type	A(mm)	B(mm)
ASPK 2/4	59	10,1
ASPK 8	77	8,6

- This type is designed minimum Bmm gap between strainer bottom and pump bottom.
- The liquid should be filled Amm between tank bottom and strainer bottom to protect damage of seal by screwing with idle pumping.
- The gap between tank bottom and pump bottom should be kept minimum 25mm.
- 이 펌프는 스트레이너 밑부분에서 위쪽으로 B mm까지를 최저치로 설계되었다.
- Bottom에서 Strainer 바닥사이 A mm 에 액체가 충전되었을때 내장된 Screw가 Pumping을 하여 공회전에 의한 Seal 파손을 방지할 수 있다.
- 펌프와 Tank 바닥과의 사이는 25mm 이상 간격을 두어야한다.

ASPK Series

Sectional drawing 부품도



Part list

No.	Part name	Spec.	Material
1	PUMP BODY	-	GC25
2	COUPLING	-	SC360
3	COUPLING COVER	-	SUS304
4	TRUSS (+)BOLT	M4x0.7px6L	SUS304
5	WRENCH BOLT	M6x1.0px20L	SUS304
6	AIR VENT	PT1/4"	SM45C
7	PIN	Ø5x25L	SUS304
8	MECHANICAL SEAL	Ø12	T.C / sic
9	PUMP SHAFT	Ø12	SUS304
10	CHAMBER PACKING	Ø80xØ86x0.5t	TEFLON
11	SPACE CHAMBER	-	SUS304
12	MIDDLE CHAMBER	-	SUS304

No.	Part name	Spec.	Material
13	BEARING CHAMBER	-	SUS304
14	BOTTOM CHAMBER	-	SUS304
15	SUCTION CHAMBER	-	SUS304
16	IMPELLER	-	SUS304
17	BAND	-	SUS304
18	NUT	M6x1.0p	SUS304
19	STRAINER	Ø60x1.0t	SUS304
20	CIRCLE STRAINER	Ø82x38h	SUS304
21	SPRING WASHER	S.W 8	SUS304
22	NYLON NUT	M8x1.25p	SUS304
23	T/C BEARING	Ø16x9.7h	T.C
24	SPACER	Ø15xØ12.8	SUS304

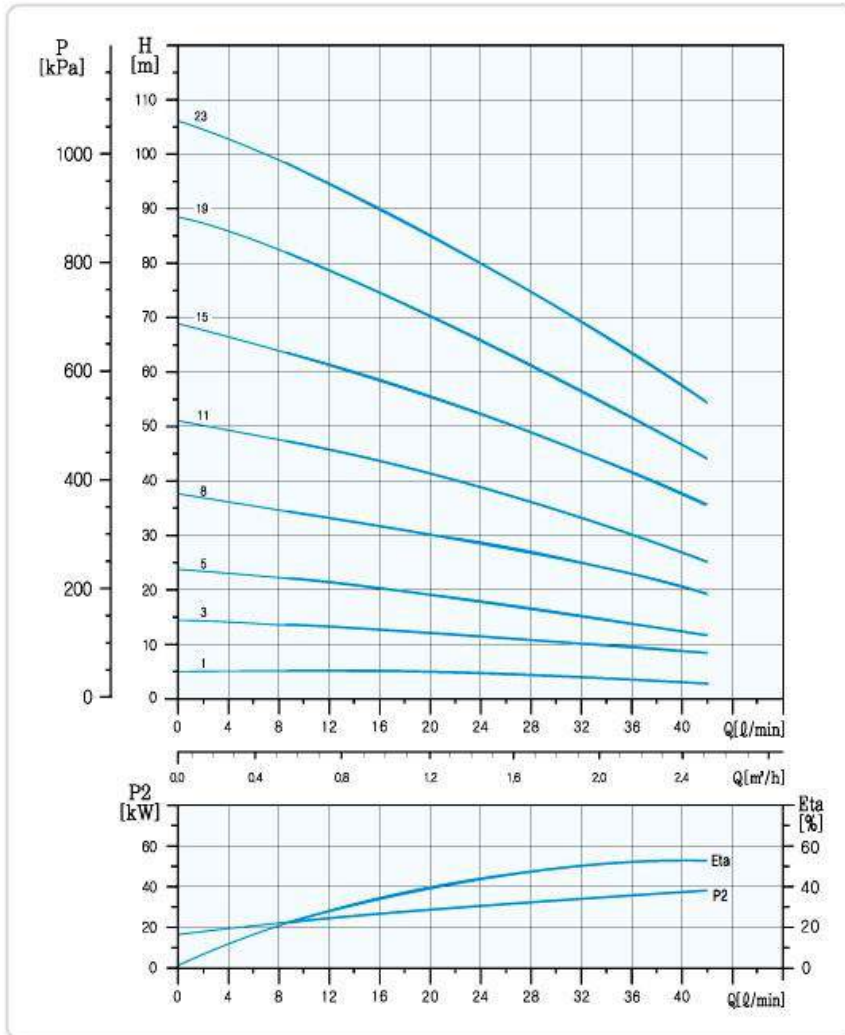
Multi-centrifugal pumps

Immersible pumps

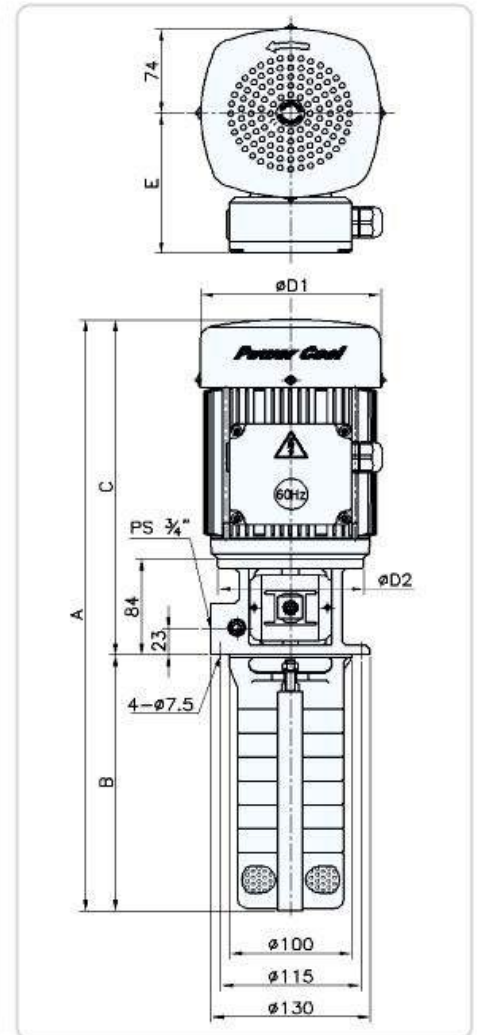
ASPK 2

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 2-1/1	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 2-3/3	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 2-5/5	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 2-8/8	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 2-11/11	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 2-15/15	F80S	0.55	2.46-2.79/1.39-1.63	73
ASPK 2-19/19	F80M	0.75	3.07-3.19/1.84-1.90	74
ASPK 2-23/23	F80M	0.75	3.07-3.19/1.84-1.90	74

