

# 신신수중펌프

## SHIN SHIN SUBMERSIBLE PUMP/AERATOR/SAND/MIXER



|             |               |                 |                |               |
|-------------|---------------|-----------------|----------------|---------------|
|             |               | <b>SSV</b>      | <b>SSG/SCG</b> |               |
|             |               |                 |                |               |
|             | <b>SCE/SC</b> | <b>SVEX</b>     | <b>SAPH</b>    |               |
|             |               |                 |                |               |
| <b>SSB</b>  | <b>SCP</b>    | <b>SSH</b>      | <b>SVA(M)</b>  |               |
|             |               |                 |                |               |
| <b>SGPT</b> | <b>SGPN</b>   | <b>SAR/SARN</b> | <b>SAX</b>     | <b>SHA(M)</b> |
|             |               |                 |                |               |

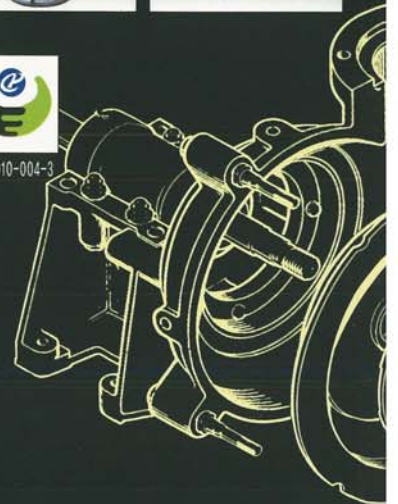


KS B 6321 KSA 9001:2009 ISO 9001:2009 ISO9001 Certified 경영혁신형기업 특허 우수조달공통성표 지정번호 2010-004-3

환경을 선도하는 기업(KSB 6321 / KSA 9001:2009 / ISO9001 / 2009)

# 신신펌프제작소

## SHIN SHIN PUMP MANUFACTURING CO.







제2공장 : 시화공단내(시흥시 정왕동 13663-11)  
The 2' st factory : 1363-11, Jeongwang-Dong, Siheung, Kyunggi-Do, Korea

### 회사연혁

- 1990년 1월 - **신신펌프제작소** 설립
  - 제1공장 경기도 부천시 역곡1동 24-20 (온수산업기계공단 내 대지700평 건평700평)
- 1990년 6월 - 수중펌프 토목용 SSV-15 외 12종 개발
- 1990년 7월 - 수중오수펌프 SCE 및 SSB 기종 개발
  - 기존 수중펌프의 단점인 임펠라 및 케이싱을 재보완하여 개발하였음
- 1991년 3월 - 수중에어레타 개발(폭기기)
- 1991년 6월 - 수중오수펌프 SB기종 개발
  - 임펠라를 BLADELESS TYPE으로 개발
- 1992년 3월 - 대용량 수중모터펌프(SB형 기종)개발
- 1993년 4월 - 대용량 수중펌프 개발(22KW~75KW)
- 1994년 1월 - 수중용 볼텍스 펌프개발(0.75KW~15KW)
- 1996년 1월 - 수중 육상용 VANE PUMP 개발 (국제) 특허출원 (특허번호:59831)
- 1997년 3월 - 경기도 시흥시 정왕동 시화공장 대지 1,000평, 건평 700평 제2공장 준공
- 1999년 7월 - 세륵기전용 수중펌프SHV 및 신형 레미콘전용 SAND PUMP(SGPN, SGPT)개발
- 2000년 6월 - ISO9001 인증획득(수중모터펌프 및 공사용 수중펌프이 설계, 개발, 생산 및 부가서비스)
- 2001년 1월 - 농기계 협동조합 회원 가입
- 2002년 1월 - 수중 프로펠러펌프(축류)개발
- 2003년 1월 - **KS B 6321인증획득**(배수용 수중 모터펌프)
- 2004년 7월 - 축류펌프  $\phi$  1500mm 개발완료
- 2005년 1월 - 한국펌프공업협동조합 회원가입
- 2005년 12월 - 시험용량  $\phi$  2000mm (970kW 303/6.6kV)모터펌프 시험장 준공
- 2008년 7월 - 게이트펌프 개발 및 제작 납품완료





제1공장 및 본사 : 온수산업기계 공단내  
The 1<sup>st</sup> factory : 24-20 Yeoggog-Dong, Wommi-Gu, Buchon, Kyunggi-Do, Korea(Inside of Seoul-Onsu Industrial Complex)

### HISTORY

- Jan. 1990 Setting up "Shin-Shin Pump Corp" the 1st factory yeock-gok 1-dong pucheon, kyung-ki province.
- Jun. 1990 Development of construction submersible pump SSV-15
- July. 1990 Development of submersible sewage pump SCE and SSB
- Mar. 1991 Development of submersible Airator SAR
- Jun. 1991 Development of submersible sewage pump SB  
Development of BLADELESS TYPE of Impeller
- Mar. 1992 Development of Maximum submersible motor pump (SB)
- Apr. 1993 Development of Maximum sewage submersible pump(22kw~75kw)  
Development of a fish farming pump 6-150-SBL
- Jan. 1994 Development of "submersible and overland pump VANE" (patent NO.5983)
- Oct. 1996 Development of 2nd factory, Jung-wang dong, Si-heung, Kyung-ki province
- Feb. 1999 Development of Mixed Flow Pump and propeller pump AX
- Jul. 1999 Development of Truck tire washer submersible pump SSV and sand pupm(SGPN, SGPT)
- Jun. 2000 Acquistion of ISO 9001:2001 Certificate
- Jan. 2001 Entrance for a member of Korea Agricultural Machine Cooperative Assciation
- Jan. 2002 Development of Mixed Flow pump and propeller pump (SAX, SMIX)
- Jan. 2003 Admitted K.S-No. 03-3982 (KS B6321 Submersible Motor pump) KS. (Korea standard)
- Jul. 2004 Development of large volume submersible pump(φ 1500mm)
- Jan. 2005 Merbership of KPMA(Korea Pump Manufacturer Assciation)
- Dec. 2005 Complete, Large pump test facility(φ 2000mm, 970kW 3.3/6.6kV)
- Jul. 2008 Development of Gate pump for river flood disaster





■ 토목건설 배수용(Drain for Civil Engineering Site)

| SSV  | SSH  | SGPT  | SGPN   | SCR   |
|--|--|---|--|---|
|   |   |   |   |    |
| <p>■ 용도</p> <ul style="list-style-type: none"> <li>토목, 건축공사 배수용</li> <li>지하철공사의 용수배수용</li> <li>상·하수도공사 배수용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Draining from construction area</li> <li>Supplying water to Truck Tire washer</li> <li>Draining of underground construction</li> <li>Draining and supplying of tunnel construction</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>도로, 항만, 댐 공사의 양수</li> <li>광산용수의 배수</li> <li>고양정 급배수용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Draining of large amount water at construction site</li> <li>Draining and supplying of water hole and tank</li> <li>Draining a shipbuilding yard and a mine</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>지하철, 고층건물 지하공사</li> <li>항만 하천공사 준설작업용</li> <li>모래채취용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Extracting sand of remicon plant</li> <li>Dredging operation in harbor</li> <li>Moving gravel and sand</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>상수도 침전지 청소용</li> <li>제철소용제 청소용</li> <li>화물선 선저청소용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Moving sand of remicon plant</li> <li>Discharging deposited soil</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>각종 고농도 슬러지 이송</li> <li>펄프 고농도 슬러지 이송</li> <li>과실, 어패류 이송용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>For drainage, sewage, and waste water treatment</li> <li>For fruit and fishes transfer</li> <li>For pulp and leather transfer</li> <li>For various high-density sludge transfer</li> </ul> |

■ 오수, 폐수 배수용(Sewage and Waste Water Pumps)

| SCE   | SVEX   | SSB   | SB/SBH/SBL  | SCP  |
|---|--|---|---|--|
|    |   |   |    |   |
| <p>■ 용도</p> <ul style="list-style-type: none"> <li>합병처리장, 하수 처리용</li> <li>소각장, 정수장, 오수처리용</li> <li>원수, 유량, 슬러지 이송용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Draining waste and waste water of a cattle shed kitchen</li> <li>Moving waste and excretion</li> <li>Wastes water plant building of and hospital, factory</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>정화조원수, 슬러지 이송</li> <li>분뇨, 펄프 및 고형물 이송</li> <li>병원, 호텔 등 잡배수 이송</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Transferring the waste water included solid</li> <li>Transferring the original water from wast water in the waterpurifier tank</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>산업공장, 빌딩 오수배수용</li> <li>지하철역, Pit내 오수배수용</li> <li>합병처리장 오수배수용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>General draining</li> <li>Draining of underground inundation</li> <li>Draining of a waste water at disposal plant</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>합병처리용</li> <li>오수배수, 하수중계펌프용</li> <li>농업용, 양어장 유입펌프</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Transferring large amount of rainfall</li> <li>Moving large amount of water at rivers or reservoirs</li> <li>For farming and water cleuning plant</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>상수도 침전지 부상물처리</li> <li>수면상의 부유물 회수</li> <li>오·폐수 침전 부유물처리</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>The treatment of material on the surface which is in the water works.</li> <li>Withdrawal the floatings on the water</li> <li>The sending back and removal of floatings at the water tank and precipitator which are indirty</li> </ul> |



**신신펌프** ShinShin Submersible Moter Pump

■ 폭기, 스킴, 교반, 축, 사류펌프(Aerator, Scum, Screw, Propeller, Mixed Flow Pumps)

| SAR/SARN  | SMX  | SAX  | SMIX  | SSA   |
|---|--|--|---|---|
|   |   |   |    |    |
| <p>■ 용도</p> <ul style="list-style-type: none"> <li>폐수처리장, 분뇨처리장의 폭기로 산소공급</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Aeration for industrial waste water, excreta, sewage</li> <li>Aeration in lake, reservoir, fish farm</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>오수 · 하수처리교반</li> <li>약품 · 식품교반</li> <li>산업용폐수처리교반</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Sewage, waste-water or drainage disposal plant sewage sediment and various liquid of piled object</li> <li>Industry plant : anti-precipitation of small solid object such as sand and slime, and homogenizing a various liquid</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>흡수등의 수방 대비용</li> <li>대용량배수, 관개수용</li> <li>상수도, 공업용수 취수용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Low head large amount of flowing water</li> <li>Draining off water form flooded district</li> <li>Irrigation water, industrial water, water supply</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>홍수, 폭우 등의 수방용</li> <li>대용량 상 · 하수처리장 공업용수</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Middle head, large water supply</li> <li>Flood control measure</li> <li>Industrial water for large capacity of waterworks and sewage management</li> <li>Any large capacity of water management</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>하수 및 오폐수 처리장의 폭기(산소공급 및 교반)용</li> <li>혐기성 소화조 및 탈질</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Aquarator of sewage waste water treating</li> <li>Air-supply of active sludge treating process</li> <li>Consist of aerating and agitating function</li> <li>Aerobic/anaerobic digestion</li> <li>Maintain sludge</li> </ul> |

■ 수중 그라인더펌프, 게이트펌프, 입축/횡축, 축/사류펌프(Grinder Pump, Gate Pump, Verticil/Horizontal Pumps)

| SSG/SCG   | SAPH  | SVA(M)   | SHA(M)   |
|---|---|--|--|
|   |    |   |    |
| <p>■ 용도</p> <ul style="list-style-type: none"> <li>고형물 오수처리용</li> <li>음식물, 축산 폐수처리용</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Transfer excreta, solids, animal waste</li> <li>Transfer sewage at restaurant, house</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>소규모 배수 역할의 수문 부착형 펌프</li> <li>ISO1940에 따른 G2.5 적용 진동 최소화</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Gate Pump for Medium Capacity facilities</li> <li>Applied ISO1940 G2.5 Grade</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>대규모 배수용 배수 펌프</li> <li>베어링 수밀로 내구성 증대</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Large Volume Pump for flood.</li> <li>Bearing Portector for Long Life cycle.</li> </ul> | <p>■ 용도</p> <ul style="list-style-type: none"> <li>횡축 축사류형 배수 펌프</li> <li>중대형 규모 배수장</li> <li>비교적 고양정용 펌프</li> </ul> <p>■ Application:</p> <ul style="list-style-type: none"> <li>Horizontal Installation Type Pump for flood.</li> <li>Long Life cycle.</li> <li>High Head Pump.</li> </ul> |

■ 신신푼중펌프 제작 범위

- ▶ 토출구경 : 40~2000(mm)
- ▶ 정격출력 : 0.4~1200(Kw)
- ▶ 토출량 : 0.05~500(m<sup>3</sup>/min)
- ▶ 주파수 : 50Hz/60Hz
- ▶ 정격전압 : 220~6600(v)
- ▶ 전동기 극수 : 2~24극 (특별사양제작)

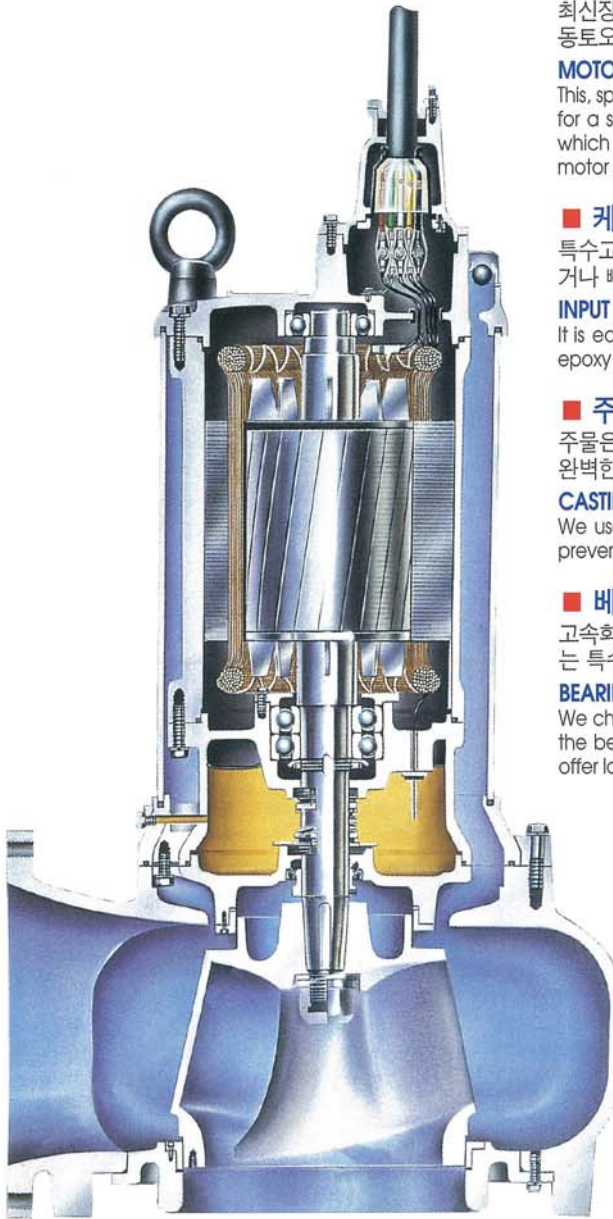
■ SHIN SHIN SUBMER SIBLE PUMP PRODPCT ABILITY

- ▶ Discharge diameter : 40-2000(MM)
- ▶ Power : 0.4-1200(KW)
- ▶ Capacity : 0.05-500(M<sup>3</sup>/Min)
- ▶ Frequency : 50Hz/60Hz
- ▶ Voltage : 220-6600(V)
- ▶ Poles : 2-24 pole





## 신신펌프 기술적인 특징(High Technology of Feature)



### ■ 모터

최신장비와 원선도법을 이용하여 정확한 모터 특성을 산출하였으며, 높은 기동토크 및 고효율의 모터로 특수 설계된 수중펌프 전용 모터입니다.

### MOTOR

This, specially designed for high efficiency and starting torque is a exclusive motor for a submersible pump. we are using special motor for submersible pump only, which we consider high starting torque and high efficiency factor because the motor should be used in bad condition.

### ■ 케이블 인출부

특수고무 및 에폭시 몰딩에 수중방수구조를 갖추었고 케이블을 잡아당겨 찢기거나 빠지는 것을 방지하기 위한 안전고리를 장착하였습니다.

### INPUT OF CABLE

It is equipped with underwater resistant system made of peculiar rubber and epoxy molding. Safety ring is installed to prevent cable from being cut or taken out.

### ■ 주물

주물은 기포로 인한 누수방지를 위하여 물속에서의 철저한 공압검사를 거친 완벽한 주물만을 사용합니다.

### CASTING IRON

We use only cast-iron which is completely investigated under water, so it can prevent cast-iron from leaking by a blowhole.

### ■ 베어링

고속회전 및 고온에 적합한 베어링을 채택하여, 장시간 운전하여도 이상이 없는 특수 베어링을 사용하였습니다.

### BEARING

We choose a proper bearing to endure in high temperature of high speed swing, the bearing encaurabre against high temperature and hige speed spinning will offer long life-span.

### ■ 메카니칼 씰

완벽한 방수처리 자랑하며 높은 수압에도 견딜 수 있는 특수 MECHANICAL SEAL을 사용하여 펌프의 수명을 한층 높였습니다.

### MECHANICAL SEAL

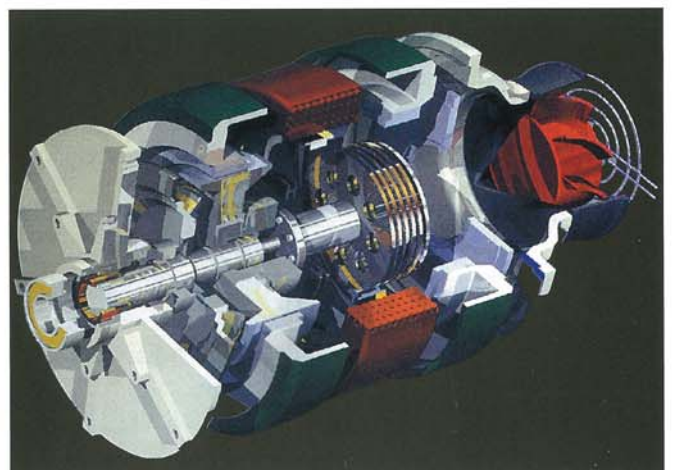
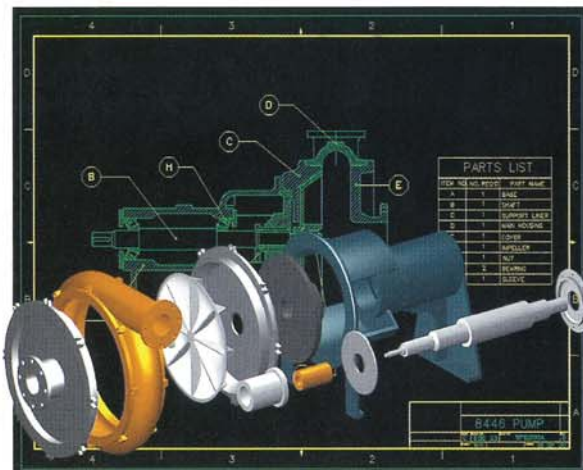
We installed a peculiar mechanica seal which can be endured by high pressure and is perfect water proof so that Life span of a submersible pump can be extended.

### ■ 임펠러

특수재질과 열처리로 마모율을 최대로 줄였고, 어떠한 조건에서도 펌프 성능을 발휘할 수 있도록 축적된 설계기술로써 최고의 임펠러를 만듭니다.

### IMPELLER

The impeller, main part of pump, made of special material and minimized abrasion factor by heat treatment, makes the pump work well in the worst comdition.





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# SSV형

## 토목공사용 배수펌프(Drain Pump for civil Engineering Site)



### ■ 용도

- 토목, 건축공사 배수용
- 지하철공사의 용수배수용
- 이동용 긴급배수용
- 산업현장 및 빌딩지하수 급, 배수용
- 1대의 펌프로(Impeller교환) 고양정 용이나 저양정용으로 손쉽게 변경가능
- 상·하수도공사 배수용
- 타-널공사 배수용
- 기타장식용 분수 및 폭포수용
- 세륵기용
- 통신구 배수용

### ■ 특징

- 최고형의 메카니칼씰을 사용하여 기존의 3배이상 씰링능력을 발휘함.
- 5.5Kw 기종이상은 Non-Pressure 설계로 제작됨.

### ■ APPLICATIONS

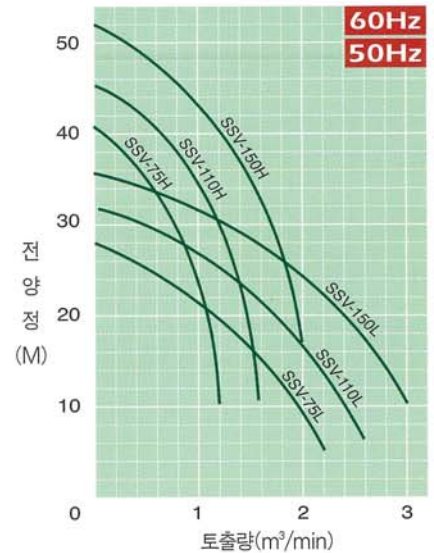
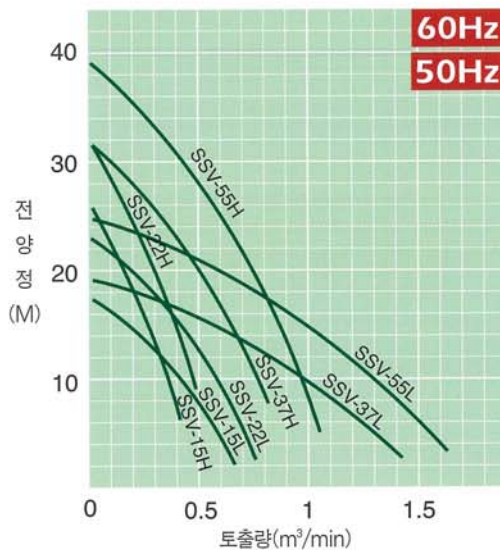
- Deep Well System Engineering
- Civil Engineering
- Tunnel and Subway Construction
- General Construction
- Supplying water to Truck Tire Washer and Transferring clean water
- Water supply and drainage Construction

### ■ FEATURES

- By changing impeller, Suction cover and Hose Coupling, it is Possible to Control water Transfer level
- A model of 5.5KW output level of higher ones are manufactured on a non-Pressure desing
- Perfect watertight with double mechanical seal
- Portable due to light weight Compact Structure

### 성능곡선도

(Performance Curve)



### 표준사양

(Standard Specifications)

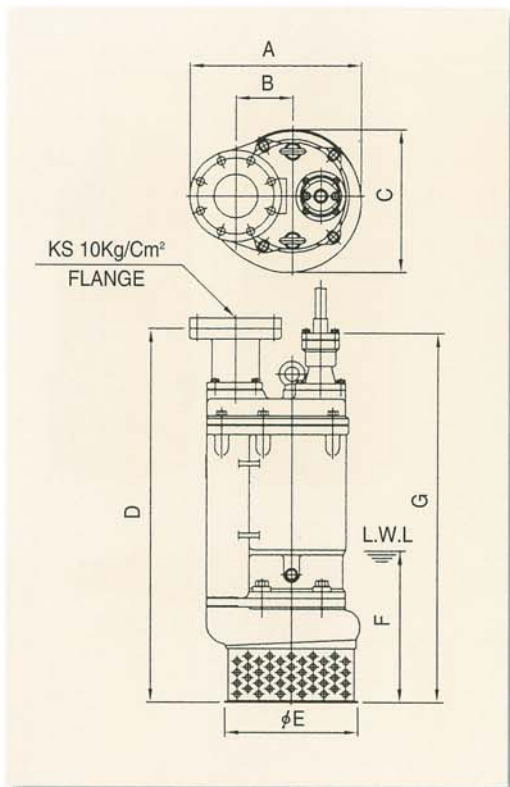
| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m³/min) | 전압<br>Volt  | 중량<br>kg |
|------------------|-----------------|-------------------|----------------|------------------|-------------|----------|
| SSV-15H          | 50mm            | 1.5               | 16             | 0.25             | 220/380/440 | 48       |
| SSV-22H          |                 | 2.2               | 20             | 0.30             |             | 56       |
| SSV-15L          |                 | 1.5               | 8              | 0.50             |             | 48       |
| SSV-22L          | 80mm            | 2.2               | 10             | 0.60             |             | 56       |
| SSV-37H          |                 | 3.7               | 20             | 0.50             |             | 80       |
| SSV-55H          |                 | 5.5               | 25             | 0.60             |             | 94       |
| SSV-37L          | 100mm           | 3.7               | 10             | 1.00             |             | 80       |
| SSV-55L          |                 | 5.5               | 15             | 1.00             |             | 94       |
| SSV-75H          |                 | 7.5               | 30             | 0.80             |             | 160      |
| SSV-110H         | 100mm           | 11.0              | 35             | 1.00             |             | 176      |
| SSV-150H         |                 | 15.0              | 40             | 1.20             |             | 190      |
| SSV-75L          |                 | 7.5               | 15             | 1.60             |             | 160      |
| SSV-110L         | 150mm           | 11.0              | 20             | 1.70             |             | 176      |
| SSV-150L         |                 | 15.0              | 20             | 2.50             |             | 190      |



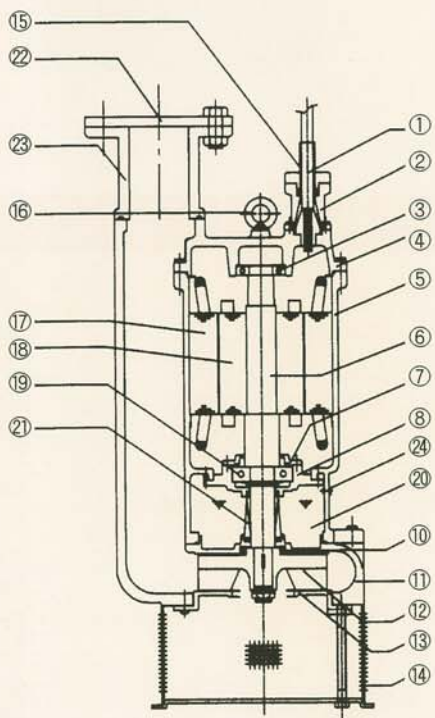
**SSV형** 토목공사용 배수펌프(Drain Pump for civil Engineering Site)

**외형치수도** (Outline Drawing and Size)

| 형식<br>Model | 구경<br>Size | A   | B   | C   | D   | E   | F   | G   |
|-------------|------------|-----|-----|-----|-----|-----|-----|-----|
| SSV-15H     | 50mm       | 255 | 75  | 212 | 550 | 250 | 230 | 455 |
| SSV-22H     |            |     |     |     | 580 |     |     | 485 |
| SSV-15L     | 80mm       | 232 | 75  | 212 | 565 | 240 | 270 | 455 |
| SSV-22L     |            |     |     |     | 595 |     |     | 485 |
| SSV-37H     | 100mm      | 318 | 105 | 250 | 670 | 310 | 350 | 605 |
| SSV-55H     |            |     |     |     | 695 |     |     | 630 |
| SSV-37L     | 150mm      | 330 | 130 | 330 | 685 | 310 | 350 | 605 |
| SSV-55L     |            |     |     |     | 710 |     |     | 630 |
| SSV-75H     | 100mm      | 395 | 130 | 330 | 855 | 310 | 350 | 850 |
| SSV-110H    |            |     |     |     | 915 |     |     | 910 |
| SSV-150H    | 150mm      | 430 | 130 | 330 | 860 | 310 | 350 | 850 |
| SSV-75L     |            |     |     |     | 920 |     |     | 910 |



**구조단면도** (Sectional Drawing)



| 품번<br>No. | 품명<br>Name of Parts | 재질<br>Material |
|-----------|---------------------|----------------|
| 1         | CAB TYRE CABLE      | -              |
| 2         | STUFFING BOX        | GC200          |
| 3         | UPPER BEARING       | STB2           |
| 4         | MOTOR BRACKET       | GC200          |
| 5         | MOTOR FRAME         | GC200          |
| 6         | MOTOR SHAFT         |                |
| 7         | BEARING COVER       | GC200          |
| 8         | BEARING HOUSING     | GC200          |
| 10        | OIL SEAL            | N.B.R          |
| 11        | PUMP CASING         | GC200          |
| 12        | IMPELLER            | GCD500         |
| 13        | SUCTION COVER       | GCD500         |
| 14        | STRAINER            | SS400          |
| 15        | PROTECTED           | N.B.R          |
| 16        | EYE BOLT            | SS400          |
| 17        | STATOR              | S-60           |
| 18        | ROTOR               | S-60           |
| 19        | LOWER BEARING       | STB2           |
| 20        | OIL                 | TURBINE OIL    |
| 21        | MECHANICAL SEAL     | SIC/SIC        |
| 22        | FLANGE              | SS400          |
| 23        | FLANGE COUPLING     | GC200          |
| 24        | OIL BOLT            | SS400          |





# SSH형

## 토목공사용 고양정 펌프(High Head for civil Engineering Site Pump)



### ■ 용도

- 토목공사용

### ■ 적용

- 대형 토목공사의 대용량 고양정 배수
- 대단위 집수정의 급배수
- 조선소 및 광산의 용수 취수 및 배수
- 쓰레기 매립장의 침출수 배수
- 통신구 배수펌프

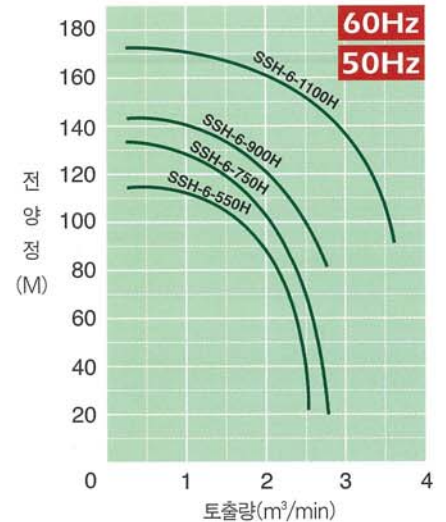
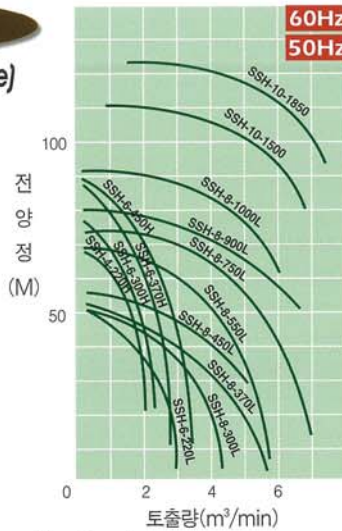
### ■ Applications

- Engineering site
- Dewatering and drainage at road, harbor, dam Construction site
- Drainage system of mining industry
- Other water supply and drainage system

### ■ FEATURES

- All waters design enables usage at low water level
- All models are designed based on non-Pressure layout
- Applicable to higher head than other dewatering pumps

### 성능곡선도 (Performance Curve)



### 표준사양 (Standard Specifications)

| 형식<br>Pump Model | 구경<br>Disc. (mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m³/min) | 회전수<br>Rpm | 중량<br>Weight(kg) |
|------------------|------------------|-------------------|----------------|------------------|------------|------------------|
| SSH-4-220H       | 100mm            | 22                | 60             | 1                | 3600       | 370              |
| SSH-6-220L       |                  |                   | 35             | 2                |            | 370              |
| SSH-6-300H       |                  | 30                | 1.4            | 385              |            |                  |
| SSH-6-370H       |                  | 37                | 2              | 550              |            |                  |
| SSH-6-450H       |                  | 45                | 2.5            | 750              |            |                  |
| SSH-6-550H       |                  | 55                | 90             | 2                |            | 830              |
| SSH-6-750H       |                  | 75                | 120            | 1.5              |            | 830              |
| SSH-6-900H       |                  | 90                | 60             | 2                |            | 950              |
| SSH-6-1100H      |                  | 110               | 160            | 2                |            | 990              |
| SSH-8-300L       |                  | 200mm             | 30             | 35               |            | 3                |
| SSH-8-370L       | 3.6              |                   | 660            |                  |            |                  |
| SSH-8-450L       | 4.5              |                   | 820            |                  |            |                  |
| SSH-8-550L       | 55               |                   | 50             | 4                | 850        |                  |
| SSH-8-750L       | 75               |                   | 60             | 4.5              | 900        |                  |
| SSH-8-900L       | 90               |                   | 80             | 5.5              | 980        |                  |
| SSH-8-1100L      | 110              |                   | 80             | 4.5              | 1020       |                  |

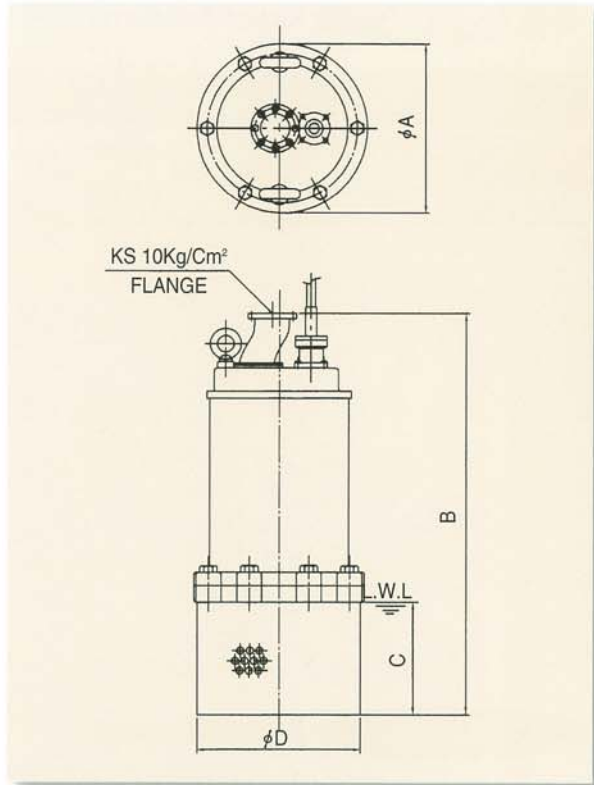


SSH형

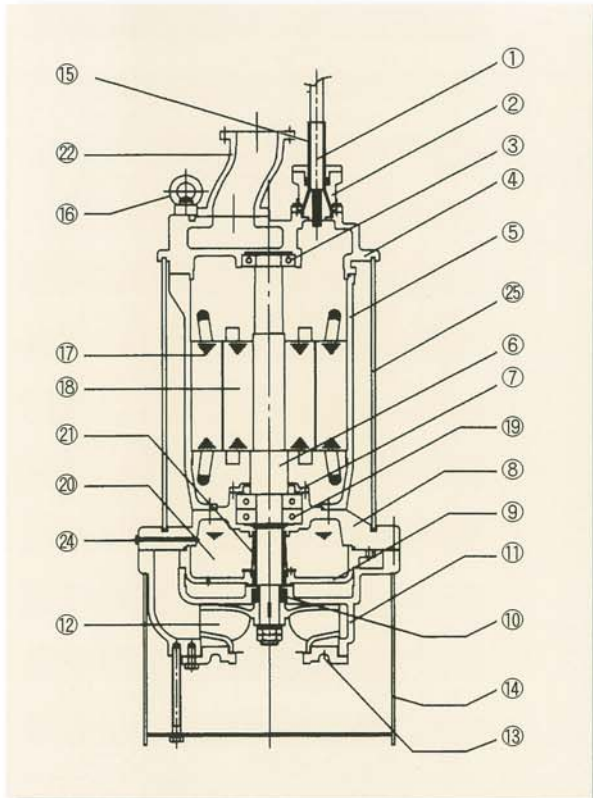
토목공사용 고양정 펌프(High Head for civil Engineering Site Pump)

