STAINLESS TYPE ステンレスタイプ

ACHK SERIES

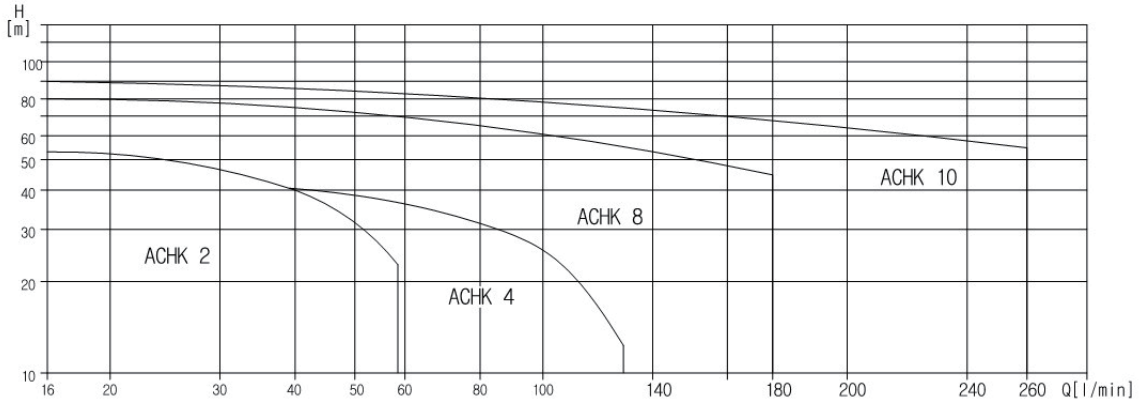


ACHK	2	–	50	3	–	SC	–	2/2
①	②		③	④		⑤		⑥

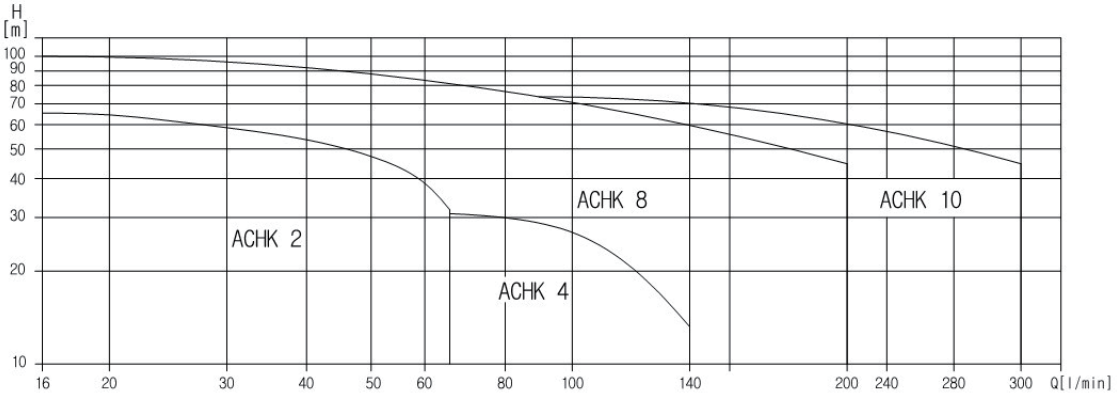
①	MODEL
②	Standard flow / 標準流量 (m^3/h) 2, 4, 8, 10
③	Number of chambers / チャンバーの数 x 10
④	Number of impeller stages / インペラ段数
⑤	Mechanical Seal material / メカニカルシール材質 SC : Sic + Carbon, ST : Sic + T/C, TT : T/C + T/C
⑥	Voltage / 電圧 2/2 : 200/220V, 2/3 : 220/380V, 4/4 : 415/440V

» Performance range・性能範囲

50Hz



60Hz



» Coverage・カバレッジ

- ACHK Series is a multi-stage centrifugal pump for medium pressure, which is mainly used for high-precision and high-performance machine tools, and is very suitable for cooling or cleaning workpieces.
  The ACHK Series is designed to be compact to be suitable for use in spaces where installation is limited.
- This pump is applied to cooling equipment of machine tools such as NC.CNC Lathe, Machining center, Grinding machine, industrial washing machine, filtering system, etc.
  The material of the important part of the pump is made of stainless steel, and a fluorine material (FKM) mechanical seal is installed, so it is resistant to temperature and has good durability.

- ACHKシリーズは中圧用多段遠心ポンプで、主に高精度・高性能工作機械に使用されており、ワークの冷却や洗浄に最適です。
  ACHKシリーズは、設置が限られているスペースでの使用に適したコンパクトな設計になっています。
- このポンプは、NC.CNC旋盤、マシニングセンター、研削盤、工業用洗濯機、ろ過システムなどの工作機械の冷却装置に使用されます。 ポンプの重要な部分の材質はステンレス鋼で、フッ素材（FKM）のメカニカルシールが取り付けられているため、耐熱性と耐久性に優れています。

» Use Liquid ・使用した液体

- The liquid used should be clean, free of solid particles, abrasive sludge, and fibrous components, there is no risk of explosion, low viscosity, and should not damage the material of the pump.
  If the specific gravity or viscosity of the liquid to be used is higher than that of the water-soluble cutting oil, the motor power must be appropriately increased if necessary.

- 使用する液体は清潔で、固形粒子、研磨スラッジ、繊維成分がなく、爆発の危険がなく、粘度が低く、ポンプの材料に損傷を与えないようにする必要があります。
  使用する液体の比重や粘度が水溶性切削油よりも高い場合は、必要に応じてモーター出力を適切に上げる必要があります。

» Pump・ポンプ

- This pump can adjust the immersion depth using an empty chamber when the depth of the tank or container is deep.

  Caution) The larger the number of empty chambers, the lower the pressure may be. When installing the pump, a diaphragm should be installed between the discharge side and the suction side of the tank to prevent the suction drop due to the mixing of foreign substances, so that the discharged fluid is not immediately sucked.

- このポンプは、タンクや容器の深さが深い場合、空のチャンバーを使用して浸水深さを調整できます。

  注意) 空のチャンバーの数が多いほど、圧力が低くなる可能性があります。
  ポンプを設置する際は、タンクの吐出側と吸込側の間にダイヤフラムを設置し、異物の混入による吸込低下を防ぎ、吐出液がすぐに吸い込まれないようにしてください。

» Motor・モーター

- This pump uses a fan-cooled standard motor.
  The main dimensions of this motor are manufactured according to general standards.
  - **Protection class** : IP54
  - **Insulation class** : F
  - **Standard voltage 50Hz** : 3Ø 200/380, 415V
  - **Standard voltage 60Hz** : 3Ø 220/380, 440V

- Motors produced by our company are premium efficiency (750W or more) motors based on the implementation of the lowest consumption efficiency system.
  Other non-standard voltages and high-efficiency motors can also be manufactured by order (electrical specifications and appearance are subject to change).

