

BESTECH

VACUUM TECHNOLOGY



VACUUM PUMP TECHNOLOGY



OIL ROTARY VACUUM PUMP, DRY VACUUM PUMP, MECHANICAL BOOSTER PUMP, DIFFUSION PUMP, REFRIGERANT CHARGING MACHINE, GAS RECOVERY SYSTEM, HIGH VACUUM SEALING MACHINE AND OTHER VACUUM EQUIPMENT

BESTECH

BESTECH

베
스
텍

BESTECH

■ CONTENTS

- Bestech Vacuum
 - 04 Company Profile
 - 05 History
 - 06 Greetings
 - 07 Products
- Vacuum Pump
 - 08 Rotary Vane Pumps
 - 60 Booster Pumps
 - 94 Dry Pumps
- Pump Combination
 - 123 Rotary & Booster



BESTECH VACUUM

COMPANY PROFILE

- 회 사 명 : 베스텍주식회사
- 대 표 자 : 하 강 수
- 설 립 일 : 1989. 01. 01
- 업 종 : 제 조 업
- 생 산 품 : 오일 로타리 진공펌프, 드라이 진공펌프, 메카니칼 부스터펌프
오일확산펌프, 냉매차징머신, 가스회수장치, 고진공포장기 외
- 주 소 : 경기도 안산시 단원구 변영로 32번길 14 (우)425-110 (시화공단 4바 602호)
- 연 락 처 : TEL. 031-498-7300 FAX. 031-319-5423
- Website : www.bst.co.kr
- E-mail : bst@bst.co.kr
- 거 래 처 : 삼성전자, 엘지전자, 현대자동차, 기아자동차, 대우조선해양 외



- Company Name : Bestech Co.,Ltd.
- Presidnet & C.E.O : Gang Su Ha
- Establishment : 1989. 01. 01
- Type of Business : Manufacture
- Product line : Oil Rotary Vacuum Pump, Dry Vacuum Pump, Mechanical Booster Pump,
Diffusion Pump, Refrigerant Charging Machine, Gas Recovery System,
High Vacuum Sealing Machine and other Vacuum Equipment
- Address : 14, Beonyeong-ro 32beon-gil, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
425-110 (4Ba 602Ho Shihwa industrial complex)
- Contact : Tel. +82-31-498-7300 Fax. +82-31-319-5423
- Website : www.bst.co.kr
- E-mail : bst@bst.co.kr
- Customer : Samsung Electronics Co., Ltd, LG Electronics Co., Ltd,
Hyundai Mortor Company, Kia Motors,
Daewoo Shipbuilding & Marine Engineering Co., Ltd.