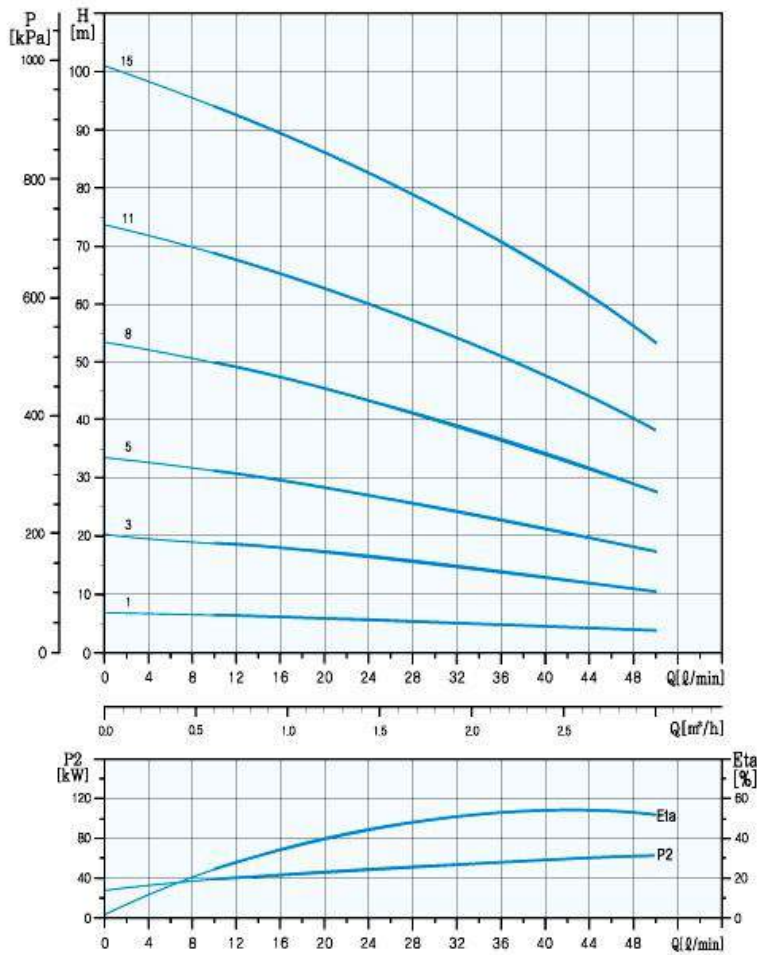
Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	D2	E	
435	141	294	148	120	123	13.6
477	183	294	148	120	123	13.8
519	225	294	148	120	123	14.0
582	288	294	148	120	123	14.3
645	351	294	148	120	123	14.7
744	435	309	148	120	123	17.2
828	519	309	148	120	123	18.9
912	603	309	148	120	123	19.5

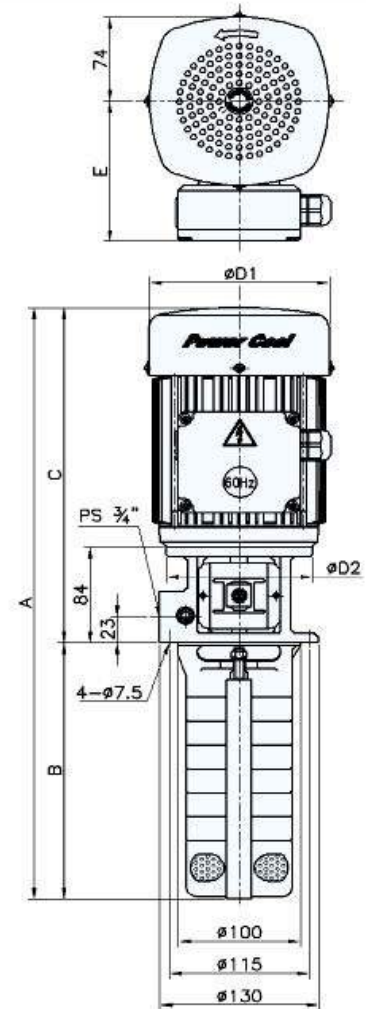
ASPK 2

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 2-1/1	F80	0.37	2.02-2.02/0.27-1.10	68
ASPK 2-3/3	F80	0.37	2.02-2.02/0.27-1.10	68
ASPK 2-5/5	F80	0.37	2.02-2.02/0.27-1.10	68
ASPK 2-8/8	F80S	0.55	2.73-2.50/1.58-1.37	68
ASPK 2-11/11	F80M	0.75	3.95-3.62/2.29-1.98	68
ASPK 2-15/15	F80L	1.10	4.89-4.48/2.83-2.45	73
ASPK 2-19/15	F80L	1.10	4.89-4.48/2.83-2.45	74
ASPK 2-23/15	F80L	1.10	4.89-4.48/2.83-2.45	74

Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	D2	E	
435	141	294	148	120	123	13.6
477	183	294	148	120	123	13.8
519	225	294	148	120	123	14.0
597	288	309	148	120	123	16.2
675	351	324	148	120	123	18.4
784	435	349	148	120	123	20.4
868	519	349	148	120	123	21.1
952	603	349	148	120	123	21.7

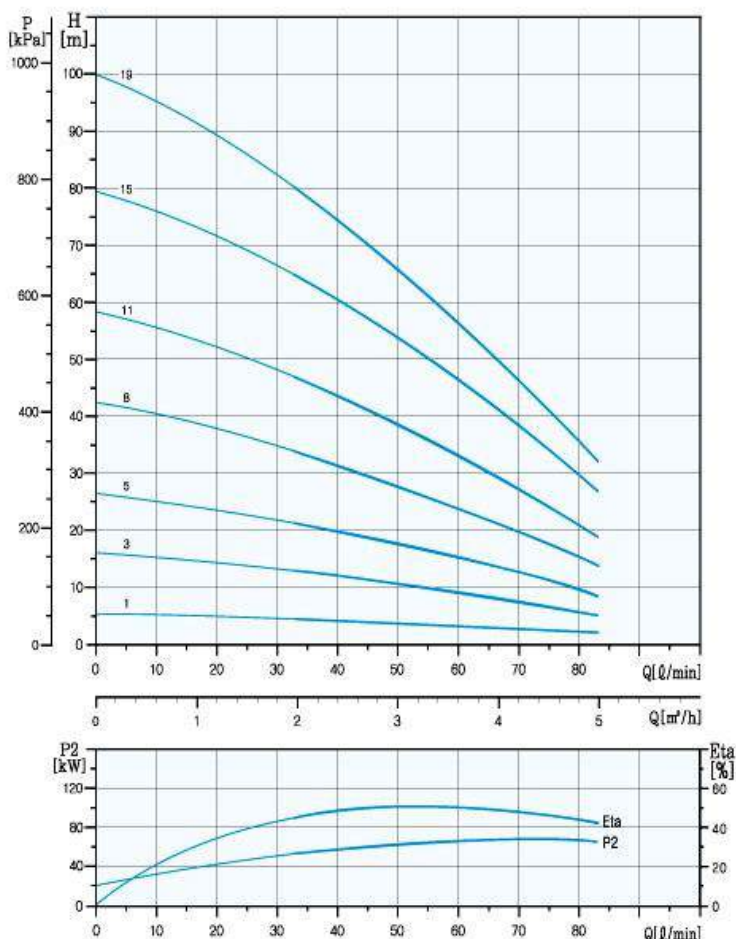
Multi-centrifugal pumps

Immersible pumps

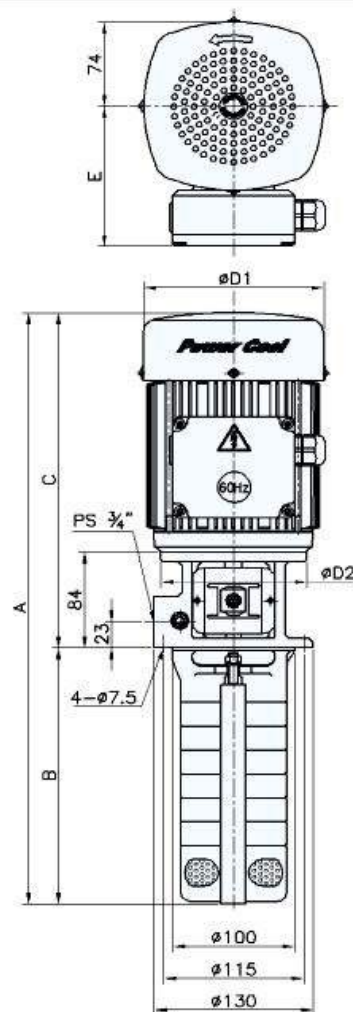
ASPK 4

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3 ϕ 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 4-1/1	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 4-3/3	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 4-5/5	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 4-8/8	F80S	0.55	2.46-2.79/1.39-1.63	73
ASPK 4-11/11	F80M	0.75	3.07-3.19/1.84-1.90	74
ASPK 4-15/15	F80L	1.10	4.84-4.85/2.75-2.86	80
ASPK 4-19/19	F80L	1.10	4.84-4.85/2.75-2.86	80