- 3Ø Motor must be connected to a starting control panel that meets the standard.

- このポンプは、ファン冷却式の標準モーターを使用しています。
  このモーターの主な寸法は、一般的な規格に従って製造されています。
  - **保護クラス**：IP54
  - **絶縁クラス**：F
  - **標準電圧50Hz**：3Ø200/380、415V
  - **標準電圧60Hz**：3Ø220/380、440V

- 当社が製造するモーターは、最低消費効率方式を採用したプレミアム 効率（750W以上）のモーターです。
  その他の非標準電圧および高効率モーターも注文により製造できます.（電気的仕様および外観は変更される場合があります）。

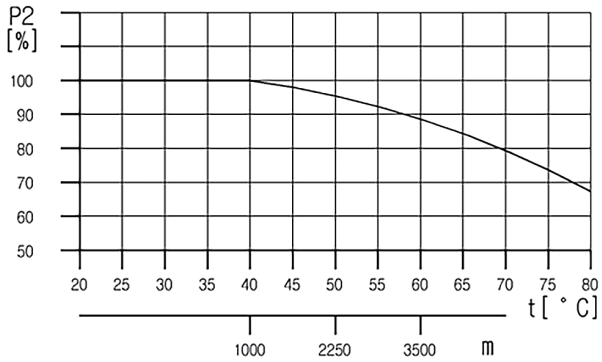
- 3Øモーターは、規格を満たす始動コントロールパネルに接続する必要があります。

STAINLESS TYPE ステンレスタイプ

STAINLESS STEEL TYPE

» Ambient temperature・周囲温度

- When installing the motor in a place where the ambient temperature is 40°C or higher or the altitude is 1000m or higher, the motor output should be lower than the rated output in consideration of the low cooling performance due to the low density of air.
- 周囲温度が40°C以上、海抜が1000m以上の場所にモーターを設置する場合は、空気密度が低いため冷却性能が低いため、モーター出力を定格出力より低くする必要があります。



- As shown in the table above, in the case of P2, when the pump is installed in an ambient environment with an altitude of 3500m and a temperature of 60°C, the performance of the pump is reduced to 80%.
- 上記の表に示すように、P2の場合、ポンプを海抜3500m、温度60°Cの周囲環境に設置すると、ポンプの性能は80%に低下します。

» Noise・ノイズ

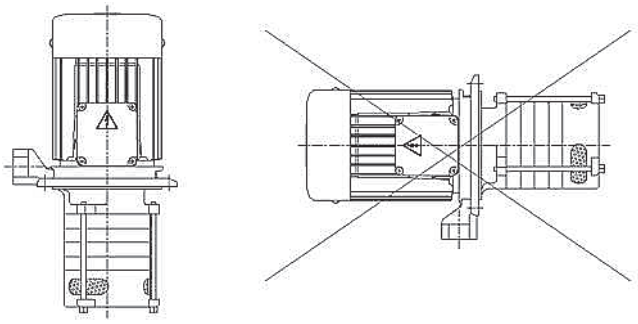
MOTOR [Kw]	Sound pressure level [dB(A)]	
	50 Hz	60 Hz
0. 37	< 70	< 70
0. 55	< 70	< 70
0. 75	< 70	< 70
1. 1	< 70	< 71

» Mechanical seal・メカニカルシール

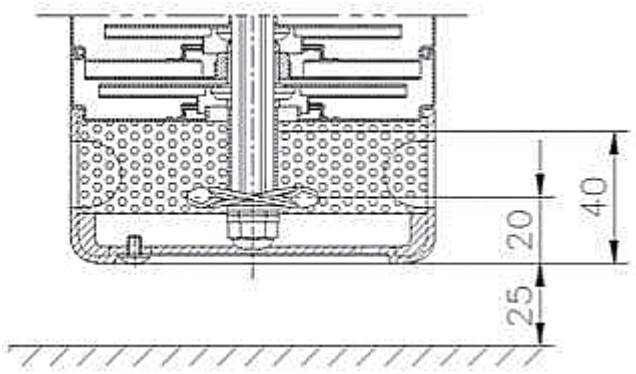
- The actual operating range is determined by the operating pressure, pump type, mechanical seal type, and temperature of the liquid used.
- 実際の動作範囲は、動作圧力、ポンプの種類、メカニカルシールの種類、および使用する液体の温度によって決まります。

Seal division	Max. pressure	Max. Temperature(°C)
TC/Sic Viton(FKM)	2.5 MPa	0 ~ 120

» Notes on installation・設置に関する注意事項



- The ACHK pump should not be installed horizontally, but should be installed vertically.
- ACHKポンプは水平に設置するのではなく、垂直に設置する必要があります。



- This pump is designed to a minimum of 20mm upward from the underside of the strainer.
- When the liquid is filled 40mm between the bottom of the strainer and the bottom of the strainer, the built-in screw pumps it to prevent seal damage due to idle rotation.
- There must be a minimum clearance of 25 mm between the pump and the tank bottom.

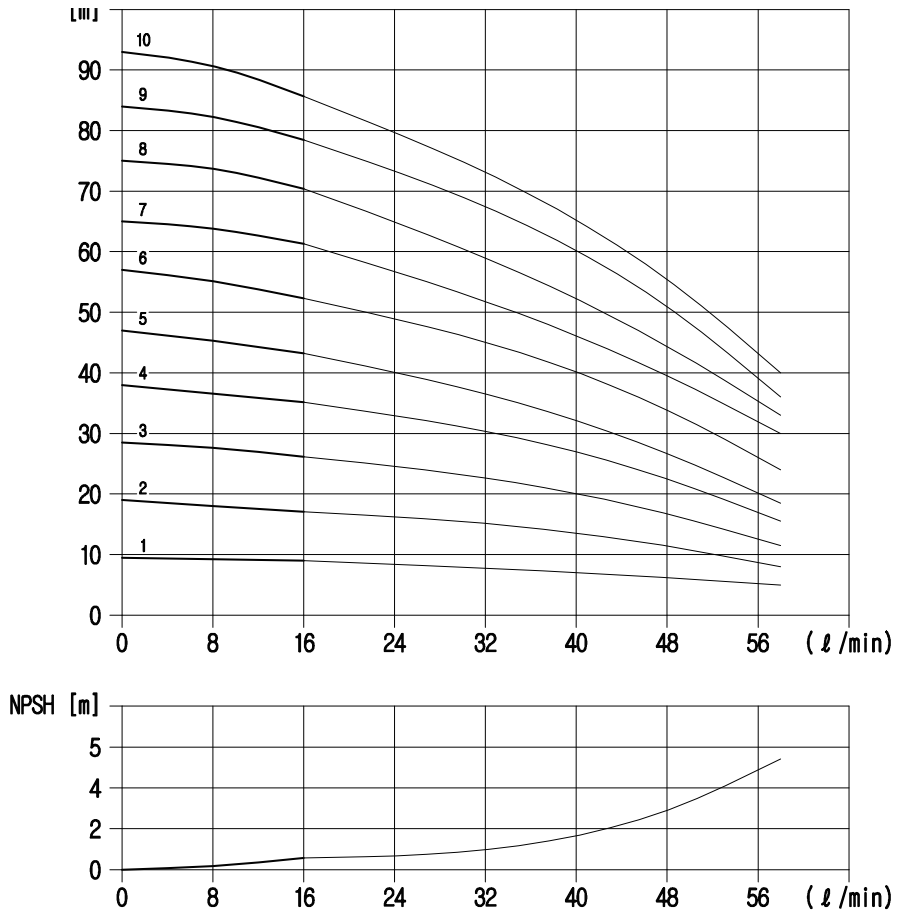
- このポンプは、ストレーナーの下側から最低20mm上向きに設計されています。
- ストレーナの底とストレーナの底の間で液体が40mm満たされる
- ポンプとタンク底部の間には25mm以上のクリアランスが必要 です。