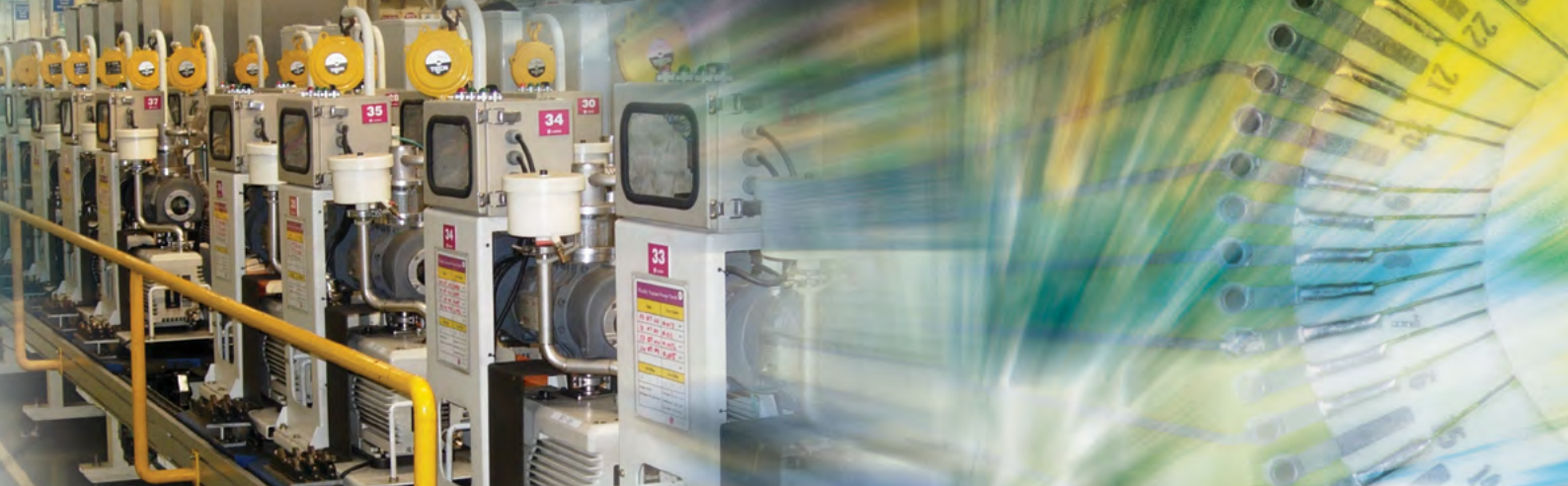
HISTORY

- 1989.01 진공사업 시작(서울 시흥동)
- 1993.04 핸드캐리 로터리펌프 개발(140 ℓ /min)
- 1995.01 양천구 공장 이전
- 1996.06 BT시리즈 로터리펌프 개발(100~1,500 ℓ /min)
- 1997.01 법인전환
- 1998.04 독산동 본사 이전
- 2000.01 B(M)시리즈 메카니컬부스터펌프 개발(120m³/hr)
- 2001.05 B(M)시리즈 메카니컬부스터펌프 개발
(300/600/1,200/2,400/3,600m³/hr)
- 2001.07 핵심부품 국산화 업체 선정(산업자원부)
- 2001.08 본사 및 시화공장 준공, 이전
- 2002.05 VP시리즈 로터리펌프 개발(3,000/5,500/8,000 ℓ /min)
- 2002.07 ISO9001 인증 획득
- 2003.05 유망 중소기업 및 수출 유망 중소기업 선정(중소기업청)
- 2003.09 한국 반도체 장비 경연대회 산업자원부 장관상 수상
(산업자원부)
- 2005.07 클린환경사업장 지정(노동부)
- 2005.12 CE 인증 획득
- 2007.06 SD시리즈 스크류드라이펌프 개발(120/300/480/660m³/hr)
- 2009.08 SES시리즈 드라이펌프 시스템 개발
(120/300/330/500/600/700/1,200m³/hr)
- 2010.01 기업부설연구소 설립인가(한국산업기술진흥협회)
- 2010.11 안산 제2공장 매입(대지3,504m², 건물3,294m²)
- 2010.12 이노비즈기업 선정(중소기업청)
- 2010.12 벤처기업 선정(기술보증기금)
- 2012.01 B(I)시리즈 대형 메카니컬부스터펌프 개발(7,000m³/hr)
- 2013.06 MS시리즈 대형 로터리펌프 개발
(12,000/16,000/20,000 ℓ /min)
- 2013.07 안산 제3공장 매입(대지8,281.2m², 건물5,931.5m²)
- 2013.08 안산 제2공장 무인 자동 가공설비 & 생산 가공설비 증설완료
- 2014.02 안산 제3공장 가동
- 2014.03 B(I)시리즈 대형 메카니컬부스터펌프 개발(5,500m³/hr)
- 2015.02 MS시리즈 소형 로터리펌프 개발(420/650 ℓ /min)
- 2016.01 MS시리즈 소형 로터리펌프 개발(1,000/1,600/2,200 ℓ /min)
- 2016.05 MS시리즈 중형 로터리펌프 개발(3,500/6,000/8,000ℓ/min)
- 2016.06 안산 제 3공장 양산용 자동화 가공설비 증설완료