외형치수도 (Outline Drawing and Size)

| 형식<br>Model | 구경<br>Size | A     | B    | C    | D    |
|-------------|------------|-------|------|------|------|
| SSH-4-220H  | 100mm      | 475   | 1130 | 200  | 440  |
| SSH-6-220L  |            |       | 1155 |      |      |
| SSH-6-300H  |            | 150mm | 635  | 1425 | 310  |
| SSH-6-370H  |            |       |      |      |      |
| SSH-6-450H  |            |       |      |      |      |
| SSH-6-550H  |            |       |      |      |      |
| SSH-6-750H  |            |       |      |      |      |
| SSH-6-900H  |            |       |      |      |      |
| SSH-6-1100H | 200mm      | 475   | 1180 | 200  | 440  |
| SSH-8-300L  |            |       |      |      |      |
| SSH-8-370L  |            |       |      |      |      |
| SSH-8-450L  |            |       |      |      |      |
| SSH-8-550L  |            |       |      |      |      |
| SSH-8-750L  |            |       |      |      |      |
| SSH-8-900L  | 690        | 1650  | 370  | 620  |      |
| SSH-8-1100L |            |       |      |      | 1675 |



구조단면도 (Sectional Drawing)



| 품번<br>No. | 품명<br>Name of Parts | 재질<br>Material |
|-----------|---------------------|----------------|
| 1         | CAB TYRE CABLE      | -              |
| 2         | STUFFING BOX        | GC200          |
| 3         | UPPER BEARING       | STB2           |
| 4         | MOTOR BRACKET       | GC200          |
| 5         | MOTOR FRAME         | GC200          |
| 6         | MOTOR SHAFT         |                |
| 7         | BEARING COVER       | GC200          |
| 8         | BEARING HOUSING     | GC200          |
| 9         | OIL CHAMBER         | GC200          |
| 10        | OIL SEAL            | N.B.R          |
| 11        | PUMP CASING         | GC200          |
| 12        | IMPELLER            | GCD500         |
| 13        | SUCTION COVER       | GCD500         |
| 14        | STRAINER            | SS400          |
| 15        | PROTECTED           | N.B.R          |
| 16        | EYE BOLT            | SS400          |
| 17        | STATOR              | S-60           |
| 18        | ROTOR               | S-60           |
| 19        | LOWER BEARING       | STB2           |
| 20        | OIL                 | TURBINE OIL    |
| 21        | MECHANICAL SEAL     | SIC/SIC        |
| 22        | FLANGE COUPLING     | GC200          |
| 24        | OIL BOLT            | SS400          |
| 25        | OUT CASING          | SPP            |



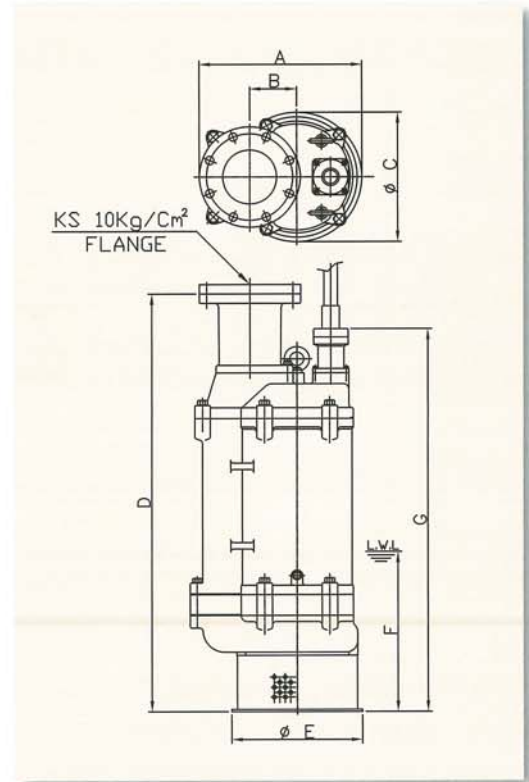


# SSH형

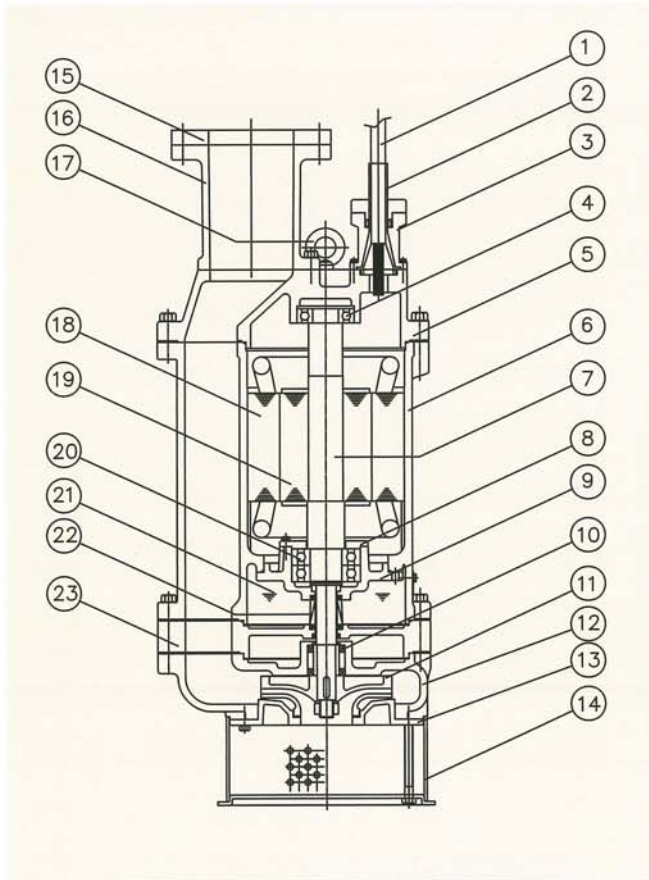
토목공사용 고양정 편수로 펌프(High Head for civil Engineering Site Pump)

## 외형치수도 (Outline Drawing and Size)

| 형식<br>Model | 구경<br>Size | A   | B   | C   | D    | E   | F   | G    |
|-------------|------------|-----|-----|-----|------|-----|-----|------|
| SSH-4-220H  | 100mm      | 435 | 130 | 355 | 1160 | 355 | 350 | 1085 |
| SSH-6-220L  | 150mm      | 450 |     |     | 1185 |     |     |      |
| SSH-6-300H  |            |     |     |     |      |     |     |      |



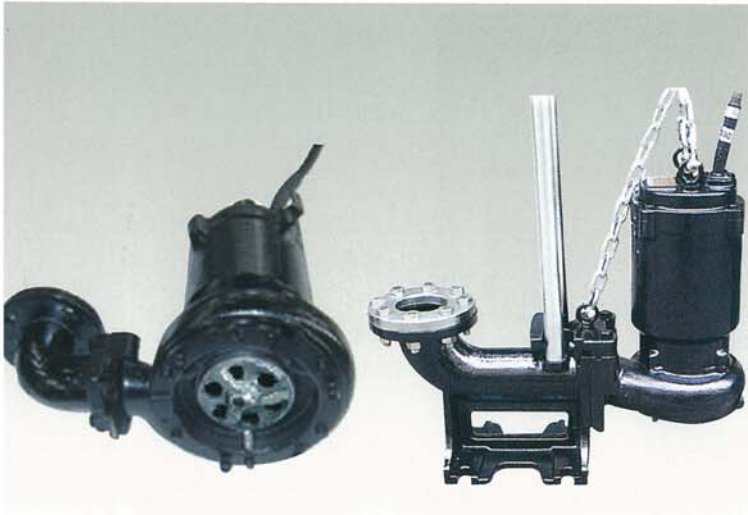
## 구조단면도 (Sectional Drawing)



| 품번<br>No. | 품명<br>Name of Parts | 재질<br>Material |
|-----------|---------------------|----------------|
| 1         | CAB TYRE CABLE      | -              |
| 2         | PROTECTED           | N.B.R          |
| 3         | STUFFING BOX        | GC200          |
| 4         | UPPER BEARING       | STB2           |
| 5         | MOTOR BRACKET       | GC200          |
| 6         | MOTOR FRAME         | GC200          |
| 7         | MOTOR SHAFT         |                |
| 8         | BEARING COVER       | GC200          |
| 9         | BEARING HOUSING     | GC200          |
| 10        | OIL SEAL            | N.B.R          |
| 11        | IMPELLER            | GCD500         |
| 12        | PUMP CASING         | GC200          |
| 13        | SUCTION COVER       | GCD500         |
| 14        | STRAINER            | SS400          |
| 15        | FLANGE              | SS400          |
| 16        | FLANGE COUPLING     | GC200          |
| 17        | EYE BOLT            | SS400          |
| 18        | STATOR              | S-60           |
| 19        | ROTOR               | S-60           |
| 20        | LOWER BEARING       | STB2           |
| 21        | OIL                 | TURBINE OIL    |
| 22        | MECHANICAL SEAL     | SIC/SIC        |
| 23        | SEAL CHAMBER        | GC200          |



**SSG/SCG형 수중 그라인더 펌프(Submersible Grinder Pump)**



**■ 용도**

- 마을하수처리용, 음식물 분쇄 이송용
- 오수 및 폐수이동 정화조 설비 축산분뇨 처리
- 고형물에 의한 배관 폐쇄 우려 설비용
- 가축분뇨 및 우사 돈사 처리용

**■ 특징**

- 정밀 주조로된 그라인더에 의한 고형물 분쇄
- 내마모강 재질의 그라인더 커터 팬과 컷터날
- 사용경과에 따른 손쉬운 그라인더 절삭 틈새 조정
- 사용환경에 따라 고양정/대유량 펌프 선택 가능

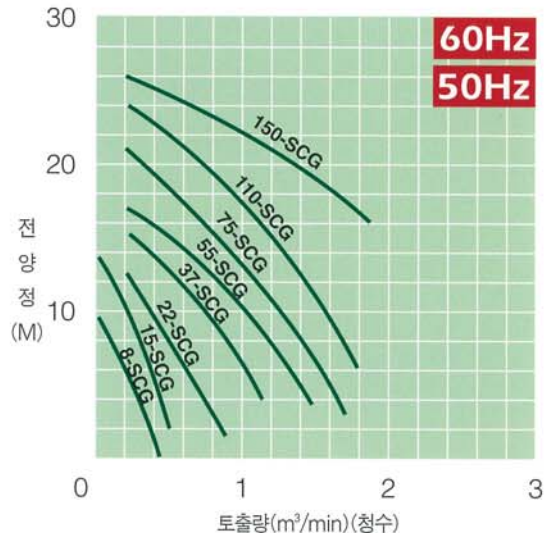
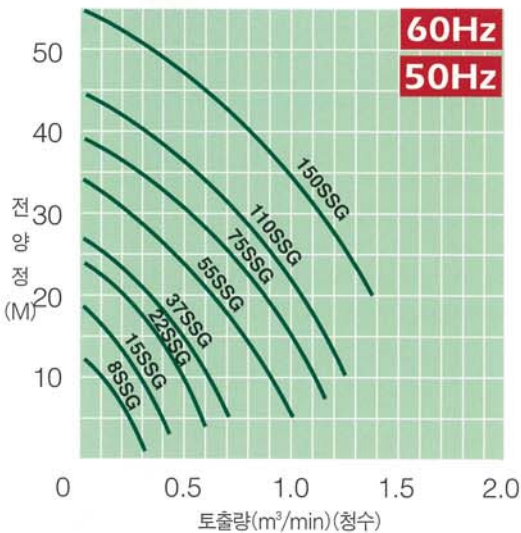
**■ APPLICATIONS**

- Transfer excreta, solids, animal waste
- Transfer sewage at restaurant, house

**■ FEATURES**

- High precision grinder cutter.
- Anti-abrasion high chrome grinder

**성능곡선도 (Performance Curve)**



**표준사양 (Standard Specifications)**

| 형식<br>Model | 구경<br>Disc. (mm) | 출력<br>Out Put (kw) | 전양정<br>Head (m) | 토출량<br>Q(m³/min) | 회전수<br>Rpm | 중량<br>Weight (kg) |     |
|-------------|------------------|--------------------|-----------------|------------------|------------|-------------------|-----|
| 8-SSG       | 50mm             | 0.75               | 10              | 0.1              | 3600       | 29                |     |
| 15-SSG      |                  | 1.5                | 15              | 0.15             |            | 43                |     |
| 22-SSG      | 80mm             | 2.2                | 20              | 0.2              |            | 53                |     |
| 37-SSG      |                  | 3.7                |                 | 0.32             |            | 67                |     |
| 55-SSG      | 100mm            | 5.5                | 25              | 0.45             |            | 79                |     |
| 75-SSG      |                  | 7.5                | 30              | 0.52             |            | 136               |     |
| 110-SSG     |                  | 11.0               | 35              | 0.55             |            | 153               |     |
| 150-SSG     |                  | 15.0               | 40              | 0.8              |            | 162               |     |
| 8-SCG       | 50               | 0.75               | 8               | 0.1              |            | 1800              | 50  |
| 15-SCG      | 80               | 1.5                |                 | 0.3              |            |                   | 60  |
| 22-SCG      |                  | 2.2                |                 | 0.5              | 92         |                   |     |
| 37-SCG      | 100              | 3.7                |                 | 11               | 0.65       |                   | 96  |
| 55-SCG      |                  | 5.5                |                 | 13               | 0.75       |                   | 142 |
| 75-SCG      |                  | 7.5                |                 | 16               | 0.75       |                   | 150 |
| 110-SCG     |                  | 11                 |                 | 20               | 0.75       |                   | 220 |
| 150-SCG     |                  | 15                 |                 | 22               | 1.0        |                   | 235 |





# SSB형

## 고양정 오수이송펌프(Waste Water & Effluent Pump)



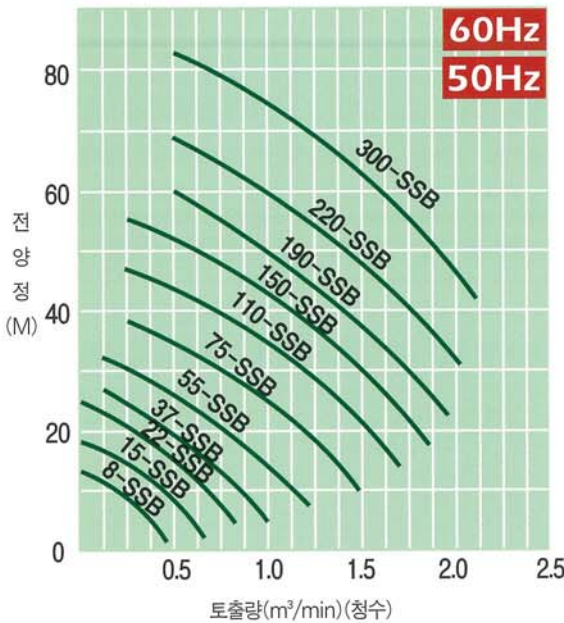
### ■ 용도

- 산업공장, 빌딩, 공장, 오수배수용
- 지하철역, Pit내 오수배수용
- 합병처리장, 지하상가 오수배수용
- 기타 고양정 오수배수용
- 정화조, 소포, 방류 배수용
- 침출수 배수용

### ■ 특징

- 자동탈착장치가 적용되는 고양정용.
- 수압이 걸리지 않는 Non-Pressure 방식을 채용하여 내구성이 우수함.

### 성능곡선도 (Performance Curve)



### ■ APPLICATIONS

- Effluent transfer from water & sewage water treatment plant
- Subway station, underground, industrial site
- Sewage drainage system in a food, Paper and pulp factory
- Precaution for inundation and sewage water

### ■ FEATURES

- Bladless type of impeller which has a high water transferability on fabric and solid matters has been used to prevent troubles caused from possible clotting
- Easy to maintain with guide rail system
- Economic Power consumption with increased pump efficiency
- All models are designed based on non-pressure layout

### 표준사양 (Standard Specifications)

| 형식<br>Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m <sup>3</sup> /min) | 회전수<br>Rpm | 중량<br>Weight(kg) | Auto Setter |
|-------------|-----------------|-------------------|----------------|-------------------------------|------------|------------------|-------------|
| 8-SSB       | 50mm            | 0.75              | 12             | 0.16                          | 3600       | 30               | TO-8-SSB    |
| 15-SSB      |                 | 1.5               | 15             | 0.25                          |            | 42               | TO-15-SSB   |
| 22-SSB      | 80mm            | 2.2               | 20             | 0.3                           |            | 52               | TO-22-SSB   |
| 37-SSB      |                 | 3.7               |                | 0.5                           |            | 68               | TO-37-SSB   |
| 55-SSB      |                 | 5.5               |                | 0.6                           |            | 82               | TO-55-SSB   |
| 75-SSB      | 100mm           | 7.5               | 30             | 0.8                           |            | 134              | TO-75-SSB   |
| 110-SSB     |                 | 11.0              | 35             | 1.0                           |            | 154              | TO-110-SSB  |
| 150-SSB     |                 | 15.0              | 40             | 1.2                           |            | 158              | TO-150-SSB  |
| 190-SSB     |                 | 19                | 50             | 1.0                           |            | 275              | TO-190-SSB  |
| 220-SSB     |                 | 22                | 60             | 1.0                           |            | 285              | TO-220-SSB  |
| 300-SSB     |                 | 30                | 75             | 1.0                           |            | 305              | TO-300-SSB  |





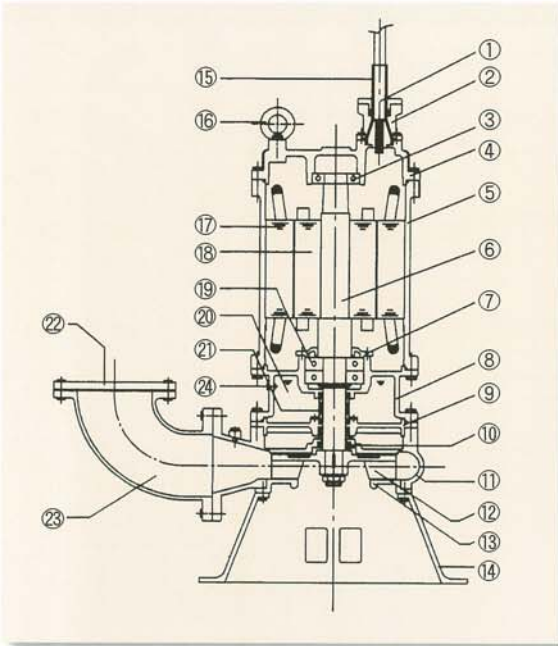
**SSB형**

**고양정 오수이송펌프(Waste Water & Effluent Pump)**

**구조단면도**

(Sectional Drawing)

**8-SSB~150-SSB**



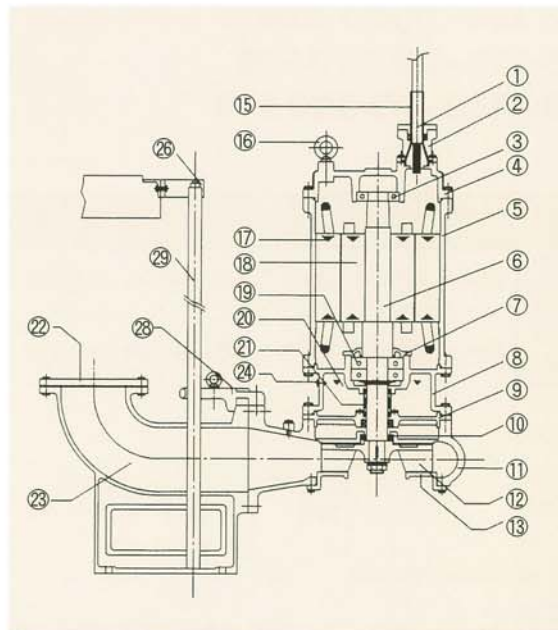
| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 13     | SUCTION COVER    | GCD500      |
| 14     | STAND            | GC200       |
| 15     | PROTECTOR        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | ELBOW            | GC200       |
| 24     | OIL BOLT         | SS400       |

| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 13     | SUCTION COVER    | GCD500      |
| 15     | PROTECTOR        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | DUCK FOOT BEND   | GCD500      |
| 24     | OIL BOLT         | SS400       |
| 26     | GUIDE SUPPORT    | GCD500      |
| 28     | GUIDE HOOK       | GCD500      |
| 29     | GUIDE PIPE       | SPP         |

**구조단면도**

(Sectional Drawing)

**TO-8-SSB~TO-15-SSB**  
**TO-22-SSB~TO-37-SSB**  
**TO-55-SSB~TO-150-SSB**





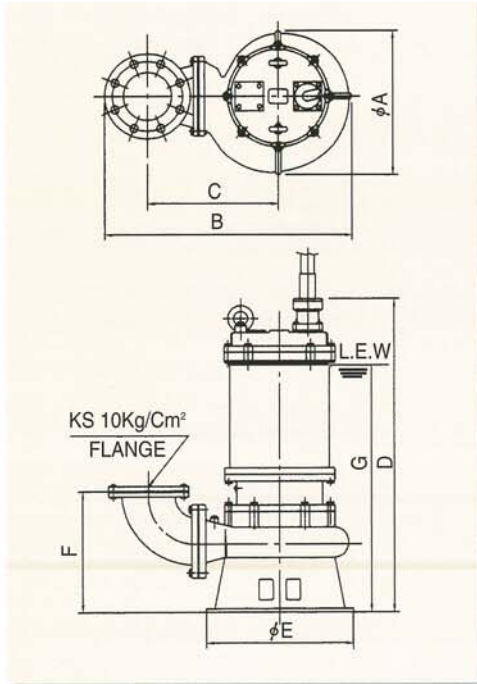


# SSB형

## 고양정 오수이송펌프(Waste Water & Effluent Pump)

### 외형치수도 (Outline Drawing and Size)

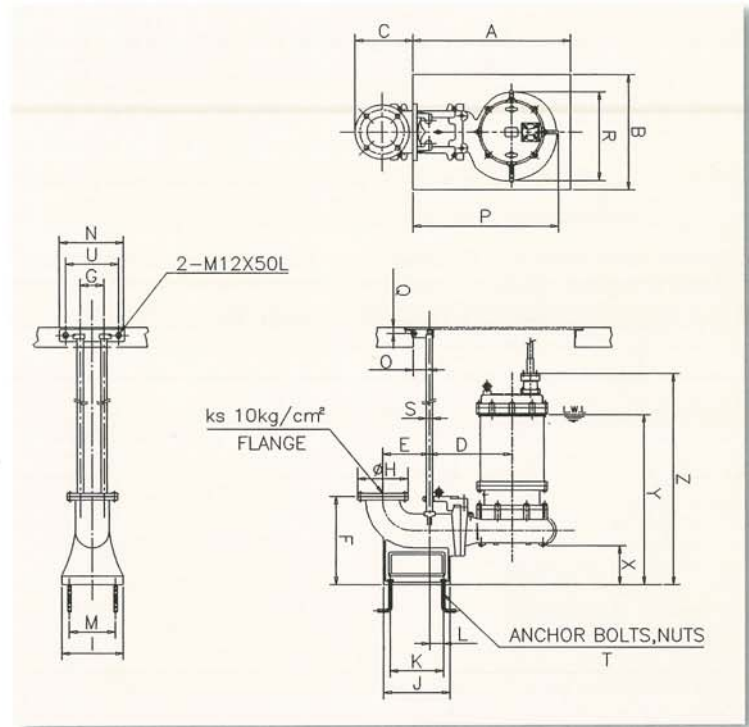
#### 8-SSB~150-SSB



| 형식 Model | 구경 Size | A   | B   | C   | D    | E   | F   | G   |     |
|----------|---------|-----|-----|-----|------|-----|-----|-----|-----|
| 8-SSB    | 50mm    | 225 | 410 | 220 | 405  | 225 | 200 | 320 |     |
| 15-SSB   |         | 225 | 425 | 235 | 460  |     | 190 |     |     |
| 22-SSB   | 80mm    | 280 | 510 | 270 | 520  | 280 | 235 | 390 |     |
| 37-SSB   |         |     |     |     | 615  |     |     |     | 430 |
| 55-SSB   | 100mm   | 350 | 600 | 325 | 640  | 340 | 275 | 450 |     |
| 75-SSB   |         |     |     |     | 825  |     |     |     | 530 |
| 110-SSB  |         |     |     |     | 885  |     |     |     | 590 |
| 150-SSB  | 100mm   | 425 | 695 | 380 | 1025 | 415 | 310 | 710 |     |
| 190-SSB  |         |     |     |     |      |     |     |     |     |
| 220-SSB  |         |     |     |     |      |     |     |     |     |
| 300-SSB  |         |     |     |     |      |     |     |     |     |

### 외형치수도 (Outline Drawing and Size)

#### TO-8-SSB~TO-15-SSB TO-22-SSB~TO-37-SSB TO-55-SSB~TO-150-SSB TO-190-SSB~TO-300-SSB



| 형식 Model   | 구경 Size | A   | B   | C   | D   | E   | F   | G   | H   | I   | J   | K   | L  | M   | N   | O  | P   | Q   | R             | S   | T   | U   | X   | Y   | Z  |
|------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|-----|-----|---------------|-----|-----|-----|-----|-----|----|
| TO-8-SSB   | 50mm    | 500 | 400 | 160 | 185 | 143 | 250 | 70  | 155 | 155 | 200 | 120 | 10 | 120 | 230 | 60 | 345 | 195 | 25            | 185 | 120 | 370 | 46  |     |    |
| TO-15-SSB  |         |     |     |     | 200 |     |     |     |     |     |     |     |    |     |     |    | 200 | 130 |               |     | 400 | 52  |     |     |    |
| TO-22-SSB  | 80mm    | 550 | 400 | 255 | 220 | 225 | 285 | 80  | 185 | 210 | 250 | 180 | 20 | 170 |     |    | 405 | 245 | 4-5/8" X 150L | 190 | 120 | 430 | 56  |     |    |
| TO-37-SSB  |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     | 120 | 450 | 66  |     |    |
| TO-55-SSB  | 100mm   | 650 | 450 |     | 235 |     |     |     |     |     |     |     |    |     |     |    | 460 | 260 | 32            | 32  | 245 | 175 | 550 | 73  |    |
| TO-75-SSB  |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     |     | 600 | 89  |     |    |
| TO-110-SSB |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     |     | 265 | 160 | 660 | 95 |
| TO-150-SSB | 100mm   | 700 | 500 |     | 285 | 275 | 335 | 100 | 210 | 240 | 280 | 200 | 19 | 200 | 300 | 95 | 650 | 395 |               |     |     | 150 | 730 | 10  |    |
| TO-190-SSB |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     |     |     |     |     |    |
| TO-220-SSB |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     |     |     |     |     |    |
| TO-300-SSB |         |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |     |     |               |     |     |     |     |     |    |



**SCE형**

**수중커터펌프(Submersible Cutter Pump)**



**■ 용 도**

- 합병처리장, 하수, 오수처리용
- 소각장, 정수장, 오수처리용
- 축사의 오수오물용
- 공장, 병원, 빌딩등 주방의 잡배수용
- 기타 각종 고형물 원수 및 슬러지 이송

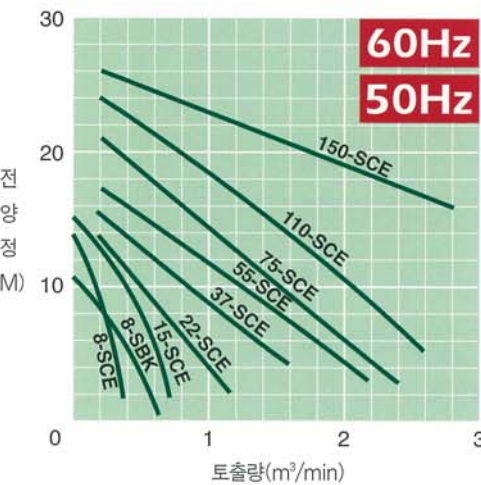
**■ 특 징**

- Motor의 "토크"가 강한 특수사양 임.
- NON-CLOG IMPELLER사용, 이물질 에 막힘을 최소화

**■ TO형 표준 부속품**

- Gulde Support/Bolt. Nut 1식
- 탈착 Bend/Bot. Nut 1식

**성능곡선도 (Performance Curve)**



**■ APPLICATIONS**

- Waste water Plant building of and hospital factory
- General Purpose drainage of excreta and Sewage disposal plant
- Fusion processing
- Drainage system in a kitchen of industry factories
- Sewage disposal at livestock farm

**■ FEATURES**

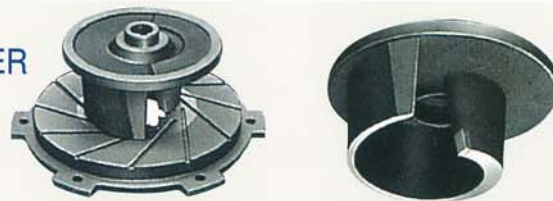
- A special option provides strong torque of a motor
- NoN-CLOG IMPELLER Type
- Solid sewage that inflows through a hose is shredded into small fragments enough to prevent any clotting while tran sfering

**■ To Type Accessories unit**

- Gulde Support/Bolt. Nut 1Set
- To Bend/Bot. Nut 1Set

**■ 절단기구(切斷機構) 및 SCE TYPE IMPELLER**

- Non-Clog Impeller



**표준사양 (Standard Specifications)**

| 형 식<br>Pump Model | 구 경<br>Disc. (mm) | 출 력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m <sup>3</sup> /min) | 회전수<br>Rpm | 중 량<br>Weight(kg) | Autto Sert |
|-------------------|-------------------|--------------------|----------------|-------------------------------|------------|-------------------|------------|
| 8-SCE             | 50                | 0.75               | 8              | 0.21                          | 3600       | 30                | To-8-SCE   |
| 8-SBK             |                   |                    |                |                               |            | 50                | To-8-SBK   |
| 15-SCE            | 80                | 1.5                | 11             | 0.5                           | 1800       | 60                | To-15-SCE  |
| 22-SCE            |                   | 2.2                |                | 0.65                          |            | 90                | To-22-SCE  |
| 37-SCE            | 100               | 3.7                | 13             | 0.7                           |            | 96                | To-37-SCE  |
| 55-SCE            |                   | 5.5                | 16             |                               |            | 140               | To-55-SCE  |
| 75-SCE            |                   | 7.5                | 20             | 156                           |            | To-75-SCE         |            |
| 110-SCE           |                   | 11                 | 22             | 220                           |            | To-110-SCE        |            |
| 150-SCE           |                   | 15                 |                | 235                           |            | To-150-SCE        |            |



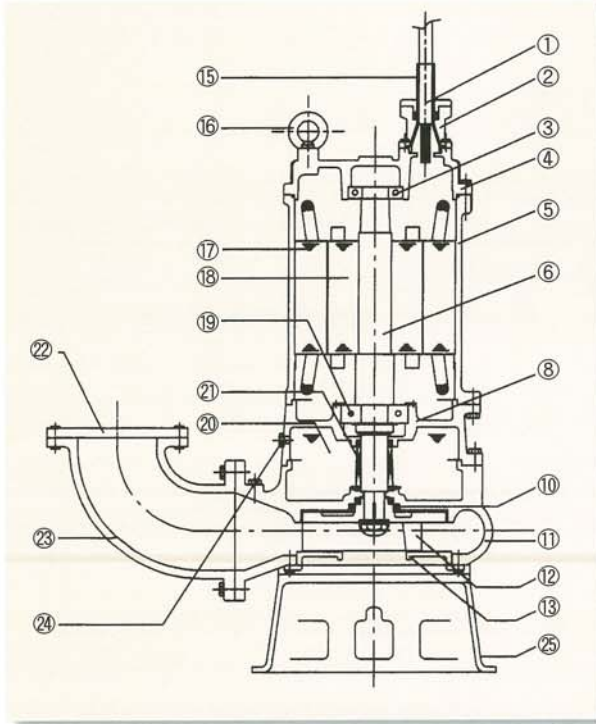


**SCE형**

**수중커터펌프(Submersible Cutter Pump)**

**구조단면도 (Sectional Drawing)**

**SCE-TYPE**

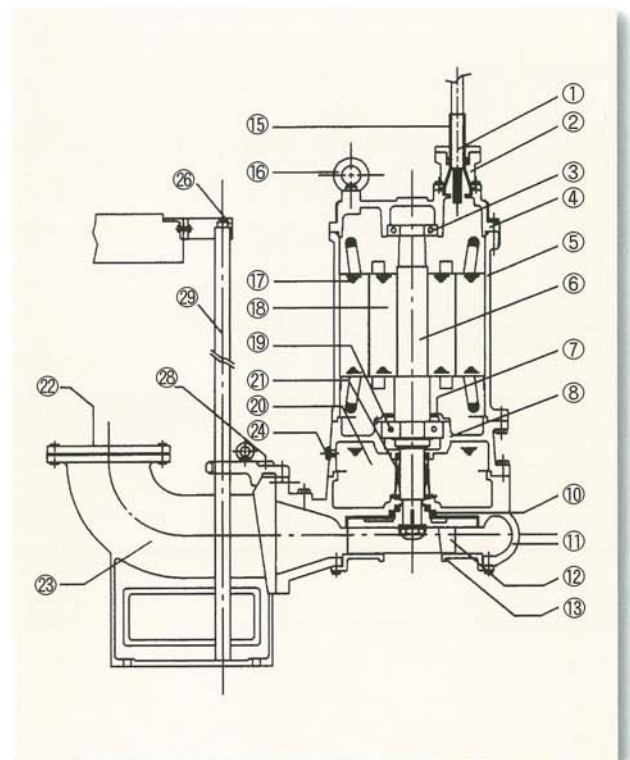


| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 8      | BEARING HOUSING  | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 13     | SUCTION COVER    | GCD500      |
| 15     | PROTECTOR        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | ELBOW            | GS200       |
| 24     | OIL BOLT         | SS400       |
| 25     | STAND            | GC200       |

| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 13     | SUCTION COVER    | GCD500      |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | DUCK FOOT BEND   | GCD500      |
| 24     | OIL BOLT         | SS400       |
| 26     | GUIDE SUPPORT    | GCD500      |
| 28     | GUIDE HOOK       | GCD500      |
| 29     | GUIDE PIPE       | SPP         |