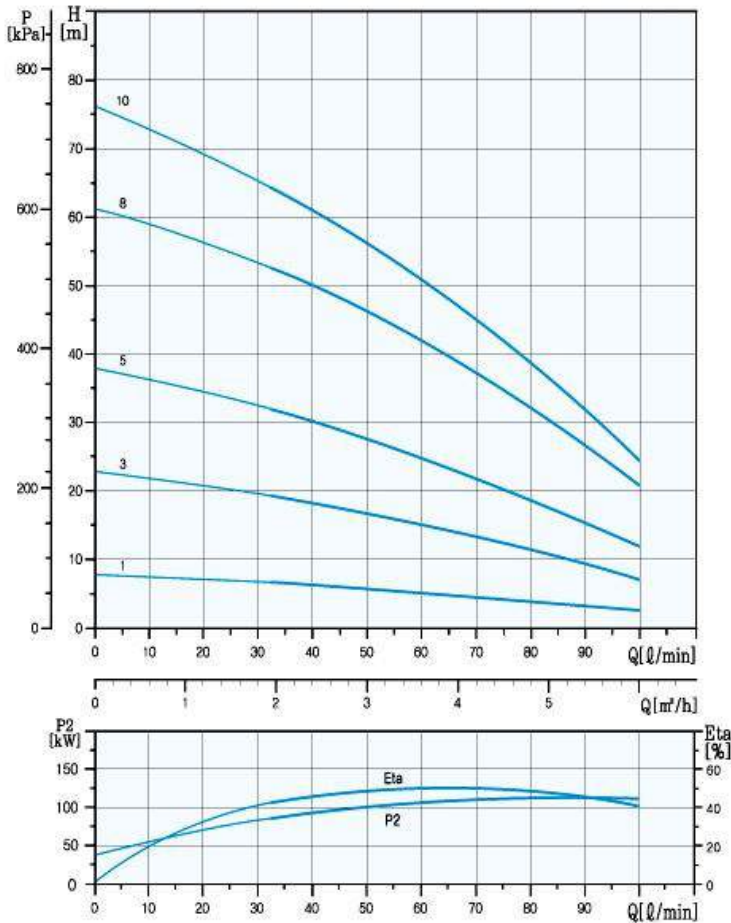
Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	D2	E	
435	141	294	148	120	123	13.6
477	183	294	148	120	123	13.9
519	225	294	148	120	123	14.1
597	288	309	148	120	123	16.4
675	351	324	148	120	123	18.8
784	435	349	148	120	123	20.1
868	519	349	148	120	123	21.3

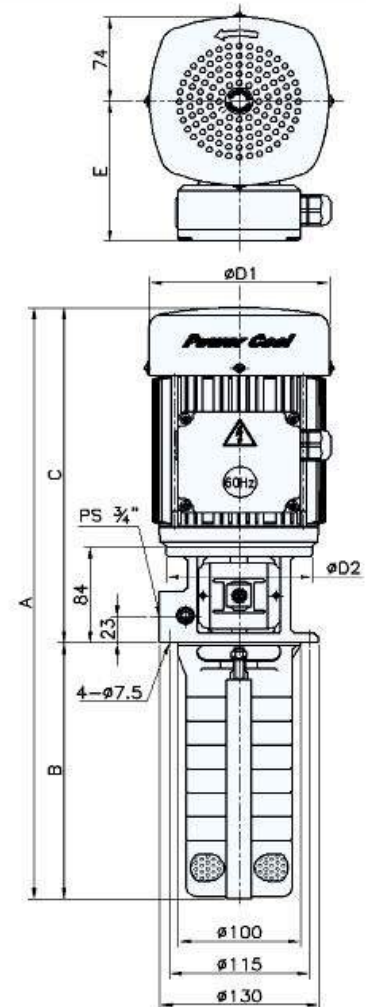
ASPK 4

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 4-1/1	F80	0.37	2.02-2.02/0.27-1.10	68
ASPK 4-3/3	F80	0.37	2.02-2.02/0.27-1.10	68
ASPK 4-5/5	F80S	0.55	2.73-2.50/1.58-1.37	73
ASPK 4-8/8	F80L	1.10	4.89-4.48/2.83-2.45	80
ASPK 4-11/10	F80L	1.10	4.89-4.48/2.83-2.45	80
ASPK 4-15/10	F80L	1.10	4.89-4.48/2.83-2.45	80
ASPK 4-19/10	F80L	1.10	4.89-4.48/2.83-2.45	80

Dimensions

Dimensions (mm)						Net weight (kg)
A	B	C	D1	D2	E	
435	141	294	148	120	123	13.0
477	183	294	148	120	123	13.3
534	225	309	148	120	123	15.7
637	288	349	148	120	123	19.1
700	351	349	148	120	123	20.3
784	435	349	148	120	123	20.6
868	519	349	148	120	123	20.9