STAINLESS TYPE ステンレスタイプ

ACHK 2 – 50Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 415V, 50Hz

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 2-××/1	1	0.37	2.6/2.4/1.4/1.2	68
ACHK 2-××/2	2	0.37	2.6/2.4/1.4/1.2	68
ACHK 2-××/3	3	0.55	3.1/2.8/1.6/1.4	73
ACHK 2-××/4	4	0.55	3.1/2.8/1.6/1.4	73
ACHK 2-××/5	5	0.75	4.0/3.6/2.1/1.9	80.7

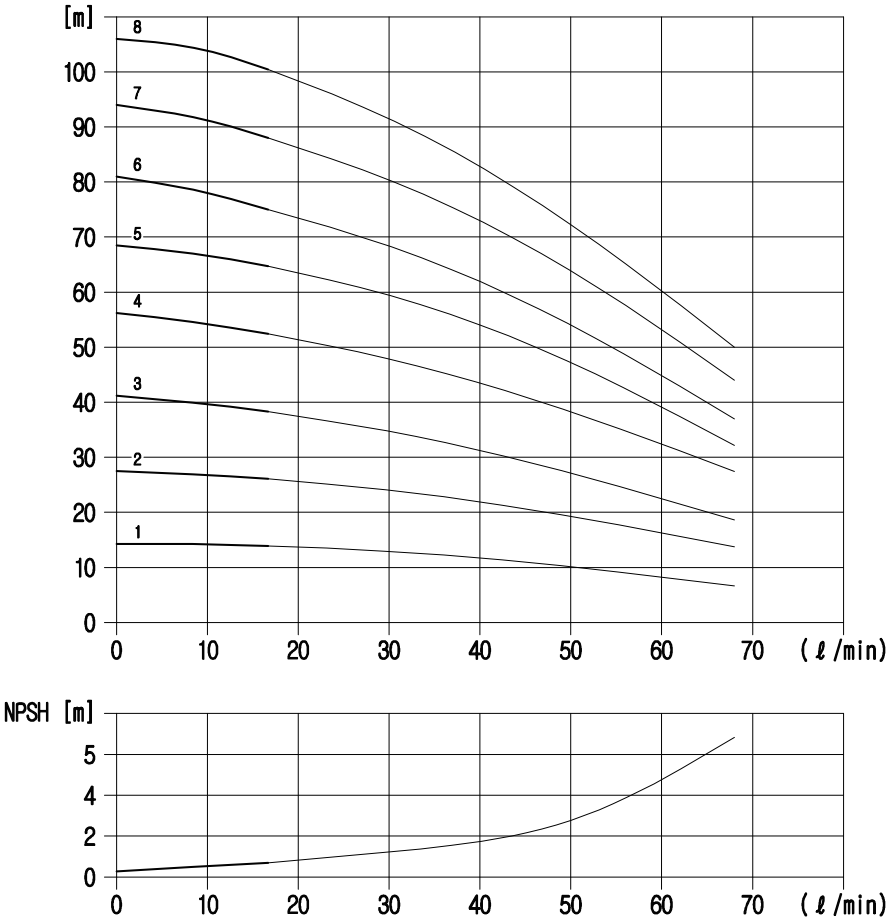
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 2-××/6	6	0.75	4.0/3.6/2.1/1.9	80.7
ACHK 2-××/7	7	1.1	5.3/4.8/2.8/2.6	82.7
ACHK 2-××/8	8	1.1	5.3/4.8/2.8/2.6	82.7
ACHK 2-××/9	9	1.1	5.5/5.0/2.9/2.7	82.7
ACHK 2-××/10	10	1.1	5.5/5.0/2.9/2.7	82.7

STAINLESS TYPE ステンレスタイプ

ACHK 2 – 60Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 440V, 60Hz

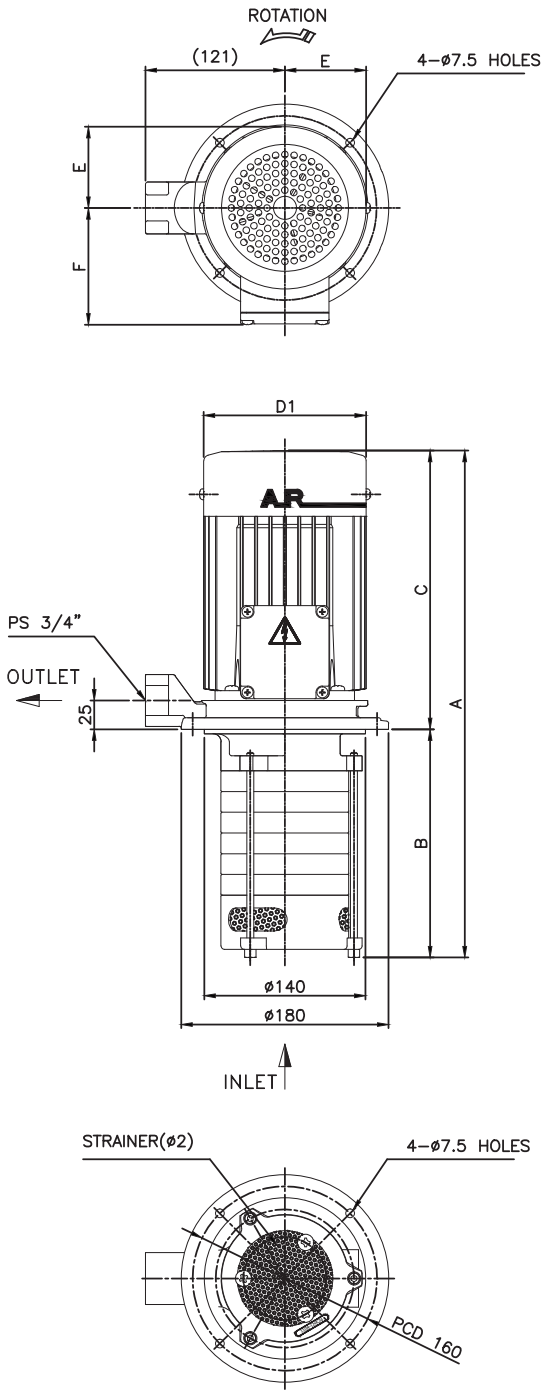
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 2-××/1	1	0.37	2.4 / 2.2 / 1.3 / 1.1	68
ACHK 2-××/2	2	0.37	2.4 / 2.2 / 1.3 / 1.1	68
ACHK 2-××/3	3	0.55	3.0 / 2.7 / 1.6 / 1.4	73
ACHK 2-××/4	4	0.75	4.0 / 3.6 / 2.1 / 1.9	77