**구조단면도 (Sectional Drawing)**

**TO-SCE-TYPE**







# SCE형

## 수중커터펌프(Submersible Cutter Pump)

### 외형치수도

(Outline Drawing and Size)

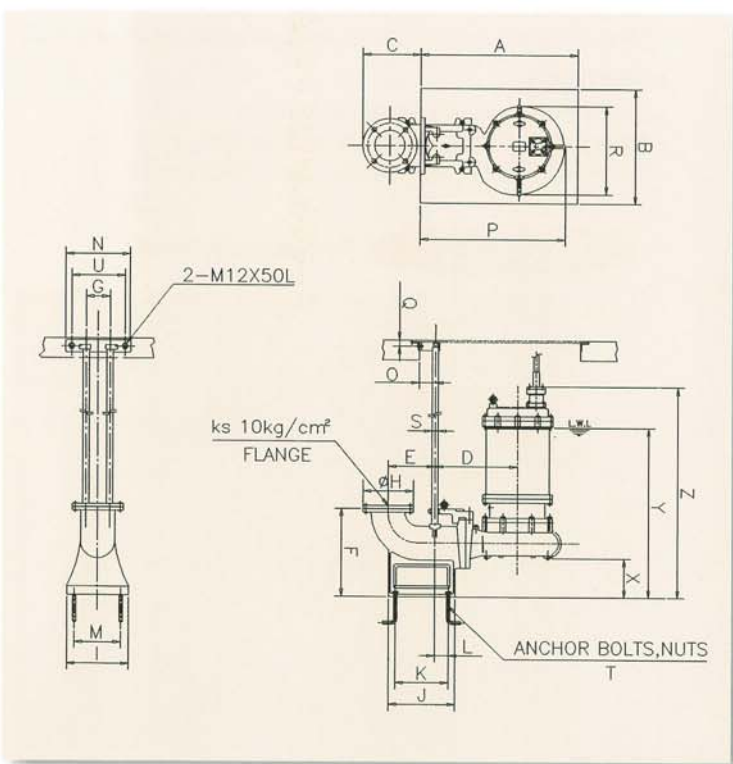
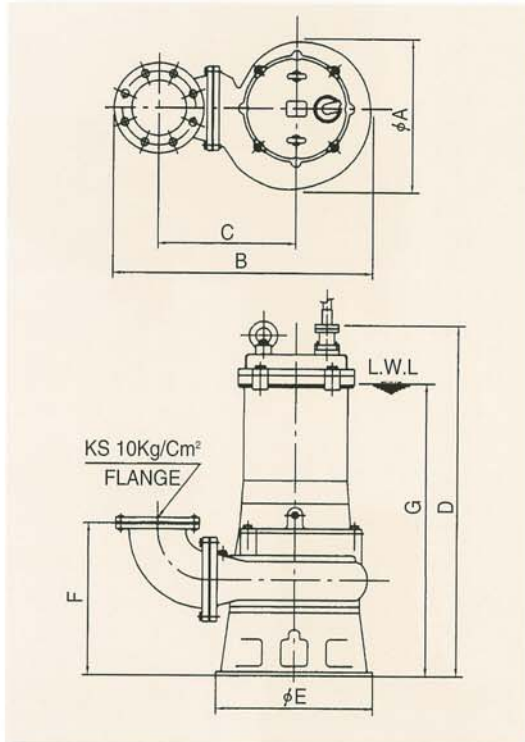
15-SCE~150-SCE

| 형식 Model | 구경 Size | A   | B   | C   | D    | E   | F   | G   |
|----------|---------|-----|-----|-----|------|-----|-----|-----|
| 8-SCE    | 50mm    | 260 | 400 | 215 | 495  | 260 | 200 | 380 |
| 8-SBK    |         | 250 | 545 | 300 | 620  | 320 | 255 | 450 |
| 15-SCE   | 80mm    | 280 |     |     |      |     |     |     |
| 22-SCE   | 100mm   | 320 | 600 | 335 | 750  | 340 | 289 | 550 |
| 37-SCE   |         |     |     |     |      |     |     |     |
| 55-SCE   |         | 330 | 600 | 335 | 825  |     | 289 | 650 |
| 75-SCE   |         |     |     |     |      |     |     |     |
| 110-SCE  |         | 400 | 750 | 420 | 1025 | 450 | 350 | 750 |
| 150-SCE  |         |     |     |     |      |     |     |     |

### 외형치수도

(Outline Drawing and Size)

TO 8 SCE TO-22-SCE~TO-150-SCE



| 형식 Pump Model | 구경 Size | A   | B   | C   | D   | E   | F   | G   | H   | I   | J   | K   | L   | M   | N   | O  | P   | Q   | R   | S             | T   | U   | X   | Y   | Z   |     |     |      |
|---------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|---------------|-----|-----|-----|-----|-----|-----|-----|------|
| TO-8-SCE      | 50mm    | 500 | 400 | 160 | 189 | 142 | 250 | 70  | 155 | 160 | 200 | 120 | 10  | 120 | 230 | 60 | 345 | 195 | 25  | 4-5/8" X 150L | 180 | 110 | 380 | 495 |     |     |     |      |
| TO-8-SBK      |         |     |     |     | 215 |     |     |     |     |     |     |     |     |     |     |    |     |     |     |               |     | 395 | 240 |     |     | 190 | 110 | 450  |
| TO-15-SCE     | 80mm    |     |     |     | 255 | 235 | 225 | 285 | 80  | 185 | 220 | 250 | 180 | 20  | 170 |    |     | 430 | 280 |               |     |     |     |     |     |     |     |      |
| TO-22-SCE     | 100mm   | 700 | 450 | 285 | 270 |     |     |     |     |     |     |     |     |     |     |    | 535 | 320 |     |               |     | 160 | 550 | 760 |     |     |     |      |
| TO-37-SCE     |         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |     |               |     |     |     |     |     |     |     |      |
| TO-55-SCE     |         |     |     |     |     |     |     | 275 | 276 | 335 | 100 | 210 | 245 | 280 | 200 | 62 | 200 | 295 | 95  | 535           | 30  | 325 | 32  |     | 245 | 160 | 700 | 890  |
| TO-75-SCE     |         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |     |               |     |     |     |     |     |     |     |      |
| TO-110-SCE    |         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |     |               | 615 | 400 |     |     |     | 155 | 800 | 1000 |
| TO-150-SCE    |         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |     |               |     |     |     |     |     |     |     |      |



# SVEX형

## 오수, 오물용 볼텍스펌프(Sewage and Waste Water Vortex Pump)



### ■ 용도

- 정화조 원수 이송 및 슬러지 이송
- 분뇨, 펄프 및 고형물 이송
- 병원, 호텔, 식당, 빌딩 등의 잡배수 이송
- 도축, 도계장의 잡배수 이송
- 기타 하수처리장의 등의 원수 이송
- 단독 정화조
- 집단 오수 처리장

### ■ 특징

- 오물펌프로서 특수 개방형 임펠러에 의하여 고형물이나 섬유질 등의 이물이 막히거나 감기지 않습니다.
- 자동탈착을 병용함으로 보수점검 작업을 용이하게 할 수 있음.

### ■ APPLICATIONS

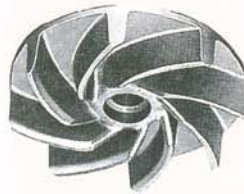
- Transfer sludge at piggery farm
- Transfer waste water from septic tank
- Transfer excreta, Solids, Pulp
- Transfer sewage at hospital, hotel, restaurant
- Effluent transfer from waste & sewage water treatment Plant

### ■ FEATURES

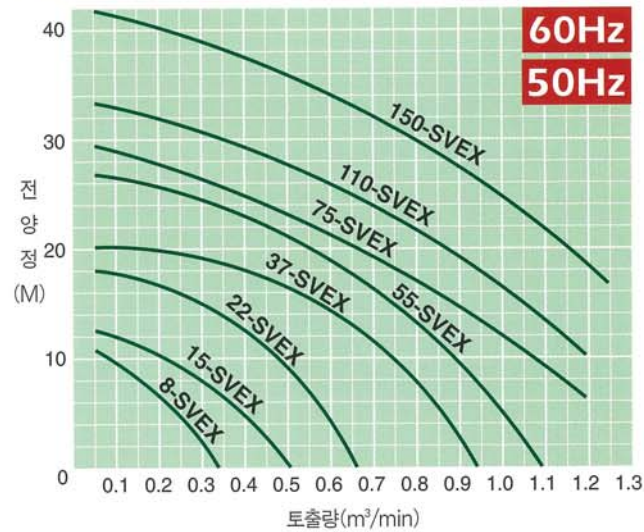
- Easy to maintain with Guide Rail System
- Easy go transfer solids with Vortex Structure
- Perfect water tight with double mechanical seal



■ \*SVEX TYPE  
IMPELLER  
Vortex impeller



### 성능곡선도 (Performance Curve)



### 표준사양 (Standard Specifications)

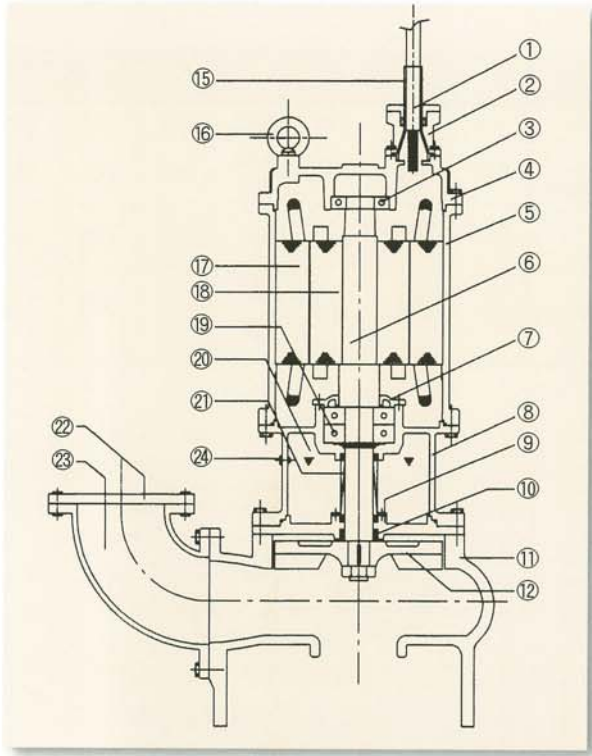
| 형식<br>Pump Model | 구경<br>Disc. (mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m³/min) | 회전수<br>Rpm  | 중량<br>Weight(kg) | Auto Setter |
|------------------|------------------|-------------------|----------------|------------------|-------------|------------------|-------------|
| 8-SVEX           | 50               | 0.75              | 8              | 0.21             | 3600        | 16               | TO-8-SVEX   |
| 15-SVEX          |                  | 1.5               | 10             |                  |             | 46               | TO-15-SVEX  |
| 22-SVEX          |                  | 2.2               | 15             |                  |             | 52               | TO-22-SVEX  |
| 37-SVEX          |                  | 3.7               | 18             |                  |             | 72               | TO-37-SVEX  |
| 55-SVEX          |                  | 5.5               | 20             |                  |             | 78               | TO-55-SVEX  |
| 75-SVEX          | 100              | 7.5               | 22             | 136              | TO-75-SVEX  |                  |             |
| 110-SVEX         |                  | 11                | 25             | 151              | TO-110-SVEX |                  |             |
| 150-SVEX         |                  | 15                | 30             | 158.5            | TO-150-SVEX |                  |             |



**SVEX형** 오수, 오물용 볼텍스펌프(Sewage and Waste Water Vortex Pump)

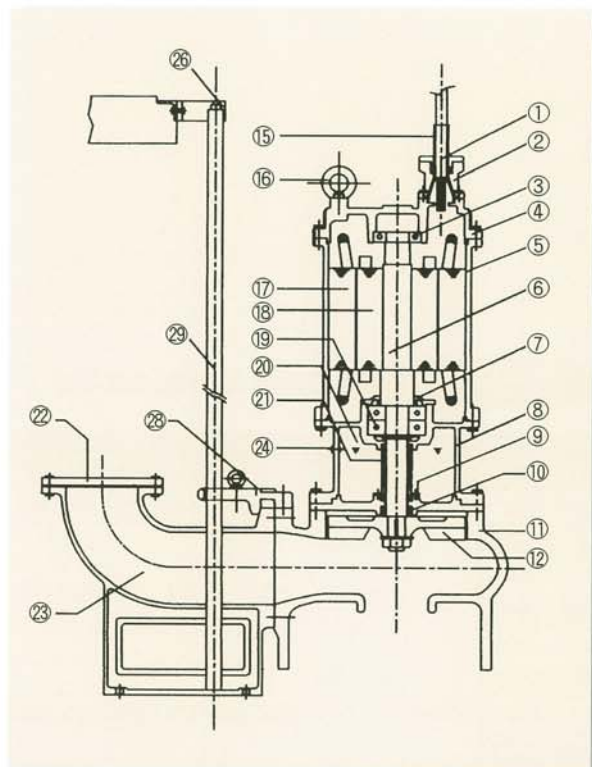
구조단면도 (Sectional Drawing)

SVEX-TYPE



| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 15     | PROTECTED        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | ELBOW            | GC200       |
| 24     | OIL BOLT         | SS400       |

| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYPE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      |             |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC200       |
| 12     | IMPELLER         | GCD500      |
| 15     | PROTECTED        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | PIPE FLANGE      | SS400       |
| 23     | DUCK FOOT BEND   | GCD500      |
| 24     | OIL BOLT         | SS400       |
| 26     | GUIDE SUPPORT    | GCD500      |
| 28     | GUIDE HOOK       | GCD500      |
| 29     | GUIDE PIPE       | SPP         |



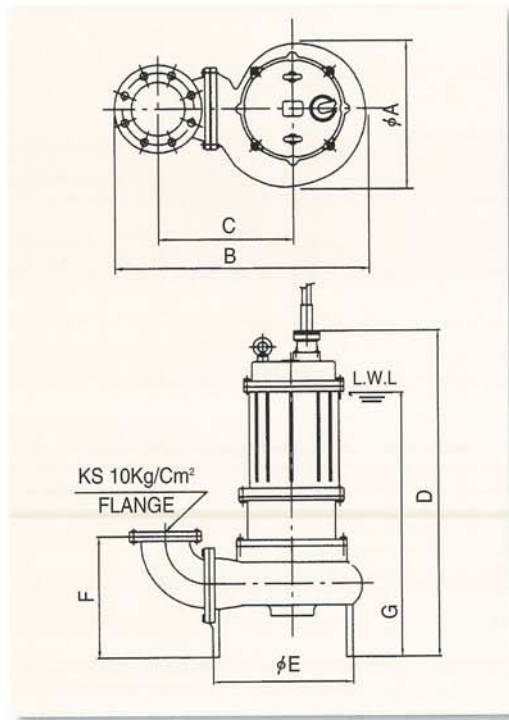


**SVEX형**

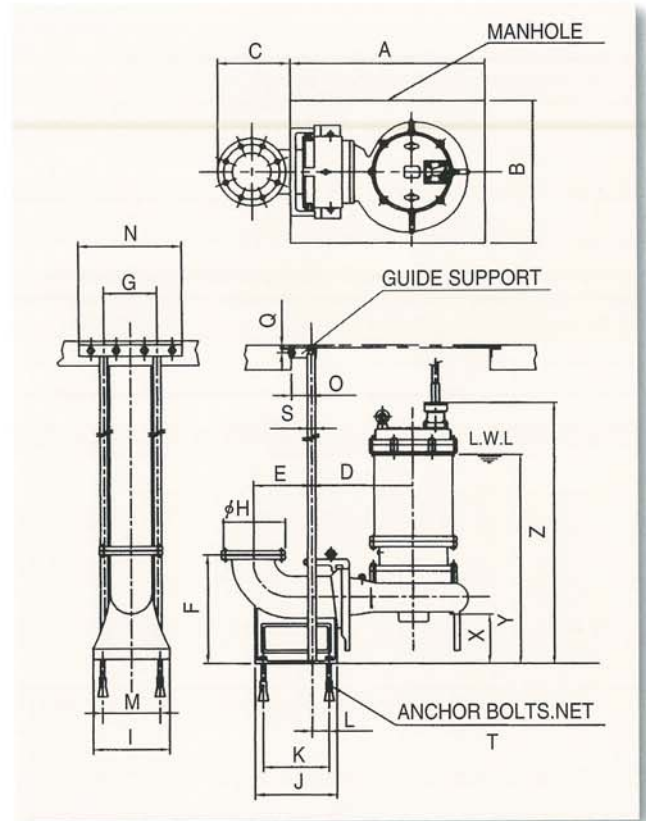
오수, 오물용 볼텍스펌프(Sewage and Waste Water Vortex Pump)

**외형치수도** (Outline Drawing and Size)

**8-SVEX(TO-8-SVEX)**  
**75-SVEX(TO-75-SVEX)**



| 형식<br>Pump Model | 구경<br>Size | A   | B   | C   | D   | E   | F   | G   |
|------------------|------------|-----|-----|-----|-----|-----|-----|-----|
| 8-SVEX           | 50mm       | 170 | 380 | 215 | 380 | 155 | 150 | 270 |
| 15-SVEX          | 80mm       | 210 | 475 | 265 | 445 | 245 | 200 | 350 |
| 22-SVEX          |            |     |     |     | 475 |     |     |     |
| 37-SVEX          |            |     |     |     | 620 |     |     |     |
| 55-SVEX          | 270        | 505 | 280 | 255 | 220 | 430 |     |     |
| 75-SVEX          | 100mm      | 275 | 570 | 325 | 845 | 300 | 240 | 610 |
| 110-SVEX         |            |     |     |     | 905 |     |     |     |
| 150-SVEX         |            |     |     |     |     |     |     |     |



**외형치수도** (Outline Drawing and Size)

| 형식<br>Pump Model | 구경<br>Size | A   | B   | C   | D   | E   | F   | G   | H   | I   | J   | K   | L  | M   | N   | O  | Q  | S  | T             | X   | Y   | Z    |
|------------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|----|----|---------------|-----|-----|------|
| TO-8-SVEX        | 50mm       |     |     | 160 | 175 | 145 | 250 | 70  | 155 | 155 | 200 | 120 | 10 | 120 |     |    |    | 25 |               | 145 | 380 | 485  |
| TO-15-SVEX       | 80mm       | 500 | 400 | 255 | 198 | 225 | 285 | 80  | 185 | 210 | 250 | 180 | 20 | 170 | 230 | 60 | 25 | 32 | 4-5/8" × 150L | 125 | 500 | 680  |
| TO-22-SVEX       |            |     |     |     | 225 |     |     |     |     |     |     |     |    |     |     |    |    |    |               |     |     | 430  |
| TO-37-SVEX       |            |     |     |     | 565 |     |     |     |     |     |     |     |    |     |     |    |    |    |               |     |     |      |
| TO-55-SVEX       | 100mm      | 700 | 500 | 286 | 265 | 275 | 335 | 100 | 210 | 240 | 280 | 200 | 19 | 200 | 300 | 95 | 30 |    |               | 165 | 700 | 945  |
| TO-75-SVEX       |            |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |    |    |               |     |     | 1005 |
| TO-110-SVEX      |            |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |    |    |               |     |     |      |
| TO-150-SVEX      |            |     |     |     |     |     |     |     |     |     |     |     |    |     |     |    |    |    |               |     |     |      |



**SB/SBH/SBL형 대용량 이송 펌프(Large Capacity Pump)**



■ 용도

- 배수용

■ 적용

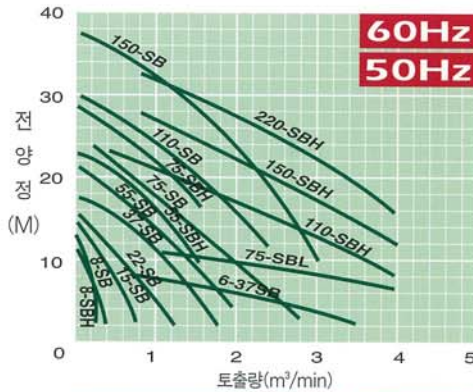
- 농업용수 및 배수장의 빗물 이송
- 강물, 저수지등의 대용량 이송
- 대용량 배수장의 빗물 이송
- 하수종말 처리장 배수이송

■ APPLICATIONS

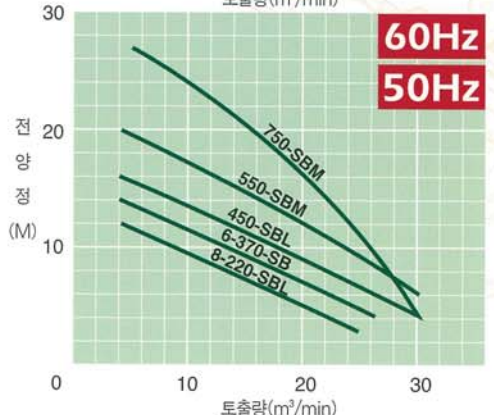
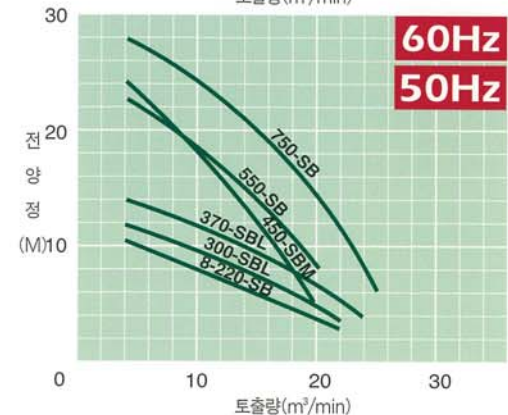
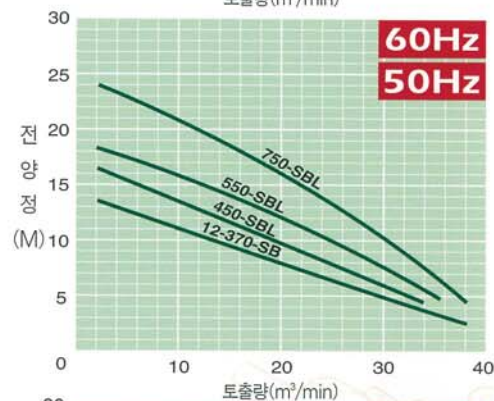
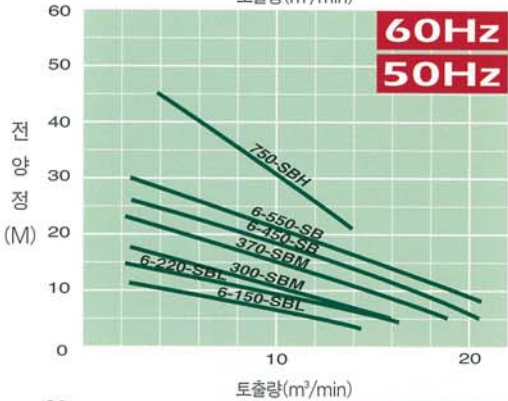
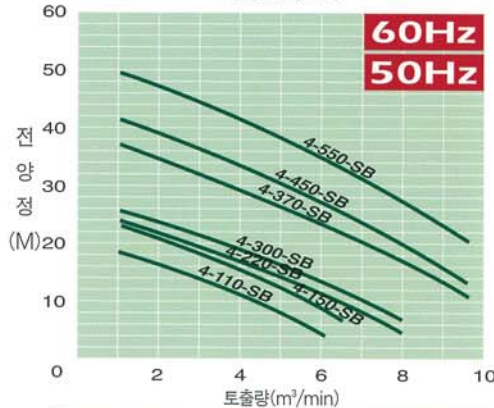
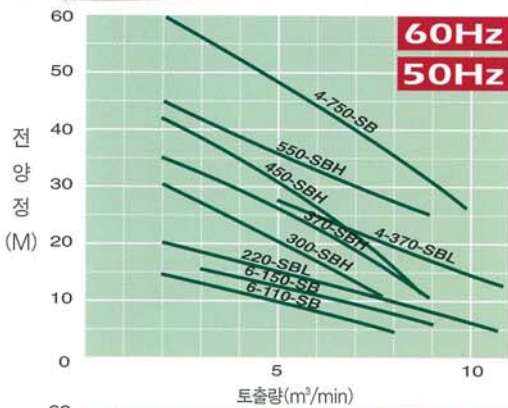
- Transferring large amount of rainfall
- Moving large amount of water at rivers of reservoirs
- For farming and water cleaning plant
- Supply factory with industrial water
- Effluent transfer from waste&sewage water treatment plant

■ FEATURES

- Minimizing stopping-up of foreign materials
- Multi-pole applicable according to water quantity
- Perfect watertight with double mechanical seal



성능곡선도 (Performance Curve)





**SB/SBH/SBL형 대용량 이송 펌프(Large Capacity Pump)**

**표준 사양 (Standard Specifications)**

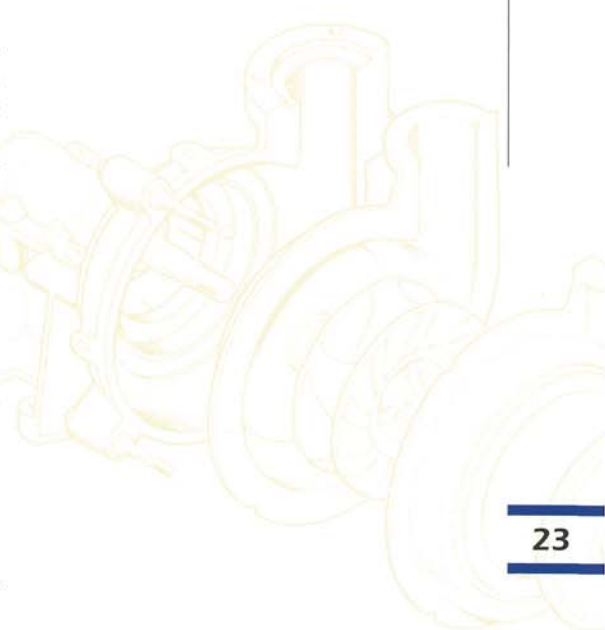
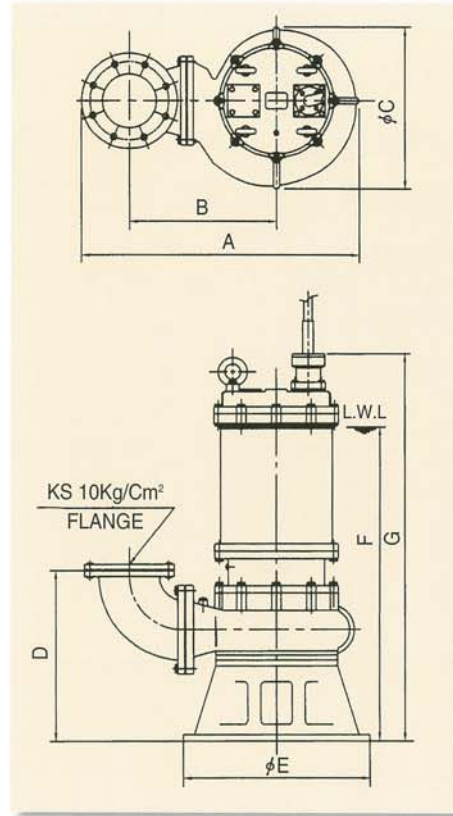
| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m <sup>3</sup> /min) | 회전수<br>Rpm | 중량<br>Weight(kg) |      |      |     |
|------------------|-----------------|-------------------|----------------|-------------------------------|------------|------------------|------|------|-----|
| 8-SB             | 50mm            | 0.75              | 8              | 0.21                          | 3600       | 29               |      |      |     |
| 8-SBH            |                 |                   | 10             | 0.15                          |            |                  |      |      |     |
| 15-SB            | 80mm            | 1.5               | 8              | 0.5                           | 1800       | 60               |      |      |     |
| 22-SB            |                 | 2.2               | 10             | 0.6                           |            | 93               |      |      |     |
| 37-SB            |                 | 3.7               | 15             |                               |            | 96               |      |      |     |
| 55-SB            | 100mm           | 5.5               | 14             | 1                             |            | 142              |      |      |     |
| 55-SBH           |                 |                   | 20             | 0.6                           |            |                  |      |      |     |
| 75-SBH           |                 | 7.5               | 22             | 1                             |            | 150              |      |      |     |
| 75-SB            |                 |                   | 18             |                               |            |                  |      |      |     |
| 110-SB           |                 | 11                | 22             | 1.3                           | 220        |                  |      |      |     |
| 150-SB           |                 | 15                | 30             |                               | 235        |                  |      |      |     |
| 6-37-SB          | 150mm           | 3.7               | 5              | 2.5                           | 1200       | 200              |      |      |     |
| 75-SBL           |                 | 7.5               | 9              | 2.5                           | 1800       | 320              |      |      |     |
| 110-SBH          |                 | 11                | 15             |                               |            | 285              |      |      |     |
| 150-SBH          |                 | 15                | 20             |                               |            | 330              |      |      |     |
| 190-SBH          |                 | 19                | 22             |                               |            | 490              |      |      |     |
| 220-SBH          |                 | 22                | 25             |                               |            | 520              |      |      |     |
| 4-110-SB         |                 | 200mm             | 11             |                               |            | 10               | 4.5  | 1800 | 260 |
| 4-150-SB         |                 |                   | 15             |                               |            | 14               |      |      | 280 |
| 4-190-SB         | 19              |                   | 15             |                               |            | 390              |      |      |     |
| 4-220-SB         | 22              |                   | 16             | 420                           |            |                  |      |      |     |
| 4-300-SB         | 30              |                   | 22             | 528                           |            |                  |      |      |     |
| 4-370-SB         | 37              |                   | 28             | 650                           |            |                  |      |      |     |
| 4-450-SB         | 45              |                   | 30             | 680                           |            |                  |      |      |     |
| 4-550-SB         | 55              |                   | 40             | 710                           |            |                  |      |      |     |
| 6-110-SB         | 250mm           | 11                | 6              | 7                             | 1200       | 360              |      |      |     |
| 6-150-SB         |                 | 15                | 9              |                               |            | 380              |      |      |     |
| 220-SBL          |                 | 22                | 11.5           |                               |            | 658              |      |      |     |
| 300-SBH          |                 | 30                | 13             |                               |            | 688              |      |      |     |
| 370-SBH          |                 | 37                | 19             |                               | 6          | 1800             | 898  |      |     |
| 4-370-SBL        |                 |                   | 22             |                               |            |                  | 928  |      |     |
| 450-SBH          |                 |                   | 26             |                               |            |                  | 958  |      |     |
| 550-SBH          |                 |                   | 30             |                               |            |                  | 1058 |      |     |
| 4-750-SB         | 75              | 40                | 7              | 1058                          |            |                  |      |      |     |
| 6-150-SBL        | 300mm           | 15                | 6.5            | 10                            | 1200       | 500              |      |      |     |
| 6-220-SBL        |                 | 22                | 9              | 510                           |            |                  |      |      |     |
| 300-SBM          |                 | 30                | 10             | 10.5                          |            | 550              |      |      |     |
| 370-SBM          |                 | 37                | 15             | 800                           |            |                  |      |      |     |
| 6-450-SB         |                 | 45                | 18             | 10                            | 1800       | 870              |      |      |     |
| 6-550-SB         |                 |                   | 21             |                               |            | 930              |      |      |     |
| 750-SBH          |                 |                   | 31             |                               |            | 1070             |      |      |     |
| 8-220-SB         |                 |                   | 22             |                               |            | 6                | 900  | 600  |     |
| 300-SBL          | 350mm           | 30                | 7.5            | 15                            | 1200       | 800              |      |      |     |
| 370-SBL          |                 | 37                | 9              |                               |            | 880              |      |      |     |
| 450-SBM          |                 | 45                | 12             |                               |            | 900              |      |      |     |
| 550-SB           |                 | 55                | 14             |                               |            | 990              |      |      |     |
| 750-SB           |                 | 75                | 20             |                               |            | 1150             |      |      |     |
| 8-220-SBL        |                 | 400mm             | 22             |                               |            | 5                | 20   | 900  | 800 |
| 6-370-SB         | 37              |                   | 7              | 960                           |            |                  |      |      |     |
| 450-SBL          | 45              |                   | 9              | 1000                          |            |                  |      |      |     |
| 550-SBM          | 55              |                   | 12             | 1200                          | 1050       |                  |      |      |     |
| 750-SBM          | 75              |                   | 16             |                               | 1250       |                  |      |      |     |
| 12-370-SB        | 37              |                   | 5              |                               | 600        | 1050             |      |      |     |
| 450-SBL          | 500mm           | 45                | 6              | 30                            | 900        | 1100             |      |      |     |
| 550-SBL          |                 | 55                | 7.5            |                               | 1250       |                  |      |      |     |
| 750-SBL          |                 | 75                | 10             |                               | 1200       | 1400             |      |      |     |