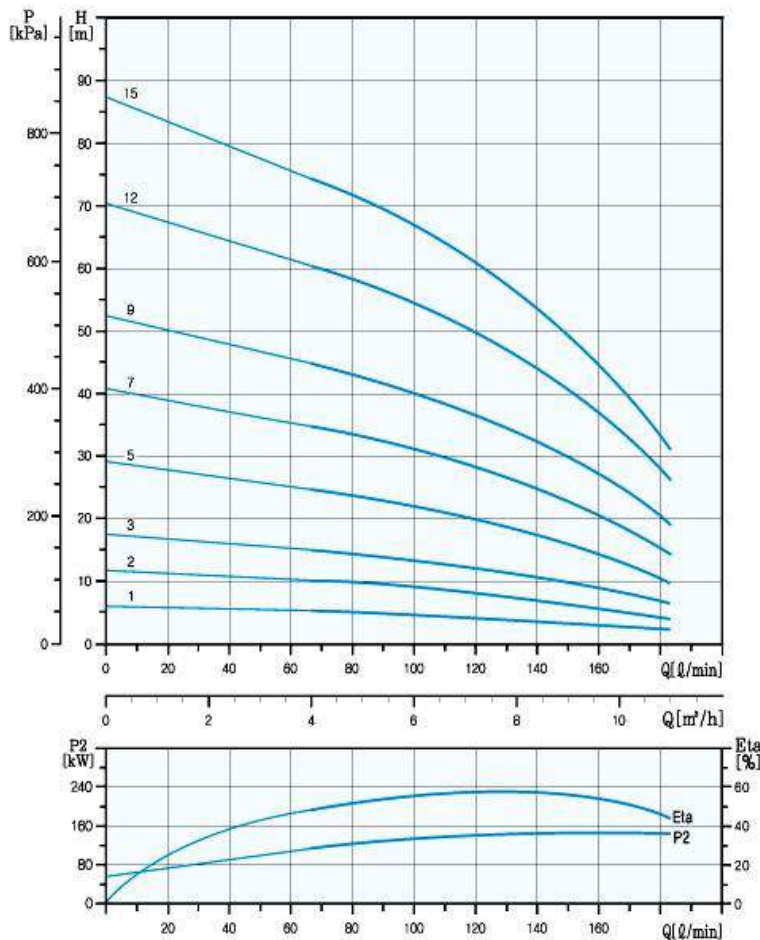
Multi-centrifugal pumps

Immersible pumps

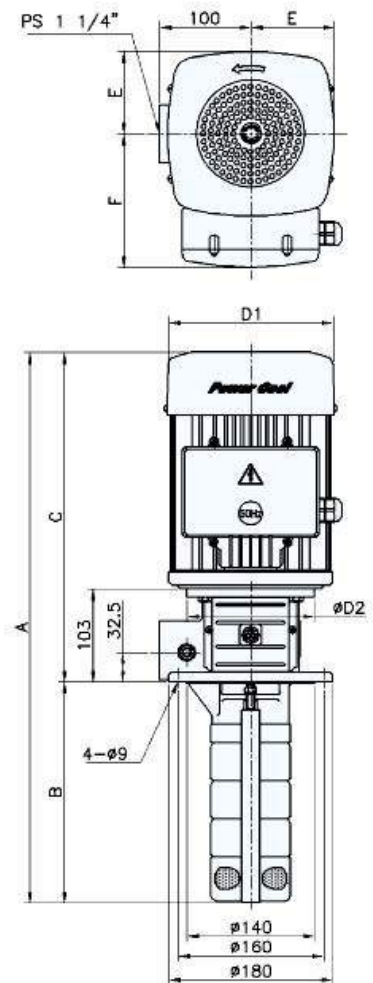
ASPK 8

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 8-1/1	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 8-2/2	F80	0.37	1.56-2.00/1.01-1.27	68
ASPK 8-3/3	F80S	0.55	2.46-2.79/1.39-1.63	73
ASPK 8-5/5	F80M	0.75	3.07-3.19/1.84-1.90	74
ASPK 8-7/7	F80L	1.10	4.84-4.85/2.75-2.86	80
ASPK 8-9/9	F90	1.50	6.93-6.90/4.02-4.10	81
ASPK 8-12/12	F90S	2.20	8.66-8.46/4.80-5.14	86
ASPK 8-15/15	F90S	2.20	8.66-8.46/4.80-5.14	86

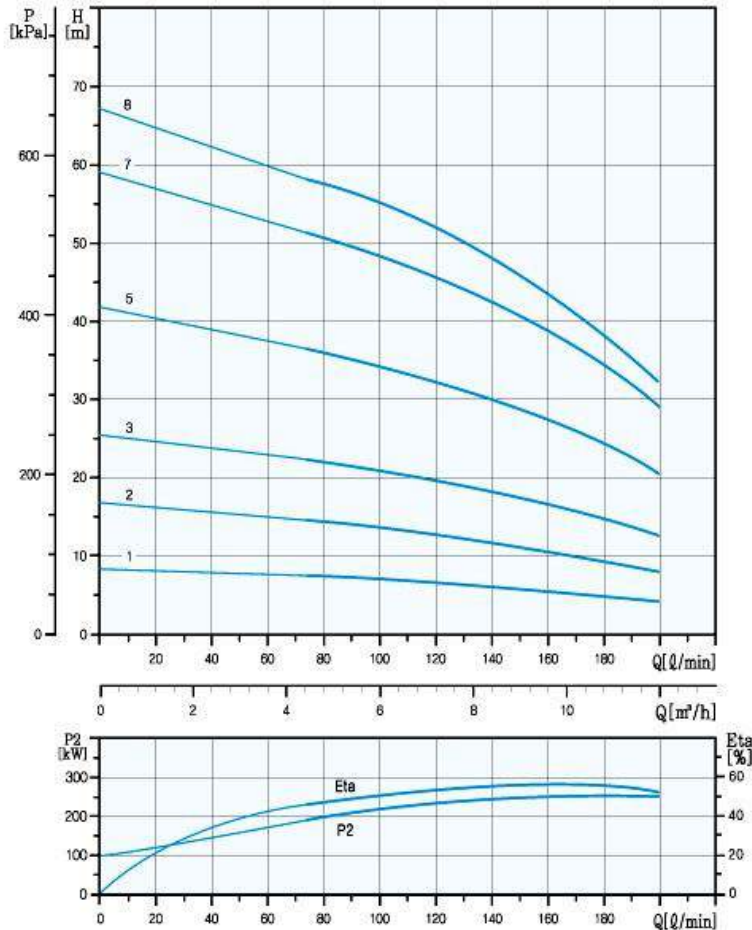
Dimensions

Dimensions (mm)							Net weight (kg)
A	B	C	D1	D2	E	F	
496	183	313	148	140	74	123	16.0
538	225	313	148	140	74	123	16.2
595	267	328	148	140	74	123	18.5
694	351	343	148	140	74	123	20.8
803	435	368	148	140	74	123	25.1
867	519	348	183	140	91.5	148	28.6
1010	645	365	183	140	91.5	148	32.1
1136	771	365	183	140	91.5	148	33.6

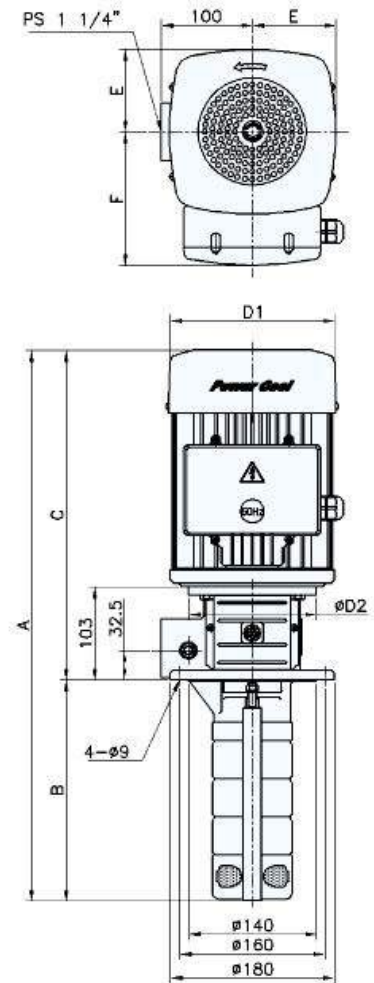
ASPK 8

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ASPK 8-1/1	F80	0.37	2.02-2.02/1.27-1.10	68
ASPK 8-2/2	F80S	0.55	2.73-2.50/1.58-1.37	73
ASPK 8-3/3	F80L	1.10	4.89-4.48/2.83-2.45	80
ASPK 8-5/5	F90	1.50	6.15-5.64/3.56-3.08	81
ASPK 8-7/7	F90S	2.20	8.20-7.52/4.75-4.10	86
ASPK 8-9/8	F90S	2.20	8.20-7.52/4.75-4.10	86
ASPK 8-12/8	F90S	2.20	8.20-7.52/4.75-4.10	86
ASPK 8-15/8	F90S	2.20	8.20-7.52/4.75-4.10	86

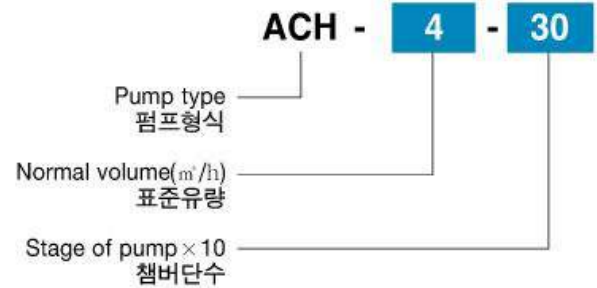
Dimensions

Dimensions (mm)							Net weight (kg)
A	B	C	D1	D2	E	F	
496	183	313	148	140	74	123	16.0
553	225	328	148	140	74	123	18.2
635	267	368	148	140	74	123	22.5
699	351	348	183	140	91.5	148	26.6
800	435	365	183	140	91.5	148	29.4
884	519	365	183	140	91.5	148	31.4
1010	645	365	183	140	91.5	148	32.0
1136	771	365	183	140	91.5	148	32.5

