

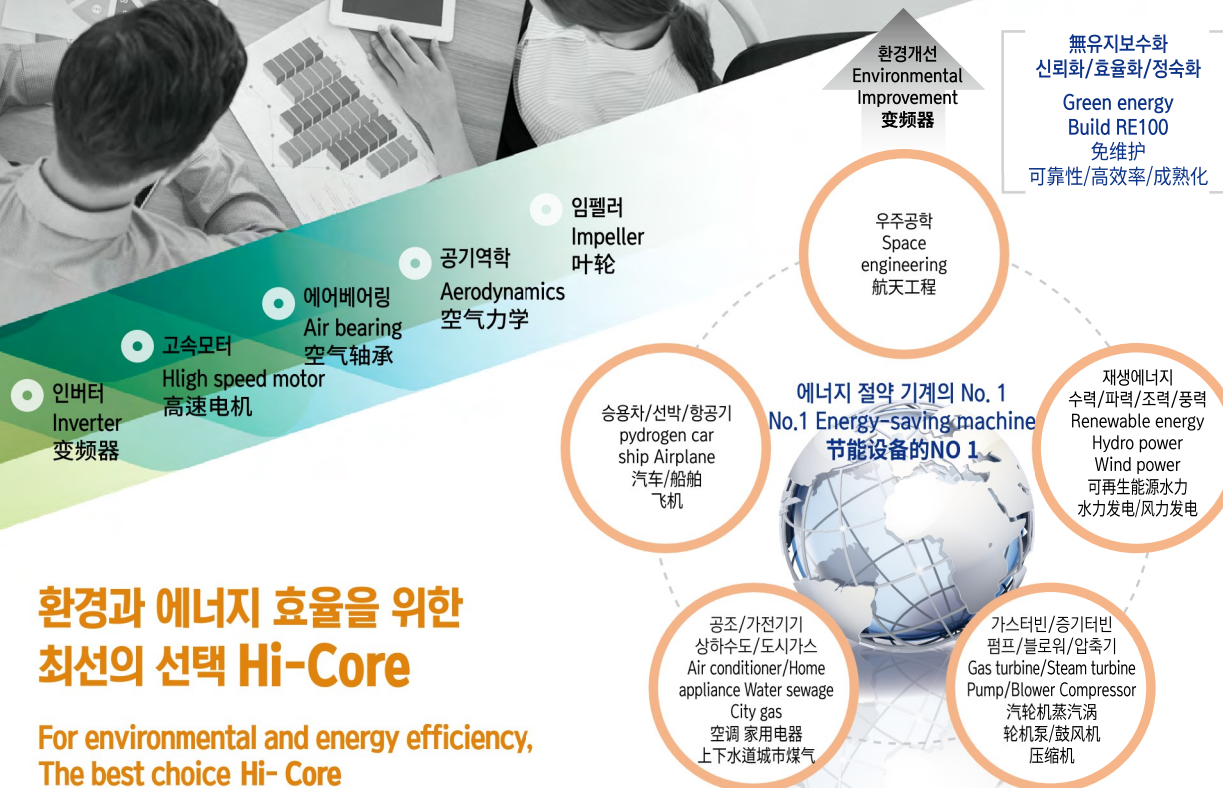


# HC-Series

The Highest Efficiency Turbo Blower / Turbo Compressor  
Technology for human beings-produced by honest people



**Hi-Core**  
하이코어주식회사



## 환경과 에너지 효율을 위한 최선의 선택 Hi-Core

For environmental and energy efficiency,  
The best choice Hi- Core  
环境和能源效率的最佳选择 Hi- Core

저희는 빠르게 변화하는 경영 환경 속에서 고객 가치 창출을 위하여 지속 성장을 향한 새로운 항해를 그리고 활발한 소통과 열정으로 열린 창의적인 당사는 임직원 뿐 아니라 고객, 협력사 등 이해 관계자들간 합의를 마련하여, 회사 정책에 적극 반영하여 회사 신뢰도를 더욱 높여가고자 노력하고 있습니다. 인류의 기술이 한계점에 도달해 가고 있는 현재, 당사는 에너지기계 중 하나인 고효율 에너지기계를 공급하며, 무공해와 반영구적으로 사용할 수 있도록 생산할 것 입니다. 고강성 동압 공기베어링으로 지지되는 고효율 고회전 고속모터를 개발하여 생산된 터보송풍기를 산업현장에 제공하여 호평을 받고 있습니다. 기존제품의 소음과 진동, 오일사용에 따른 환경문제 등을 근본적으로 제거한 혁신적인 제품으로써 기존의 제품에 비하여 약 40%의 에너지 절감효과가 입증되었습니다.

### 터보압축기 분야의 정직한 기업

We continue our journey towards sustainable growth to create value for all customers in a rapidly changing business environment.