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 2-××/5	5	0.75	4.0 / 3.6 / 2.1 / 1.9	77
ACHK 2-××/6	6	1.1	5.3 / 4.8 / 2.8 / 2.6	84
ACHK 2-××/7	7	1.1	5.6 / 5.0 / 2.9 / 2.7	84
ACHK 2-××/8	8	1.1	5.9 / 5.3 / 3.1 / 2.9	84

STAINLESS TYPE ステンレスタイプ

ACHK 2 SERIES

≫ Appearance・外観



50Hz

MODEL	Moter output [KW]	A	B	C	D1	E	F	Weight [Kg]
ACHK 2-30/1	0.37	346	144	202	141	70.5	102	10.7
ACHK 2-30/2	0.37	346	144	202	141	70.5	102	10.8
ACHK 2-30/3	0.55	346	144	202	141	70.5	102	11.9
ACHK 2-40/4	0.55	364	162	202	141	70.5	102	12.2
ACHK 2-50/5	0.75	422	180	242	141	70.5	102	13.5
ACHK 2-60/6	0.75	440	198	242	141	70.5	102	13.8
ACHK 2-70/7	1.1	478	216	262	141	70.5	102	15.9
ACHK 2-80/8	1.1	496	234	262	141	70.5	102	16.2
ACHK 2-90/9	1.1	514	252	262	141	70.5	102	16.5
ACHK 2-100/10	1.1	532	270	262	141	70.5	102	16.8

60Hz

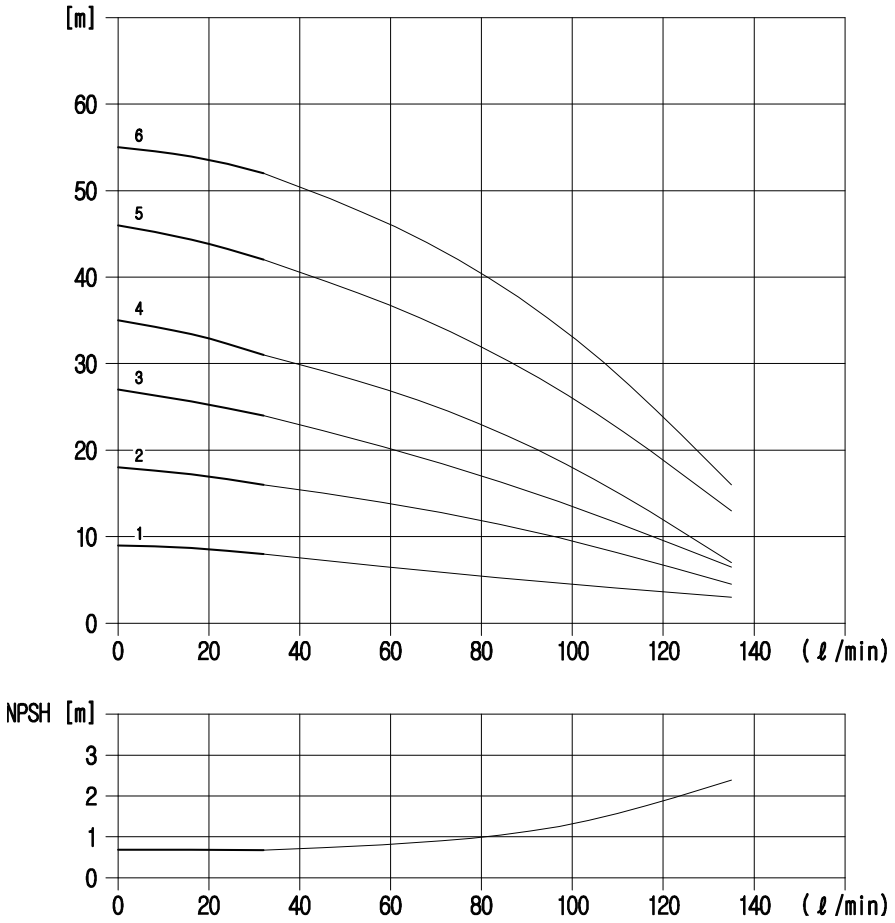
MODEL	Moter output [KW]	A	B	C	D1	E	F	Weight [Kg]
ACHK 2-30/1	0.37	346	144	202	141	70.5	102	10.7
ACHK 2-30/2	0.37	346	144	202	141	70.5	102	11.8
ACHK 2-30/3	0.55	346	144	202	141	70.5	102	11.9
ACHK 2-40/4	0.75	404	162	242	141	70.5	102	13.2
ACHK 2-50/5	0.75	422	180	242	141	70.5	102	13.5
ACHK 2-60/6	1.1	460	198	262	141	70.5	102	15.6
ACHK 2-70/7	1.1	478	216	262	141	70.5	102	15.9
ACHK 2-80/8	1.1	496	234	262	141	70.5	102	16.2

STAINLESS TYPE ステンレスタイプ

ACHK 4 – 50Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 415V, 50Hz

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 4-××/1	1	0.37	2.6/2.4/1.4/1.2	68
ACHK 4-××/2	2	0.55	3.1/2.8/1.6/1.4	73
ACHK 4-××/3	3	0.75	4.0/3.6/2.1/1.9	80.7