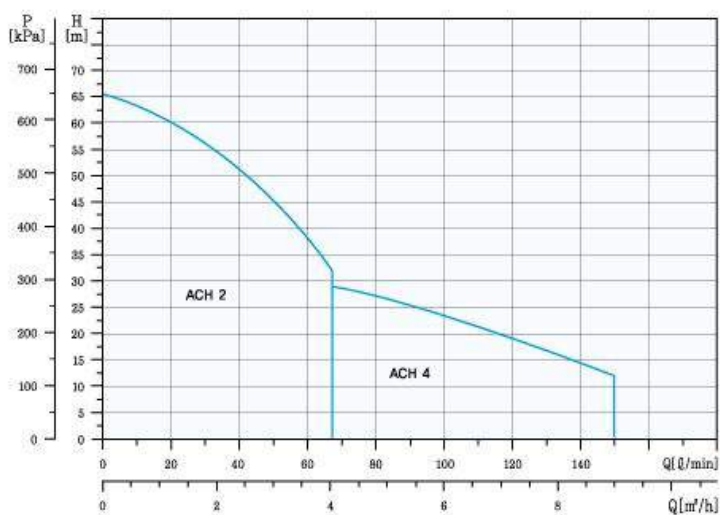
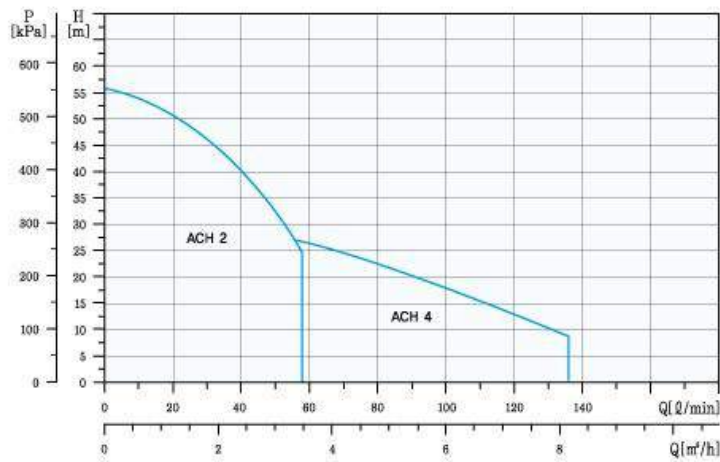
Multi-centrifugal pumps

Horizontal pumps

ACH Series



Performance range 성능범위



ACH Series

Product description 적용범위

ACH Series는 수평형 다단펌프로서 외관이 콤팩트하여 설치에 제한을 받는 공간에 사용이 적합하도록 설계되었다.

이 펌프는 소형 공작기계, 주택 및 산업용 용수공급에 적합하다.

- 공작기계(냉각 및 윤활)
- 급수이송 : 경공업, 농업용 용수이송 및 순환
- 압력상승 : Single pump 및 Multi pump의 부스터용
- 가정용 급수공급용

펌프의 중요한 부분의 재질은 스테인레스 스틸로 제작되어있으며, 불소 재질(FKM) 메카니컬 실이 장착되어 온도에 강하고 내구성이 좋다.

ACH series is a horizontal multi-staged pump, and so compacted that it is easy to install in a small space.

This pump can mainly be used with small machine and tools, house and industrial water pumping.

- cooling and lubricating for machine and tools
- water transferring; light-industrial area, farming water transfer and circulation
- high pressure; booster for single pump and multi pump
- watering in house

The major raw material is made stainless steel, and the mechanical seal is FKM so it is very strong about high temperature and endurance.

Pumped liquids 사용액체

ACH Series는 비자흡식 펌프로서 절삭액 마중을 하지 않은 상태에서 공회전을 시키게 되면 축봉장치가 파손되어 사용할 수 없게 되므로 초기 설치시에 각별히 유의해야한다.

사용액체는 고형입자, 연마슬러지 및 섬유질 성분이 없이 깨끗해야 하며, 폭발위험이 없고 점성이 낮고 펌프의 재질에 손상을 주지 않는 액체이어야 한다.

사용액체의 비중이나 점도가 수용성 절삭유보다 높은 경우 필요시에 Motor의 동력을 적절하게 증가 시켜야 한다.

This pump has a mechanical seal. Be careful not to operate in the condition of idle working without pump submerged. If not, the seal can be easily broken.

The using liquids should be clean, non-explosive and low viscosity without solid particles, sludge, and fibres, additionally not affects original elements of pump.

If the viscosity and gravity of using liquids is higher than soluble cutting water, the motor power has to be increased according to working conditions.

Operating conditions 작동조건

액체 온도범위 : 0℃ ~ 90℃ 이하

최대 주변온도 : 55℃ 이하

운전시 최고 온도는 아래 표와 같으며 사용하는 액체에 따라 다르다.

Max. Operating pressure	1Mpa(10bar)	0.6Mpa(6bar)
ACH 2	0℃ ~ 40℃	41℃ ~ 90℃
ACH 4		

liquids temperature range; 0℃ - below 90℃

maximum ambient temperature; below 55℃

Below is standard maximum temperature when operating, but changeable by using liquids.

Motor 모터

이 펌프는 Fan cooling 방식으로된 표준 Motor를 사용하고 있다. 이 Motor의 주요 규격(Dimension)은 일반표준에 따라 제작 되었다.

The motor is used standard fan cooling system and standard dimension.

Enclosure class : IP54

보호등급

Insulation class : F

절연등급

Standard voltage 50Hz : 3Ø 200-230/380-415V

표준전압

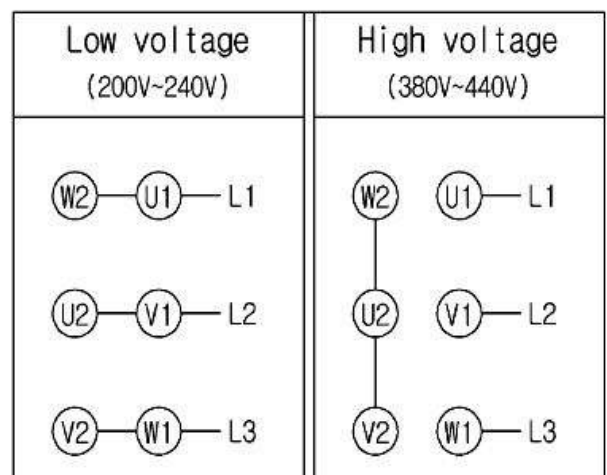
Standard voltage 60Hz : 3Ø 220-240/380-440V

표준전압

The specific voltage and motor can be produced by user's order. The standard starting panel should be connected when using 3Ø motor.

기타 비표준 사용전압 및 고효율 Motor도 주문에 의해 제작이 가능하다. 3Ø Motor에는 반드시 규격에 맞는 기동조작반이 연결 되어야 한다.

Motor connection 결선도 (Free voltage)



Multi-centrifugal pumps

Horizontal pumps

ACH Series

Sound pressure level소음

Motor (kW)	Sound pressure level(dB)	
	50Hz	60Hz
0.37	<70	<70
0.55	<70	<70
0.75	<70	<70
1.1	<70	71

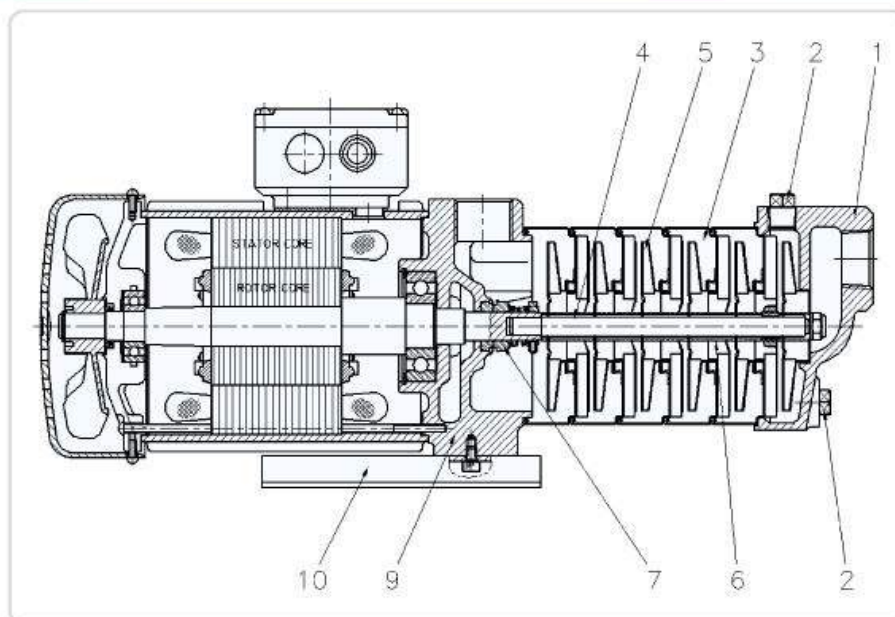
Shaft seal 메카니컬실

The proper shaft seal is decided by pressure needed, pump model, mechanical seal type and temperature of using liquid.