**SB/SBH/SBL형 대용량 이송 펌프(Large Capacity Pump)**

**외형치수도 (Outline Drawing and Size)**

| 형식<br>Pump Model | 구경<br>Size | A     | B    | C    | D    | E    | F    | G    |      |      |
|------------------|------------|-------|------|------|------|------|------|------|------|------|
| 8-SB             | 50mm       | 400   | 215  | 260  | 165  | 260  | 380  | 495  |      |      |
| 8-SBH            |            |       |      |      |      |      |      |      |      |      |
| 15-SB            | 80mm       | 545   | 300  | 280  | 255  | 320  | 450  | 620  |      |      |
| 22-SB            |            | 620   | 330  | 320  | 310  | 360  | 580  | 750  |      |      |
| 37-SB            |            |       |      |      |      |      |      |      |      |      |
| 55-SB            |            |       |      |      |      |      |      |      |      |      |
| 55-SBH           | 100mm      | 630   | 340  | 330  | 315  | 526  | 700  | 892  |      |      |
| 75-SBH           |            |       |      |      |      |      |      |      |      |      |
| 75-SB            |            |       |      |      |      |      |      |      |      |      |
| 110-SB           |            | 750   | 420  | 400  | 350  | 450  | 750  | 1025 |      |      |
| 150-SB           |            |       |      |      |      |      |      |      |      |      |
| 6-37-SB          | 150mm      | 835   | 490  | 425  | 437  | 410  | 700  | 941  |      |      |
| 75-SBL           |            | 970   | 542  | 593  | 497  | 526  | 800  | 1166 |      |      |
| 110-SBH          |            | 902   | 492  | 548  | 488  |      |      | 850  | 1109 |      |
| 150-SBH          |            |       |      |      |      |      |      | 1275 |      |      |
| 190-SBH          |            | 970   | 555  | 560  | 500  |      | 800  | 1148 |      |      |
| 220-SBH          |            |       |      |      |      |      |      |      |      |      |
| 4-110-SB         | 200mm      | 968   | 540  | 526  | 545  | 600  | 850  | 1278 |      |      |
| 4-150-SB         |            |       |      |      |      |      |      |      |      |      |
| 4-190-SB         |            |       |      |      |      |      |      |      |      |      |
| 4-220-SB         |            |       | 1022 | 582  | 560  |      | 530  |      | 850  | 1417 |
| 4-300-SB         |            |       |      |      |      |      |      |      |      |      |
| 4-370-SB         |            |       | 1075 | 610  | 625  |      | 560  |      | 1050 | 1700 |
| 4-450-SB         |            |       |      |      |      |      |      |      |      |      |
| 4-550-SB         |            | 1185  | 670  | 725  | 596  | 700  | 1300 | 1700 |      |      |
| 6-110-SB         | 250mm      | 1203  | 703  | 621  | 628  | 600  | 850  | 1220 |      |      |
| 6-150-SB         |            | 1146  | 683  | 558  | 617  | 526  | 800  | 1180 |      |      |
| 220-SBL          |            | 1252  | 702  | 715  | 700  | 700  | 1100 | 1510 |      |      |
| 300-SBH          |            | 1217  |      |      |      |      |      | 1472 |      |      |
| 370-SBH          |            | 1212  | 682  | 670  | 610  | 600  | 1050 | 1417 |      |      |
| 4-370-SBL        |            |       |      |      |      |      |      |      |      |      |
| 450-SBH          |            | 1240  | 710  |      |      |      | 1100 | 1468 |      |      |
| 550-SBH          |            | 1380  | 830  | 750  | 690  | 700  | 1300 | 1700 |      |      |
| 4-750-SB         |            |       |      |      |      |      |      |      |      |      |
| 6-150-SBL        |            | 300mm | 1300 | 760  | 655  | 745  | 600  |      | 1325 |      |
| 6-220-SBL        | 1343       |       | 770  | 730  | 695  | 730  | 1100 | 1455 |      |      |
| 300-SBM          | 1360       |       | 771  | 755  | 766  |      |      |      | 1535 |      |
| 370-SBM          |            |       | 772  | 755  |      |      |      |      |      |      |
| 6-450-SB         |            | 1413  | 810  | 830  | 772  |      | 1300 | 1778 |      |      |
| 6-550-SB         |            |       |      |      |      |      |      | 1833 |      |      |
| 750-SBH          |            | 1433  |      | 750  | 740  |      |      | 1700 |      |      |
| 8-220-SB         | 350mm      | 1500  |      | 820  | 760  | 570  | 1050 | 1400 |      |      |
| 300-SBL          |            |       |      |      |      |      |      |      |      |      |
| 370-SBL          |            |       |      | 860  |      |      |      |      |      |      |
| 450-SBM          |            |       | 1490 |      | 750  | 840  |      | 1200 | 1590 |      |
| 550-SB           |            |       |      |      |      |      |      |      |      |      |
| 750-SB           |            |       |      |      |      |      |      |      |      |      |
| 8-220-SBL        | 400mm      | 1450  |      | 730  | 900  | 700  |      |      |      |      |
| 6-370-SB         |            |       | 1480 | 820  | 750  |      |      |      |      |      |
| 450-SBL          |            |       |      |      |      |      |      |      | 1825 |      |
| 550-SBM          |            |       | 1650 | 960  | 830  | 972  |      | 1300 | 1890 |      |
| 750-SBM          |            |       |      |      |      |      |      |      |      |      |
| 12-370-SB        | 500mm      | 2080  |      | 1040 |      | 840  |      |      |      |      |
| 450-SBL          |            |       |      | 1270 | 1250 |      |      |      | 2080 |      |
| 550-SBL          |            |       | 2130 |      | 1000 |      | 780  | 1500 |      |      |
| 750-SBL          |            |       | 2290 | 1330 | 1200 | 1190 |      |      | 2100 |      |

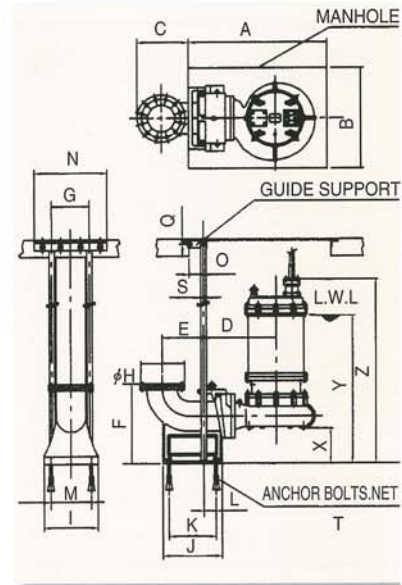




**SB/SBH/SBL형 대용량 이송 펌프(Large Capacity Pump)**

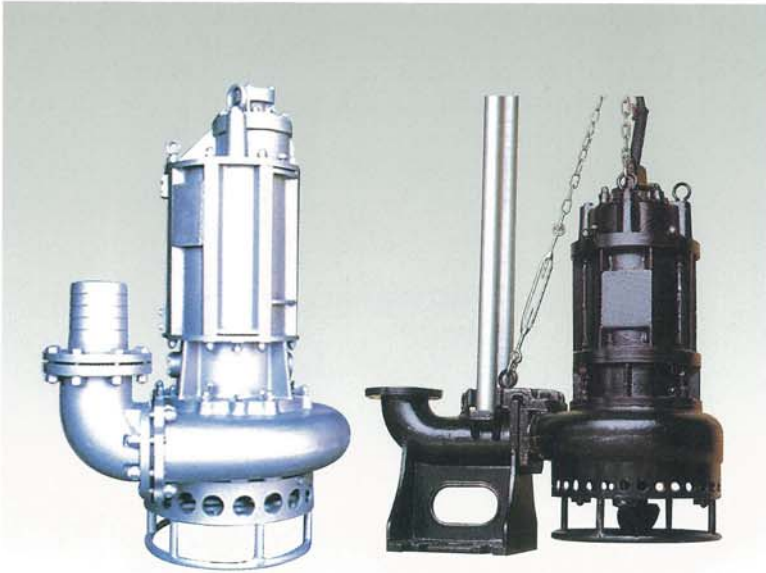
**외형치수도 (Outline Drawing and Size)**

| 형식<br>Pump Model | 구경<br>Size | A    | B    | C   | D     | E    | F    | G   | H   | I    | J    | K   | L   | M   | N    | O   | Q   | S   | T          | X    | Y    | Z    |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
|------------------|------------|------|------|-----|-------|------|------|-----|-----|------|------|-----|-----|-----|------|-----|-----|-----|------------|------|------|------|-------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|------|------|------|-----|------|------|-----|
| TO-8-SB          | 50mm       | 500  | 400  | 160 | 240   | 142  | 250  | 70  | 155 | 160  | 200  | 120 | 10  | 120 |      |     |     | 25  | 115        | 400  | 580  |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-8-SBH         |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      | 120  | 450   | 600  |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-15-SB         | 80mm       |      |      | 255 | 343   | 225  | 285  | 80  | 185 | 220  | 250  | 180 | 20  | 170 |      | 230 | 60  | 25  | 4-58X150L  | 154  | 650  | 815  |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-22-SB         |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-37-SB         |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-55-SB         |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-55-SBH        | 100mm      | 700  | 450  | 286 | 353   |      |      |     |     |      |      |     |     |     |      |     |     | 32  | 4-M16X150L | 150  | 700  | 960  |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-75-SBH        |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-75-SB         |            |      |      |     | 286   | 276  | 335  | 100 | 210 | 250  | 280  | 200 | 19  | 200 | 300  | 95  | 30  |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-110-SB        | 150mm      |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-150-SB        |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-37-SB       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      | 487  |      |     |     |     |     |     |     |    |     |     |     |      |      | 103  | 750 | 964  |      |     |
| TO-75-SBL        |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      | 540  |      |     |     |     |     |     |     |    |     |     |     |      |      | 145  |     | 1129 |      |     |
| TO-110-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      | 330  | 290  | 480 |     | 280 |     | 410 | 300 | 90 |     | 380 |     |      |      | 172  | 750 | 1081 |      |     |
| TO-150-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      | 490  |     |     |     |     |     |     |    |     |     |     |      |      | 490  | 700 | 931  |      |     |
| TP-190-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      | 490  | 700 | 931  |      |     |
| TO-220-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      | 552  |     |     |     |     |     |     |    |     |     |     |      |      | 143  | 850 | 1238 |      |     |
| TO-4-110-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      | 200mm | 1200 | 850  |      | 521  |      |     |     |     | 400 |     |     |    | 300 |     |     |      |      |      | 165 | 800  | 1113 |     |
| TO-4-150-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     | 563 |     |     |     |     |    |     |     |     |      |      |      |     |      | 163  | 850 |
| TO-4-190-SB      |            |      |      |     | 395   | 563  | 330  | 550 | 330 | 450  | 350  |     |     |     |      |     | 44  |     | 163        | 850  | 1258 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-220-SB      |            |      |      |     |       | 591  |      |     |     |      |      |     |     |     |      |     |     |     | 170        | 1000 | 1367 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-300-SB      |            |      |      |     |       | 651  |      |     |     |      |      |     |     |     | 360  | 100 | 40  |     | 154        |      | 1614 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-370-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     | 132        |      | 1175 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-450-SB      |            |      |      |     |       | 622  |      |     |     |      |      |     | 100 |     |      |     |     |     | 166        |      | 1146 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-550-SB      |            |      |      |     |       | 602  |      |     |     |      |      |     |     |     |      |     |     |     | 123        | 1100 | 1395 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-110-SB      |            |      |      |     |       | 625  |      |     |     |      |      |     |     |     |      |     |     |     |            |      | 1444 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-150-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-220-SBL       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-300-SBH       | 250mm      | 1400 |      | 500 | 605   | 400  | 630  | 280 | 400 | 460  | 560  | 430 |     | 360 |      |     |     |     | 192        |      | 1390 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-370-SBH       |            |      |      |     |       |      |      | 677 |     |      |      |     |     |     |      |     |     |     |            |      |      | 1050 |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-370-SBL     |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      | 193  | 1100  | 1441 |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-450-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      | 133   | 1150 | 1594 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-550-SBH       |            |      | 1000 |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     | 133        | 1150 | 1594 |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-4-750-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-150-SBL     | 300mm      | 1500 |      | 523 | 675   |      |      |     |     |      |      |     |     |     |      |     |     |     |            | 180  | 850  | 1285 |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-220-SBL     |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       | 1100 | 1444 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-300-SBM       |            |      |      |     |       |      |      |     | 687 | 450  | 810  | 445 | 600 | 630 |      |     |     | 500 | 700        | 150  | 65   |      | 173   |      | 1474 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-370-SBM       |            |      |      |     |       |      |      |     | 724 |      |      |     |     |     |      |     |     |     |            |      |      |      | 173   |      | 1711 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-450-SB      |            |      |      |     |       |      |      |     | 774 |      |      | 490 |     |     | 470  | 120 |     |     |            |      |      |      | 205   | 1300 | 1766 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-550-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      | 1666 |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-750-SBH       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-8-220-SB      |            |      |      |     | 350mm | 1600 |      |     | 650 |      |      |     |     |     |      |     |     |     |            |      |      |      |       | 200  |      | 1548 |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-300-SBL       |            |      |      |     |       |      |      |     |     |      |      | 565 | 480 | 880 | 490  | 640 | 650 |     |            |      | 520  | 800  | 160   | 40   |      |      | 1300 | 1765 |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-370-SBL       |            |      |      |     |       |      |      |     |     |      |      |     | 747 |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-450-SBM       |            |      |      |     |       |      |      |     | 820 |      |      |     |     |     |      |     |     |     |            |      |      |      |       | 320  | 1500 | 1970 |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-550-SB        |            |      | 1200 |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-750-SB        |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-8-220-SBL     | 400mm      | 1700 |      | 760 | 720   | 650  | 1060 | 550 | 560 | 750  | 960  | 550 | 100 | 600 | 910  | 170 |     | 100 |            | 360  | 1300 | 1710 |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-6-370-SB      |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-450-SBL       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-550-SBM       |            |      |      |     |       |      |      |     | 820 |      |      |     |     |     |      |     |     |     |            |      |      |      |       | 320  | 1500 | 1970 |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-750-SBM       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-12-370-SB     | 550mm      | 2000 | 1500 | 937 | 1040  | 780  | 1400 | 700 | 745 | 1000 | 1100 | 800 | 110 | 800 | 1100 | 180 | 50  |     | 4-M36X400  | 362  |      | 2182 |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-450-SBL       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     | 390 | 1700 | 2225 |      |     |      |      |     |
| TO-550-SBL       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     |      |      |      |     |      |      |     |
| TO-750-SBL       |            |      |      |     |       |      |      |     |     |      |      |     |     |     |      |     |     |     |            |      |      |      |       |      |      |      |      |      |     |     |     |     |     |     |    |     |     |     | 362  |      | 2334 |     |      |      |     |





# SGPT형 모래자갈이송펌프 (Sand and Gravel Pump)



### 특징

- Impeller 하부에 설치된 특수 Cutter Fan에 의하여 침전 축적된 토사, 곤죽흙 등을 교반하면서 배출할 수 있다. 또 특수강 소재를 사용하므로 내구성이 강하다.
- 준설 작업에 의하여 토사 곤죽흙의 채취, 배출, 구조설비의 슬러지 및 스케일이 포함된 용수 및 레미콘 플랜트 배출설비 등에 최적이다.

### 용도

- 지하철, 고층건물 지하실 공사
- 항만, 하천공사의 준설작업
- 모래채취용
- 상수도 침전시 청소용
- 제철소 응제 청소용
- 화물선 선저청소용
- 레미콘 공장 재활용 플랜트 설비용

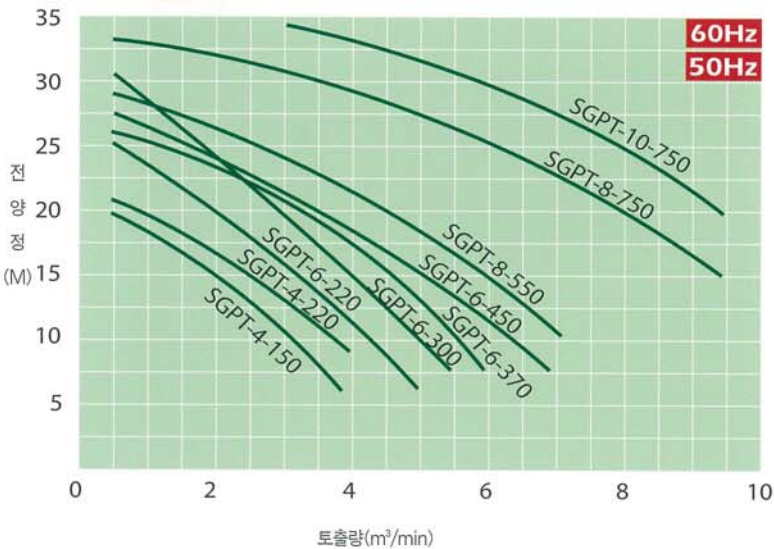
### APPLICATIONS

- Extracting sand of remicon plant
- Dredging operation in harbor
- Moving gravel and sand
- Drainage from construction site
- Draniage of underground construction
- Draniage and supplying of tunnel construction

### FEATURES

- In crease of the abrasive resistance by using High Chrome of impeller and Agitator
- Smoothed drainage of Sediment and sand by agitator
- Easy to carry with light weight
- Perfect watertight with double mechanical seal

### 성능곡선도 (Performance Curve)

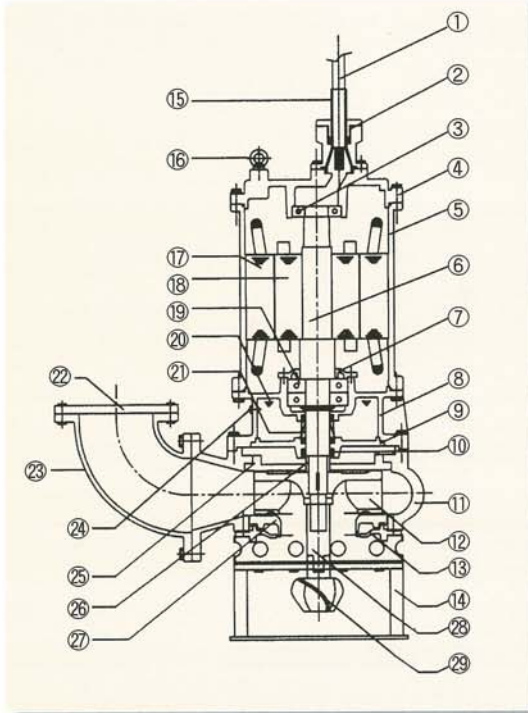


### 표준사양 (Standard Specifications)

| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m³/min) | 회전수<br>Rpm | 중량<br>Weight(kg) |
|------------------|-----------------|-------------------|----------------|------------------|------------|------------------|
| SGPT-4-150       | 100             | 15                | 15             | 2                | 1800       | 380              |
| SGPT-4-220       |                 | 22                |                | 2.5              |            | 400              |
| SGPT-6-220       | 150             |                   | 30             | 3.2              |            | 480              |
| SGPT-6-300       |                 | 510               |                |                  |            |                  |
| SGPT-6-370       |                 | 37                | 20             | 600              |            |                  |
| SGPT-6-450       |                 | 45                | 15             | 5                | 900        | 630              |
| SGPT-8-550       | 200             | 55                | 15             | 6                | 900        | 720              |
| SGPT-8-750       |                 | 75                | 20             | 8                | 900        | 750              |
| SGPT-10-750      | 250             |                   | 25             |                  |            |                  |

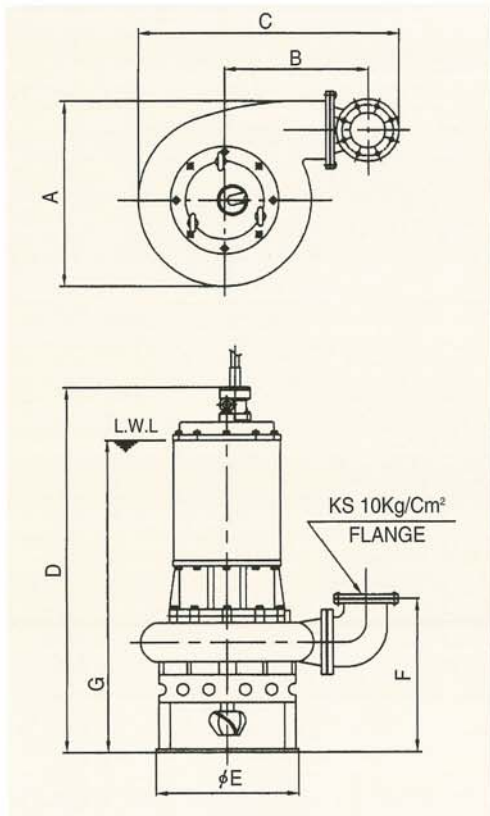
**SGPT형 모래자갈이송펌프 (Sand and Gravel Pump)**

**구조단면도 (Sectional Drawing)**



| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      | STS-410     |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GCD500      |
| 12     | IMPELLER         | SSC-13/H-CR |
| 13     | SUCTION COVER    | SSC-13/H-CR |
| 14     | STAND            | SS400       |
| 15     | PROTECTED        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | ELBOW            | GC200       |
| 24     | OIL BOLT         | SS400       |
| 25     | SLEEVE           | STS-410     |
| 26     | IMPELLER DISK    | SSC-13      |
| 27     | DELIVERY COVER   | SSC-13      |
| 28     | CONNECTIVE       | STS-304     |
| 29     | CUTTER FAN       | H-CR/SSC-13 |

**외형치수도 (Outline Drawing and Size)**



| 형식 Pump Model | 구경 Size | A   | B   | C    | D    | E   | F   | G    |       |      |      |     |     |      |
|---------------|---------|-----|-----|------|------|-----|-----|------|-------|------|------|-----|-----|------|
| SGPT-4-150    | 100mm   | 540 | 375 | 860  | 1140 | 400 | 475 | 750  |       |      |      |     |     |      |
| SGPT-4-220    |         |     |     | 930  |      |     |     |      |       |      |      |     |     |      |
| SGPT-6-220    | 150mm   | 650 | 400 | 920  | 1200 | 500 | 500 | 780  |       |      |      |     |     |      |
| SGPT-6-300    |         |     |     | 700  |      |     |     |      | 300   | 1100 | 1400 | 550 | 575 | 1050 |
| SGPT-6-370    |         |     |     |      |      |     |     |      |       |      |      |     |     |      |
| SGPT-6-450    |         |     |     |      |      |     |     |      |       |      |      |     |     |      |
| SGPT-8-550    | 200mm   | 800 | 350 | 1300 | 1600 | 550 | 600 | 1300 |       |      |      |     |     |      |
| SGPT-8-750    |         |     |     |      |      |     |     |      |       |      |      |     |     |      |
| SGPT-10-750   |         |     |     |      |      |     |     |      | 250mm |      |      |     |     |      |



# SGPN형 모래이송펌프 (Sand Pump)



### 특징

- Impeller 하부에 설치된 특수 Agitator에 의하여 침전 축적된 토사, 곤죽흙 등을 교반하면서 배출할 수 있다. 또 특수강 소재를 사용하므로 내구성이 강하다.
- 준설 작업에 의하여 토사 곤죽흙의 채취, 배출, 구조설비의 슬러지 및 스케일이 포함된 용수 및 레미콘 플랜트 배출설비 등에 최적이다.

### 용도

- 지하철, 고층건물 지하실 공사
- 항만, 하천공사의 준설작업
- 모래채취용
- 상수도 침전시 청소용
- 제철소 용제 청소용
- 화물선 선저청소용
- 레미콘 공장 재활용 플랜트 설비용

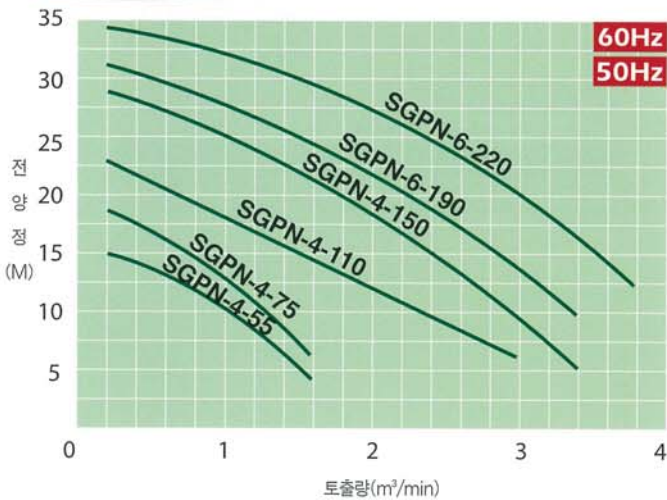
### APPLICATIONS

- Moving sand of remicon plant
- Discharging deposited soil
- Dredging sand at river, river mouth and sea floor
- Removal sediment from sumps or basins

### FEATURES

- In crease of the abraive resistance by using High Chorme of impeller and Agitator
- Smoothed drainage of sediment and sand by agitator
- Easy to carty with light weight
- Perfect watertight with double mechanical seal

### 성능곡선도 (Performance Curve)

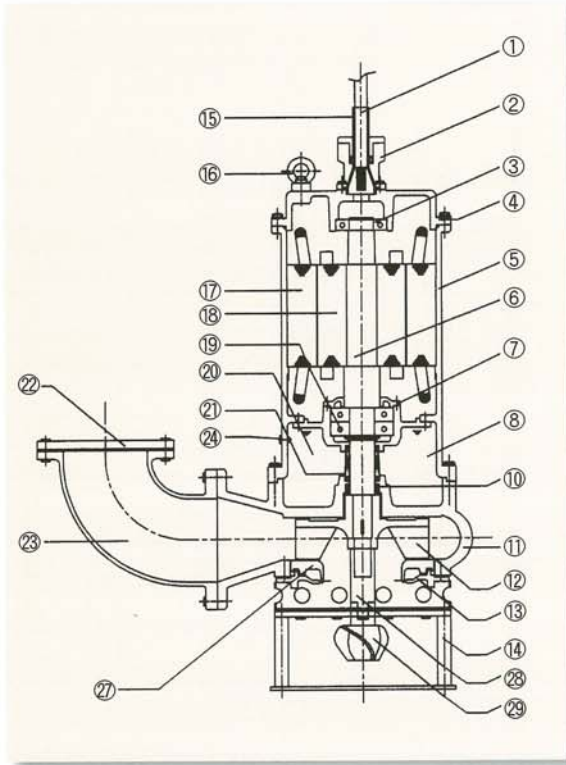


### 표준사양 (Standard Specifications)

| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m³/min) | 회전수<br>Rpm | 중량<br>Weight(kg) |
|------------------|-----------------|-------------------|----------------|------------------|------------|------------------|
| SGPN-4-55        | 100             | 5.5               | 10             | 1                | 1800       | 160              |
| SGPN-4-75        |                 | 7.5               | 12             |                  |            | 200              |
| SGPN-4-110       |                 | 11                | 15             | 250              |            |                  |
| SGPN-4-150       |                 | 15                | 20             |                  |            |                  |
| SGPN-6-190       | 150             | 19                | 25             | 1.5              |            | 300              |
| SGPN-6-220       |                 | 22                | 30             |                  |            | 350              |

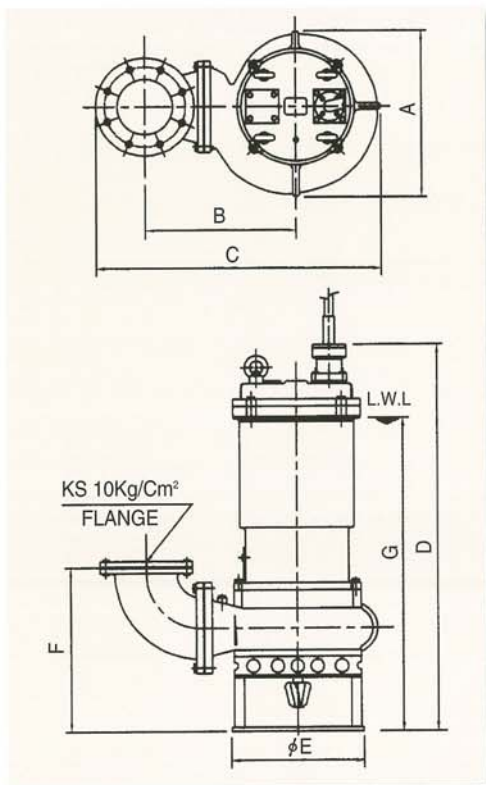
**SGPN형 모래이송펌프 (Sand Pump)**

**구조단면도 (Sectional Drawing)**



| 품번 No. | 품명 Name of Parts | 재질 Material |
|--------|------------------|-------------|
| 1      | CAB TYRE CABLE   | -           |
| 2      | STUFFING BOX     | GC200       |
| 3      | UPPER BEARING    | STB2        |
| 4      | MOTOR BRACKET    | GC200       |
| 5      | MOTOR FRAME      | GC200       |
| 6      | MOTOR SHAFT      | STS-410     |
| 7      | BEARING COVER    | GC200       |
| 8      | BEARING HOUSING  | GC200       |
| 9      | WATER CHAMBER    | GC200       |
| 10     | OIL SEAL         | N.B.R       |
| 11     | PUMP CASING      | GC-200      |
| 12     | IMPELLER         | SSC-13/H-CR |
| 13     | SUCTION COVER    | SSC-13/H-CR |
| 14     | STAND            | SS400       |
| 15     | PROTECTED        | N.B.R       |
| 16     | EYE BOLT         | SS400       |
| 17     | STATOR           | S-60        |
| 18     | ROTOR            | S-60        |
| 19     | LOWER BEARING    | STB2        |
| 20     | OIL              | TURBINE OIL |
| 21     | MECHANICAL SEAL  | SIC/SIC     |
| 22     | FLANGE           | SS400       |
| 23     | ELBOW            | GC-200      |
| 24     | OIL BOLT         | SS400       |
| 25     | SLEEVE           | STS-410     |
| 26     | IMPELLER DISK    | SSC-13      |
| 27     | DELIVERY COVER   | SSC-13      |
| 28     | CONNECTIVE       | STS-304     |
| 29     | CUTTER FAN       | SSC-13/H-CR |

**외형치수도 (Outline Drawing and Size)**



| 형식 Pump Model | 구경 Size | A   | B   | C   | D   | E   | F   | G   |
|---------------|---------|-----|-----|-----|-----|-----|-----|-----|
| SGPN-3-55     | 80mm    | 360 | 330 | 680 | 750 | 360 | 310 | 550 |
| SGPN-4-55     | 100mm   | 365 | 250 | 495 | 645 | 300 | 410 | 500 |
| SGPN-4-75     |         | 385 | 390 | 685 | 955 | 370 | 420 | 750 |
| SGPN-4-150    |         | 400 | 265 | 700 | 960 |     | 468 | 750 |
| SGPN-6-190    | 150mm   | 400 | 265 | 700 | 960 | 370 | 468 | 750 |
| SGPN-6-220    |         | 400 | 265 | 700 | 960 |     | 468 | 750 |



# SMX형 수중믹서 (Submersible Mixer)



### ■ 용도

- 오·폐수 또는 하수처리장-오수 침전물 및 각종 퇴적물의 교반
- 산업공장-석회, 모래등의 작은 고형물등의 침전방지 및 각종 양액의 균질화
- 양어장의 효과적인 산소공급, 물의 순환, 결빙방지, 온도조절등 양식의 최적상태 유지
- 석회, 모래 등 작은 고형물 등의 침전방지용

### ■ 특징

- 간결한 구조
- 상하좌우 각 방향의 기동이 가능하며 오수 및 액질 양액등의 균질화 및 침전 방지 효과가 크다.
- AIR DIFFUSER등과 사용하여 폭기 시간이 길게 됨으로 산소공급 능력을 배가하다.