Also, we have an open and creative corporate culture with active communication and passion.

Hi-Core seeks a mutually beneficial solution for not only our own employees, but all stakeholders including our customers and partner companies thus improving our reliability.

At a time when technology is about to hit a wall, Hi-Core provides some of the most efficient energy machinery in the field that produces zero pollution and can be used semi-permanently.

Our high-efficiency, high-output, high-speed motor supported by a high-strength dynamic pressure air bearing has been used to produce the Turbo Blower which has received wide acclaim in the industry.

It is an innovative product that fundamentally addresses environmental issues such as noise, vibration and the use of oil. It has been proven to conserve energy by approximately 40% compared to existing models. It has also been proven that it can be used semi-permanently.

**We will grow further into an honest company in the field of turbo blower/compressor**

在瞬息万变的经营环境中，我们持续迈向以创造客户价值持续增长的航程。

并以活跃的沟通和热情，打造开放的创意企业文化。

本公司致力于在员工、客户、合作伙伴等利益相关方之间达成共识，积极反映公司政策，提高公司信任度。

如今人类技术正在接近极限，我们将提供节能机械之一的高效能设备，致力于开发生产无污染和半永久性的能源机械。

研发采用高刚性动压空气轴承支撑的高效率的大功率高速电机，将生产的空悬鼓风机提供给工业现场应用，受到了广大的好评。

其创新产品从根本上消除了传统产品的噪音、振动、使用油的环境问题等，与传统产品相比已经验证节能率约达到40%，已被证明可以永久使用。

**致力发展壮大成空压压缩机领域的诚实企业**



## HC Series (Turbo Blower / Compressor)

기존의 터보기계(터보송풍기, 터보압축기)는 동력전달을 위해 증속기어와 오일베어링이 사용되고 있어 극심한 소음과 기름 오염이 수반됩니다. 하이코어는 이러한 기존 제품들의 한계를 뛰어넘는 HC(Turbo Blower / Compressor) Series를 제공합니다

- HC는 공기베어링으로 지지된 회전축을 PM모터로 직접 운전되는 무급유 · 무소음 제품
- 전기 동력이 기계적 접촉없이 축에 전달 되므로 시스템 효율이 탁월하고 내구수명이 반영구적
- 청정 작업환경제공, 에너지절감
- 유지보수비 절감, 작은 설치공간 등
- 고효율의 환경 친화형 에너지기계(터보기계)
- 차세대 터보기계인 HC Series를 구현하기 위해 최첨단의 기술인 동압포일에어베어링, PM 모터&인버터, AL7075 임펠러를 생산

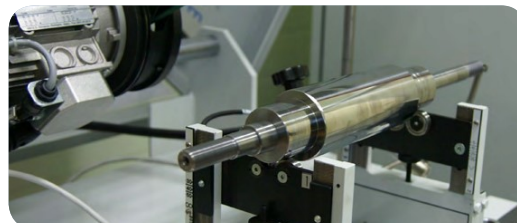
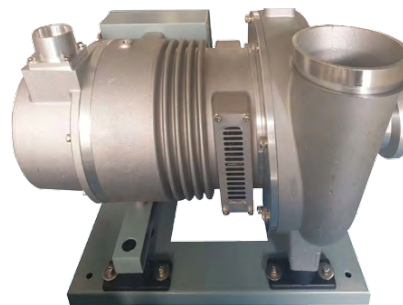
Conventional turbomachines use accelerator gear and oil bearings to transmit power (turbo blower, turbo compressor), causing extreme noise and oil pollution.

Hi-Core offers the Turbo Blower/Compressor (HC) Series that goes beyond the limits of these existing products.

- HC is a refueling/noise-free product that operates directly with a PM motor on shaft supported by air bearing
- Because electrical power is transmitted to the shaft without mechanical contact, the system efficiency is excellent and the durable life is semi-permanent
- Providing a clean working environment, saving energy
- Reduction in maintenance costs, small installation spaces, etc.
- High efficiency environmentally friendly energy machine (turbo machine) To implement the HC Series, the next generation turbo machine, we produce cutting edge technologies such as foil air bearing, PM motor & inverter, and AL7075 impeller

原有的的涡轮机械（涡轮机、涡轮压缩机）使用增速齿轮和油轴承来传递动力，因此伴随着严重的噪音和油污。海珂尔供应超越这些原有产品局限性的HC(Turbo Blower/Compressor)系列

- HC是用空气轴承支撑的旋转轴直接驱动PM马达的无油、无噪音产品
- 电动动力无需机械接触直接传递到轴上，系统效率卓越，半永久性耐用寿命
- 提供清洁工作环境、节约能源
- 节省维护费用、安装空间小等
- 高效率的亲环境能源机械（空悬设备）
- 为了实现下一代最先进的HC Series涡轮机，我们生产的设备应用了最尖端的高压空气轴承、PM马达和逆变器、AL7075叶轮。