실제의 운전범위는 사용압력, 펌프형식, 메카니컬 실 Type 그리고 사용 액체의 온도에 따라 결정된다.

Seal division	Max. pressure (bar)	Max. Temperature (°C)
Carbon / Sic Viton(FKM)	10	0 ~ 120

Sectional drawing 부품도

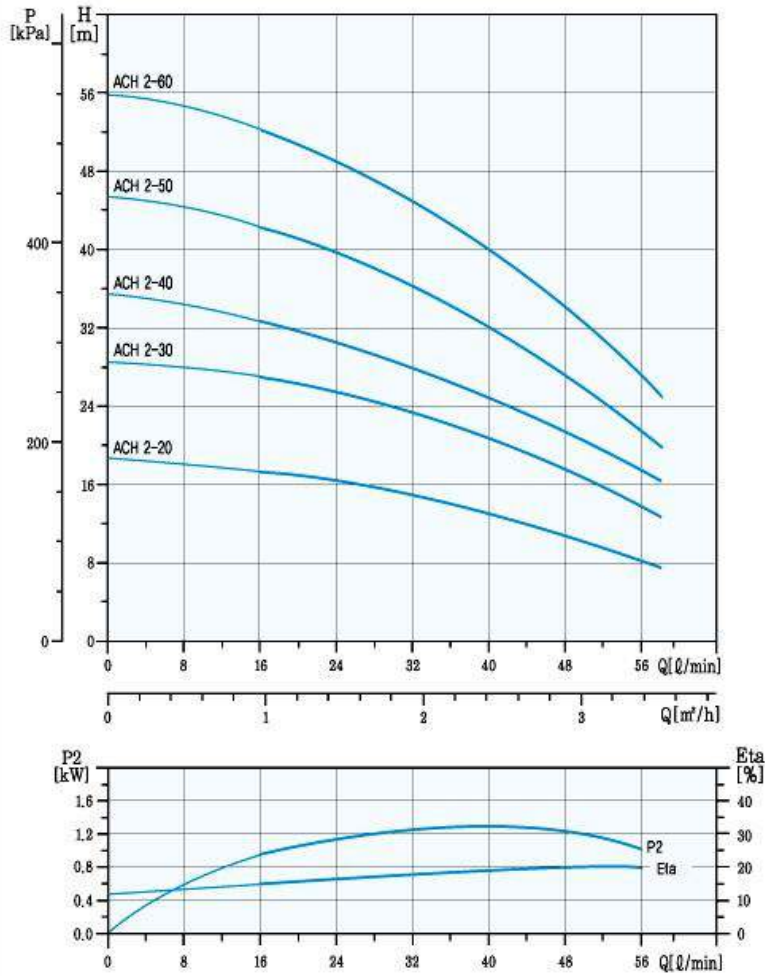


No.	Part name	Spec.	Material
1	SUCTION CHAMBER	-	GC25
2	DRAIN PLUG	PT 3/8"	-
3	CHAMBER	-	SUS304
4	SHAFT	Ø12	SUS304
5	IMPELLER	-	SUS304
6	SPACER	-	SUS304
7	MECHANICAL SEAL	Ø16	Carbon / Sic
9	PUMP BODY	-	GC25
10	BASE	-	SS41

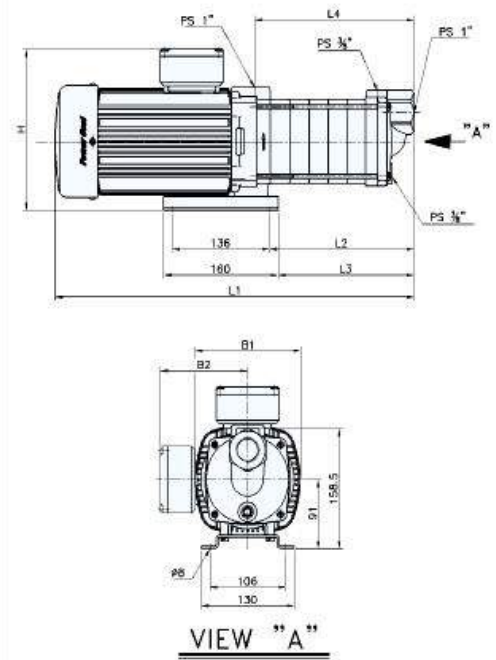
ACH 2

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACH 2-20	F80	0.37	2.02-1.75 / 1.06-0.97	68
ACH 2-30	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACH 2-40	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACH 2-50	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACH 2-60	F80L	1.10	4.48-3.90 / 2.36-2.16	80

Dimensions

Dimensions (mm)							Net weight (kg)
L1	L2	L3	L4	B1	B2	H	
346	86	74	107	148	123	214	11.6
364	104	92	125	148	123	214	11.8
382	122	110	143	148	123	214	12.0
415	140	128	161	148	123	214	13.2
458	158	146	179	148	123	214	14.1