### ■ APPLICATIONS

- Sewage, waste-water or drainage disposal plant sewage sediment and various liquid of piled object
- Industry Plant : anti-precipitation of small solid object such as sand and slime, and homogenizing a Various liquid
- A fish farm-Maintenance of best condition for breeding such a effective oxygen support, a circulation fo water freezing prevention and a temperature control
- Farm-homogenizing a fertilizer, a compost, and an excrement and antiprecipitation

### ■ FEATURES

- In stalled to any direction(upper, low right, left side)
- Simple structure
- Prominent effect in homogenizing a various liquid and protection of sediment
- Maximizing the Oxygen Supply by making the aeration time longer and using Airdiffuser, Surface turbine, and etc

## 표준사양 (Standard Specifications)

| 형 식 Model  | 정격출력 kW | 청수출력 kW | 극수P  | 감속비Gear | 회전수rpm | 최대처리체적 m <sup>3</sup> /hr | 유량 m <sup>3</sup> /min | 중량 kg |
|------------|---------|---------|------|---------|--------|---------------------------|------------------------|-------|
| SMX-4-8    | 0.75    | 0.7     | 4    |         | 1750   | 130                       | 2.2                    | 60    |
| SMX-4-15   | 1.5     | 1.3     |      |         |        | 170                       | 2.8                    | 65    |
| SMX-4-22   | 2.2     | 1.9     |      |         |        | 250                       | 4.0                    | 80    |
| SMX-4-37   | 3.7     | 3.4     |      |         |        | 300                       | 4.8                    | 80    |
| SMX-4-55   | 5.5     | 5.0     |      |         |        | 500                       | 8.3                    | 90    |
| SMX-4-75   | 7.5     | 7.0     |      |         |        | 700                       | 11.5                   | 95    |
| SMX-4-110  | 11      | 9.5     |      |         |        | 1000                      | 18.4                   | 110   |
| SMX-4-150  | 15      | 13.0    |      |         |        | 1500                      | 25.1                   | 120   |
| SMX-6-8    | 0.75    | 0.7     | 6    |         | 1180   | 150                       | 3.0                    | 65    |
| SMX-6-15   | 1.5     | 1.3     |      |         |        | 230                       | 4.8                    | 80    |
| SMX-6-22   | 2.2     | 1.9     |      |         |        | 300                       | 5.3                    | 80    |
| SMX-6-37   | 3.7     | 3.1     |      |         |        | 450                       | 7.5                    | 90    |
| SMX-6-55   | 5.5     | 4.9     |      |         |        | 750                       | 12.5                   | 110   |
| SMX-6-75   | 7.5     | 6.5     |      |         |        | 830                       | 13.8                   | 120   |
| SMX-6-110  | 11      | 10.0    |      |         |        | 1500                      | 25.3                   | 140   |
| SMX-8-15   | 1.5     | 1.3     |      |         |        | 8                         |                        | 870   |
| SMX-8-22   | 2.2     | 1.9     | 370  | 6.2     | 120    |                           |                        |       |
| SMX-8-37   | 3.7     | 3.1     | 900  | 15.0    | 150    |                           |                        |       |
| SMX-8-55   | 5.5     | 4.2     | 1000 | 17.0    | 155    |                           |                        |       |
| SMX-8-75   | 7.5     | 6.8     | 1200 | 22.0    | 160    |                           |                        |       |
| SMX-8-110  | 11      | 9.7     | 1400 | 24.0    | 180    |                           |                        |       |
| SMX-8-150  | 15      | 13.0    | 2000 | 34.0    | 200    |                           |                        |       |
| SMX-12-55  | 5.5     | 4.2     | 12   |         | 570    |                           |                        |       |
| SMX-12-75  | 7.5     | 6.2     |      |         |        | 1350                      | 23.0                   | 200   |
| SMX-12-110 | 11      | 9.5     |      |         |        | 2000                      | 34.0                   | 240   |
| SMX-4G-220 | 22      | 18.0    |      |         |        | 4                         | 1 : 6                  |       |

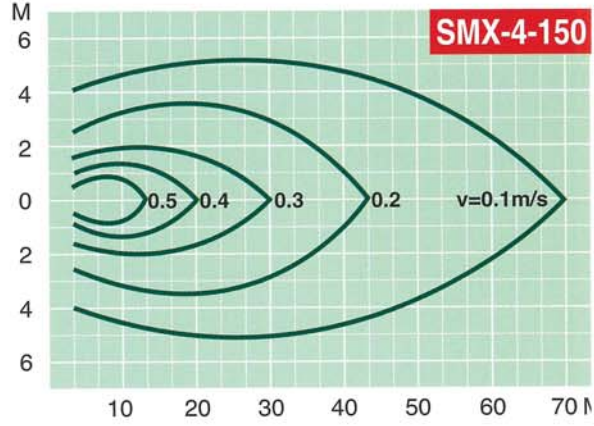
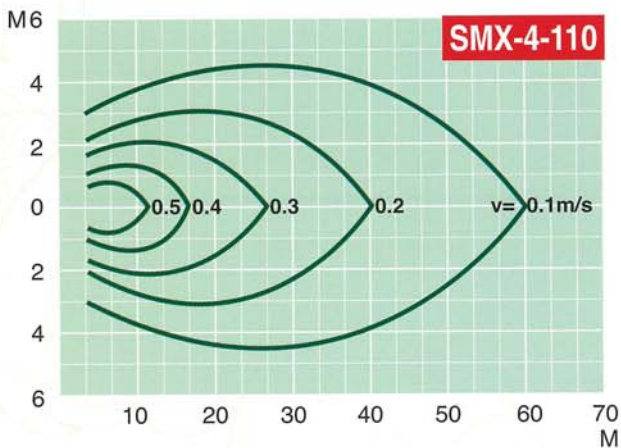
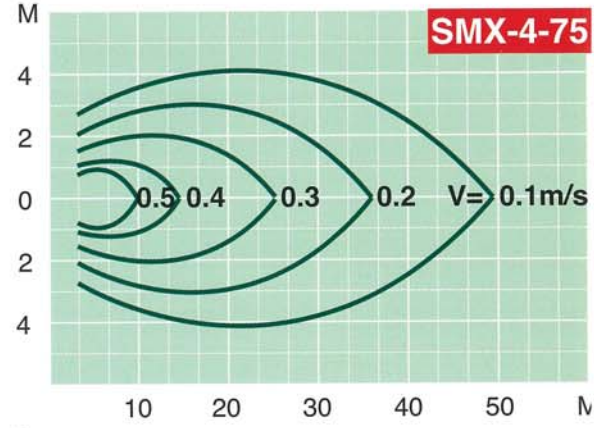
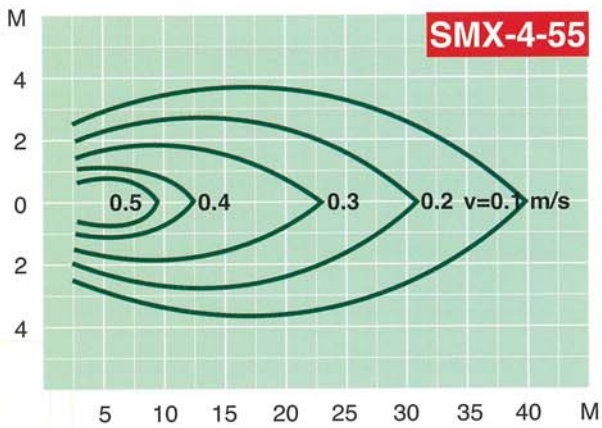
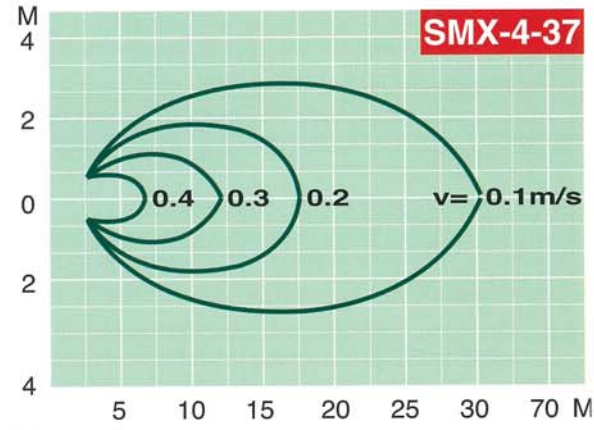
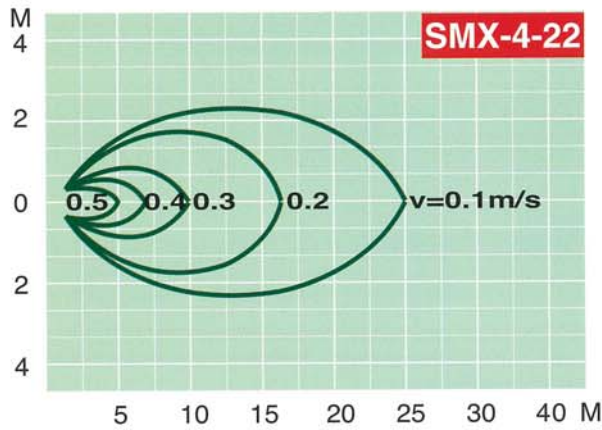
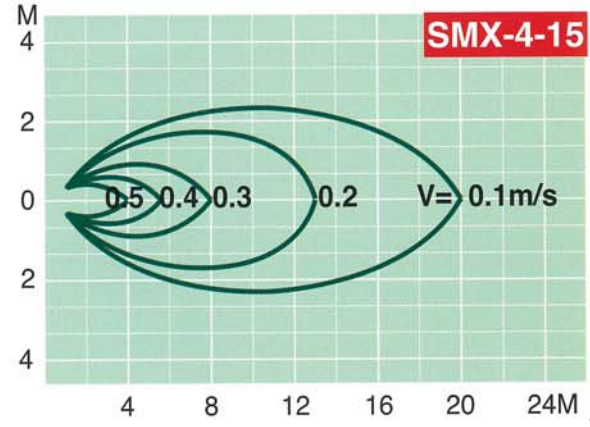
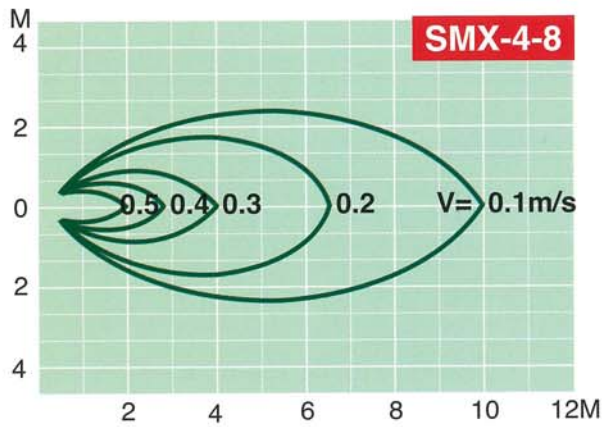
※수중믹서, 감속기어, 다극모터, 특수용(상행, 하행식) 등은 주문제작가능



# SMX형

## 수중믹서 (Submersible Mixer)

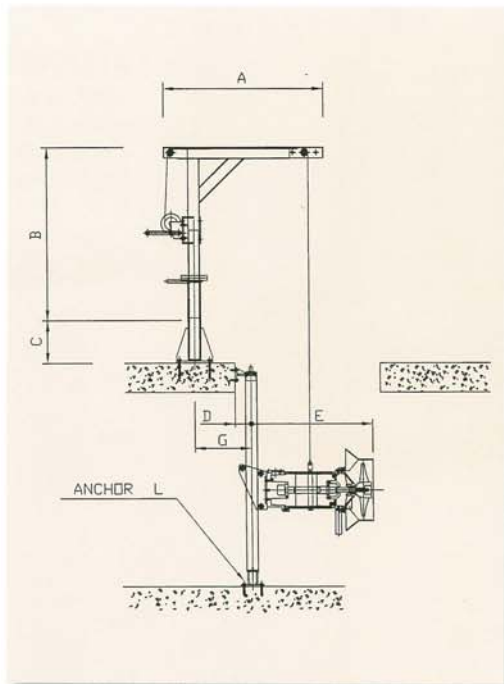
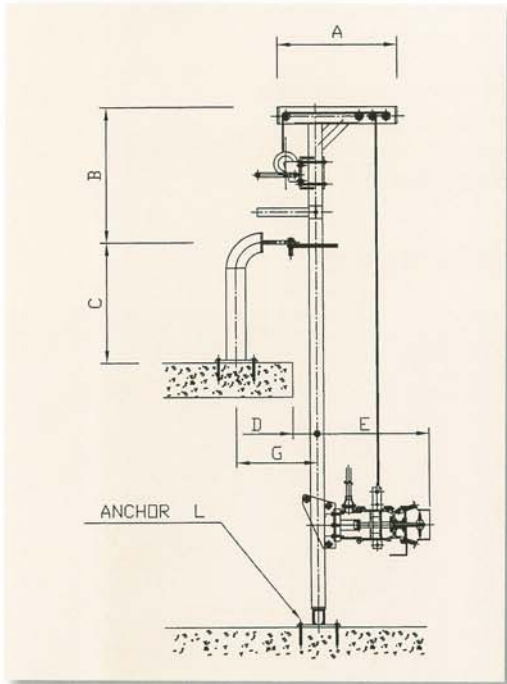
### 성능곡선도 (Performance Curve)





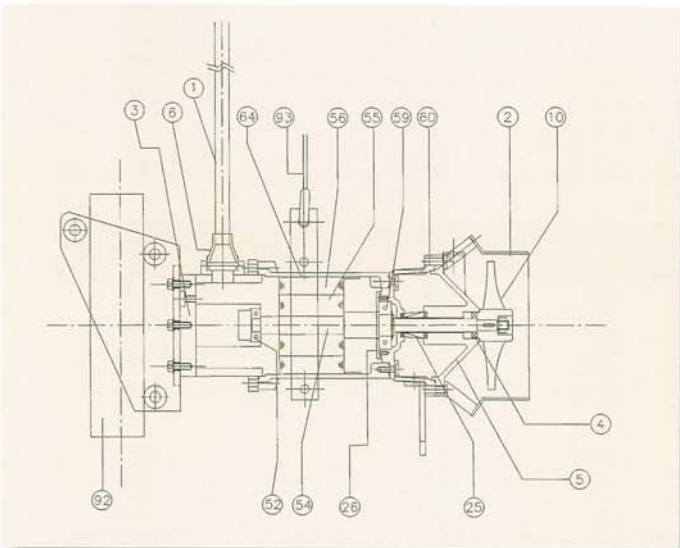
**SMX형 수중믹서 (Submersible Mixer)**

**외형치수도 (Outline Drawing and Size)**



| 형식<br>Pump Model | A   | B   | C   | D   | E    | F   | G   | L          |
|------------------|-----|-----|-----|-----|------|-----|-----|------------|
| SMX-4-8          | 700 | 800 | 715 | 150 | 520  | 150 | 470 | M12 × 120L |
| SMX-4-15         |     |     |     |     | 660  |     |     |            |
| SMX-4-22         |     |     |     |     | 660  |     |     |            |
| SMX-4-37         |     |     |     |     | 942  |     |     |            |
| SMX-4-55         |     |     |     |     | 942  |     |     |            |
| SMX-4-75         |     |     |     |     | 1075 |     |     |            |
| SMX-6-110        |     |     |     |     | 1216 |     |     |            |
| SMX-8-150        |     |     |     |     |      |     |     | M16 × 200L |

**구조단면도 (Sectional Drawing)**



| 품번<br>No. | 품명<br>Name of Parts | 재질<br>Material |
|-----------|---------------------|----------------|
| 1         | POWER CABLE         | -              |
| 2         | WEAR RING           | STS304         |
| 3         | BRACKET             | GC-200         |
| 4         | OIL SEAL            | N.B.R          |
| 5         | HOUSING COVER       | GC-200         |
| 6         | STUFFING BOX        | GC-200         |
| 10        | PROPELLER           | SSC13          |
| 25        | MECHNICAL SEAL      | SLICON CARBIDE |
| 26        | BEARING COVER       | SS400          |
| 52        | UPPER BEARING       | STB2           |
| 54        | MOTOR SHAFT         | STS410         |
| 55        | ROTOR               | S-60           |
| 56        | STATOR              | S-60           |
| 59        | LOWER BEARING       | STB2           |
| 60        | BEARING HOUSING     | GC-200         |
| 64        | FRAME               | GC-200         |
| 92        | GUIDE RAIL          | STS304         |
| 93        | WIRE ROPE           | STS304         |

**SAR/SARN형 수중폭기장치(Aerator)**



■ **APPLICATIONS**

- Aeration for industrial waste water, excreta, sewage
- Aeration in lake, reservoir, fish farm
- Aeration in septic tank of apartment, building, industrial factory

■ **FEATURES**

- High oxygen transfer, Powerful mixing and agitation
- Effective air solution by means of self-air suction
- Increase durability with 4pole motor, directly connected to shaft
- Perfect watertight with double mechanical seal

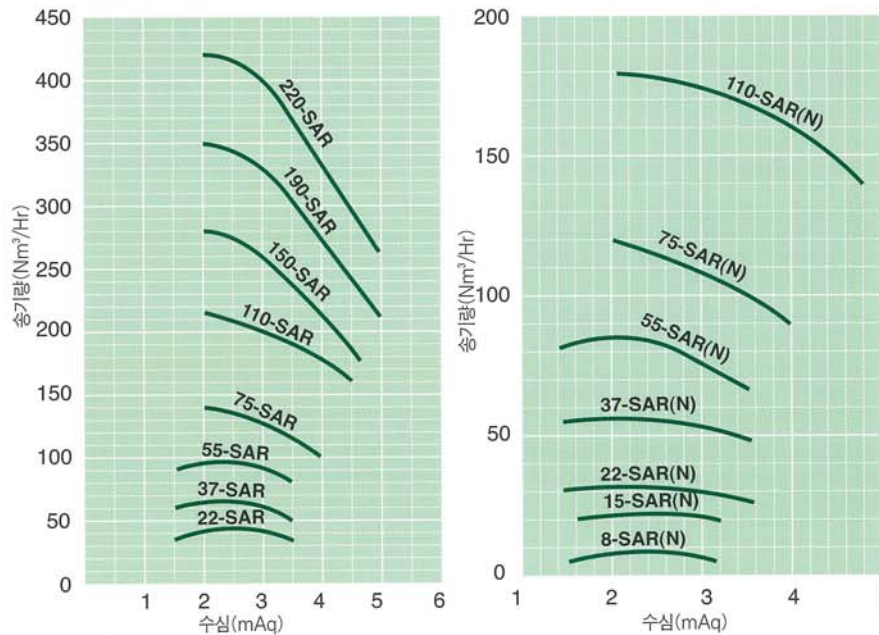
■ **특징**

- 수중 폭기용

■ **용도**

- 오·폐수 처리장의 공기주입
- 양어장 및 어패류 양식장의 산소공급

**수심곡선도 (Performance Curve)**



**표준 사양 (Standard Specifications)**

■ **SAR-폭기용 수중 에어렛타**

| 형식<br>Pump Model | 구경<br>mm | 출력<br>Out Put(kw) | 토출구수 | 송기량·수심<br>Nm³/Hr-m | 산소공급능력<br>kgO₂/Hr | 회전수<br>Rpm | 중량<br>Kg |
|------------------|----------|-------------------|------|--------------------|-------------------|------------|----------|
| 22-SAR           | 50mm     | 2.2               | 8    | 36-3               | 1.8-2.8           | 1800       | 170      |
| 37-SAR           |          | 3.7               |      | 60-3               | 3.5-5.0           |            | 180      |
| 55-SAR           |          | 5.5               |      | 90-3               | 5.5-7.7           |            | 220      |
| 75-SAR           |          | 7.5               |      | 125-3              | 8.2-11.3          |            | 240      |
| 110-SAR          | 80mm     | 11                |      | 200-3              | 13-18             |            | 366      |
| 150-SAR          |          | 15                |      | 260-3              | 17-23             |            | 376      |
| 190-SAR          |          | 19                |      | 330-3              | 20-27             |            | 606      |
| 220-SAR          |          | 22                |      | 400-3              | 24-36             |            | 616      |

■ **SARN-수중 에어렛타**

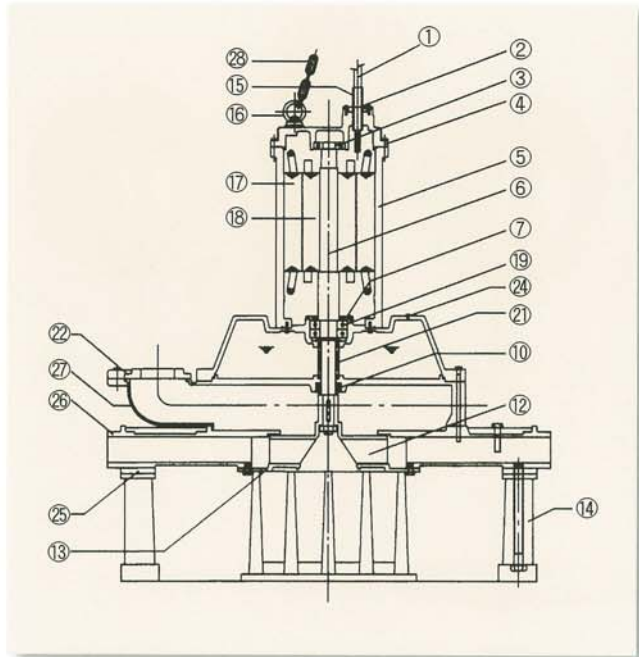
| 형식<br>Pump Model | 구경<br>mm | 출력<br>Out Put(kw) | 토출구수 | 송기량·수심<br>Nm³/Hr-m | 산소공급능력<br>kgO₂/Hr | 회전수<br>Rpm | 중량<br>Kg |
|------------------|----------|-------------------|------|--------------------|-------------------|------------|----------|
| 22-SAR(N)        | 50mm     | 2.2               | 8    | 36-3               | 1.8-2.8           | 1800       | 170      |
| 37-SAR(N)        |          | 3.7               |      | 60-3               | 3.5-5.0           |            | 180      |
| 55-SAR(N)        |          | 5.5               |      | 90-3               | 5.5-7.7           |            | 220      |
| 75-SAR(N)        |          | 7.5               |      | 125-3              | 8.2-11.3          |            | 240      |
| 110-SAR(N)       | 80mm     | 11                |      | 200-3              | 13-18             |            | 366      |
| 150-SAR(N)       |          | 15                |      | 260-3              | 17-23             |            | 376      |
| 190-SAR(N)       |          | 19                |      | 330-3              | 20-27             |            | 606      |
| 220-SAR(N)       |          | 22                |      | 400-3              | 24-36             |            | 616      |



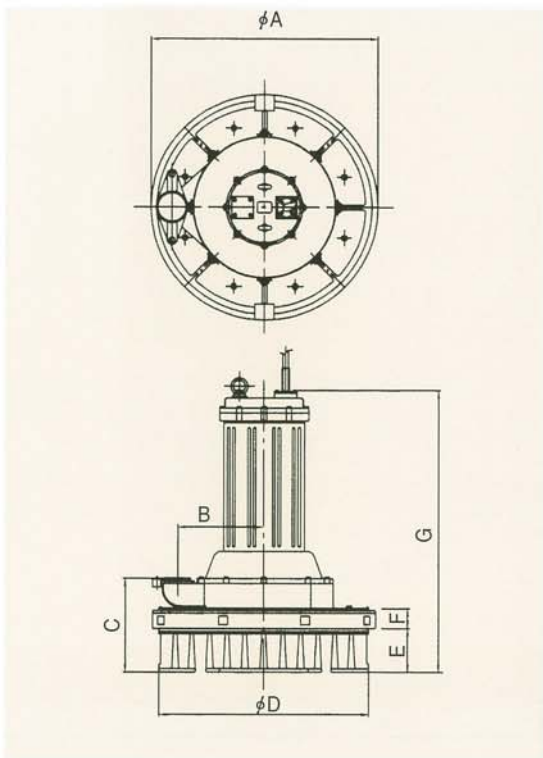
**SAR/SARN형 수중폭기장치(Aerator)**

**구조단면도 (Sectional Drawing)**

| 품번<br>No. | 품명<br>Name of Parts | 재질<br>Material |
|-----------|---------------------|----------------|
| 1         | CAB TYRE CABLE      | -              |
| 2         | STUFFING BOX        | GC200          |
| 3         | UPPER BEARING       | STB2           |
| 4         | MOTOR BRACKET       | GC200          |
| 5         | MOTOR FRAME         | GC200          |
| 6         | MOTOR SHAFT         | STS410         |
| 7         | BEARING COVER       | GC200          |
| 10        | OIL SEAL            | N.B.R          |
| 12        | IMPELLER            | SSC13          |
| 13        | SUCTION COVER       | GCD500         |
| 14        | STAND               | GC200          |
| 15        | PROTECTED           | N.B.R          |
| 16        | EYE BOLT            | SS400          |
| 17        | STATOR              | S-60           |
| 18        | ROTOR               | S-60           |
| 19        | LOWER BEARING       | STB2           |
| 21        | MECHANICAL SEAL     | SIC/SIC        |
| 22        | SCREWED FLANGE      | GC200          |
| 24        | OIL BOLT            | SS400          |
| 25        | GUIDE VANE          | GC200          |
| 26        | GUIDE VANE COVER    | GC200          |
| 27        | AIR CASING          | GC200          |
| 28        | CHAIN               | SS400          |



**외형치수도 (Outline Drawing and Size)**



**■ SAR-폭기용 수중 에어레타**

| 형식<br>Pump Model | 구경<br>Size | A    | B   | C   | D   | E   | F  | G    |
|------------------|------------|------|-----|-----|-----|-----|----|------|
| 22-SAR           | 50mm       | 700  | 271 | 224 | 670 | 90  | 50 | 630  |
| 37-SAR           |            |      |     |     |     |     |    | 845  |
| 55-SAR           |            |      |     |     |     |     |    | 865  |
| 75-SAR           | 80mm       |      |     | 244 |     |     | 70 | 935  |
| 110-SAR          |            |      |     |     |     |     |    | 945  |
| 150-SAR          | 100mm      | 1000 | 385 | 254 | 975 | 130 | 80 | 945  |
| 190-SAR          |            |      |     |     |     |     |    | 1058 |
| 220-SAR          |            |      |     |     |     |     |    |      |

**■ SARN-수중 에어레타**

| 형식<br>Pump Model | 구경<br>Size | A    | B   | C   | D   | E   | F  | G    |
|------------------|------------|------|-----|-----|-----|-----|----|------|
| 22-SAR(N)        | 50mm       | 700  | 271 | 224 | 670 | 90  | 50 | 630  |
| 37-SAR(N)        |            |      |     |     |     |     |    | 845  |
| 55-SAR(N)        |            |      |     |     |     |     |    | 865  |
| 75-SAR(N)        | 80mm       |      |     | 244 |     |     | 70 | 935  |
| 110-SAR(N)       |            |      |     |     |     |     |    | 945  |
| 150-SAR(N)       | 100mm      | 1000 | 385 | 254 | 975 | 130 | 80 | 945  |
| 190-SAR(N)       |            |      |     |     |     |     |    | 1058 |
| 220-SAR(N)       |            |      |     |     |     |     |    |      |



# SCP형

## 스컴제거 펌프(Scum Skimmer Pump)



### ■ 용도

- 상수도 침전지 부상물 처리.
- 수면상의 부유물 회수.
- 오·폐수처리시설의 침전조 및 원수조에서 부유물제거 반송

### ■ 적용

- 흡입구의 막힘이나 펌프의 공회전 최소화.
- 스킴 파쇄장치를 통한 완벽한 스킴 제거.
- 수면의 변화에 따른 흡입구위치의 조정이 쉽다.

### ■ APPLICATIONS

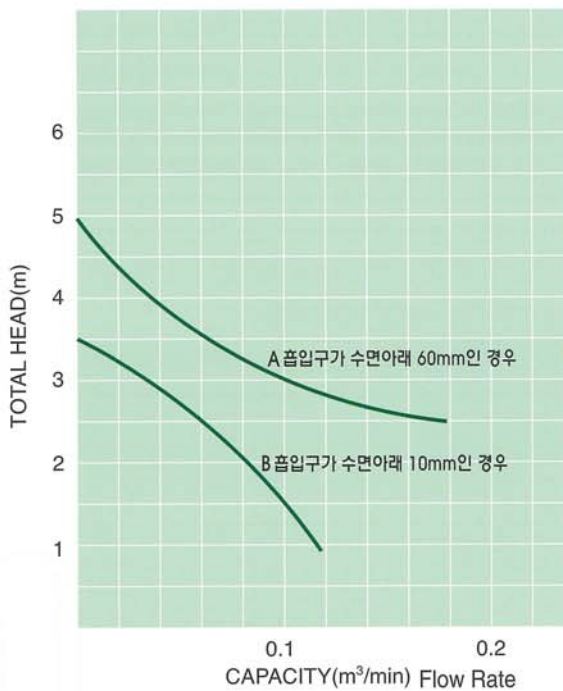
- The treatment of material on the surface which is in the water works
- With drawal the floatings on the water
- The Sending back and removal of floatings at the water tank(cisterh) and precipitator which are in dirty(filty)
- Waste water dealing system

### ■ FEATURES

- Minimize the turning of pump of blocking of an inlet Valve
- The Complete removing of scurh through scum breaking equipment
- It is easy to control the position of inlet Valve according to the Variation of the surface of the water

### 성능곡선도

(Performance Curve)



A: Suction mouth 60MM under W.L  
B: Suction Mouth 10MM under W.L

### 표준사양

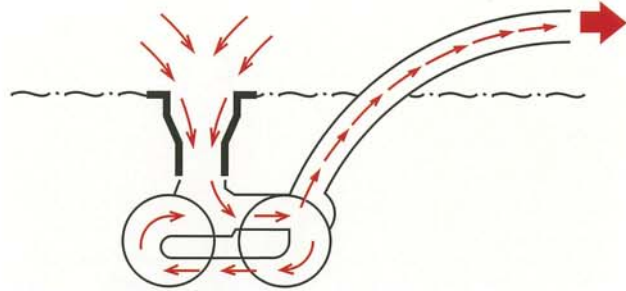
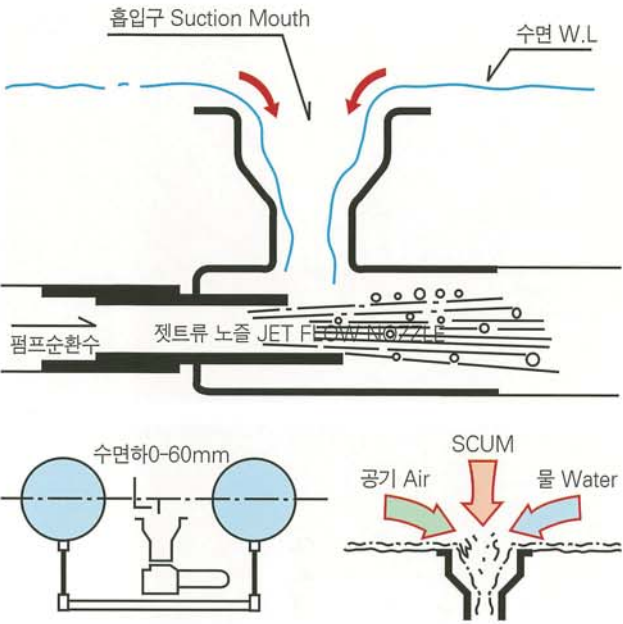
(Standard Specifications)

| 모델 식<br>Pump Model | 구 경<br>Disc. (mm) | 출 력<br>Out Put(kw) | 전 양 정<br>Head(m) | 토 출 량<br>Q(m³/min) | 회 전 수<br>Rpm | 중 량<br>Weight(kg) | 최 대 고 형 물<br>직 경(mm) |
|--------------------|-------------------|--------------------|------------------|--------------------|--------------|-------------------|----------------------|
| 8-SCP              | 50                | 0.75               | 5                | 0.2                | 3450         | 45                | 25                   |



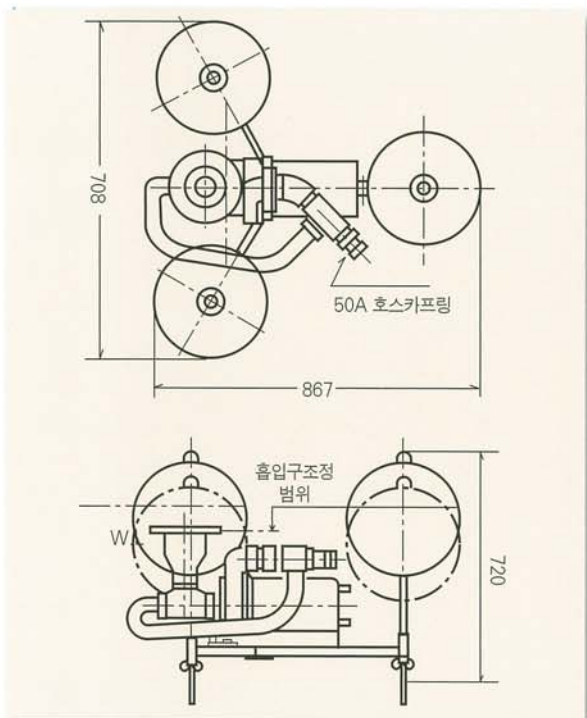
# SCP형 스킴제거 펌프(Scum Skimmer Pump)

## 구조단면도 (Sectional Drawing)



- 부유식 장치로써 수면의 변동에 따라 움직이므로 수면과 흡입구 관계가 일정합니다.
- 스킴과 분류된 분리수 순환하여 흡입됨으로 펌프에 공회정으로 인한 무리가 가지 않습니다.
- 부유식이므로 설치가 간편하며 조작이 쉽습니다.
- Water is circulated through the by-pass from the pump discharge outlet to generate high velocity at nozzle
- Use of a flexible hose simplifies installation

## 외형치수도 (Outline Drawing and Size)



침전조 스킴제거 처리

- This guarantees a stable sucking process even if water, air and suspended matter are drawn in from water surface simultaneously

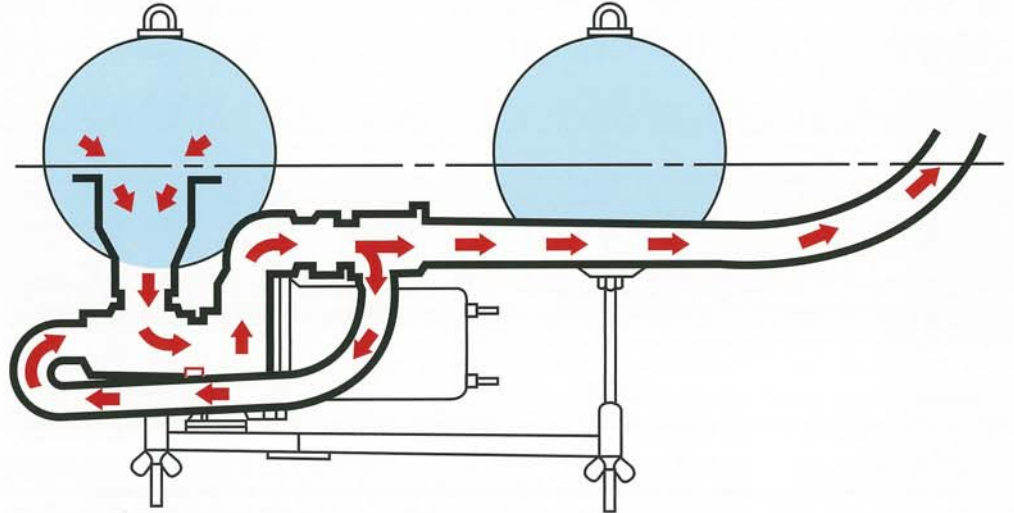


## SCP형

## 스컴제거 펌프(Scum Skimmer Pump)

### 작동원리

(FLOWING of SCUM)



- SCUM SKIMMER는 수면위로 발생하여 떠다니는 부유물(스컴, 기름, 거품)등을 흡입하여 완벽히 제거하는 부유식 스킴펌프입니다.
- 제트 이젝터 원리를 도입함으로써 흡입구의 막힘, 펌프의 공회전 등을 최소화시킨 스킴스키밍 펌프입니다.
- 딱딱하고 흡입구보다 큰 스컴 발생시에도 스컴파쇄장치가 장착되어 있어 완벽한 제거 작업이 가능합니다.
- 부유식이므로 침전조의 스컴량 변화등 수면의 변화에 따라 흡입구 위치를 조정하여 부유물의 회수가 보다 효율적이고, 물의 흡입부족으로 발생하는 기계적 무리가 없습니다.
- A Powerful Jet injector helps the pump suck up water, air, or scum at a constant rate
- This creates low Pressure at suction mouth, Constantly drasing water and air laden floating articles



# SCR형

# 스크류펌프(Screw Pump)



### ■ 용도

- 각종 고농도 슬러지 이송
- 펄프 고농도 슬러지 이송
- 과실, 어·패류 이송용
- 하수, 오·폐수 처리용

### ■ 적용

- 원전무폐쇄형 임펠러로 막힘이나 감김이 없음
- 고형물의 무손상 이송이 가능하고 내마모성이 우수
- 이중메카니컬 및 오일 윤활에 의해 별도의 축봉수장치 불필요

### ■ APPLICATIONS

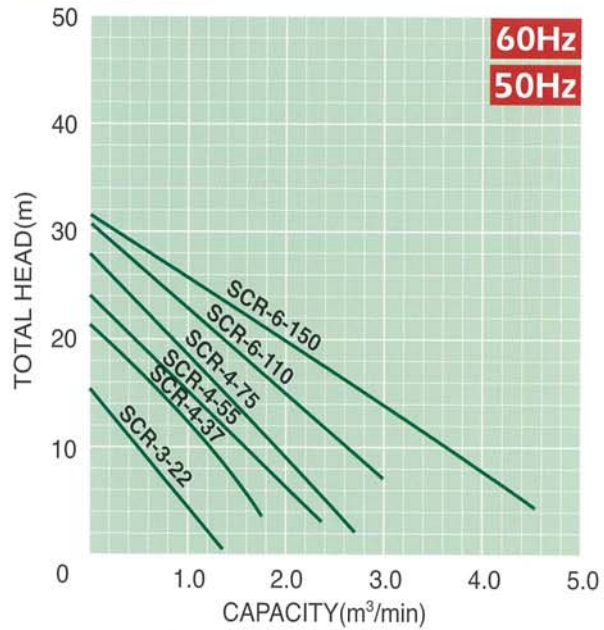
- For drainage, Sewage, and waste water treatment
- For fruit and fishes transfer
- For pulp and leather transfer
- For Various high-density sludge transfer

### ■ FEATURES

- No clog and no twining by a perfect (NON-clog screw) impeller
- Safe movement of a solid object and long life span
- Special complete water proof of shaft by dual Mechanical seal and a oil lubrication