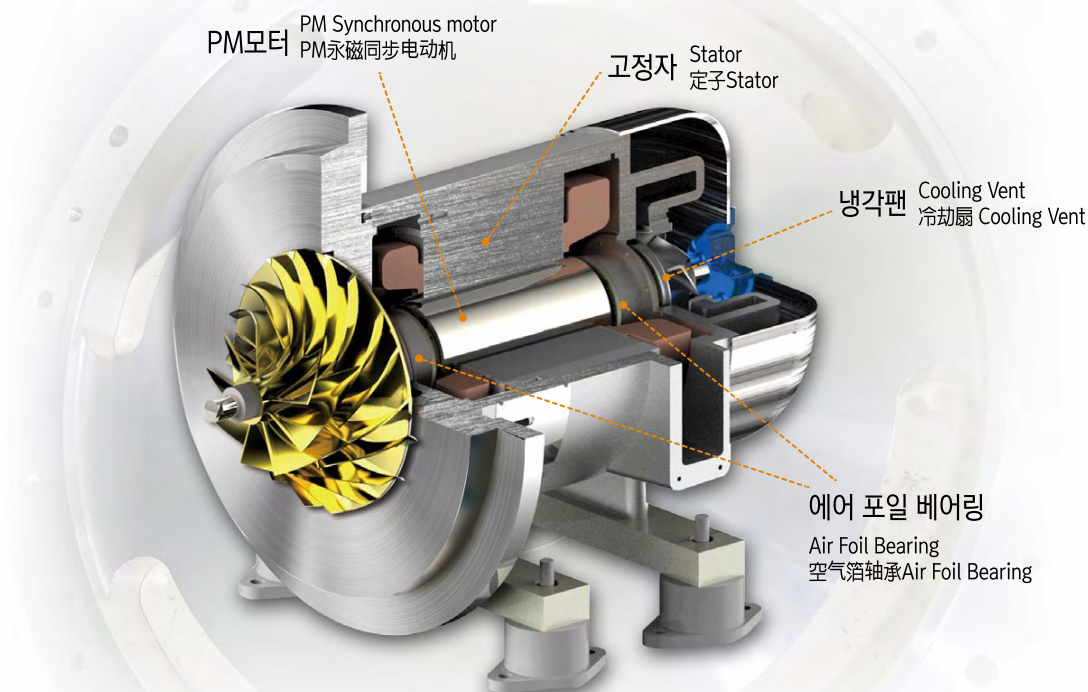


## Turbo Blower 구조 Turbo Blower Structure Turbo Blower 结构

터보블로워는 에어 베어링, 고효율 임펠러와 초고속PM모터를 사용함으로 에너지를 획기적으로 절감하여 경제적인 효과와 산업환경의 질을 향상시킬 수 있습니다.

Turbo blowers can dramatically reduce energy by using air bearings, high-efficiency impellers, and high-speed PM motors, improving economic effects and quality of the industrial environment.

空悬鼓风机采用空气轴承、高效叶轮和超高速PM马达，可显著节约能源，提高经济效益和改善工业环境质量。



### PM모터

### PM Motor PM电机

- 대용량(7.5kw~300kw)PM모터
- 고효율 PM Motor는 장비전체의 운전범위보다 더욱 높은 효율(95%이상)을 실현
- 고효율 설계와 생산으로 인해 다른 제품보다 매우 적은 열을 발산하여 효율을 극대화 시킨 제품
- Sensorless Type Motor Drive(Inverter)기술을 적용하여 고온의 모터 환경에서도 정확한 제어가 가능
- 높은 안정성 / 유지보수 비용의 최소화
- 저소음 무진동

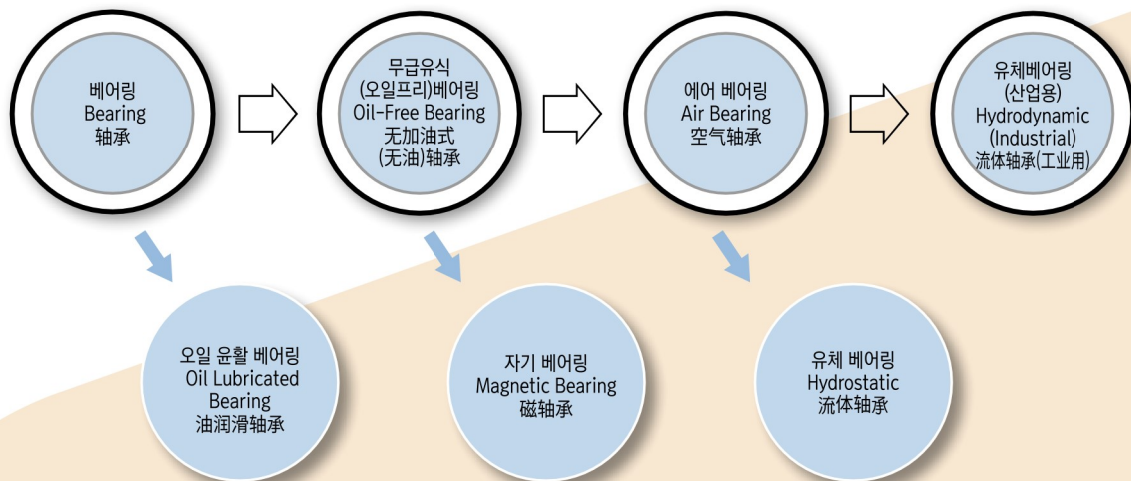
- PM Motor (7.5kw~300kw)
- High efficiency PM Motor realizes higher efficiency (95% or more) than the operating range of the entire equipment.
- The product maximizes efficiency by dissipating much less heat than other products due to its high-efficiency design and production.
- Sensorless Type Motor Drive (Inverter) technology enables accurate control even in high temperature motor environments.
- High stability / Minimization of maintenance costs
- Low noise no vibration.