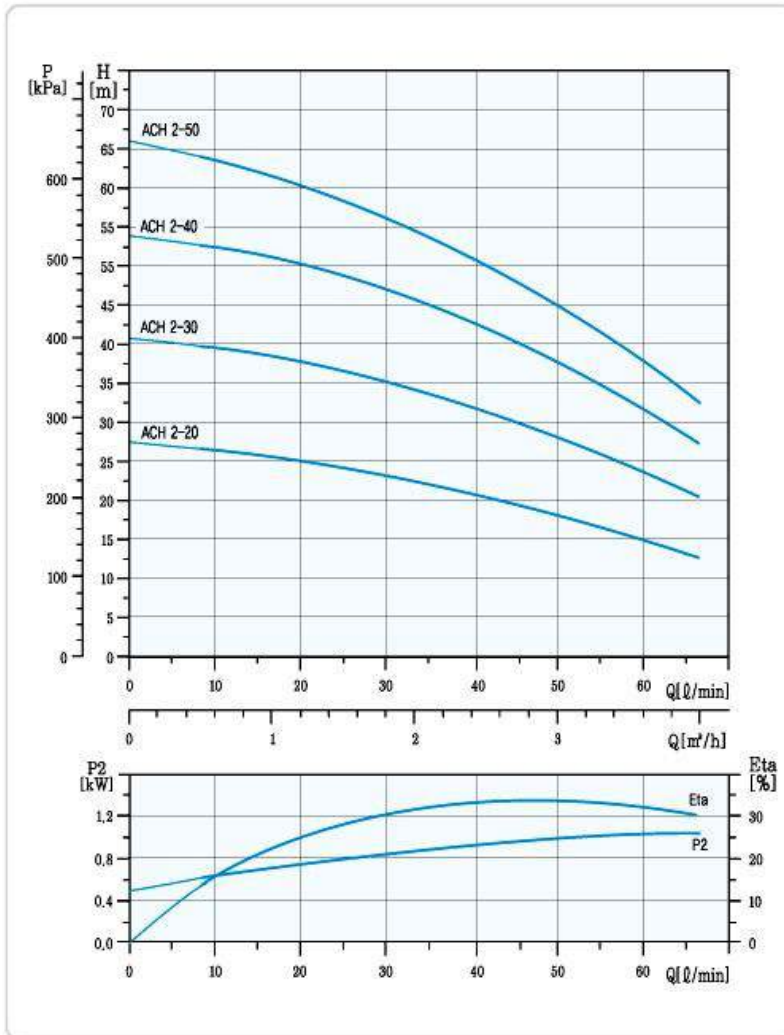
Multi-centrifugal pumps

Horizontal pumps

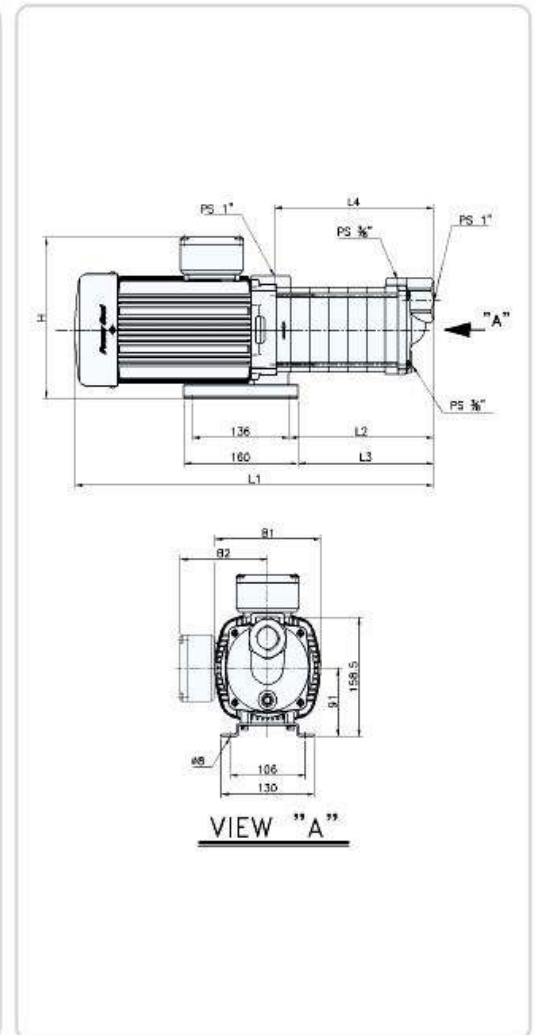
ACH 2

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACH 2-20	F80S	0.55	2.73-2.50 / 1.58-1.37	73
ACH 2-30	F80M	0.75	3.95-3.62 / 2.29-1.98	74
ACH 2-40	F80L	1.10	4.89-4.48 / 2.83-2.45	80
ACH 2-50	F80L	1.10	4.89-4.48 / 2.83-2.45	80

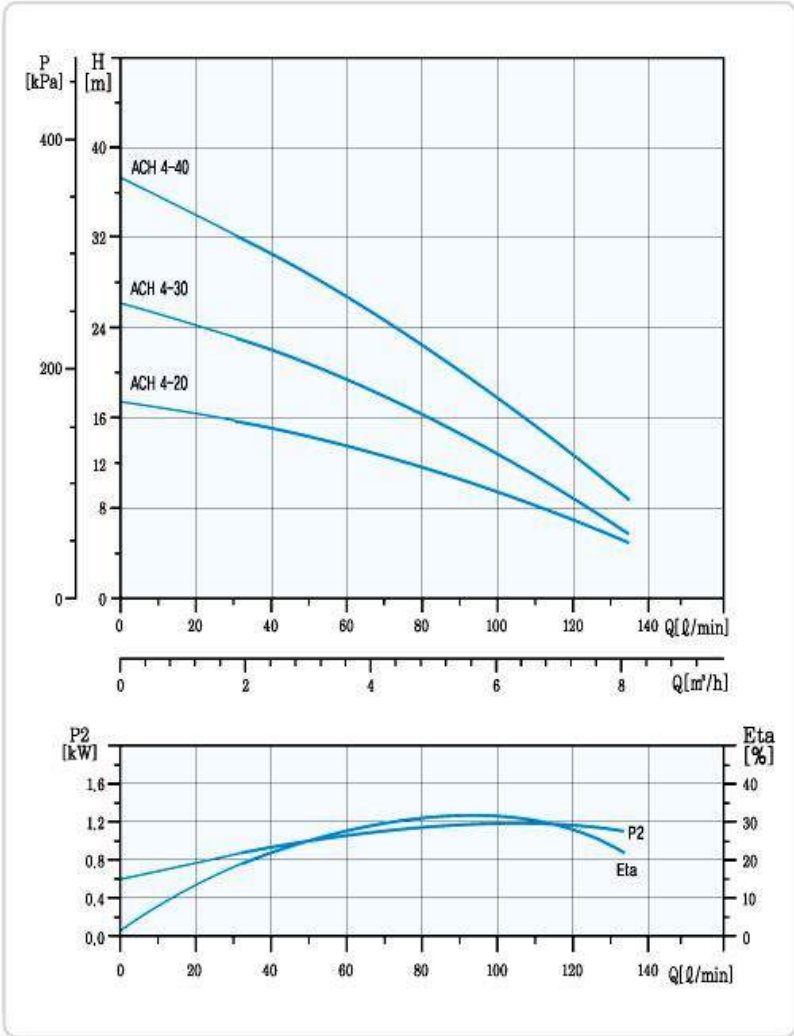
Dimensions

Dimensions (mm)							Net weight (kg)
L1	L2	L3	L4	B1	B2	H	
346	86	74	107	148	123	214	11.6
379	104	92	125	148	123	214	13.0
422	122	110	143	148	123	214	13.8
440	140	128	161	148	123	214	14.0

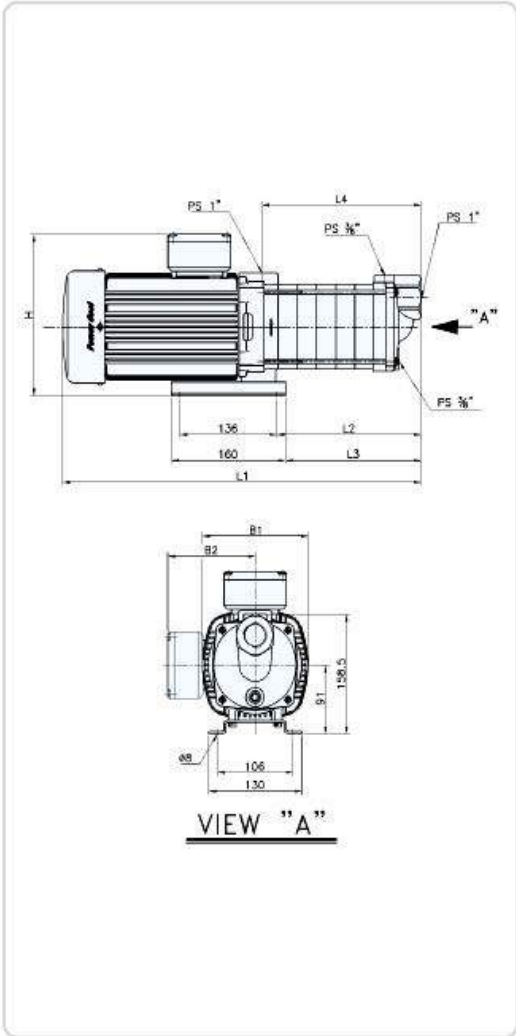
ACH 4

50Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 200-230/380-415V 50Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACH 4-20	F80S	0.55	2.50-2.18 / 1.32-1.21	73
ACH 4-30	F80M	0.75	3.62-3.15 / 1.91-1.74	74
ACH 4-40	F80L	1.10	4.48-3.90 / 2.36-2.16	80

Dimensions

Dimensions (mm)							Net weight (kg)
L1	L2	L3	L4	B1	B2	H	
380	95	83	116	148	123	214	11.4
422	122	110	143	148	123	214	12.6
474	149	137	170	148	123	214	14.2