### 성능곡선도

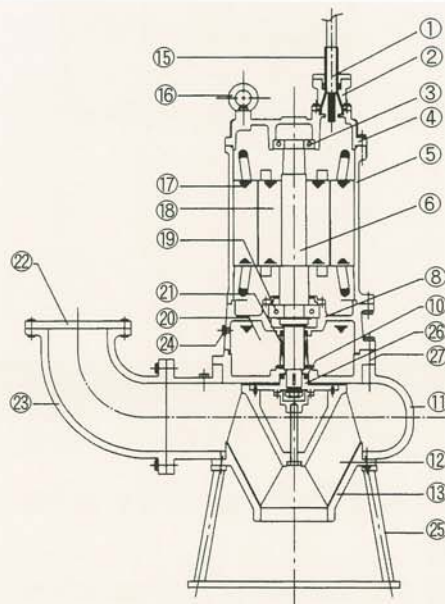
(Performance Curve)



### 구조단면도

(Sectional Drawing)

| 품번 No. | 품명 Name of Parts | 재질 Material   |
|--------|------------------|---------------|
| 1      | CAB TYRE CABLE   | -             |
| 2      | STUFFING BOX     | GC200         |
| 3      | UPPER BEARING    | STB2          |
| 4      | MOTOR BRACKET    | GC200         |
| 5      | MOTOR FRAME      | GC200         |
| 6      | MOTOR SHAFT      | STS410        |
| 8      | BEARING HOUSING  | GC200         |
| 10     | OIL SEAL         | N.B.R         |
| 11     | PUMP CASING      | GC200         |
| 12     | IMPELLER         | GCD500/SSC-13 |
| 13     | SUCTION COVER    | GCD500        |
| 15     | PROTECTED        | N.B.R         |
| 16     | EYE BOLT         | SS400         |
| 17     | STATOR           | S-60          |
| 18     | ROTOR            | S-60          |
| 19     | LOWER BEARING    | STB2          |
| 20     | OIL              | TURBINE OIL   |
| 21     | MECHANICAL SEAL  | SIC/SIC       |
| 22     | FLANGE           | SS400         |
| 23     | ELBOW            | GC200         |
| 24     | OIL BOLT         | SS400         |
| 25     | STAND            | SS400         |
| 26     | IMPELLER BOSS    | GC200         |
| 27     | CASING COVER     | GC200         |





# SCR형 스크류펌프(Screw Pump)

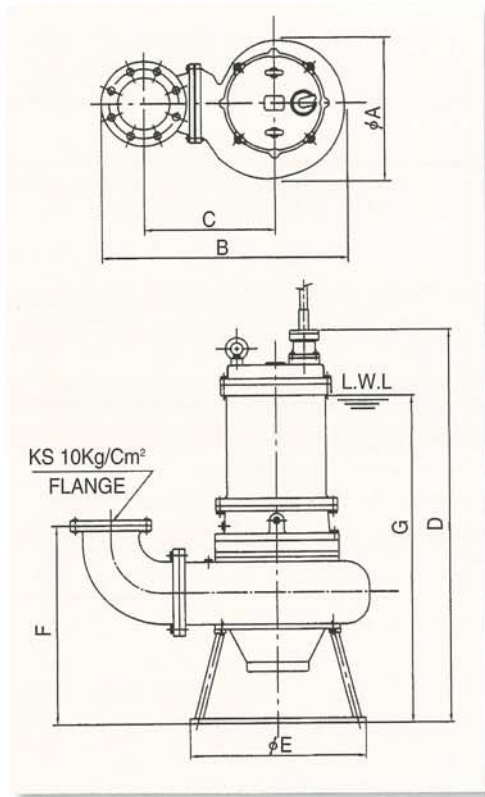
## 표준사양

(Standard Specifications)

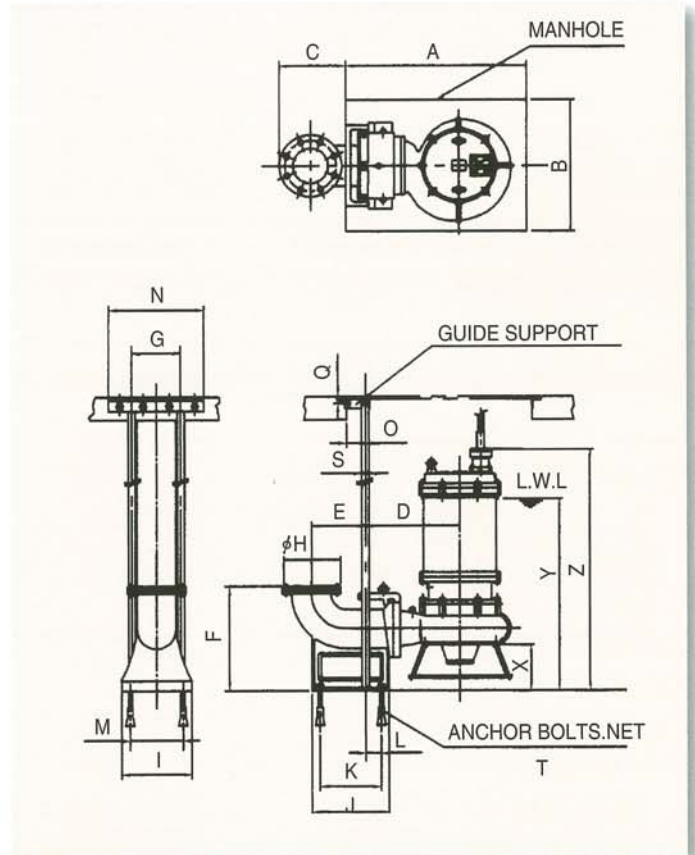
| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>Q(m <sup>3</sup> /min) | 회전수<br>Rpm |
|------------------|-----------------|-------------------|----------------|-------------------------------|------------|
| SCR-3-22         | 80              | 2.2               | 10.5           | 0.6                           | 1800       |
| SCR-4-37         | 100             | 3.7               | 12.5           | 1                             |            |
| SCR-4-55         |                 | 5.5               | 13             | 1.5                           |            |
| SCR-4-75         |                 | 7.5               | 19             |                               |            |
| SCR-6-110        | 150             | 11                | 20             | 2                             |            |
| SCR-6-150        |                 | 15                | 24             |                               |            |

## 외형치수도

(Outline Drawing and Size)



| 형식<br>Pump Model | 구경<br>Size | A   | B     | C   | D    | E    | F   | G    |     |
|------------------|------------|-----|-------|-----|------|------|-----|------|-----|
| SCR-3-22         | 80mm       | 360 | 620   | 330 | 750  | 360  | 310 | 550  |     |
| SCR-4-37         | 100mm      |     | 630   | 340 | 892  |      | 315 | 700  |     |
| SCR-4-55         |            |     | 150mm | 450 | 750  |      | 420 | 1025 | 450 |
| SCR-4-75         |            | 450 |       | 750 | 420  | 1025 | 450 | 350  | 800 |
| SCR-6-110        | 150mm      | 450 | 750   | 420 | 1025 | 450  | 350 | 800  |     |
| SCR-6-150        |            | 450 | 750   | 420 | 1025 | 450  | 350 | 800  |     |



| 형식<br>Pump Model | 구경<br>Size | A    | B   | C   | D   | E   | F   | G   | H   | I   | J   | K   | L   | M   | N   | O   | Q   | S          | T          | X   | Y    | Z   |
|------------------|------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|------------|-----|------|-----|
| TO-SCR-3-22      | 80mm       | 700  | 450 | 255 | 230 | 225 | 285 | 80  | 185 | 220 | 250 | 180 | 20  | 170 | 230 | 60  | 49  | 32         | 4-5/8-150L | 100 | 500  | 670 |
| TO-SCR-4-37      | 285        |      |     | 270 | 276 | 335 | 100 | 210 | 250 | 280 | 200 | 19  | 200 | 300 | 95  | 44  | 154 |            |            | 550 | 755  |     |
| TO-SCR-4-55      | 285        |      |     | 270 | 276 | 335 | 100 | 210 | 250 | 280 | 200 | 19  | 200 | 300 | 95  | 44  | 154 |            |            | 450 | 620  |     |
| TO-SCR-4-75      | 285        |      |     | 270 | 276 | 335 | 100 | 210 | 250 | 280 | 200 | 19  | 200 | 300 | 95  | 44  | 154 |            |            | 450 | 620  |     |
| TO-SCR-6-110     | 150mm      | 1200 | 850 | 330 | 270 | 290 | 480 | 280 | 280 | 400 | 410 | 300 | 90  | 300 | 380 | 100 | 40  | 4-M20X200L | 200        | 700 | 1000 |     |
| TO-SCR-6-150     |            | 1200 | 850 | 330 | 270 | 290 | 480 | 280 | 280 | 400 | 410 | 300 | 90  | 300 | 380 | 100 |     |            | 200        | 700 | 1000 |     |





# SAX형

## 수중 축류 펌프(Axial Flow Pump)



### ■ 용 도

- 관개용수, 공업용수 취수, 급수
- 침수, 유수지 등의 우수 배수
- 저양정 대유량 급 배수

### ■ 적 용

- 간단한 설치 시공, 편리하고 손쉬운 유지관리
- 전동기 및 베어링의 온도감지 및 누수감지 장치내장
- 간결한 구조
- 다년간 경험의 우수한 설계로 제작됨

### ■ APPLICATIONS

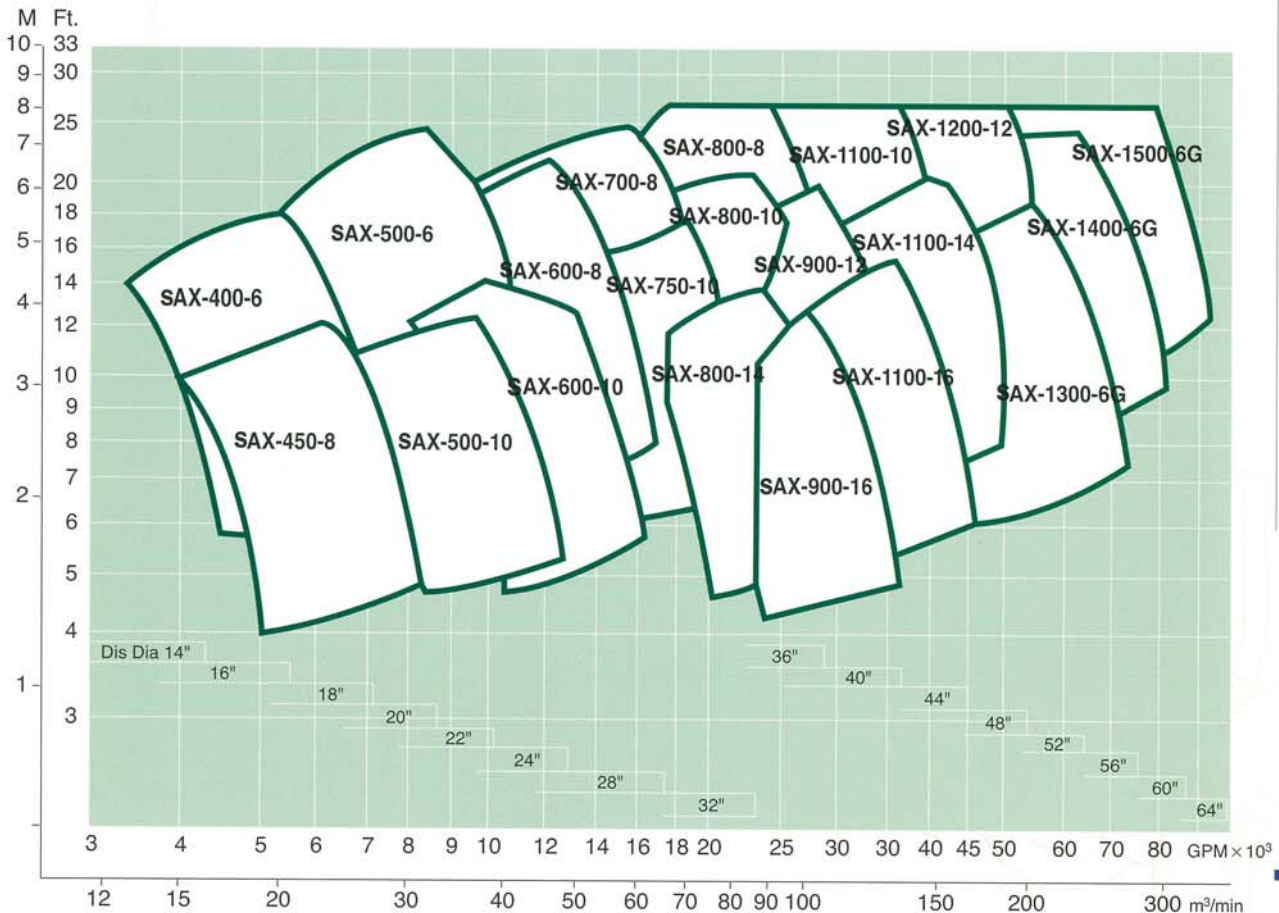
- Drain large quantity for irrigation, agricultural water
- Reserve water for water works and industrial supply
- Protection from flood, heavy rain
- Transfer a large quantity of sewage water
- Circulate a large quantity of water a pleasure resort of park, lake

### ■ FEATURES

- Easy to handle, install with close, compact design
- Various application to low head, large quantity
- Reserve water for water works and industrial supply
- Transfer a large quantity of sewage water
- Circulate a large quantity of water pleasure resort of park, lake

### 성능곡선도

(Performance Curve)





# SAX형

## 수중 축류 펌프(Axial Flow Pump)

### 표준 사양 (Standard Specifications)

#### ■ SAX-수중축류펌프

| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>(m <sup>3</sup> /min) | 회전수<br>Rpm |     |     |
|------------------|-----------------|-------------------|----------------|------------------------------|------------|-----|-----|
| SAX-15-6P        | 400mm           | 15                | 3.8            | 16                           | 1200       |     |     |
| SAX-19-6P        |                 | 19                | 4              | 19                           |            |     |     |
| SAX-22-6P        |                 | SAX-400-6         | 22             | 4.5                          |            | 20  |     |
| SAX-30-6P        |                 |                   | 30             | 5.2                          |            | 23  |     |
| SAX-30-6P        |                 | 500mm             | 30             | 5                            |            | 25  |     |
| SAX-37-6P        |                 |                   | 37             | 5.5                          |            | 28  |     |
| SAX-45-6P        | SAX-500-6       |                   | 45             | 5.6                          | 33         |     |     |
| SAX-55-6P        |                 | 55                | 6.5            | 35                           |            |     |     |
| SAX-19-8P        | 450mm           | 19                | 3.5            | 22                           | 900        |     |     |
| SAX-22-8P        | SAX-450-8       | 22                | 3.5            | 25                           |            |     |     |
| SAX-37-8P        |                 | 37                | 4.3            | 35                           |            |     |     |
| SAX-45-8P        | 600mm           | 45                | 4.7            | 40                           |            |     |     |
| SAX-55-8P        |                 | SAX-600-8         | 55             | 5.5                          |            | 42  |     |
| SAX-75-8P        | 75              |                   | 5.8            | 55                           |            |     |     |
| SAX-22-10P       | 500mm           | 22                | 3              | 30                           | 720        |     |     |
| SAX-30-10P       |                 | SAX-500-10        | 30             | 3.5                          |            | 35  |     |
| SAX-37-10P       | 37              |                   | 3.6            | 43                           | 900        |     |     |
| SAX-55-8P        | 700mm           | 55                | 5              | 45                           |            |     |     |
| SAX-75-8P        |                 | 75                | 5.6            | 55                           |            |     |     |
| SAX-90-8P        | SAX-700-8       | 90                | 6              | 63                           |            |     |     |
| SAX-110-8P       |                 | 110               | 6.5            | 71                           |            |     |     |
| SAX-30-10P       | 600mm           | 30                | 3.5            | 35                           |            | 720 |     |
| SAX-37-10P       |                 | 37                | 3.6            | 43                           |            |     |     |
| SAX-45-10P       |                 | SAX-600-10        | 45             | 4                            | 47         |     |     |
| SAX-55-10P       |                 |                   | 55             | 4.6                          | 50         |     |     |
| SAX-90-8P        |                 | 800mm             | 90             | 6.2                          | 62         |     | 900 |
| SAX-110-8P       |                 |                   | 110            | 6.7                          | 70         |     |     |
| SAX-130-8P       | SAX-800-8       | 130               | 7.2            | 77                           |            |     |     |
| SAX-150-8P       |                 | 150               | 7.5            | 88                           |            |     |     |
| SAX-190-8P       | 190             | 8.2               | 100            | 720                          |            |     |     |
| SAX-45-10P       | 750mm           | 45                | 4              |                              | 48         |     |     |
| SAX-55-10P       |                 | 55                | 4.5            |                              | 52         |     |     |
| SAX-75-10P       | SAX-750-10      | 75                | 5              |                              | 64         |     |     |
| SAX-90-10P       |                 | 90                | 5.5            |                              | 70         |     |     |
| SAX-75-10P       | 800mm           | 75                | 4.7            |                              | 68         | 720 |     |
| SAX-90-10P       |                 | 90                | 5.2            | 74                           |            |     |     |
| SAX-110-10P      |                 | SAX-800-10        | 110            | 5.7                          | 82         |     |     |
| SAX-130-10P      |                 |                   | 130            | 6                            | 92         |     |     |
| SAX-130-10P      |                 | 1100mm            | 130            | 5.9                          | 95         |     |     |
| SAX-150-10P      |                 |                   | 150            | 6.2                          | 105        |     |     |
| SAX-190-10P      | SAX-1100-10     | 190               | 7              | 118                          | 1200       |     |     |
| SAX-220-10P      |                 | 20                | 7.5            | 128                          |            |     |     |

#### ■ 생산범위

- 1) 구경 300~2,400A
- 2) 전원 380/440V, 3,300V, 6,600V
- 3) 출력 15kW~1,400kW
- 4) 감속기부착, STS 컬럼파이프

#### ■ Product Range

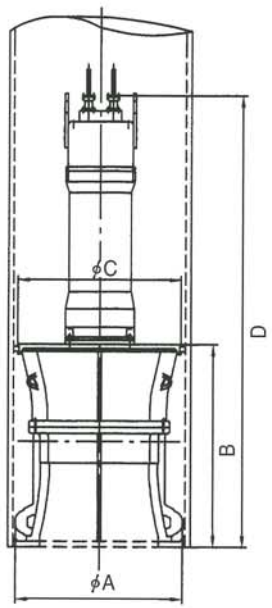
- 1) Discharge : 300~2,400A
- 2) Elec. Power : 380/440V, 3,300V, 6,600V
- 3) Output : 15kW~1,400kW
- 4) Gear type, Stainless steel column pipe

| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전양정<br>Head(m) | 토출량<br>(m <sup>3</sup> /min) | 회전수<br>Rpm |      |
|------------------|-----------------|-------------------|----------------|------------------------------|------------|------|
| SAX-75-12P       | 900mm           | 75                | 4              | 80                           | 720        |      |
| SAX-90-12P       |                 | 90                | 4.5            | 87                           | 600        |      |
| SAX-110-12P      |                 | SAX-900-12        | 110            | 5                            |            | 96   |
| SAX-130-12P      | 130             |                   | 5.5            | 103                          | 514        |      |
| SAX-55-14P       | 800mm           | 55                | 3.5            | 67                           |            |      |
| SAX-75-14P       |                 | 75                | 4.2            | 76                           |            |      |
| SAX-90-14P       | SAX-800-14      | 90                | 4.5            | 86                           | 450        |      |
| SAX-55-16P       |                 | 55                | 3              | 78                           |            |      |
| SAX-75-16P       | 900mm           | 75                | 3.5            | 93                           | 450        |      |
| SAX-90-16P       |                 | 90                | 4              | 98                           |            |      |
| SAX-110-16P      | SAX-900-16      | 110               | 4              | 120                          | 600        |      |
| SAX-190-12P      |                 | 190               | 6              | 139                          |            |      |
| SAX-220-12P      | 1200mm          | 220               | 6.5            | 149                          |            |      |
| SAX-250-12P      |                 | 250               | 6.9            | 160                          |            |      |
| SAX-300-12P      |                 | SAX-1200-12       | 300            | 7.4                          |            | 180  |
| SAX-350-12P      |                 |                   | 350            | 7.8                          |            | 200  |
| SAX-110-14P      | 1100mm          | 110               | 4.2            | 115                          | 514        |      |
| SAX-130-14P      |                 | 130               | 4.4            | 130                          |            |      |
| SAX-150-14P      |                 | 150               | 4.9            | 135                          |            |      |
| SAX-190-14P      |                 | SAX-1100-14       | 190            | 5.5                          |            | 152  |
| SAX-220-14P      |                 |                   | 220            | 6                            |            | 162  |
| SAX-75-16P       |                 | 1100mm            | 75             | 3.5                          |            | 94   |
| SAX-110-16P      | 110             |                   | 4              | 120                          |            |      |
| SAX-130-16P      | SAX-1100-16     | 130               | 4.5            | 135                          | 1200       |      |
| SAX-150-16P      |                 | 150               | 4.9            | 135                          |            |      |
| SAX-300-6PG      | 1500mm          | 300               | 6.2            | 215                          |            |      |
| SAX-350-6PG      |                 | 350               | 6.5            | 240                          |            |      |
| SAX-400-6PG      |                 | SAX-1500-6G       | 400            | 7.1                          |            | 250  |
| SAX-450-6PG      |                 |                   | 450            | 7.5                          |            | 265  |
| SAX-500-6PG      |                 | 500               | 8              | 275                          | 1200       |      |
| SAX-190-6PG      |                 | 1400mm            | 190            | 5                            |            | 162  |
| SAX-220-6PG      | 220             |                   | 5.5            | 175                          |            |      |
| SAX-250-6PG      | 250             |                   | 6              | 185                          |            |      |
| SAX-300-6PG      | SAX-1400-6G     |                   | 300            | 6.5                          |            | 206  |
| SAX-350-6PG      |                 |                   | 350            | 7                            |            | 220  |
| SAX-400-6PG      | 1300mm          |                   | 400            | 7.4                          | 240        | 1200 |
| SAX-150-6PG      |                 | 150               | 4              | 165                          |            |      |
| SAX-190-6PG      | SAX-1300-6G     | 190               | 4.4            | 190                          |            |      |
| SAX-220-6PG      |                 | 220               | 5              | 195                          |            |      |
| SAX-250-6PG      |                 | 250               | 5.5            | 202                          |            |      |
| SAX-300-6PG      |                 | 300               | 5.8            | 225                          |            |      |



**SAX형 수중 축류 펌프(Axial Flow Pump)**

**외형치수도 (Outline Drawing and Size)**



| 형식<br>Pump Model | 구경<br>Size | A    | B    | C    | D    | 중량<br>Kg |
|------------------|------------|------|------|------|------|----------|
| SAX-15-6P        | 400mm      | 550  | 536  | 560  | 1250 | 350      |
| SAX-19-6P        |            |      |      |      |      | 600      |
| SAX-22-6P        |            |      |      |      |      | 700      |
| SAX-30-6P        |            |      |      |      |      | 750      |
| SAX-30-6P        | 500mm      | 660  | 646  | 670  | 1480 | 750      |
| SAX-37-6P        |            |      |      |      |      | 950      |
| SAX-45-6P        |            |      |      |      |      | 1200     |
| SAX-55-6P        |            |      |      |      |      | 1500     |
| SAX-19-8P        | 450mm      |      |      |      | 1765 | 750      |
| SAX-22-8P        |            |      |      |      |      | 850      |
| SAX-37-8P        | 600mm      | 760  | 800  | 750  | 1950 | 950      |
| SAX-45-8P        |            |      |      |      |      | 1600     |
| SAX-55-8P        |            |      |      |      |      | 2200     |
| SAX-75-8P        |            |      |      |      |      | 2000     |
| SAX-22-10P       | 500mm      |      |      |      | 1950 | 900      |
| SAX-30-10P       |            |      |      |      |      | 1000     |
| SAX-37-10P       | 700mm      | 980  | 1025 | 930  | 2500 | 1100     |
| SAX-55-8P        |            |      |      |      |      | 1900     |
| SAX-75-8P        |            |      |      |      |      | 2000     |
| SAX-90-8P        |            |      |      |      |      | 2150     |
| SAX-110-8P       | 600mm      | 870  | 890  | 860  | 2350 | 1000     |
| SAX-30-10P       |            |      |      |      |      | 2100     |
| SAX-37-10P       |            |      |      |      |      | 1100     |
| SAX-45-10P       |            |      |      |      |      | 2000     |
| SAX-55-10P       | 800mm      | 1060 | 960  | 1070 | 2730 | 2400     |
| SAX-90-8P        |            |      |      |      |      | 2600     |
| SAX-110-8P       |            |      |      |      |      | 2600     |
| SAX-130-8P       |            |      |      |      |      | 3200     |
| SAX-150-8P       | 750mm      | 980  | 890  | 970  | 2350 | 3800     |
| SAX-190-8P       |            |      |      |      |      | 4800     |
| SAX-45-10P       |            |      |      |      |      | 2000     |
| SAX-55-10P       |            |      |      |      |      | 2400     |
| SAX-75-10P       | 1060       | 960  | 1070 |      | 2600 | 2500     |
| SAX-90-10P       |            |      |      |      |      | 2730     |

| 형식<br>Pump Model | 구경<br>Size | A    | B    | C    | D    | 중량<br>Kg |
|------------------|------------|------|------|------|------|----------|
| SAX-75-10P       | 800mm      | 1170 | 1205 | 1260 | 2850 | 2500     |
| SAX-90-10P       |            |      |      |      |      | 3100     |
| SAX-110-10P      |            |      |      |      |      | 3500     |
| SAX-130-10P      |            |      |      |      |      | 3800     |
| SAX-130-10P      | 1100mm     |      |      |      | 2880 | 3800     |
| SAX-150-10P      |            |      |      |      |      | 4500     |
| SAX-190-10P      |            |      |      |      |      | 5800     |
| SAX-220-10P      |            |      |      |      |      | 6300     |
| SAX-19-8P        | 450mm      |      |      |      | 1765 | 3100     |
| SAX-22-8P        |            |      |      |      |      | 3200     |
| SAX-37-8P        | 600mm      | 760  | 800  | 750  | 1950 | 3800     |
| SAX-45-8P        |            |      |      |      |      | 4500     |
| SAX-55-8P        |            |      |      |      |      | 3100     |
| SAX-75-8P        |            |      |      |      |      | 3200     |
| SAX-22-10P       | 500mm      |      |      |      | 1950 | 3500     |
| SAX-30-10P       |            |      |      |      |      | 3700     |
| SAX-37-10P       | 700mm      | 980  | 1025 | 930  | 2500 | 4100     |
| SAX-55-8P        |            |      |      |      |      | 4500     |
| SAX-75-8P        |            |      |      |      |      | 5000     |
| SAX-90-8P        |            |      |      |      |      | 6300     |
| SAX-110-8P       | 600mm      | 870  | 890  | 860  | 2350 | 6500     |
| SAX-30-10P       |            |      |      |      |      | 7100     |
| SAX-37-10P       |            |      |      |      |      | 7600     |
| SAX-45-10P       |            |      |      |      |      | 8200     |
| SAX-55-10P       | 800mm      | 1060 | 960  | 1070 | 2730 | 8200     |
| SAX-90-8P        |            |      |      |      |      | 4500     |
| SAX-110-8P       |            |      |      |      |      | 5000     |
| SAX-130-8P       |            |      |      |      |      | 6300     |
| SAX-150-8P       | 750mm      | 980  | 890  | 970  | 2350 | 6600     |
| SAX-190-8P       |            |      |      |      |      | 6800     |
| SAX-45-10P       |            |      |      |      |      | 4100     |
| SAX-55-10P       |            |      |      |      |      | 5000     |
| SAX-75-10P       | 1060       | 960  | 1070 |      | 2600 | 5500     |
| SAX-90-10P       |            |      |      |      |      | 2730     |

■ 감속기 부착형

| 형식<br>Pump Model | 구경<br>Size | A    | B    | C    | D    | 중량<br>Kg |
|------------------|------------|------|------|------|------|----------|
| SAX-300-6PG      | 1500mm     | 1560 | 1420 | 1550 | 4800 | 9400     |
| SAX-350-6PG      |            |      |      |      |      | 10000    |
| SAX-400-6PG      |            |      |      |      |      | 10200    |
| SAX-450-6PG      |            |      |      |      |      | 10450    |
| SAX-500-6PG      | 1550       |      |      |      | 4800 | 10700    |
| SAX-190-6PG      |            |      |      |      |      | 8400     |
| SAX-220-6PG      | 1400mm     | 1560 |      |      | 4400 | 8600     |
| SAX-250-6PG      |            |      |      |      |      | 9200     |
| SAX-300-6PG      |            |      |      |      |      | 9200     |

| 형식<br>Pump Model | 구경<br>Size | A    | B    | C    | D    | 중량<br>Kg |
|------------------|------------|------|------|------|------|----------|
| SAX-300-6PG      | 1400mm     |      |      |      | 4800 | 9400     |
| SAX-350-6PG      |            |      |      |      |      | 10000    |
| SAX-400-6PG      |            |      |      |      |      | 10200    |
| SAX-150-6PG      |            |      |      |      |      | 7800     |
| SAX-190-6PG      | 1300mm     | 1560 | 1420 | 1550 | 4000 | 8400     |
| SAX-220-6PG      |            |      |      |      |      | 8600     |
| SAX-250-6PG      |            |      |      |      | 4400 | 9200     |
| SAX-300-6PG      |            |      |      |      |      | 4800     |

**SAXH형 게이트펌프(Gate Pump)**



**■ 용도**

- 소규모 배수 역활의 수문 부착형 펌프
- 수평 또는 수직형 게이트 펌프
- 대형 내부 순환 펌프
- 별도의 유수지 및 배수장시설 불필요

**■ 적용**

- 수문 설계에 적합한 최소 사이즈 설계
- 수평 또는 수직형 게이트 펌프
- ISO1940에 따른 G2.5적용 진동 최소화
- 구경  $\phi$  2000mm 대용량 제작

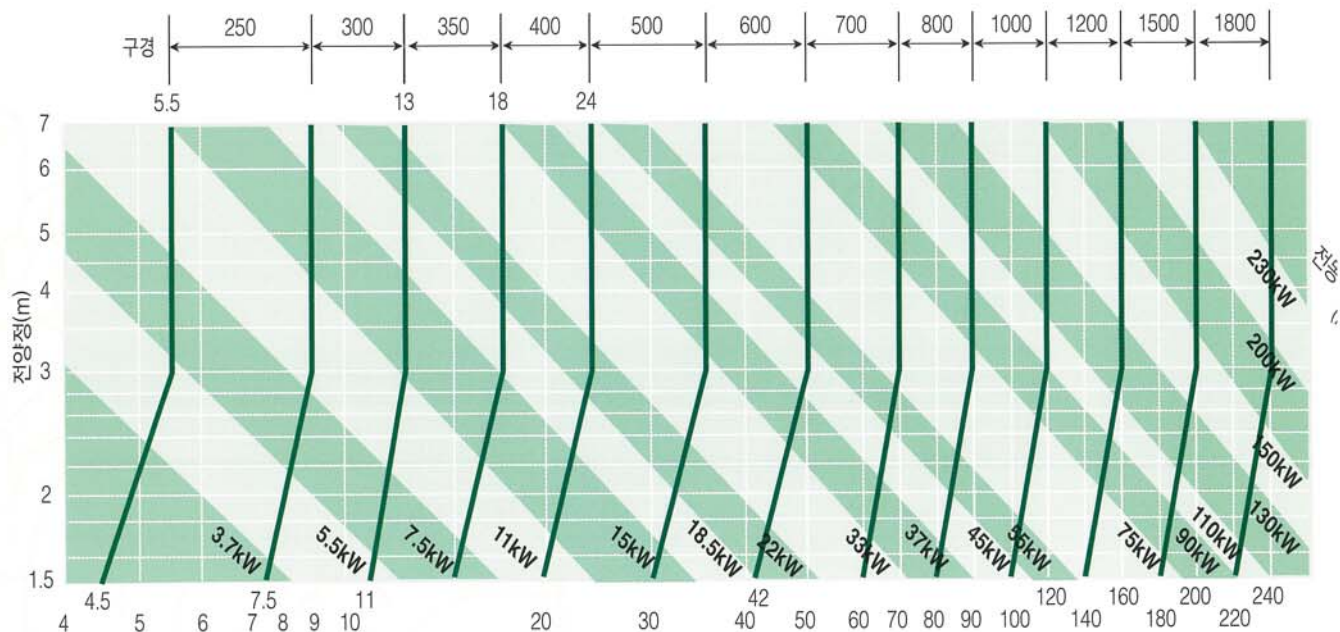
**■ APPLICATIONS**

- Gate Pump for Medium Capacity facilities
- Horizontal/Vertical Flow Pump
- Use for Internal Circulation Pump
- Compactization of Water treatment facilities

**■ FEATURES**

- Minimum Size Design
- Horizontal/Vertical Flow Pump
- Applied ISO1940 G2.5 Grade