- 大功率(7.5kw~300kw)PM马达
- 高效率的PM Motor实现了比整个设备的运行范围更高的效率(95%以上)
- 通过高效的设计和和生产，比其他产品散发的热量更少，从而最大限度地提高效率。
- 采用无传感器类型Motor Drive(Inverter)技术，在高温电机环境下也能精确控制
- 可靠性高/维护成本最低
- 低噪音无振动



**포일 공기베어링****Air Foil Bearing 箔空气轴承**

- 무 급유 공기 윤활 장치
  - 축이 회전할 때 발생하는 베어링과 축사이의 공기유동을 압축공기로 변환시켜 회전축을 부양하고 윤활역할도 수행
  - 축이 공기베어링과 마찰하며 회전하게 되는데 이때의 마찰 손실을 예방하기 위해 축과 베어링에 내마모 코팅이 필요-20,000회 이상의 기동과 정지(on-off)가 가능하도록 특수코팅 처리
  - 대용량(300kw이상) 송풍기 및 공기 압축기에 적용되는 Bump-Type 공기베어링의 설계기술, 제조기술을 확보
  - 소음이 없고 높은 시스템 효율과 반영구적 내구수명을 보장
- No refueling air lubrication device
  - By converting the air flow between the bearing and the shaft that occurs when the shaft rotates into compressed air, it supports the rotating shaft and also plays a role of lubrication.
  - The shaft rotates while rubbing against the air bearing, and wear-resistant coating is required on the shaft and bearing to prevent friction loss at this time.
  - Special coating treatment to enable more than 20,000 starts and stops.
  - Secure the design and manufacturing technology of the bump-type air bearing applied to large capacity (300kw or more) blowers and air compressors.
  - No noise and ensures high system efficiency and semi-permanent durability.
- 无加油空气润滑装置
  - 将轴旋转时产生的轴承和轴之间的空气流动转换为压缩空气，从而浮起旋转轴同时起润滑作用
  - 轴与空气轴承摩擦并旋转，为了避免摩擦损失，轴和轴承需要耐磨涂层可承受-20,000次以上启动停止(on-off)的特殊涂层处理。
  - 拥有适用于大功率(300kw以上)风机和空气压缩机的Bump-Type空气轴承的设计技术、制造技术
  - 确保无噪音、高系统效率和半永久性的耐久寿命