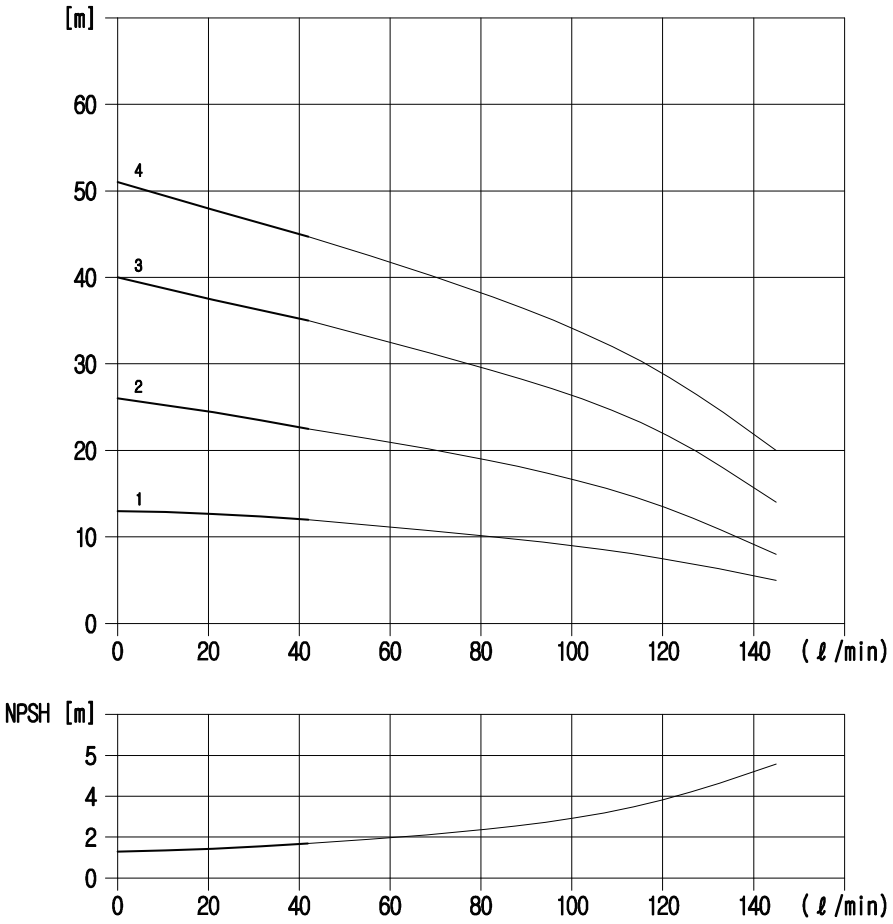
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 4-××/4	4	1.1	5.3/4.8/2.8/2.6	82.7
ACHK 4-××/5	5	1.1	5.3/4.8/2.8/2.6	82.7
ACHK 4-××/6	6	1.1	5.3/4.8/2.8/2.6	82.7

STAINLESS TYPE ステンレスタイプ

ACHK 4 – 60Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 440V, 60Hz

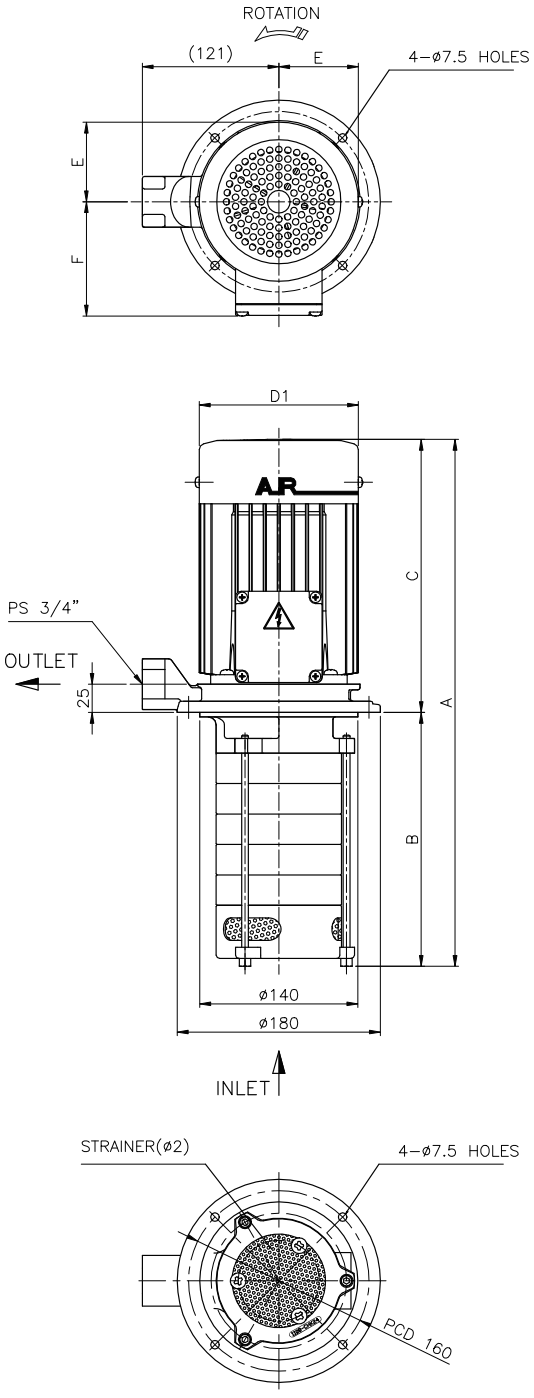
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 4-××/1	1	0.55	3.0 / 2.7 / 1.6 / 1.4	73
ACHK 4-××/2	2	0.75	4/0 / 3.6 / 2.1 / 1.9	77

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 4-××/3	3	1.1	5.3 / 4.8 / 2.8 / 2.6	84
ACHK 4-××/4	4	1.1	5.3 / 4.8 / 2.8 / 2.6	84

STAINLESS TYPE ステンレスタイプ

ACHK 4 SERIES

» Appearance・外観



50Hz

MODEL	Moter output [KW]	A	B	C	D1	E	F	Weight [Kg]
ACHK 4-20/1	0.37	346	144	202	141	70.5	102	10.6
ACHK 4-20/2	0.55	346	144	202	141	70.5	102	11.7
ACHK 4-30/3	0.75	413	171	242	141	70.5	102	13.1
ACHK 4-40/4	1.1	460	198	262	141	70.5	102	15.3
ACHK 4-50/5	1.1	487	225	262	141	70.5	102	15.7
ACHK 4-60/5	1.1	514	252	262	141	70.5	102	16.1
ACHK 4-60/6	1.1	514	252	262	141	70.5	102	16.5
ACHK 4-80/6	1.1	568	306	262	141	70.5	102	16.9