**성능곡선도 (Performance Curve)**



※구경  $\phi$  2000mm 대용량 주문제작





# SMIX형

## 수중시류펌프(Mixed Flow Pump)



### ■ 용도

- 홍수, 폭우등의 수방용
- 대용량, 상·하수처리장 공업용수
- 중앙정 대유량 급·배수
- 기타 대용량 취급용

### ■ 적용

- 이상유무 조기진단으로 제품의 신뢰성 극대화
- 설치공간의 협소 및 부대설비 불필요
- 구조가 간단하고 유지·보수가 용이하다

### ■ APPLICATIONS

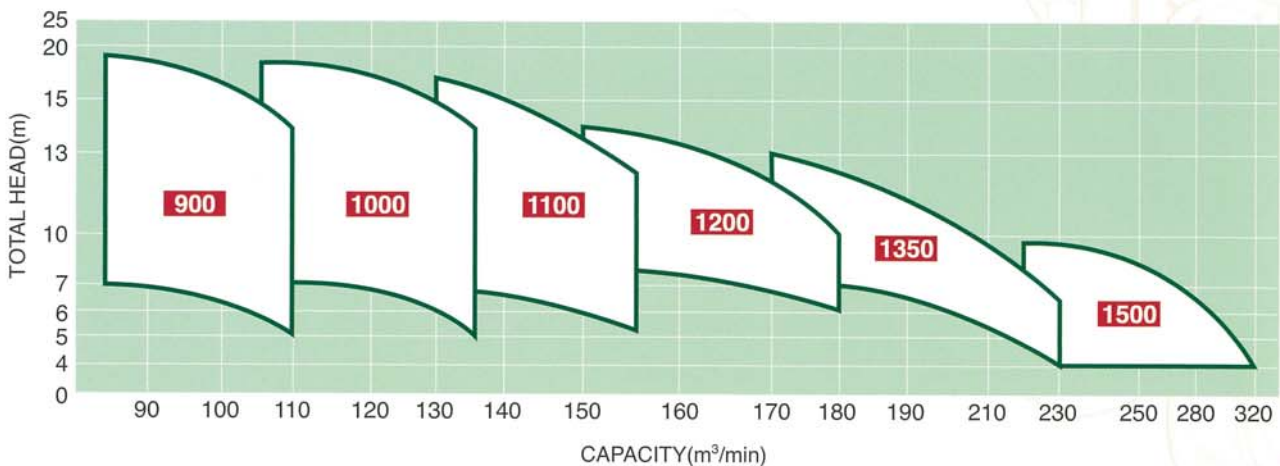
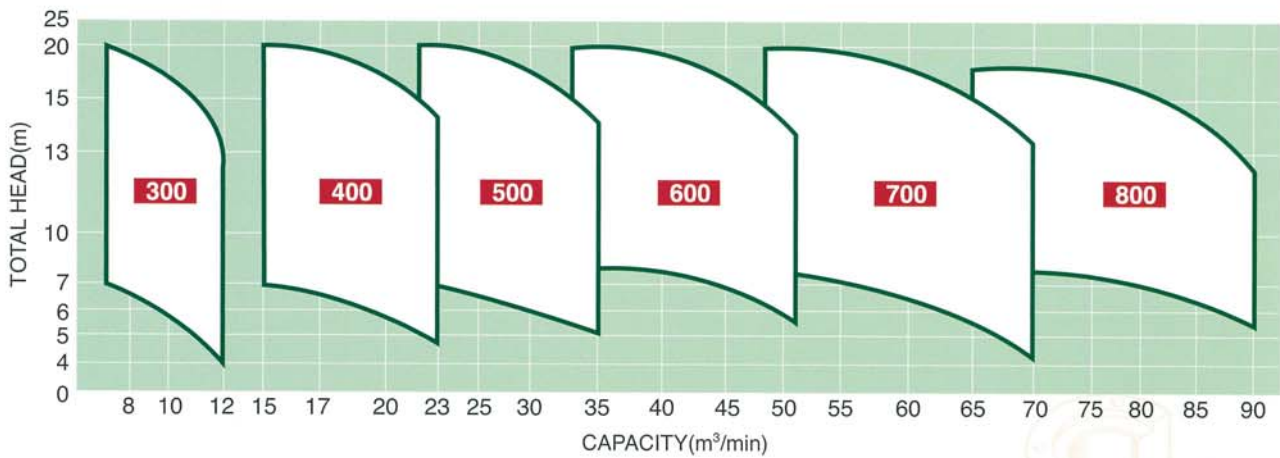
- Protection from flood, heavy rain
- Drain large quantity for irrigation, agricultural water
- Reserve water for water works and industrial supply
- Transfer a large quantity of sewage water
- Circulate a large quantity of water a pleasure resort of park, lake

### ■ FEATURES

- Easy to handle, install with close, compact design
- Various application to middle head, large quantity
- No need of special piping or housing work
- Perfect watertight with double mechanical seal
- Minimizing the cost of installation

### 성능곡선도

(Performance Curve)





# SMIX형

## 수중사류펌프(Mixed Flow Pump)

### 표준 사양

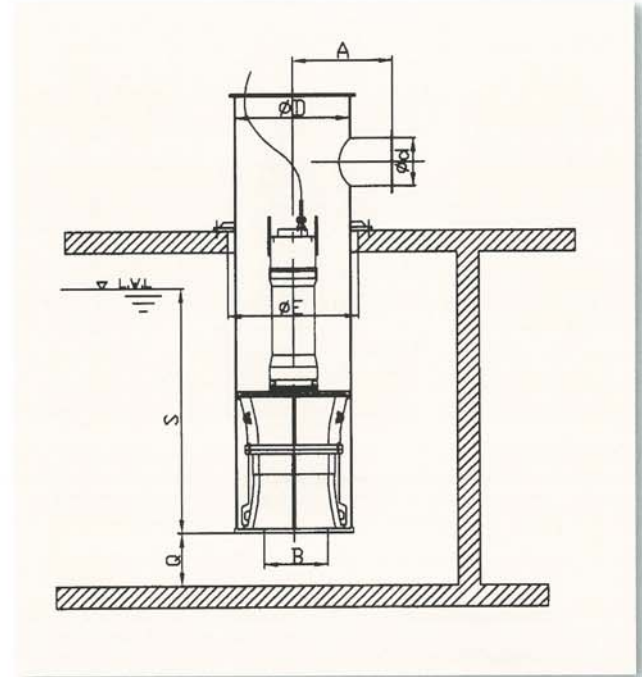
(Standard Specifications)

#### ■ MIX-수중사류펌프

| 형식<br>Pump Model | 구경<br>Disc.(mm) | 출력<br>Out Put(kw) | 전압정<br>Head(m) | 토출량<br>(m <sup>3</sup> /min) | 회전수<br>Rpm |         |
|------------------|-----------------|-------------------|----------------|------------------------------|------------|---------|
| SMIX-12-22       | 300             | 22                | 9              | 10                           | 1200       |         |
| SMIX-12-37       |                 |                   | 15             |                              | 1800       |         |
| SMIX-16-37       | 400             |                   | 7.5            | 20                           | 900        |         |
| SMIX-16-55       |                 | 55                | 11.5           |                              | 1200       |         |
| SMIX-16-75       |                 | 75                | 15.5           |                              |            |         |
| SMIX-16-90       |                 | 90                | 18.5           |                              |            |         |
| SMIX-20-55       | 500             | 55                | 7.5            | 30                           | 600        |         |
| SMIX-20-75       |                 | 75                | 10.5           |                              | 900        |         |
| SMIX-20-110      |                 | 110               | 15             |                              | 1200       |         |
| SMIX-20-130      |                 | 130               | 18             |                              |            |         |
| SMIX-24-75       | 600             | 75                | 7              | 45                           | 514        |         |
| SMIX-24-90       |                 | 90                | 8.5            |                              | 600        |         |
| SMIX-24-130      |                 | 130               | 12.5           |                              | 720        |         |
| SMIX-24-150      |                 | 150               | 14.6           |                              | 900        |         |
| SMIX-24-190      |                 | 190               | 17.5           |                              |            |         |
| SMIX-28-110      |                 | 700               | 90             |                              | 6.5        | 60      |
| SMIX-28-110      | 110             |                   | 8              | 514                          |            |         |
| SMIX-28-150      | 150             |                   | 10.8           | 600                          |            |         |
| SMIX-28-220      | 220             |                   | 16             | 720                          |            |         |
| SMIX-28-260      | 260             |                   | 18.5           | 900                          |            |         |
| SMIX-32-130      | 800             |                   | 130            | 7                            | 80         |         |
| SMIX-32-150      |                 | 150               | 8              | 514                          |            |         |
| SMIX-32-190      |                 | 190               | 10             | 600                          |            |         |
| SMIX-32-220      |                 | 220               | 12             | 720                          |            |         |
| SMIX-32-300      |                 | 300               | 16.3           |                              |            |         |
| SMIX-36-150      |                 | 900               | 150            | 6.3                          |            | 100     |
| SMIX-36-220      | 220             |                   | 9.3            |                              |            |         |
| SMIX-36-300      | 300             |                   | 12.5           |                              |            |         |
| SMIX-36-350      | 350             |                   | 14.7           | 300-720                      |            |         |
| SMIX-36-400      | 400             |                   | 16.9           |                              |            |         |
| SMIX-40-190      | 1000            |                   | 190            |                              | 6.7        |         |
| SMIX-40-220      |                 | 220               | 7.8            |                              |            |         |
| SMIX-40-300      |                 | 300               | 10.7           |                              |            |         |
| SMIX-40-400      |                 | 400               | 14.2           |                              |            |         |
| SMIX-40-500      |                 | 500               | 17.7           |                              |            |         |
| SMIX-44-220      |                 | 1100              | 220            | 6.7                          | 140        | 300-514 |
| SMIX-44-300      | 300             |                   | 9              |                              |            |         |
| SMIX-44-400      | 400             |                   | 12.2           |                              |            |         |
| SMIX-44-450      | 450             |                   | 13.7           |                              |            |         |
| SMIX-44-500      | 500             |                   | 15.2           |                              |            |         |
| SMIX-48-300      | 1200            |                   | 300            | 8.1                          |            |         |
| SMIX-48-355      |                 | 355               | 9.4            |                              |            |         |
| SMIX-48-400      |                 | 400               | 10.8           |                              |            |         |
| SMIX-48-450      |                 | 450               | 12.1           |                              |            |         |
| SMIX-48-500      |                 | 500               | 13.5           |                              |            |         |
| SMIX-54-300      |                 | 1350              | 300            | 6.9                          | 190        | 240-360 |
| SMIX-54-400      | 400             |                   | 9.1            |                              |            |         |
| SMIX-54-500      | 500             |                   | 11.4           |                              |            |         |
| SMIX-60-400      | 1500            |                   | 400            | 7                            |            |         |

### 외형치수도

(Outline Drawing and Size)

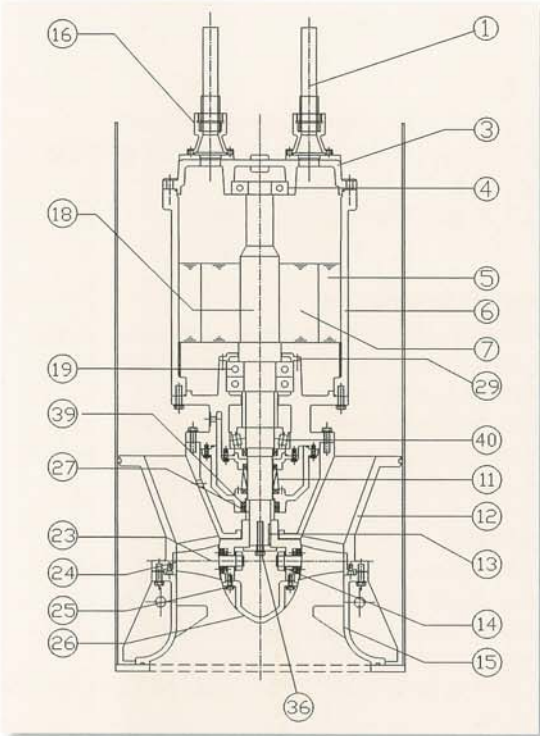


| 형식<br>Pump Model | 토출구경<br>Disc.(mm) | 컬럼관경<br>(D) | A    | B    | E    | Q<br>(최소) | S<br>(최소) | 중량<br>(Kg) |
|------------------|-------------------|-------------|------|------|------|-----------|-----------|------------|
| SMIX-300         | 300(12")          | 500(20")    | 400  | 330  | 600  | 200       | 450       | 650        |
| SMIX-400         | 400(16")          | 600(24")    | 450  | 430  | 700  | 250       | 600       | 1200       |
| SMIX-500         | 500(20")          | 700(28")    | 500  | 530  | 800  | 300       | 750       | 3200       |
| SMIX-600         | 600(24")          | 800(32")    | 550  | 630  | 950  | 350       | 900       | 4800       |
| SMIX-700         | 700(28")          | 900(36")    | 650  | 730  | 1050 | 400       | 1050      | 6200       |
| SMIX-800         | 800(32")          | 1000(40")   | 850  | 830  | 1150 | 450       | 1200      | 7400       |
| SMIX-900         | 900(36")          | 1100(44")   | 900  | 930  | 1300 | 500       | 1350      | 8200       |
| SMIX-1000        | 1000(40")         | 1200(48")   | 900  | 1000 | 1400 | 550       | 1500      | 9690       |
| SMIX-1100        | 1100(44")         | 1300(52")   | 1000 | 1100 | 1500 | 600       | 1650      | 10000      |
| SMIX-1200        | 1200(48")         | 1400(56")   | 1000 | 1200 | 1600 | 600       | 1800      | 10100      |
| SMIX-1350        | 1350(54")         | 1550(62")   | 1150 | 1350 | 1750 | 700       | 2000      | 10900      |
| SMIX-1500        | 1500(60")         | 1700(68")   | 1250 | 1500 | 1950 | 750       | 2200      | 11100      |



# 신신펌프 수중 축류펌프(Axial Flow Pump)

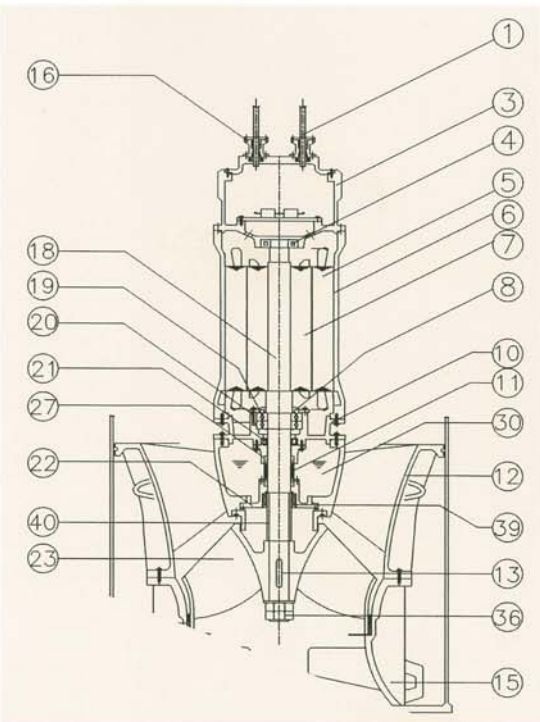
구조단면도 (Sectional Drawing)



| 품번 NO. | 품명 NAME OF PARTS   | 재질 MATERIAL | 품번 NO. | 품명 NAME OF PARTS       | 재질 MATERIAL |
|--------|--------------------|-------------|--------|------------------------|-------------|
| 1      | CAB TYRE CABLE     |             | 18     | ROTOR SHAFT            | STS410      |
| 3      | MOTOR BRACKET      | GC200       | 19     | BEARING                | STB2        |
| 4      | UPPER BEARING      | STB2        | 23     | PROPELLER VANE         | GCD500      |
| 5      | STATOR             | S-60        | 24     | CASING LINER           | GC200       |
| 6      | MOTOR FRAME        | GC200       | 25     | WRENCH BOLT            | STS304      |
| 7      | ROTOR              | S-60        | 26     | PROPELLER CAP          | GC200       |
| 11     | MECHANICAL SEAL    | SIC/SIC     | 27     | SLEEVE                 | STS304      |
| 12     | DISCHARGE CASING   | GC200       | 29     | BEARING COVER          | GC200       |
| 13     | SUNK KEY           | STS304      | 36     | HEX NET                | STS304      |
| 14     | VANE FIXED PLATE   | STS304      | 39     | OIL SEAL               | N.B.R       |
| 15     | SUCTION BELL MOUNT | GC200       | 40     | TAPERED ROLLER BEARING | STB2        |
| 16     | STUFFING BOX       | GC200       |        |                        |             |

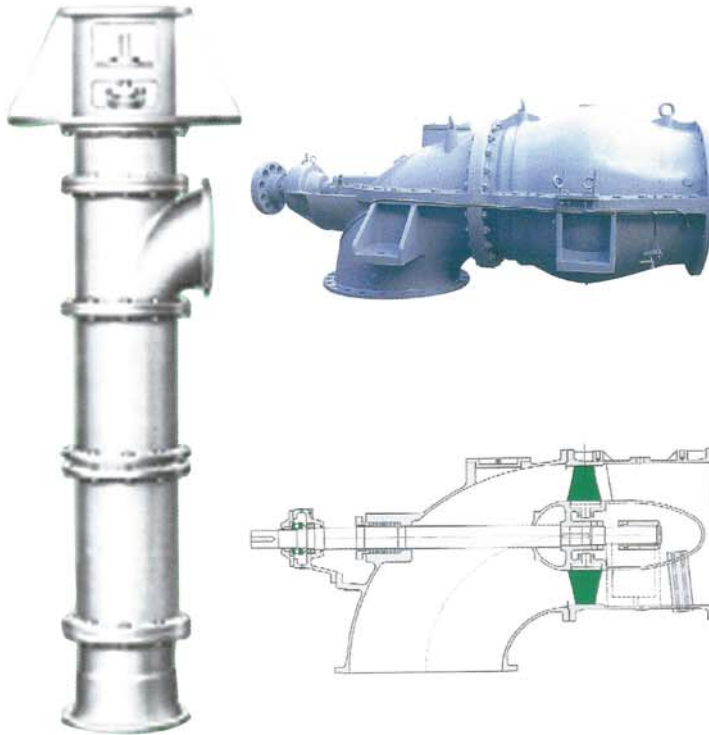
# 신신펌프 수중사류펌프(Mixer Flow Pump)

구조단면도 (Sectional Drawing)



| 품번 NO. | 품명 NAME OF PARTS   | 재질 MATERIAL | 품번 NO. | 품명 NAME OF PARTS     | 재질 MATERIAL |
|--------|--------------------|-------------|--------|----------------------|-------------|
| 1      | CAB TYRE CABLE     |             | 18     | ROTOR SHAFT          | STS410      |
| 3      | MOTOR BRACKET      | GC200       | 19     | BEARING              | STB2        |
| 4      | UPPER BEARING      | STB2        | 20     | BEARING TEMP SENSOR  |             |
| 5      | STATOR             | S-60        | 21     | ROLLER BEARING       | STB2        |
| 6      | MOTOR FRAME        | GC200       | 22     | SEAL CHAMBER         | GC200       |
| 7      | ROTOR              | S-60        | 23     | IMPELLER             | GCD500      |
| 8      | BEARING COVER      | GC200       | 24     | CASING LINER         | GC200       |
| 10     | BEARING HOUSING    | GC200       | 27     | ROLLER BEARING COVER | GC200       |
| 11     | MECHANICAL SEAL    | SIC/SIC     | 30     | OIL                  | TURBINE OIL |
| 12     | DISCHARGE CASING   | GC200       | 36     | HEX NET              | STS304      |
| 13     | SUNK KEY           | STS304      | 39     | OIL SEAL             | N.B.R       |
| 15     | SUCTION BELL MOUNT | GC200       | 40     | SLEEVE               | STS410      |
| 16     | STUFFING BOX       | GC200       |        |                      |             |

**SHA(M)형 입·횡축 축사류펌프(Vertical/Horizontal Axial, Mixed Flow Pump)**



**■ 용도**

- 관개용수, 공업용수 취수, 급수
- 침수, 유수지 등의 우수 배수
- 저양정 대유량 급 배수

**■ 적용**

- 간단한 설치 시공, 편리하고 손쉬운 유지관리
- 전동기 및 베어링의 온도감지 및 누수감지 장치내장
- 간결한 구조
- 다년간 경험의 우수한 설계로 제작됨

**■ APPLICATIONS**

- Drain large quantity for irrigation, agricultural water
- Reserve water for water works and industrial supply
- Protection from flood, heavy rain
- Transfer a large quantity of sewage water
- Circulate a large quantity of water a pleasure resort of park, lake

**■ FEATURES**

- Easy to handle, install with close, compact design
- Various application to low head, large quantity
- Reserve water for water works and industrial supply
- Transfer a large quantity of sewage water
- Circulate a large quantity of water pleasure resort of park, lake

**표준 사양 (Standard Specifications)**

|                     |                             |
|---------------------|-----------------------------|
| 유량 Capacity         | 30~1,000m <sup>3</sup> /min |
| 온도 Temperature      | 0~40℃                       |
| 양정 Total Head       | 0.5~15M                     |
| 회전방향 Rotation       | C.C.W(PUMP FRONT VIEW)      |
| 토출구경 Discharge Bore | φ 350~2,000mm               |



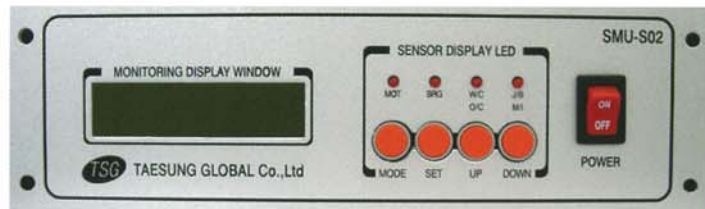
# 신신펌프 모니터링 유닛 (Monitoring Unit System)

## 수중모터펌프 보호장치

신신수중모터펌프는 온도감지 센스와 침수감지센스가 내장되어 모터이상 경보기와 연결시 모터코일 및 상하 베어링이 이상 발열시나 모터 내부 및 메카니컬-시일부(구동부)가 기밀이 파손되어 침수시에 자동으로 감지하여 이상상태를 모터 이상 경보기에 표시하고 수중 모터 펌프축의 가동을 즉시 중단시켜 수중 프로펠러 펌프의 더 큰 손상을 방지합니다.



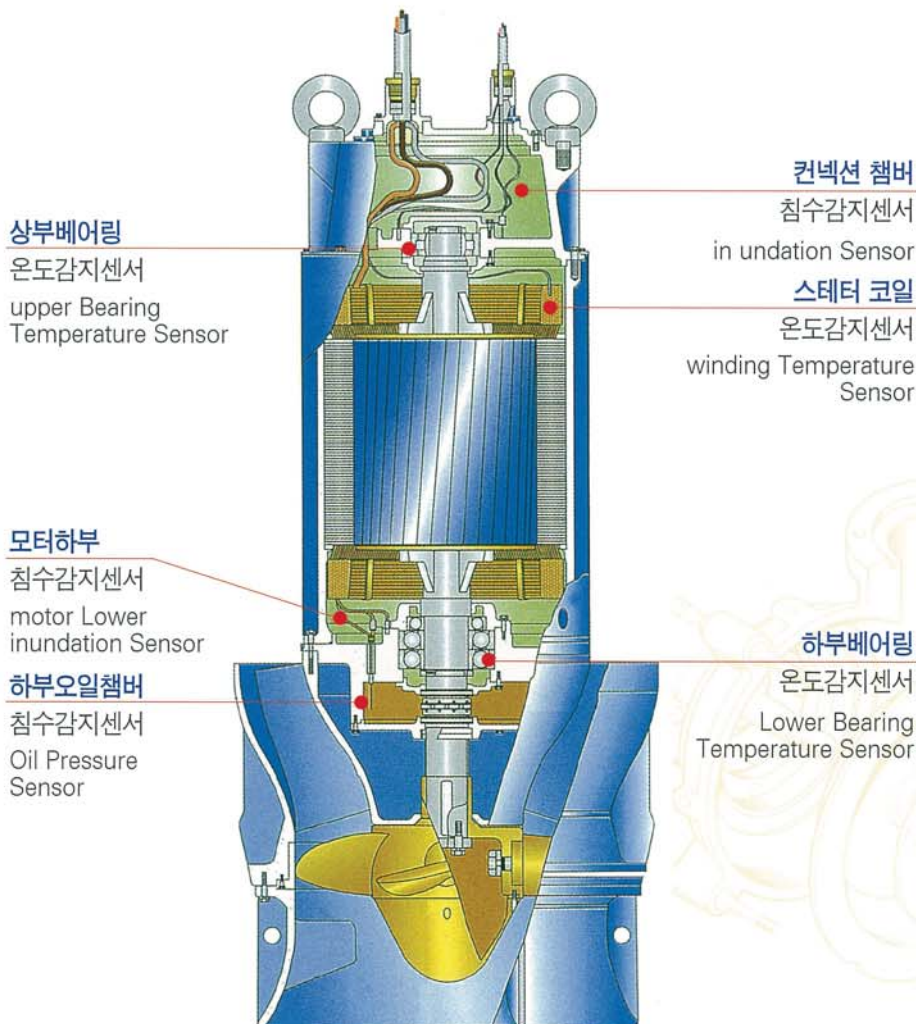
(저압용)



(고압용)

## SHIN SHIN SUBMERSIBLE Motor pump

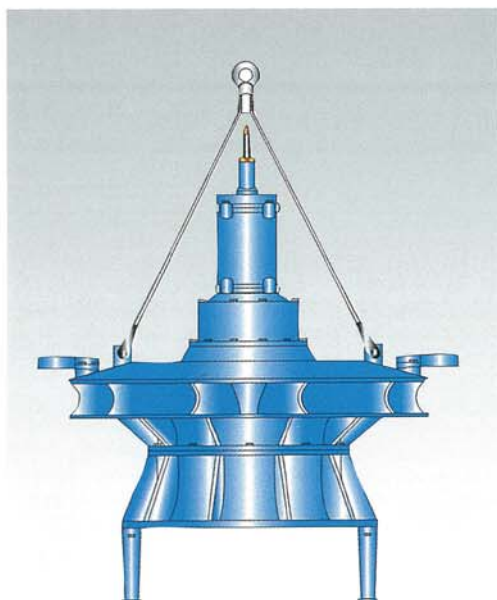
Is the device which executes protection function for SuBMersible motor pump(S)  
 Connected with the sensor of several security unit installed into Submersible motor pumps  
 Monitoring unit System is wired to control panel(CMCC) and if the pump operates wrongly, stops motor by





# SSA형

## 수중폭기기(Aquarator)



### ■ 용도

- 하수처리장 폭기기 및 산소 공급용
- 활성오니 폭기조 폭기용
- 오·폐수 처리장 오니 산소 공급용
- 위생처리장 교반 및 폭기용, 혐기조 교반용
- 기타 수질정화에 필요한 산소공급 및 폭기에 사용

### ■ 특징

- 수심 및 폭기조 크기에 따른 다양한 현장 조건에 탄력적으로 사용
- 대형 처리장에서도 사용가능
- 기액 충돌로 발생하는 미세공기 입자에 의한 산소용해율 극대화
- 상황에 따라 2단 처차 감속기의 부착으로 강력한 교반활동
- 첨단과학 시스템에 의한 핵심부 설계로 높은 효율 발휘

### ■ APPLICATIONS

- Aquarator of sewage waste water treating
- Air-supply of active sludge treating process
- Consist of aerating and agitating function
- Aerobic/anaerobic digestion
- Maintain sludge

### ■ FEATURES

- Ability to convey oxygen well through up to date high efficiency designed
- Control air-convey through alter mative supply continuous and inter mittent operation
- Little beak down easy to maintain loug durability through compact construction

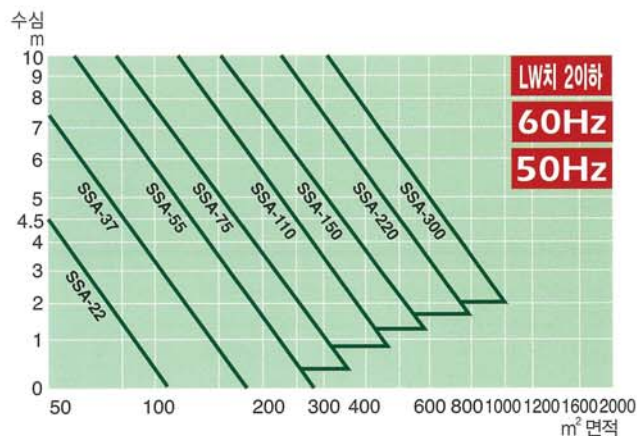
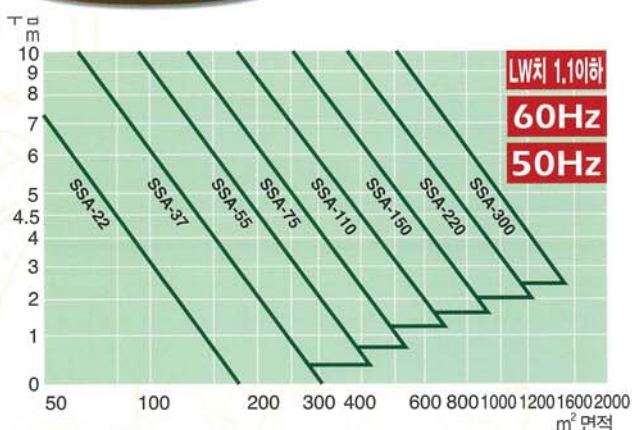
### 표준사양

#### (Standard Specifications)

| 형식<br>(Model) | 전동기 출력<br>(Kw) | 송기량<br>(Nm <sup>3</sup> /hr)<br>(Air Supply Volum) | 산소공급량(O <sub>2</sub> Capacity)<br>(KgO <sub>2</sub> /hr) |            |            | 최대교반적용<br>(m <sup>3</sup> ) | 최소순환수량<br>(m <sup>3</sup> /min) |
|---------------|----------------|--|--|------------|------------|-----------------------------|---------------------------------|
|               |                |  | 수심(Water Depth)  |            |            |                             |                                 |
|               |                |  | 4m   | 5m         | 6m         |                             |                                 |
| SSA-22        | 2.2            | 1.0~3.5  | 4.7~8.9  | 5.3~11.3   | 6.2~12.8   | 365                         | 14                              |
| SSA-37        | 3.7            | 1.0~1.6  | 5.6~16.1   | 6.6~19.0   | 7.4~21.9   | 615                         | 23                              |
| SSA-55        | 5.5            | 2.0~9.0  | 9.5~24.1   | 11.5~28.3  | 13.5~32.5  | 915                         | 35                              |
| SSA-75        | 7.5            | 3.0~12.0   | 14.0~33.0  | 16.5~39.0  | 19.0~44.0  | 1250                        | 50                              |
| SSA-110       | 11.5           | 5.0~18.0   | 22.5~48.0  | 26.5~56.5  | 30.0~64.5  | 1820                        | 72                              |
| SSA-150       | 15.0           | 6.0~24.0   | 29.0~65.0  | 34.0~76.0  | 38.0~67.0  | 2500                        | 95                              |
| SSA-220       | 22.0           | 8.0~38.0   | 37.0~92.0  | 44.0~110.0 | 51.0~128.0 | 3650                        | 145                             |
| SSA-300       | 30.0           | 15.0~50.0  | 62.0~130.0   | 72.0~150.0 | 81.0~168.0 | 5000                        | 260                             |

### 성능곡선도

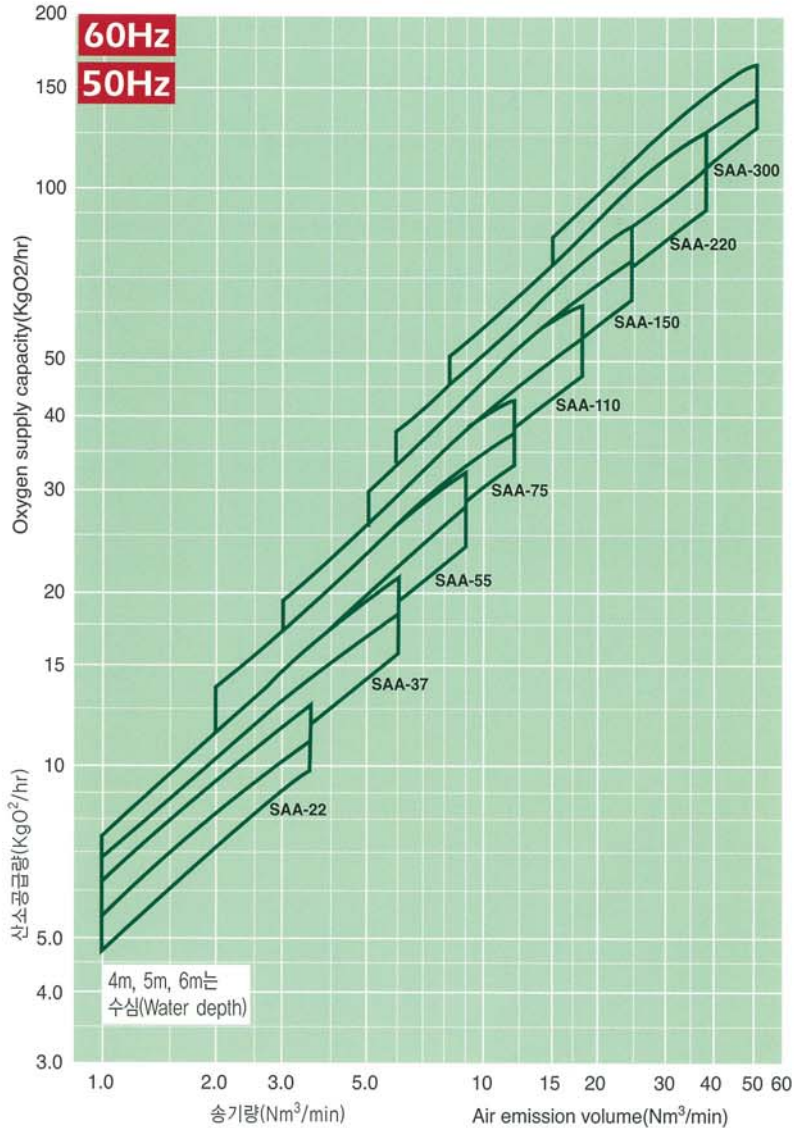
#### (Performance Curve)



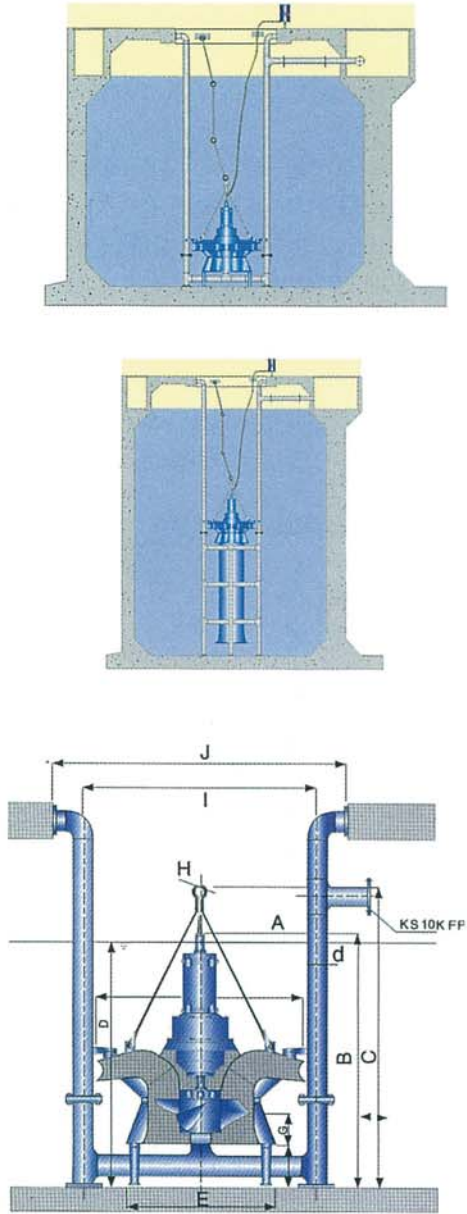


**SSA형 수중폭기기(Aquarator)**

**성능곡선도 (Performance Curve)**



※ 산소공급량은 ±10%의 오차가 있음



**외형치수도 (Outline Drawing and Size)**

단위mm

| 형식<br>Model | A    | B    | C    | D    | E    | F   | G   | H    | I    | J    | d    |
|-------------|------|------|------|------|------|-----|-----|------|------|------|------|
| SAA-22      | 830  | 1320 | 1520 | 1200 | 600  | 160 | 100 | 30   | 910  | 1200 | 65A  |
| SAA-37      | 950  | 1410 | 1620 | 1400 | 700  | 210 | 135 |      | 1150 | 1500 | 80A  |
| SAA-55      | 1300 | 1865 | 2070 | 1600 | 850  | 260 | 190 |      | 1370 | 1750 | 100A |
| SAA-75      | 1450 |      |      | 1750 | 960  | 300 | 210 | 1630 | 2050 | 125A |      |
| SAA-110     | 1700 | 2570 | 2895 | 1950 | 1100 | 350 | 270 | 70   | 1920 | 2380 | 150A |
| SAA-150     | 1900 | 2570 |      | 2250 | 1300 | 425 | 310 |      | 2250 | 2740 |      |
| SAA-220     | 2400 | 2960 | 3265 | 2600 | 1520 | 550 | 380 | 100  | 2700 | 3275 | 200A |
| SAA-300     | 2600 | 3200 | 3650 | 3020 | 1700 | 650 | 440 |      | 3140 | 3780 | 250A |



- (1) 배관 및 배선관계를 고려하여 맨홀의 위치를 선정합니다.
- (2) 신신 카다록을 참조하여 자동탈착장치의 치수를 고려한 후 펌프의 배관쪽 벽에서 맨홀 끝까지의 치수를 설계하여야 합니다.
- (3) 펌프의 크기에 맞는 맨홀의 크기를 정합니다.
- (4) 그림 1과 같이 먼저 맨홀의 끝에서 가이드 파이프가 설치될 위치를 정합니다.
- (5) 그림 2와 같이 설치한 다음 기초 볼트를 조임하고 토출배관을 완전히 배관하십시오.
- (6) 스냅 후로트를 설치하고 저수위는 펌프 바닥에서 약 1M 정도로 하고 고수위 후로트 스위치는 펌프 높이를 고려하여 적당한 위치에 설치합니다.
- (7) 가이드 파이프의 수직도와 토출곡관의 수직 수평도를 체크한 다음 앵커볼트와 배관의 팩킹을 확인하고 모든 확인이 완벽하게 되어 있으면 지상의 리프터를 이용하여 가이드 파이프가 안내하는대로 천천히 내립니다.