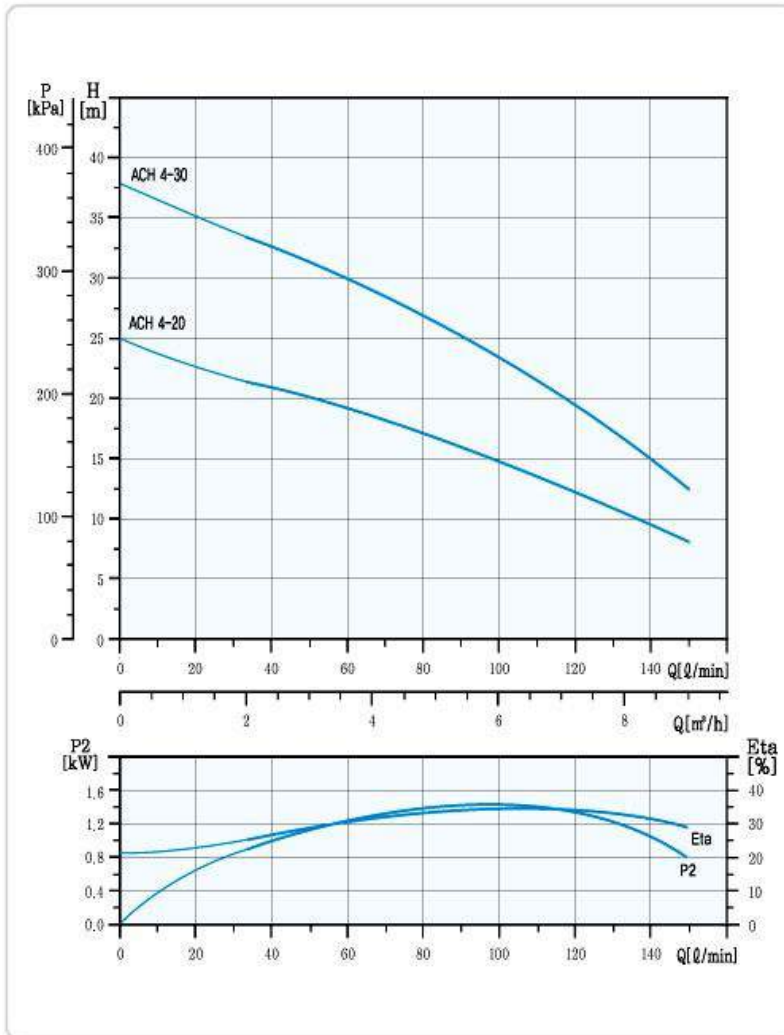
Multi-centrifugal pumps

Horizontal pumps

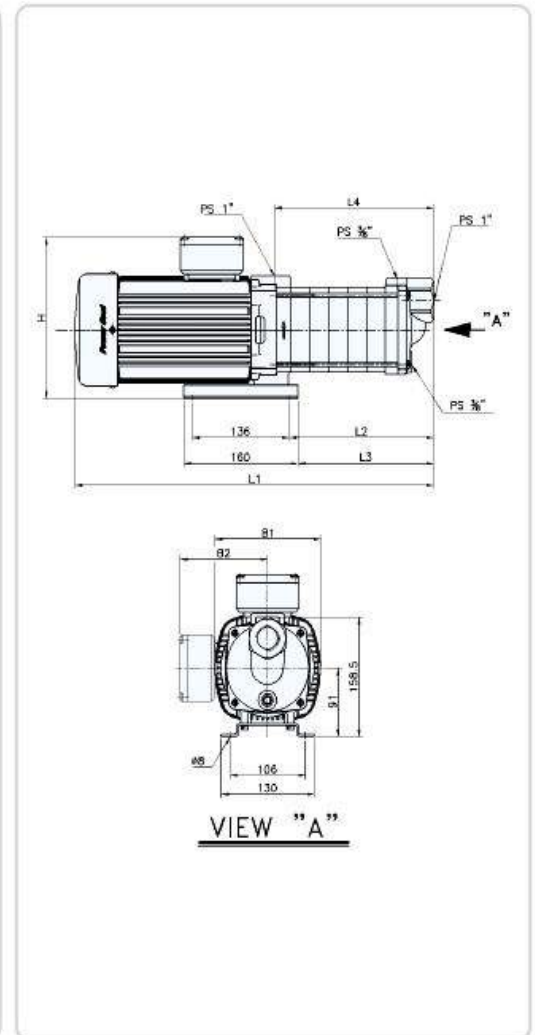
ACH 4

60Hz

Performance range 성능곡선



External dimensions 외형도



Electrical data

3Ø 220-240/380-440V 60Hz

Pump type	Motor		Current (A)	Motor Efficiency (%)
	Frame NO.	(P2) kW		
ACH 4-20	F80M	0.75	3.95-3.62 / 2.29-1.98	74
ACH 4-30	F80L	1.10	4.89-4.48 / 2.83-2.45	80

Dimensions

Dimensions (mm)							Net weight (kg)
L1	L2	L3	L4	B1	B2	H	
395	95	83	116	148	123	214	12.4
422	122	110	143	148	123	214	14.0

MEMO

MEMO

Company History

(View of factory)



1976.	5	아름기공(주) 설립	Established as A-RYUNG Machinery Industry Co. Ltd.
1980.	4	상공부지정 Oil pump 전문화 업체 지정 (No.79-118)	Designated technical manufacturer of oil pump by the Ministry of Trade and Industry.
1982.	2	근대학 실천계획 승인업체지정 (중소기업진흥공단 No.81-208)	Designated as an 'Approved Company of Systematization of Small & Medium Industry' by the Ministry of Trade and Industry.
1982.	5	우수중소기업 대통령표창 수상 (No. 54709)	Awarded the Korea Presidential Citation for an 'Excellent Small & Medium Enterprise.
1987.	9	국산기계개발 우수업체선정 부총리상 수상 (No.87-104호)	Awarded 'Excellent company for domestic machine development' by the Deputy Prime Minister.
1992.	12	자율세정 공로패 수상 (국세청)	Awarded 'Self-Control company for National Tax' by National Tax Office.
1993.	5	해외시장 수출 산업상 수상 (대한무역진흥공사)	Awarded an 'Export Industry Prize for Overseas Market' by the Korea Trade Center. (KOTRA)
1996.	11	'CE' 유럽안전규격 인증 (TÜV Rheinland)	Authorized Conformity 'EC' declaration by TÜV Rheinland.
1999.	6	'EM' 기계류, 부품소재 우수품질규격 인증 (한국기술표준원 No.1999-039호)	Obtaining Certification for EM Machinery, Spare parts by Korea Technique Standard Association.
1999.	11	ISO 9001 품질경영시스템 인증 (KSA)	Obtaining the ISO 9001 Certification by the KSA-QA supported by IQ-NET.
2000.	10	'CSA-c-us' 미국 및 캐나다 안전규격 인증 (CSA INTERNATIONAL)	Obtained the CSA-c-us mark, American-Canadian Safety Standard' by CSA INTERNATIONAL.
2000.	11	수출공로 산업자원부장관상 표창 (No.47955)	Awarded 'The prize of Export-developing Company' by Ministry of Trade and Industry.
2003.	11	무역진흥 경제발전 공로 산자부장관 표창 수상 (No.54163)	Awarded 'Prize of Trade Promotion and Industrial Development' from Ministry of Trade and Industry
2003.	12	수출공로 전라남도지사 표창 (No.1421)	Awarded 'Prize of excellent Exporter' by Jeonnam Province.
2004.	1	부품,소재 신뢰성 인증(기술표준원 No.2004-6호)	Obtained 'Certificate of quality reliance of parts and components' by Technology Standard Office in Ministry of Trade and Industry.
2004.	11	중국현지 법인 설립 '아름기공(대련)유한공사'	Opened China office in Dalian named 'A-Ryung Dalian Co. Ltd.'
2005.	6	공장증축 및 개축, 구조 개선사업 완료	Added building of factory and developing factory structure.
2005.	12	'공작기계발전' 공로 국무총리상 표창 (No.133740호)	Awarded 'Honor of machine development' by The Prime Minister.



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