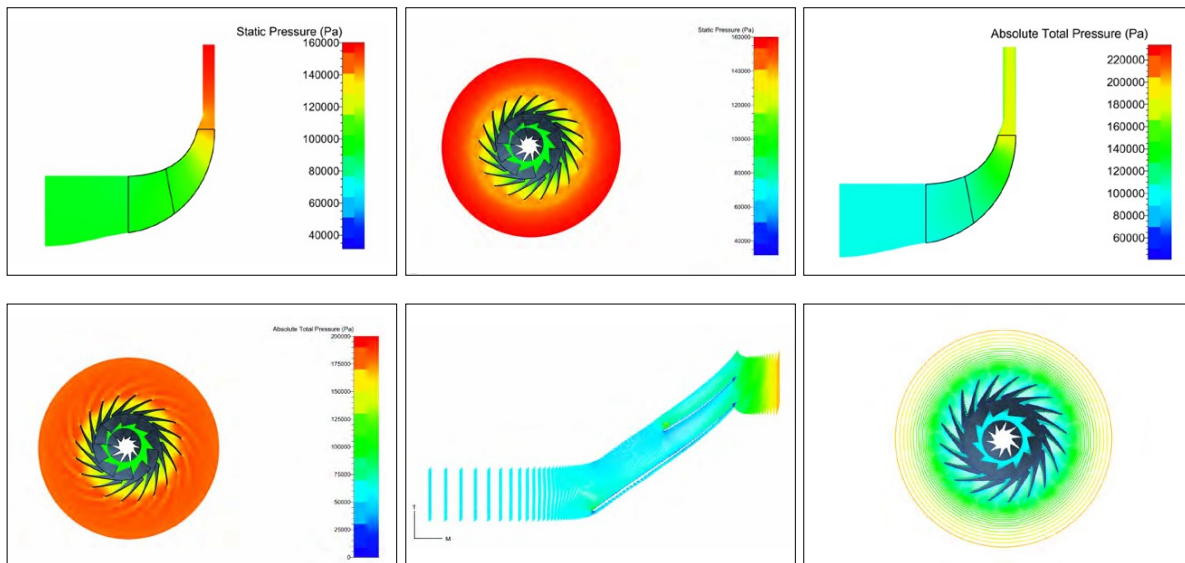
## 임펠러

## Impeller 叶轮

- 고강도의 재질로 압력이 높은 상황에도 적합
  - 폭넓은 운전범위 및 충분한 압력마진 확보로 SURGE 안정성 높음
  - 단조소재를 이용한 정밀기계가공 생산(A7075-T651)
  - 정밀5축 기계로 가공하여 매우 정밀하며 고효율 임펠러 생산
  - Impeller와 Shaft가 직결로 연결되어 동력전달효율 100%
- 
- High strength material suitable for high pressure
  - With a wide operating range and sufficient pressure margin, surge stability is high
  - Production of precision machine processing using forged materials (A7075-T651)
  - Processed with a precision 5-axis machine to produce a very precise high-efficiency impeller
  - Impeller and Shaft are directly connected, so the power transmission efficiency is 100%
- 
- 高强度材质，也适用于压力高的条件
  - 宽阔的运行范围和足够的压力余量抗SURGE能力强
  - 高锻造材料生产的精密机械加工(A7075-T651)
  - 采用精密5轴机械加工，高度精密，生产高效率叶轮
  - Impeller与Shaft直接相连，动力传动效率100%



## | 유로해석 Aerodynamic interpretation |



**인버터****Inverter 变频器**

- VD\_VECTOR DRIVE (7.5kw~800kw, 200v/400v/690v/1140v)
- PM MOTOR에 가장 최적화된 DRIVE 선택
- 급격한 부하 변동에도 빠른 반응 속도
- 고객사양에 따라 다양한 범용 인버터 적용가능
- 사용자 친화적인 그래픽 제어시스템(터치스크린)
- VD-VECTOR DRIVE (7.5kw~800kw, 200v/400v/690v/1140v)
- Choose the most optimized DRIVE for PM MOTOR
- Despite rapid load fluctuations, fast response speed
- Various general purpose inverters can be applied depending on customer specifications
- User-Friendly Graphic Control System (Touch Screen)
- VD\_VECTOR DRIVE(7.5kw~800kw, 200v/400v/690v/1140v)
- 选用了PM MOTOR最匹配的DRIVE
- 快速应对急剧的负荷变动
- 可根据客户要求选用各种通用变频器
- 对用户友好的图形控制系统(触摸屏)

**제품적용분야****Product Application  
产品应用领域****환경산업 Environmental industry 环境产业**

상수도, 하수폐수처리장 포기용, 소각로, 위생처리장 등  
포기조, 집수조, 막분리용  
Water supply, sewage wastewater treatment plant, incinerator, sanitary treatment plant, etc. Air supply, backwash, separation of membrane.  
污水废水 处理厂曝气用、焚烧炉、卫生处理厂等曝气池、集水池、膜分离用全行业

**농업/식품 및 기타 Agriculture/food etc. 输送农业/食品和其他**

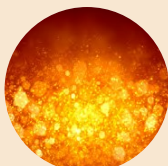
곡물류 이송 및 건조, 식품 원재료 이송  
양어장 산소공급, 농축산 분뇨처리장  
미생물활성화를 위한 산소공급  
Transferring grain, drying, and transferring raw food ingredients. The fish farm's oxygen supply, manure treatment plant. Oxygen supply to activatemicroorganisms.  
谷物输送和干燥, 食品源材料输送养鱼池供氧, 浓养殖粪便处理厂激活微生物的供氧

**식용용기 세척 Dishwashing  
食品容器清洗**

병세척 후 내부 수분제거 및 건조  
Remove moisture from the inside and dry after washing the bottle  
清洗瓶子后去除内部水分及干燥

**도장라인 Painting line 涂装生产线**

스프레이용 압축에너지 공기 공급  
Air supply of compressed energy for spraying  
供应喷雾用压缩能空气

**소각로 Incinerator 焚化炉**

연소효과 증대, 가스배기 증가  
Combustion effect increased, gas exhaust increased  
增加燃烧效果、增加气体排气