60Hz

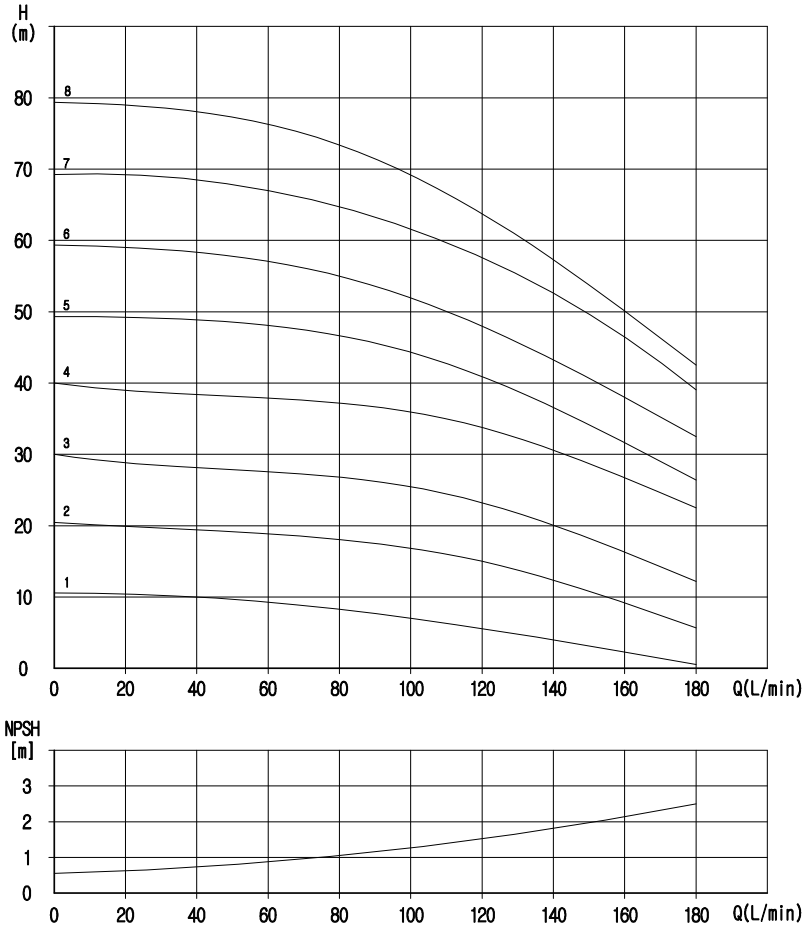
MODEL	Moter output [KW]	A	B	C	D1	E	F	Weight [Kg]
ACHK 4-20/1	0.55	346	144	202	141	70.5	102	11.6
ACHK 4-20/2	0.75	386	144	242	141	70.5	102	12
ACHK 4-30/3	1.1	433	171	262	141	70.5	102	14.2
ACHK 4-40/3	1.1	460	198	262	141	70.5	102	14.5
ACHK 4-50/3	1.1	487	225	262	141	70.5	102	14.8
ACHK 4-60/3	1.1	514	252	262	141	70.5	102	15.1
ACHK 4-70/3	1.1	541	279	262	141	70.5	102	15.4
ACHK 4-80/3	1.1	568	306	262	141	70.5	102	15.7
ACHK 4-40/4	1.1	460	198	262	141	70.5	102	14.6
ACHK 4-80/4	1.1	568	306	262	141	70.5	102	15.8

STAINLESS TYPE ステンレスタイプ

ACHK 8 – 50Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 415V, 50Hz

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 8-10/1	1	0.55	3.1/2.8/1.6/1.4	73.0
ACHK 8-20/2	2	0.75	4.0/3.6/2.1/1.9	80.7
ACHK 8-30/3	3	1.1	5.3/4.8/2.8/2.6	84.0
ACHK 8-40/4	4	1.5	7.2/7.2/4.2/4.0	84.2
ACHK 8-50/5	5	2.2	9.8/9.8/5.7/5.4	85.9

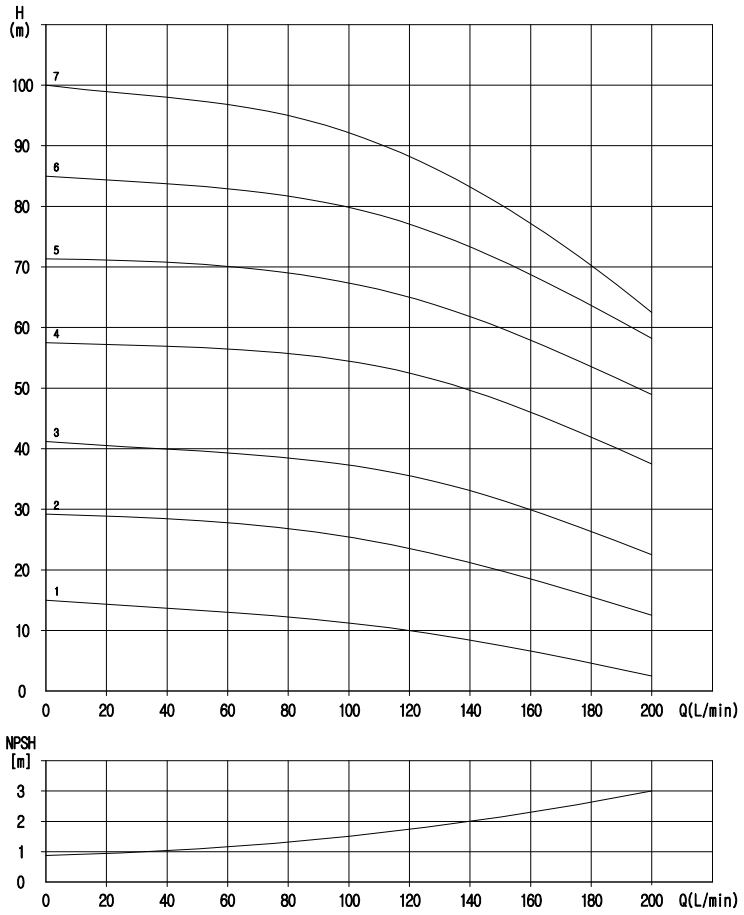
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 8-60/6	6	2.2	9.8/9.8/5.7/5.4	85.9
ACHK 8-70/7	7	2.2	9.8/9.8/5.7/5.4	85.9
ACHK 8-80/8	8	2.9	12.5/12.5/7.2/6.8	85.9