- (8) 펌프 자중에 의하여 탈착장치가 완전히 고정되면 펌프에 매어달린 리프팅 체인이 떨어지지 않도록 그림 5와 같이 맨홀 상부의 고리에 걸어놓고 차후 수리점검시 인양할 때에 이용하십시오.
- (9) 자동제어 패널에 스냅 후로트선을 연결하고 동력케이블도 연결합니다. 이때 선의 연결부위가 물속에 잠기지 않도록 주의해야 하며 물속에 잠기면 누전 혹은 모타소손의 결과를 초래하니 유의하시기 바랍니다.

- (1) Choose the location of manhole according to location and wiring.
- (2) In reference to catalogue, the manhole should be designed by the measure from the end of pump to the wall side of pipe laying.
- (3) arrange the size of manhole by the size of pump.
- (4) First, determine the location of guide pump to install from the end of manhole.(RE : Fig 1)
- (5) Install the pipe (RE : Fig 2), then, install the discharge pipe laying.
- (6) Set up the snap float 1 meter from the bottom of pit in the low water level, and install a float switch on the suitable location with considering of the pit height.
- (7) After checking the degree of perpendicular of the guide pipe and the degree of horizontality of the discharge pipe, then validate the anchor bolt and the packing of pipe laying. When you confirm everything perfectly, take the guide pipe down slowly by using the lift.
- (8) After its setting up completely, Suspend it to the ring in the upper manhole not to become disjoined the lift chain to use in maintenance.
- (9) Connect the snap float line to the panel of automatic control and power cable. At this moment, the line should not be sunk in the water. If it is placed in the water, it can cause the leakage of the electricity or the damage of motor.

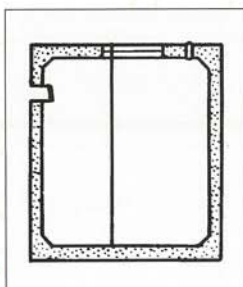
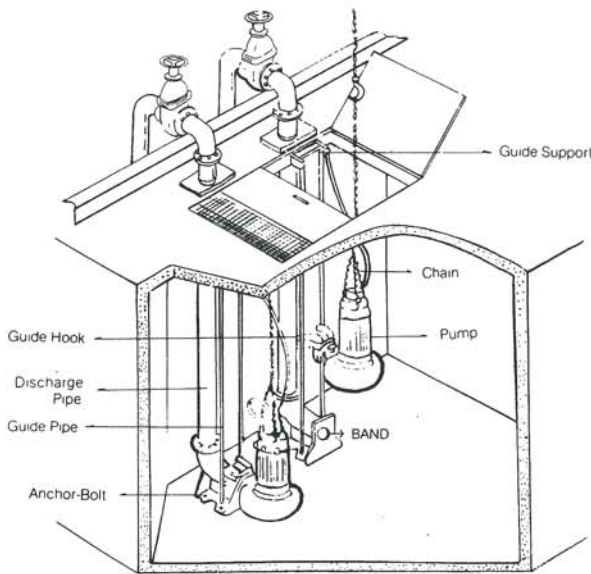


Fig. 1

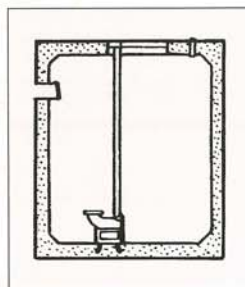


Fig. 2

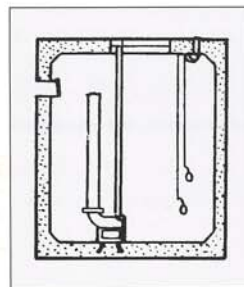


Fig. 3

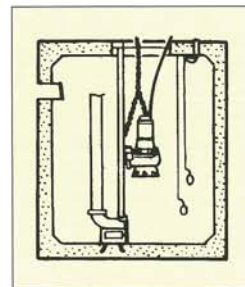


Fig. 4

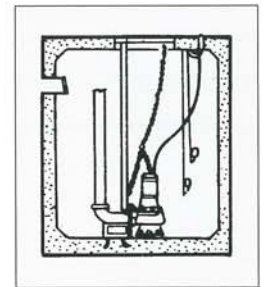


Fig. 5



# 기술자료 소비전력량의 산출 및 마찰손실 조건표

## 소비전력량의 산출(Alculation of electric Power)

소비전력은 다음과 같은 방법으로 산출합니다.

1. 단상일 때 소비전력(KW)  
= 전압(V) × 전류(A) × 역율 ÷ 1,000
2. 3상일 때 소비전력(KW)  
= √3 × 전압(V) × 전류(A) × 역율 ÷ 1,000  
따라서 소비전력량(KWHR) = 소비전력(KW) × 시간(Hr)

- The Yield of the Consuming Electric Power  
The following are the means of how to yield the consuming electric power
1. When it is single phase, the consuming electric power(KW)=Voltage(V) × Electric Current(A) × Power factor ÷ 1,000
  2. When it is three phase, the consuming electric power(KW)=√3 × Voltage(V) × Power factor ÷ 1,000  
Therefore, the Consuming Electric Power Amount(KWHR)=the consuming electric power(KW) × Hour(Hr)

## FRICITION LOSS(METERS) PER 100 METERS OF IRON PIPE

| Pipe Diameter(min) | Volume(m <sup>3</sup> /min) |      | 0.010 | 0.016 | 0.025 | 0.040 | 0.063 | 0.080 | 0.100 | 0.125 | 0.160 | 0.200 | 0.250 | 0.315 | 0.400 | 0.500 |  |
|--------------------|-----------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|                    | mm                          | inch |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 25                 | 1                           |      | 1.05  | 2.42  | 5.35  | 12.5  | 28.0  | 43.2  |       |       |       |       |       |       |       |       |  |
| 32                 | 1 1/2                       |      |       |       | 1.38  | 3.30  | 7.73  | 12.0  | 18.2  | 27.5  | 43.5  |       |       |       |       |       |  |
| 40                 | 1 1/2                       |      |       |       |       | 1.57  | 3.62  | 5.68  | 8.68  | 13.2  | 21.0  | 32.0  | 48.0  |       |       |       |  |
| 50                 | 2                           |      |       |       |       |       | 1.29  | 2.00  | 3.00  | 4.55  | 7.19  | 10.9  | 17.8  | 25.2  | 39.5  |       |  |
| 65                 | 2 1/2                       |      |       |       |       |       |       |       | 1.02  | 1.55  | 2.45  | 3.68  | 5.59  | 8.57  | 13.3  | 20.3  |  |
| 80                 | 3                           |      |       |       |       |       |       |       |       |       | 1.03  | 1.54  | 2.31  | 3.12  | 5.50  | 8.33  |  |
| 100                | 4                           |      |       |       |       |       |       |       |       |       |       |       | 0.90  | 1.37  | 2.07  |       |  |

| Pipe Diameter(min) | Volume(m <sup>3</sup> /min) |      | 0.3  | 1.0  | 1.25 | 1.4  | 1.6  | 1.8  | 2.0  | 2.24 | 2.5  | 2.8  | 3.15 | 3.55  | 4.0  | 5.0  |  |
|--------------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|--|
|                    | mm                          | inch |      |      |      |      |      |      |      |      |      |      |      |       |      |      |  |
| 65                 | 2 1/2                       |      | 31.8 |      |      |      |      |      |      |      |      |      |      |       |      |      |  |
| 80                 | 3                           |      | 12.8 | 29.8 | 45.1 |      |      |      |      |      |      |      |      |       |      |      |  |
| 100                | 4                           |      | 3.26 | 7.48 | 11.4 | 14.0 | 18.0 | 22.4 | 27.3 | 33.8 |      |      |      |       |      |      |  |
| 125                | 5                           |      | 1.08 | 2.50 | 3.79 | 4.67 | 5.93 | 7.40 | 9.00 | 11.1 | 13.6 | 16.8 | 20.9 | 26.0  | 32.3 |      |  |
| 150                | 6                           |      |      | 1.04 | 1.57 | 1.94 | 2.48 | 3.08 | 3.75 | 4.65 | 5.66 | 7.00 | 8.65 | 10.08 | 13.4 | 20.5 |  |
| 200                | 8                           |      |      |      |      |      | 0.62 | 0.77 | 0.93 | 1.13 | 1.41 | 1.72 | 2.13 | 2.65  | 3.29 | 4.94 |  |
| 250                | 10                          |      |      |      |      |      |      |      | 0.32 | 0.39 | 0.48 | 0.59 | 0.73 | 0.91  | 1.13 | 1.71 |  |
| 300                | 12                          |      |      |      |      |      |      |      |      |      |      |      |      | 0.36  | 0.45 | 0.68 |  |

| Pipe Diameter(min) | Volume(m <sup>3</sup> /min) |      | 5    | 6.3  | 8.0  | 10.0 | 12.5 | 16.0 | 20.0 | 25.0 | 28.0 | 31.5 | 36.5 | 40.0 | 50.0 | 63.0 |  |
|--------------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
|                    | mm                          | inch |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 150                | 6                           |      | 20.5 | 31.5 |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 200                | 8                           |      | 4.94 | 7.50 | 11.7 | 17.4 | 26.4 |      |      |      |      |      |      |      |      |      |  |
| 250                | 10                          |      | 1.71 | 2.60 | 4.01 | 6.00 | 9.15 | 14.5 | 21.9 |      |      |      |      |      |      |      |  |
| 300                | 12                          |      | 0.68 | 1.03 | 1.62 | 2.50 | 3.80 | 6.03 | 9.28 | 14.2 |      |      |      |      |      |      |  |
| 350                | 14                          |      | 0.31 | 0.47 | 0.75 | 1.14 | 1.75 | 0.82 | 4.35 | 6.69 | 8.40 | 10.8 | 13.4 | 16.7 | 25.2 | 38.7 |  |
| 400                | 16                          |      | 0.16 | 0.24 | 0.38 | 0.59 | 0.90 | 1.46 | 2.25 | 3.49 | 4.37 | 5.54 | 6.97 | 8.70 | 13.1 | 20.2 |  |
| 450                | 18                          |      | 0.09 | 0.13 | 0.21 | 0.33 | 0.50 | 0.82 | 1.26 | 1.96 | 2.46 | 3.12 | 3.92 | 4.89 | 7.39 | 11.3 |  |
| 500                | 20                          |      | 0.05 | 0.07 | 0.13 | 0.19 | 0.29 | 0.48 | 0.74 | 1.17 | 1.47 | 1.86 | 2.34 | 2.92 | 4.42 | 6.77 |  |

## LENGTH OF PIPE FITTINGS(METERS)

| Name             | Illustration | Fitting type | Pipe Diameter(mm) |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
|------------------|--------------|--------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|
|                  |              |              | 25                | 32   | 40   | 50   | 65   | 80   | 100  | 125  | 150  | 200  | 250  | 300  |  |  |  |
| 90 Short elbow   |              | screw        | 1.6               | 2.0  | 2.3  | 2.6  | 2.9  | 3.4  | 4.0  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 0.5               | 0.6  | 0.7  | 0.9  | 1.1  | 1.3  | 1.8  | 2.2  | 2.7  | 3.7  | 4.3  | 5.2  |  |  |  |
| 90 Long elbow    |              | Screw        | 0.8               | 1.0  | 1.0  | 1.1  | 1.11 | 1.2  | 1.4  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 0.5               | 0.6  | 0.7  | 0.8  | 0.9  | 1.0  | 1.3  | 1.5  | 1.7  | 2.1  | 2.4  | 2.7  |  |  |  |
| 45 Short elbow   |              | Screw        | 0.4               | 0.5  | 0.7  | 0.8  | 1.0  | 1.2  | 1.7  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 0.3               | 0.4  | 0.4  | 0.5  | 0.6  | 0.8  | 1.1  | 1.4  | 1.7  | 2.4  | 2.7  | 3.3  |  |  |  |
| Tee              |              | Screw        | 1.0               | 1.4  | 1.7  | 2.4  | 2.8  | 3.7  | 5.0  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 0.3               | 0.4  | 0.5  | 0.6  | 0.6  | 0.7  | 0.9  | 1.0  | 1.2  | 1.4  | 1.6  | 1.8  |  |  |  |
| Tee              |              | Screw        | 2.0               | 2.8  | 3.0  | 3.7  | 4.0  | 5.2  | 6.4  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 1.0               | 1.3  | 1.6  | 2.0  | 2.3  | 2.9  | 3.7  | 4.6  | 5.5  | 7.3  | 9.1  | 10.3 |  |  |  |
| 180 Band         |              | Screw        | 1.6               | 2.0  | 2.3  | 2.6  | 2.8  | 3.4  | 4.0  |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 0.5               | 0.6  | 0.7  | 0.9  | 1.1  | 1.3  | 1.8  | 2.2  | 2.7  | 3.8  | 4.3  | 5.2  |  |  |  |
| Union            |              | Screw        | 0.09              | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.2  |      |      |      |      |      |  |  |  |
| BALL-shape Valve |              | Screw        | 8.8               | 11.3 | 12.8 | 16.5 | 18.9 | 24.1 | 33.5 |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 13.7              | 16.5 | 18.0 | 21.3 | 23.5 | 28.6 | 36.3 | 45.6 | 57.8 | 79.1 | 94.5 |      |  |  |  |
| Sluice Valve     |              | Screw        | 0.3               | 0.3  | 0.4  | 0.5  | 0.5  | 0.6  | 0.8  |      |      |      |      |      |  |  |  |
|                  |              | Flange       |                   |      |      | 0.8  | 0.8  | 0.9  | 0.9  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |  |  |  |
| Angle Valve      |              | Screw        | 5.2               | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  |      |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 5.2               | 5.5  | 5.5  | 6.4  | 6.7  | 8.2  | 11.6 | 15.2 | 19.2 | 27.4 | 36.6 | 42.6 |  |  |  |
| Check Valve      |              | Screw        | 3.4               | 4.0  | 4.6  | 5.8  | 6.7  | 8.2  | 11.6 |      |      |      |      |      |  |  |  |
|                  |              | Flange       | 2.2               | 3.1  | 3.7  | 6.2  | 6.4  | 8.2  | 11.6 | 15.2 | 19.2 | 27.4 | 36.6 | 42.7 |  |  |  |



**기술자료** 수중케이블 연장시 적용표(Power cable diameter by length)

**수중케이블 연장시 적용표**

| 기동 방식                      | 케이블길이  |       | 케이블사이즈(mm <sup>2</sup> ) 상단220V, 하단380Vor 440V |      |      |      |      |      |      |      |      |      |
|----------------------------|--------|-------|--|------|------|------|------|------|------|------|------|------|
|                            | 출력(Kw) | 전류(A) | 50m  | 60m  | 70m  | 80m  | 90m  | 100m | 120m | 140m | 160m | 180m |
| 직<br>입<br>기<br>동           | 0.75   | 3.5   | 0.75   | 0.75 | 1.25 | 1.25 | 2.0  | 2.0  | 2.0  | 2.0  | 3.5  | 1.5  |
|                            |        | 2.0   | 0.75   | 0.75 | 0.75 | 0.75 | 1.25 | 1.25 | 1.25 | 2.0  | 2.0  | 2.0  |
|                            | 1.5    | 7     | 1.25   | 1.25 | 2.0  | 2.0  | 3.5  | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  |
|                            |        | 4.0   | 0.75   | 0.75 | 1.25 | 1.25 | 2.0  | 2.0  | 2.0  | 2.0  | 3.5  | 3.5  |
|                            | 2.2    | 11    | 2.0  | 2.0  | 3.5  | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  | 8.0  | 8.0  |
|                            |        | 6.5   | 1.25   | 1.25 | 2.0  | 2.0  | 2.0  | 2.0  | 3.5  | 3.5  | 5.5  | 5.5  |
|                            | 3.7    | 18    | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  | 5.5  | 8.0  | 8.0  | 14.0 | 14.0 |
|                            |        | 10.5  | 2.0  | 2.0  | 3.5  | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  | 8.0  | 8.0  |
|                            | 5.5    | 26    | 5.5  | 5.5  | 5.5  | 8.0  | 8.0  | 8.0  | 14.0 | 14.0 | 14.0 | 14.0 |
|                            |        | 15    | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  | 5.5  | 8.0  | 8.0  | 8.0  | 8.0  |
| 7.5                        | 34     | 5.0   | 5.5  | 8.0  | 8.0  | 14.0 | 14.0 | 14.0 | 22.0 | 22.0 | 22.0 |      |
|                            | 21     | 3.5   | 3.5  | 5.5  | 5.5  | 8.0  | 8.0  | 8.0  | 14.0 | 14.0 | 14.0 |      |
| 11                         | 48     | 8.0   | 14.0   | 14.0 | 14.0 | 22.0 | 22.0 | 22.0 | 22.0 | 30.0 | 30.0 |      |
|                            | 28     | 5.5   | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  | 22.0 | 22.0 |      |
| 15                         | 65     | 14    | 14   | 14   | 22   | 22   | 22   | 22   | 30   | 38   | 38   |      |
|                            | 37     | 8     | 8  | 8    | 14   | 14   | 14   | 14   | 14   | 22   | 22   |      |
| 19                         | 75     | 14    | 22   | 22   | 22   | 22   | 22   | 30   | 30   | 38   | 50   |      |
|                            | 38     | 8     | 14   | 14   | 14   | 14   | 14   | 14   | 22   | 22   | 22   |      |
| 22                         | 85     | 22    | 22   | 22   | 30   | 30   | 30   | 30   | 38   | 50   | 50   |      |
|                            | 49     | 14    | 14   | 14   | 14   | 14   | 22   | 22   | 30   | 30   | 30   |      |
| 스<br>타<br>벨<br>타<br>기<br>동 | 11     | 48    | 5.5  | 5.5  | 5.5  | 8.0  | 8.0  | 14   | 14   | 24   | 22   | 22   |
|                            |        | 28    | 3.5  | 3.5  | 3.5  | 5.5  | 5.5  | 8    | 8    | 8    | 8    | 14   |
|                            | 15     | 65    | 8.0  | 8.0  | 8.0  | 14   | 14   | 24   | 22   | 22   | 22   | 22   |
|                            |        | 37    | 5.5  | 5.5  | 5.5  | 8    | 8    | 8    | 8    | 14   | 14   | 14   |
|                            | 19     | 75    | 8.0  | 8.0  | 14   | 14   | 14   | 14   | 14   | 14   | 22   | 30   |
|                            |        | 38    | 5.5  | 5.5  | 8    | 8    | 8    | 8    | 14   | 14   | 14   | 14   |
|                            | 22     | 85    | 8.0  | 14   | 14   | 14   | 14   | 22   | 22   | 22   | 30   | 30   |
|                            |        | 89    | 5.5  | 5.5  | 8    | 8    | 8    | 14   | 14   | 14   | 22   | 22   |
|                            | 26     | 100   | 14   | 14   | 14   | 22   | 22   | 22   | 30   | 30   | 38   | 38   |
|                            |        | 58    | 8  | 8    | 8    | 8    | 14   | 14   | 14   | 22   | 22   | 22   |
| 30                         | 115    | 14    | 14   | 22   | 22   | 22   | 30   | 30   | 38   | 38   | 50   |      |
|                            | 66     | 8     | 8  | 8    | 14   | 14   | 14   | 22   | 22   | 22   | 22   |      |
| 37                         | 140    | 22    | 22   | 22   | 22   | 30   | 30   | 38   | 50   | 50   | 50   |      |
|                            | 81     | 14    | 14   | 14   | 14   | 14   | 14   | 22   | 22   | 22   | 22   |      |
| 45                         | 185    | 22    | 22   | 30   | 30   | 38   | 38   | 50   | 60   | 60   | -    |      |
|                            | 107    | 14    | 14   | 14   | 14   | 14   | 22   | 22   | 30   | 30   | -    |      |
| 55                         | 220    | 30    | 30   | 30   | 38   | 38   | 50   | 60   | -    | -    | -    |      |
|                            | 127    | 14    | 14   | 14   | 22   | 22   | 22   | 30   | -    | -    | -    |      |
| 75                         | 300    | 38    | 38   | 50   | 50   | 60   | 60   | -    | -    | -    | -    |      |
|                            | 173    | 22    | 22   | 22   | 30   | 30   | 30   | -    | -    | -    | -    |      |

**전선의 Voltage Drop 계산법(Voltage Drop and cable Area)**

전선에 단면적은 표준 Voltage에서 2%이상 Drop안되도록 결정되어야 하고 이 전압 강하는 다음 방식으로 계산된다.

To keep the voltage less than 2% in normal operation, the power cable must have bigger sectional area

1. 단상모터 (Single phase motor)

$$E(V) = \frac{34.4 \times L \times I}{A} \times 10^3$$

E = Voltage Drop(Voltage loss(V))

A = 전선단면적(mm<sup>2</sup>)(Cable sectional Area(mm<sup>2</sup>))

L = 전선의 길이(m)(Cable length(m))

I = 전류(A)(Ampere(A))

2. 삼상모터(3 Phase motor)

$$E(V) = \frac{30.8 \times L \times I}{A} \times 10^3$$

예) 삼상220(V), 1.5Kw, 6(A), 2(mm<sup>2</sup>)선(3phase 220V, 1.5Kw, 6A, 2mm<sup>2</sup> wire)

$$E = \frac{30.8 \times L \times I}{A} \times 10^3(V)$$

$$L = \frac{L \times I}{30.8 \times A} \times 10^3(M)$$

$$= \frac{200 \times 0.02 \times 2}{30.8 \times 6} \times 10^3(M)$$

단, 초과하는 Voltage Drop없이(2%이하) 40m까지 선을 연장사용 할 수 있음을 표시함.

\*MAX, Cable length : 40m



**기술자료** **취급설명서(고장원인과 유의사항)**

| 취 급                                       | 이 상   | 원 인  | 유 의 사 항   |                               |
|---|---|--|---|-------------------------------|
| 스위치를 넣는데 처음부터 기동을 하지 않는다.                 | 전원까지 전기가 와있지 않다.  | 정전   | 원인을 규명하여 수리토록 할 것. 임페라와 씩손카바가 접촉되고 있거나, 어떤 이물이 그속에 끼여져 있음. 또한 베어링의 파손등의 원인일수도 있음<br>케이블을 밟고 다니거나 잡아당기거나 또는 삼에 찢려서 절단되었으므로 부주의가 원인임.<br>전문기술자나 본사에 문의바람. |                               |
|   | 단상이 되어 있다.  | 배관선의 고장  |   |                               |
|   | 전원이 보호장치가 작동중에 있는 상태                                      | 전원의 보호장치가 작동중 어떤 원인으로 과부하가 되어 과전류가 흐를 가능성이 많다.   |   |                               |
|   | 모-터 보호장치가 작동중에 있는 상태                                      | 설치 또는 운전시의 사고  |   |                               |
|   | 케이블의 단선 또는 접선불량   | 임페라 록트이건, 킷타펌프 일때는 임페라와 씩손카바의 간격이 너무 적음.   |   |                               |
| 운전중에 자동적으로 정지하고 기동이 되지 않을때, 정지, 기동이 반복될 때 | 제어회로(수입검출기-조작선)의 이상                                       | 유입물에 따라 검출기의 작동 불량인 경우가 많다.  | 근본적인 대책을 세우십시오.   |                               |
|   | 정전  | 배선공사중  | 공사후에는 상결선이 바뀌어 역회전하는 수가 있으니 주의  |                               |
|   | 전원의 보호장치의 작동  | · 접속불량 · 단상운전<br>· 임페라 및 베어링 록크  | 원인이 규명될 때까지 재운전을 하지 마십시오.   |                               |
|   | 모-터 보호장치의 작동  | · 갈수운전 상승<br>· 저수위운전으로 모터온도 상승   |   |                               |
|   | · 제어회로의 고장<br>· 수위검출기의 동작불량                               | · 운전수위설정이 잘못됨.<br>· 수위검출기의 선정이 잘못되었을 때 상한의 ON고 하한의OFF<br>· 라-드선의 접속불량됨   | 배선이 가늘거나 또는 전원전압 강하를 할 것.   |                               |
|   | 전원이상  | · 전압강하<br>· 단상운전   |   |                               |
|   | 임페라가 공회전할 때   | 스트레나에 이물에 막혀 있거나 토사양송이 과다함   | 스트레나에 이물이 끼거나 모터에 과부하가 되지 않도록 액체상태를 조사하여 조절할 것.   |                               |
|   | 모-터 과열로 모-터 보호장치가 작동하고 있다.<br>냉각되며 기동하고 온도상승 하면 정지현상이 반복됨 | · 과부하-고점도, 고형물의 다량흡입, 수온이 높음<br>· 전압강하 · 단상운전<br>· 기중운전 · 임페라록크<br>· PANEL의 회로단선<br>· 배관 및 양정의 과대<br>· 모-터 절전저항이 떨어짐 | ON, OFF를 여러번 반복하면 모-터가 파손될 경우가 있으므로 반드시 원인을 규명하여 해소 시킬 것. 원인이 이중, 삼중으로 중복되는 경우가 있으니 주의하십시오.   |                               |
| 펌프는 가동하고 있으나 양수량이 적다.                     | 점도 고형물이 과대한 혼입전압이상  | · 단자의 접속불량<br>· 전원전압 배선회로이상<br>· 배선 케이블이 너무 길때   | 원인을 해소할 때까지 운전하지 말 것.   |                               |
|   | 펌프진동이 심하다   | 역회전하고 있음<br>· 임페라에 이물이 끼여 있다.<br>· 단상운전하고 있다.  | 삼상중 이상을 서로 바꿀 것.<br>청소하고 배선을 점검할 것.   |                               |
|   | 스트레나 구멍이 막혔다.<br>배관에 이물이 끼여 있다.                           | 유입수의 이상 또는 처리장치의 고장<br>배수의 질에 이상이 발생하다.<br>체크밸브등에 이상   | 원인규명하여 대응책을 강구할 것<br>확인수리   |                               |
|   | 펌프회전은 정상인 때   | 펌프성능이 부족하다   | 확인수리  | 펌프선정이 잘못되었으므로 적절한 펌프로 재선정할 것. |
|   |   | 배관이 가늘고 길어서 배관저항이 과다하다.  | 배관이 가늘고 길어서 배관저항이 과다하다.   | 적당한 배관을 할 것                   |
|   | 전류가 과대하다.   | 임페라와 씩손카바가 마모됨.  | 임페라 및 씩손카바를 교체할 것.  |                               |
|   |   | 전압이 낮다.  | 전압이 낮다.   |                               |
|   |   | 모-터의 역회전   | 모-터의 역회전  | 삼상중 이상을 서로 바꿀 것.              |
|   |   | 이물이 몰려서 막히다.<br>과대수량   | 이물이 몰려서 막히다.<br>과대수량  | 스리-스변으로 수량을 조사함.              |



**TECHNICAL DATE INSTRUCTION MANUAL(Failure reason and caution)**

| SITUATION   | TROUBLE   | CAUSE  | CAUTION  |
|---|---|--|--|
| It turn the switch on but it dosen't operate.   | No electrical current   | Power failure  |  |
|   | Single phase  | Wiring trouble   |  |
|   | Power protector' s operation  | While power protector operate, it might flow over current by trouble over load | Bearing trouble  |
|   | Motor protector' s operation  |  | Clogged by foreign matter  |
|   | Insulation breakage of cable circuit connection error                         | Installation or operation of trouble   | Unbalanced power supply caused by wire insulation breakage, inspect electric circuit |
| Impeller rotation trouble   | Small gap between impeller and suction cover                                  | Ask at the technician or head office.  |  |
| When it stops automatically at the driving and it desen't operate, When stopping and operating repeated | Control circuit error   | Float switch operation error   | Make the counterplan   |
|   | Power failure   | Electric circuit construction  | Correct rotation   |
|   | Operation of power protector  | -Single phase power<br>-Impeller, bearing noise                                | Don' t drive untill the problem is solved.   |
|   | Operation of motor protector  | Low operating water level cause motor temperature up                           |  |
|   | -Faulty control circuit trouble<br>-Float switch error                        | -Float switch fault<br>-Lid line connection error                              |  |
|   | The power error   | Voltage drop, single phase   | Wiring is thin   |
|   | When impeller rotate without water  | Insert abnormal solid matters in strainer                                      | Check if obstacles flow in strainer and if moter over load.                          |
|   | High liquid temperature has activated motor protector and caused pump to stop | -Over load.<br>-Pipe and head over<br>-Insulation resistance of the motor down | If ON and OFF repeated, check the damages of the motor and repair.                   |
| When it works but capacity isn't adequate.  | Voltage trouble by insert abnormal solid matters.                             | -Supply voltage circuit error<br>-When cable is too long                       | Don' t drive until the problem is solved.  |
|   | Pump vibration is extreme   | Reverse rotation   | Replace three phase  |
|   |   | Insert foreign matters in impeller.  | Clean and check electric circuit   |
|   | Strainer hole is extreme  | Raw water or processing device trouble   | Make the counterplan   |
|   | Foreign matter in pipe  | -Effluent trouble  |  |
|   |   | -Check volve trouble   | Inspect and repair   |
|   | When pump rotation is normal  | Pump performance lacks   | Replace suitable pump  |
|   |   | Pipe is small and long   | Use suitable pipe  |
|   |   | Worn out impeller and suction cover  | Replace impeller and suction cover   |
|   | Electric current exaggerates  | Low voltage  |  |
| Reverse rotation of motor   |   | Replace three phase  |  |
| Clogged by foreign matter   |   |  |  |
| High quantity of water  |   | Check water level  |  |



## CERTIFICATE OF APPROVAL

**SHINSHIN PUMP MANUFACTURING Co.**

24-20, YEOKGOK 1-DONG, WONMI-GU, BUCHEON-SI, GYEONGGI-DO, KOREA

Korean Standards Association hereby certifies that the Quality Management System of the above organization has been assessed and found to meet the requirements of the standard and scope of certification detailed below:

CERTIFICATION NO.

QMS-1016

STANDARD

KS A ISO 9001:2007/ISO 9001:2000

SCOPE OF CERTIFICATION

DESIGN, DEVELOPMENT, PRODUCTION AND SERVICING OF SUBMERSIBLE MOTOR PUMP FOR SUMP AND SUBMERSIBLE PUMP FOR CONSTRUCTION

VALID FROM

31 January, 2009

VALID UNTIL

30 January, 2012

Original Certification Date : 31 January, 2003

*Kaphong Chon*  
THE CHAIRMAN OF KSA

Issue Date : 22 January, 2009

**KOREAN STANDARDS ASSOCIATION**  
701-7, Yeoksam-Dong, Gangnam-Gu, Seoul, Korea

Accredited by Members of the IAF, ISO, A to QMS. The Accreditation Mark (K) indicates accreditation in respect of their activities covered by the Accreditation Certificate Number K-SB-QC-30



## KS CERTIFICATE

This is to certify that the Korean Industrial Standard Mark(KS mark) of:

**SHIN SHIN PUMP MANUFACTURING Co.**  
24-20 Yeokgok 1-dong, Wonmi-gu, Bucheon-si, Gyeonggi-do, Korea  
Lee, Seung-Ho

has been approved by Korean Standards Association to the following Korean Industrial Standard :

**KS B 6321**  
Submersible motor pumps for sump

in accordance with the Korean Industrial Standardization Act.

Certificate Number : 03-3982

Certification Date : Jan. 23, 2003

Current Certificate : Nov. 17, 2005

Certified by *Lee Gyeongjung*

President

**Korean Standards Association**

Korea Technology Center, 701-7, Yeoksam-dong, Gangnam-gu, Seoul, Korea

# Impellers

varieyt of types

**Non-clog Impeller (shrouded type)**



Impeller having a wide inlet extending from the center to exit, which prevents internal clogging by solids and debris entering via the inlet.

**Non-clog Impeller (with cutter mechanism)**



A "cutter mechanism" is provided by the combined action of a carbide blade integrated into a non-clog impeller and the saw-shaped inner surface of a suction cover. This cutter mechanism cuts up fibrous foreign matter to facilitate transfer.

**Vortex Impeller**



An impeller used mainly in volute pumps. Vortex impellers pump water by the eddy flow caused by interaction with the casing, which prevents internal clogging by solids and fibrous matter.

**Open Impeller**



A shroud-less impeller used in centrifugal pumps. There are two types of open impellers "semi-open" and "fully-open" impellers. Semi-oper impellers have center plates(core plates) extending to the periphery of the vanes, and fully-open impellers have center plates made as short as possible.



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**신신펌프제작소**

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