**산업전반 Industry as a whole 整个产业**

시멘트, 제련 및 제철소, 석유·화학, 펄프·종이 등  
칩 및 분체 원료공기 이송용  
Cement, smelting and steel mills, petrochemicals, pulp, paper, etc. It's for transporting chips and powder ingredients  
用于水泥、冶炼和钢厂、石化、纸浆纸等芯片和分体原料空气

**석유/화학 Petroleum/chemical 石油/化学**

칩 및 분체원료 공기이송  
It's for transporting chips and powder ingredients  
芯片和粉体原料空气输送

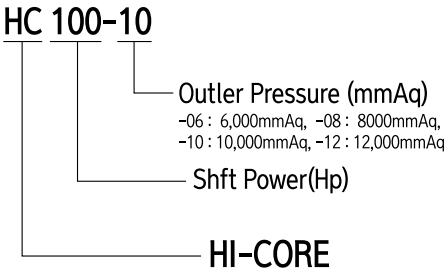
**건조라인 Dry line 干燥生产线**

소규모 건조라인  
Dry line 小型干燥生产线



# HC Series (Turbo Blower / Compressor)

- HC Series는 터치스크린을 설치하여 조작이 용이
- 고속 PM모터를 장착
- 성능시험 시스템을 거쳐 제품별 성능치를 보증
- HC Series is easy to operate by installing touch screens.
- Equipped with a high-speed PM motor.
- Product performance guarantees through the performance test system.
- HC系列安装触摸屏，方便操作
- 配备高速PM马达
- 通过性能测试系统保证产品的性能值



## | 제품 사양 리스트 Specification |

| Specification                                |       | HC10                                                                        | HC15 | HC20 | HC30 | HC50 | HC75 | HC100 | HC125 | HC150 | HC200 | HC200 | HC250 | HC300 | HC400 |
|----------------------------------------------|-------|-----------------------------------------------------------------------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Type                                         |       | SINGLE                                                                      |      |      |      |      |      |       |       |       |       | Twin  |       |       |       |
| Standard Condition                           |       | 20℃, RH 65%, 1atm, Density=1.2kg/m³, Guarantee Tolerance : ± 5% on capacity |      |      |      |      |      |       |       |       |       |       |       |       |       |
| DISCHARGE PRESSURE (mmAq) /AIR Flow (m³/min) | 6000  | 7                                                                           | 11   | 14   | 20   | 35   | 51   | 70    | 82    | 105   |       | 140   | 160   | 210   | 280   |
|                                              | 8000  | 5                                                                           | 8    | 11   | 17   | 28   | 42   | 55    | 70    | 84    |       | 108   | 138   | 168   | 216   |
|                                              | 10000 |                                                                             |      |      |      |      | 35   | 46    | 55    | 69    | 88    |       | 108   | 138   | 176   |
|                                              | 12000 |                                                                             |      |      |      |      |      |       |       | 56    | 78    |       | 93    | 112   | 156   |
| SHAFTPOWER (HP)                              |       | 10                                                                          | 15   | 20   | 30   | 50   | 75   | 100   | 125   | 150   | 200   | 200   | 250   | 300   | 400   |
| EXHAUST PIPE (A)                             | 6000  | 100                                                                         | 100  | 150  | 150  | 150  | 200  | 200   | 250   | 250   |       | 300   | 400   | 400   | 500   |
|                                              | 8000  | 100                                                                         | 100  | 150  | 150  | 150  | 200  | 200   | 250   | 250   |       | 300   | 400   | 400   | 500   |
|                                              | 10000 |                                                                             |      |      |      |      | 200  | 200   | 250   | 250   | 250   |       | 400   | 400   | 400   |
|                                              | 12000 |                                                                             |      |      |      |      |      |       |       | 250   | 250   |       | 400   | 400   | 400   |
| DIMENSION (mm)                               | W     | 700                                                                         | 700  | 700  | 700  | 700  | 850  | 850   | 1000  | 1000  | 1000  | 1200  | 1200  | 1200  | 1200  |
|                                              | L     | 850                                                                         | 850  | 1600 | 1600 | 1600 | 1750 | 1750  | 1950  | 1950  | 1950  | 2300  | 2300  | 2300  | 2300  |
|                                              | H     | 1400                                                                        | 1400 | 1400 | 1400 | 1400 | 1550 | 1550  | 1650  | 1650  | 1650  | 2100  | 2100  | 2100  | 2100  |
| WEIGHT(kG)                                   |       | 325                                                                         | 325  | 535  | 535  | 535  | 735  | 735   | 1325  | 1325  | 1325  | 2100  | 2100  | 2100  | 2100  |