STAINLESS TYPE ステンレスタイプ

ACHK 8 – 60Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 440V, 60Hz

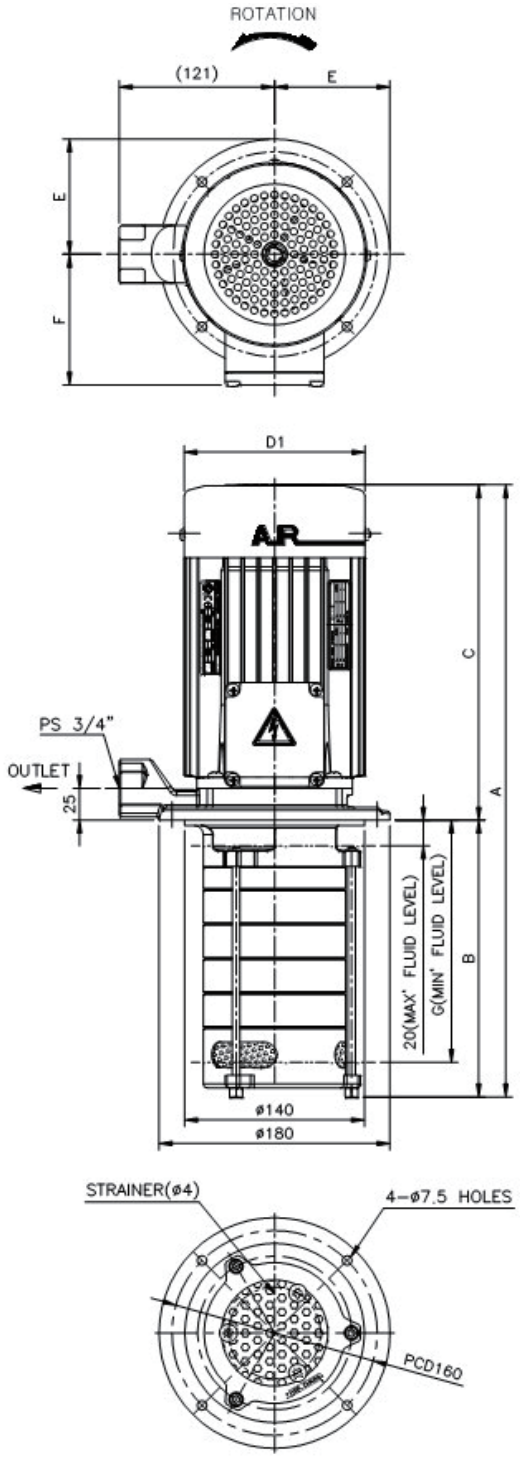
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 8-10/1	1	0.55	3.0/2.7/1.6/1.4	73.0
ACHK 8-20/2	2	0.9	5.3/4.8/2.8/2.6	84.0
ACHK 8-30/3	3	2.2	9.6/8.7/5.0/4.5	86.5
ACHK 8-40/4	4	2.2	9.6/8.7/5.0/4.5	86.5

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 8-60/6	6	2.9	12.5/11.6/6.4/6.1	86.5
ACHK 8-70/7	7	4.0	17/15.4/8.9/8.5	88.5
ACHK 8-80/8	8	4.0	17/15.4/8.9/8.5	85.5

STAINLESS TYPE ステンレスタイプ

ACHK 8 – 50Hz

≫ Appearance・外観



※ISO VG 2 cSt, 20°C

50Hz

MODEL	Moter output [KW]	A	B	C	D1	E	F	G	Weight [Kg]
ACHK 8-10/1	0.55	327.5	117	210.5	141	90	102	90	17
ACHK 8 -20/2	0.75	394.5	144	250.5	141	90	102	117	18
ACHK 8 -30/3	1.1	441.5	171	270.5	141	90	102	144	19
ACHK 8 -40/4	1.5	498	198	300	183	91.5	150	171	25
ACHK 8 -50/5	2.2	525	225	300	183	91.5	150	198	27
ACHK 8 -60/6	2.2	552	252	300	183	91.5	150	225	28
ACHK 8 -70/7	2.2	579	279	300	183	91.5	150	252	29
ACHK 8 -80/8	2.9	636	306	330	183	91.5	150	297	31

60Hz

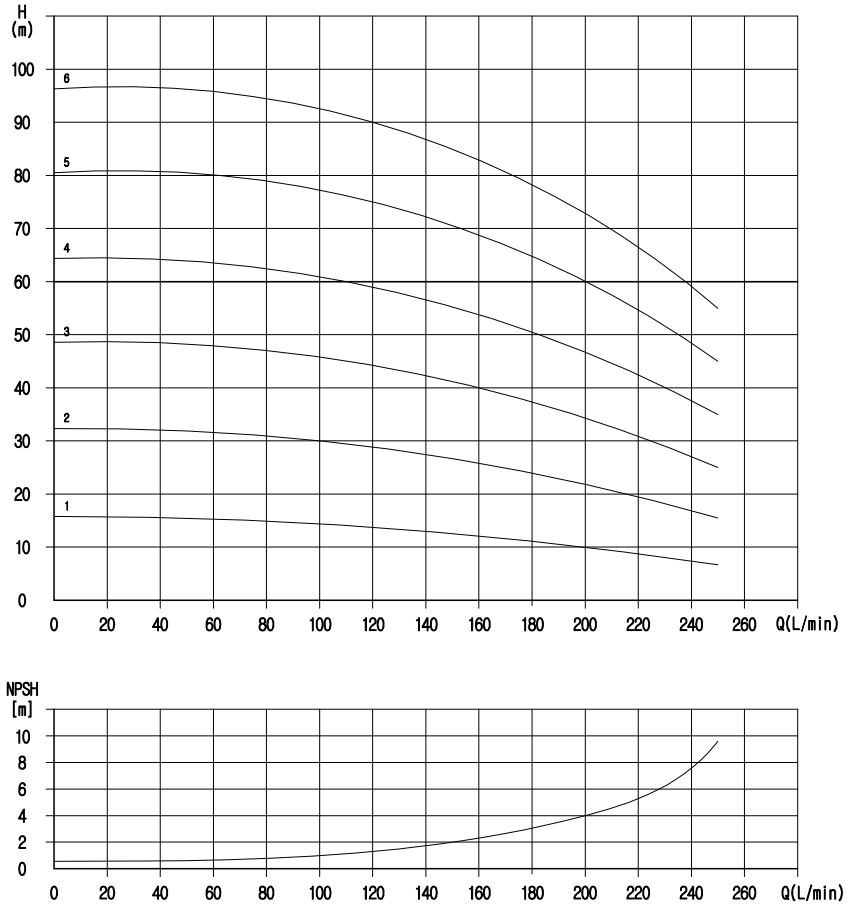
MODEL	Moter output [KW]	A	B	C	D1	E	F	G	Weight [Kg]
ACHK 8-10/1	0.55	327.5	117	210.5	414	90	102	90	17
ACHK 8 -20/2	0.9	414.5	144	270.5	141	90	102	117	19
ACHK 8 -30/3	2.2	471	171	300	183	91.5	150	144	25
ACHK 8 -40/4	2.2	498	198	300	183	91.5	150	171	26
ACHK 8 -50/5	2.9	555	225	330	183	91.5	150	196	28
ACHK 8 -60/6	4.0	582	252	330	183	91.5	150	225	42
ACHK 8 -70/7	4.0	609	279	330	183	91.5	150	252	43

STAINLESS TYPE ステンレスタイプ

ACHK 10 – 50Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt , 20°C



Electrical data 3Ø, 200V / 220V / 380V / 415V, 50Hz

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK10-10/1	1	1.1	5.3/4.8/2.8/2.6	82.7
ACHK10-20/2	2	1.1	5.3/4.8/2.8/2.6	82.7
ACHK 10-30/3	3	2.2	9.8/9.8/57/5.4	85.9