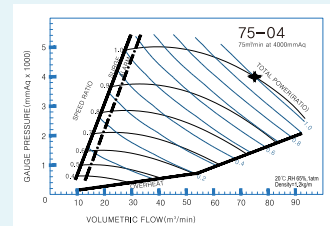
## Performance Curve

HC30

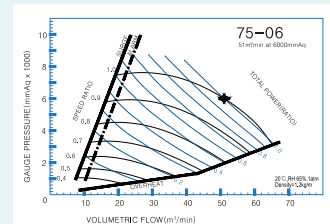
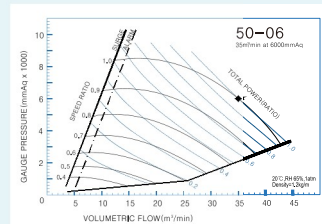
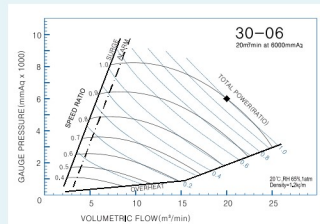
HC50

HC75

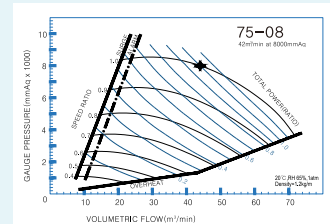
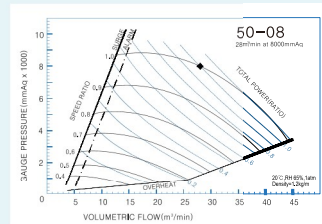
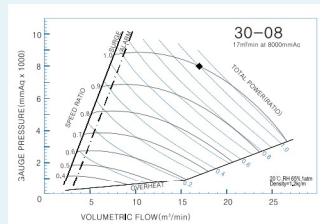
4000  
mmAq



6000  
mmAq



8000  
mmAq



10000  
mmAq

12000  
mmAq



Hi-Core  
하이코어주식회사



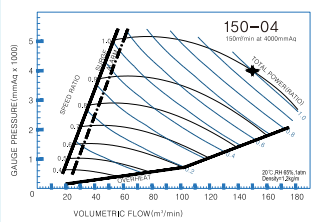
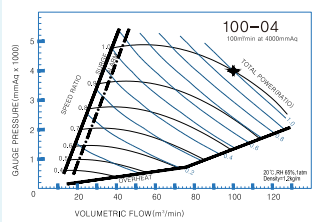
# Performance Curve

**HC100**

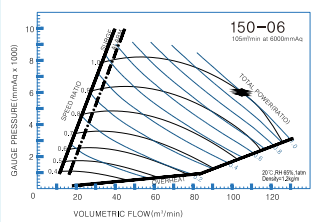
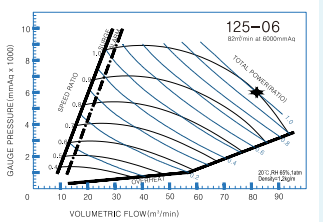
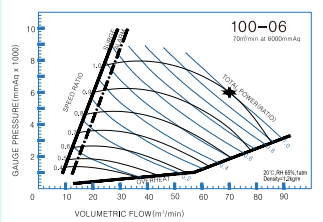
**HC125**

**HC150**

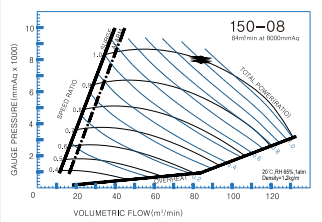
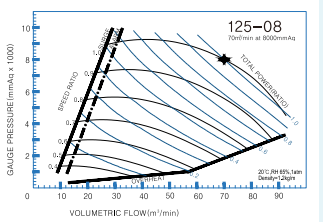
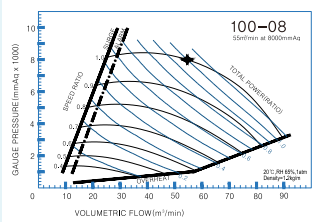
**4000**  
mmAq



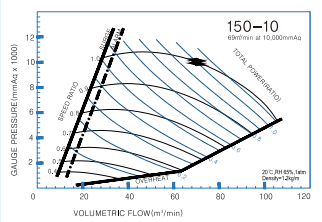
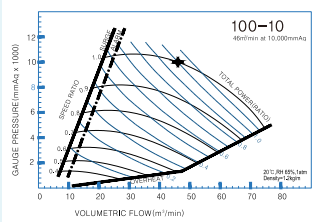
**6000**  
mmAq



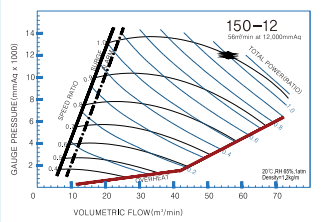
**8000**  
mmAq



**10000**  
mmAq



**12000**  
mmAq



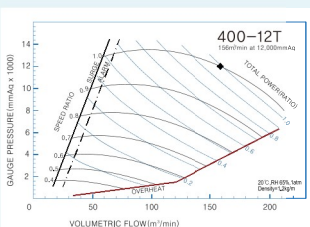
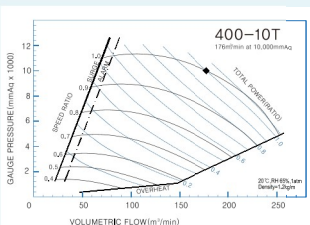
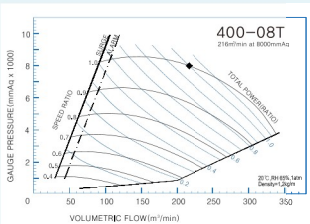
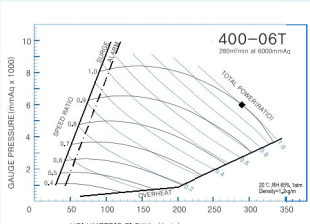
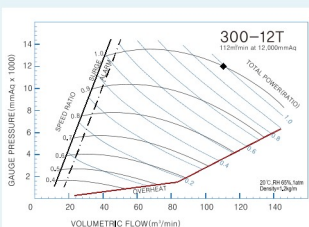
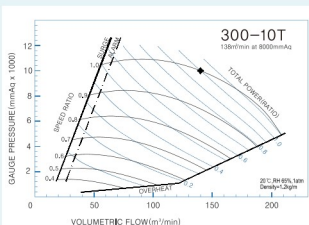
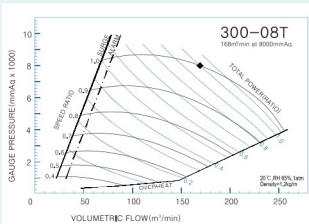
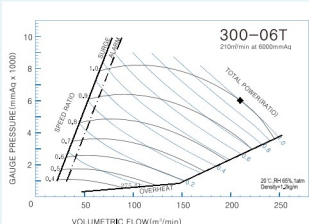
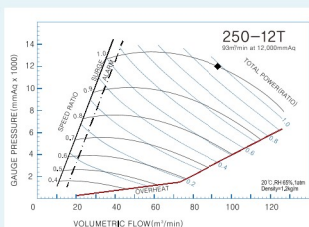
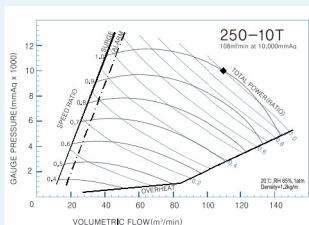
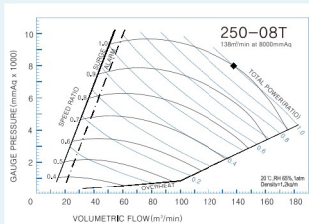
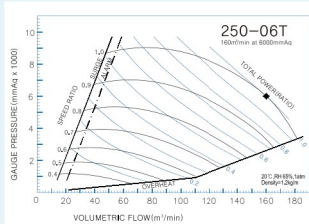
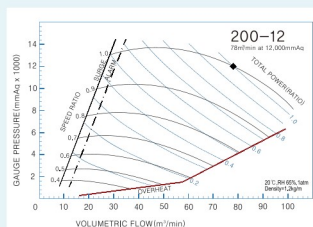
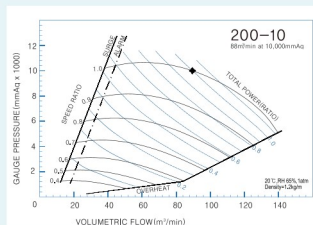
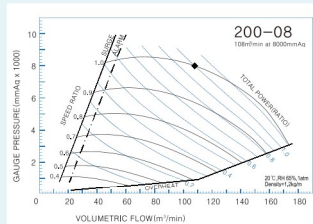
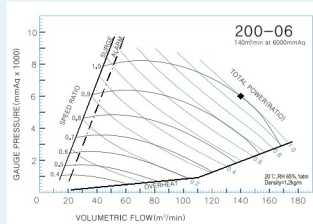
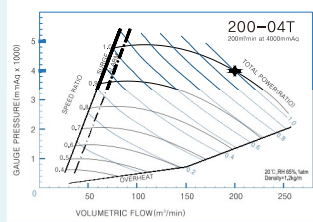


## HC200

## HC250

## HC300

## HC400





**Hi-Core**  
하이코어주식회사

[www.hicore.co.kr](http://www.hicore.co.kr)

경기도 안성시 서운면 서미로 57  
T 031-672-6768 F 031-675-6768  
E,mail [hicore1@naver.com](mailto:hicore1@naver.com)  
Mobile. +82-10-6423-7133

Headquarters/Factory :  
57 Seomi-ro, Seoun-myeon, Anseong-si, Gyeonggi-do  
京畿道 安成市 西云面 西美路57