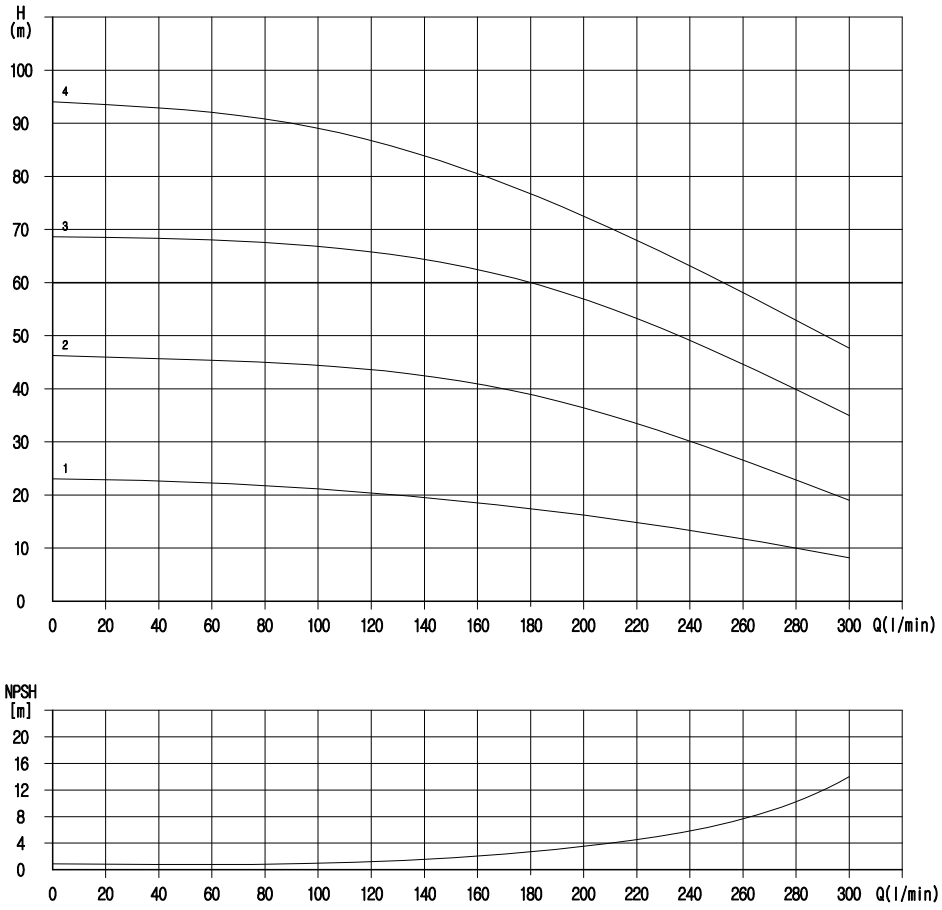
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 10-40/4	4	2.9	12.5/12.5/7.2/6.8	85.9
ACHK 10-50/5	5	2.9	12.5/12.5/7.2/6.8	85.9
ACHK 10-60/6	6	4.0	17.2/17.2/10/9.5	88.1

STAINLESS TYPE ステンレスタイプ

ACHK 10 – 60Hz

≫ Performance curve (water-soluble coolant)・性能曲線 (水溶性切削油)

※ISO VG 2 cSt, 20°C



Electrical data 3Ø, 200V / 220V / 380V / 440V, 60Hz

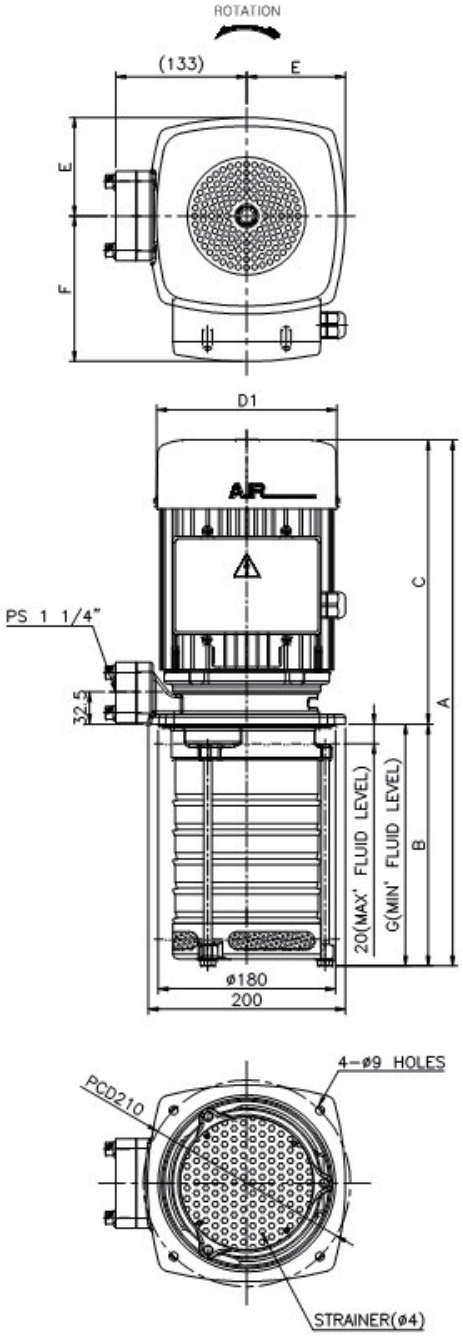
Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK10-10/1	1	1.1	5.3/4.8/2.8/2.6	84.0
ACHK10-20/2	2	2.2	9.6/8.7/5.0/4.5	86.5

Form	Number of impellers	Motor output [Kw]	CURRENT [A]	Motor efficiency [%]
ACHK 10-30/3	3	2.9	12.5/11/6.4/6.1	86.5
ACHK 10-40/4	4	4.0	17/15.4/8.9/8.5	88.5

STAINLESS TYPE ステンレスタイプ

ACHK 10 SERIES

» Appearance・外観



50Hz

MODEL	Moter output [KW]	A	B	C	D1	E	F	G	Weight [Kg]
ACHK10-10/1	1.1	379	111	268	141	100	102	84	20
ACHK10-20/2	1.1	409	141	268	141	100	102	114	22
ACHK10-30/13	2.2	474	171	303	183	100	150	144	25
ACHK10-40/4	2.9	534	201	333	183	100	150	174	30
ACHK10-50/5	2.9	564	231	333	183	100	150	204	31
ACHK10-60/6	4.0	594	261	333	183	100	150	234	36

60Hz

MODEL	Moter output [KW]	A	B	C	D1	E	F	G	Weight [Kg]
ACHK10-10/1	1.1	379	111	268	141	100	102	84	20
ACHK10-20/2	2.2	444	141	303	183	100	150	114	24
ACHK10-30/13	2.9	504	171	333	183	100	150	144	28
ACHK10-40/4	4.0	534	201	333	183	100	150	174	32