HISTORY

- 1989.01 Started vacuum business (Shiheung-dong in Seoul)
- 1993.04 Developed Transportable handy pump(140ℓ/min)
- 1995.01 Yangcheongu factory relocation
- 1996.06 Developed BT Pump (100-1500ℓ/min)
- 1997.01 Incorporation
- 1998.04 relocate officehead office(Doksan-dong)
- 2000.01 Developed BM Pump Series Mechanical Booster Pump
(120m³/h)
- 2001.05 Developed BM Pump Series Mechanical Booster Pump
(300-3,600m³/h)
- 2001.07 Selected as the core parts localizing company(from The department
of industrial resources vice-minister)
- 2001.08 Finished constructing Head office and Factory at Shihwa industrial
complex(with the same factory as present location)
- 2002.05 Developed VP Oil Rotary Vacuum Pump(3,000/5,500/8,000ℓ/min)
- 2002.07 Achieved ISO9001 certificate
- 2003.05 Selected as "the Promising small and medium-sized company as
well as promising export Enterprise"
(from Small and Medium Business Administration)
- 2003.09 Won "the Korean semiconductor equipment contest"
(from the department of industrial resources vice- minister)
- 2005.07 Selected as Clean Workplace (from the Ministry of Labor in Korea)
- 2005.12 Achieved C.E certification
- 2007.06 Developed SD Pump Series Dry Pump (120/300/480/660m³/hr)
- 2009.08 Developed SES Pump Series Ace Pump System
(120/300/330/500/600/700/1,200m³/hr)
- 2010.01 Research institute establishment
(Korea Industrial Technology Association)
- 2010.11 Purchase The Two Plant in Ansan
(Floor area 3,504m², Building Area 3,294m²)
- 2010.12 Innobiz Determine(Small and Medium Business Administration)
- 2010.12 Venture Business Determine(Technology Guarantee Fund)
- 2012.01 Developed Large Mechanical Booster Pump(7,000m³/h)
- 2013.06 Large Directly 2Stage Type MS Pump Rotary Pump
Three Type Developed (12,000/16,000/20,000ℓ/min)
- 2013.07 Purchase The Three Plant in Ansan
(Floor area 8,281.2m², Building Area 5,931.5m²)
- 2013.08 The Two Plant in Ansan Unattended automatic processing equipment
+Production and processing capacity expansion
- 2014.02 The Three Plant in Ansan Operation (Floor area 8,281.2m²,
Building Area 5,931.5m²)
- 2014.03 Developed Large Mechanical Booster Pump (5,500m³/h)
- 2015.02 Developed MS PUMP Small Rotary Pump (420/650ℓ/min)
- 2016.01 Developed MS PUMP Small Rotary Pump
(1,000/1,600/2,200ℓ/min)
- 2016.05 Developed MS PUMP Medium Rotary Pump (3,500/6,000/8,000ℓ/min)
- 2016.06 The Three Plant in Ansan Unattended automatic processing
equipment+Production and processing capacity expansion

GREETINGS



안녕하십니까?

베스텍은 진공펌프를 개발하고 설계하며 제조 생산하고 있는 대한민국의 가장 대표적인 진공 전문기업입니다.

당사는 경영이념 중 하나인 “고객 만족의 극대화”를 모토로 고객의 입장을 고려한 제품의 개발을 하고자, 설계단계부터 적극적인 의견 반영을 하고 있습니다. 끊임없는 노력으로 제품의 품질을 더욱 고급화하며 내구성을 향상시키고, 보다 양질의 진공펌프를 만들기 위하여 언제나 제품개발에 전력투구를 하여 신제품을 계속해서 시장에 소개하고 있습니다.

또한, 고객으로부터 받는 각광은 제품에 긴 생명력을 불어넣을 수 있다는 생각을 가지고 오늘도 변함없이 신제품 개발에 임하고 있습니다. “그칠 줄 모르는 신제품 개발”을 모토로 한 베스텍의 기술은 고객 분들께 더 많은 선택을 받고 있습니다.

현재는 기술 개발뿐만 아니라 다양한 판매망을 구축하여 고객에게 더욱 가까이 다가갈 수 있도록 노력을 하고 있습니다.

베스텍 제품을 선택하시는 모든 분들께 더욱 고급화된 기술과 편리한 서비스를 제공하겠습니다.
아울러 당사의 제품을 이용해 주시는 고객 여러분께 진심으로 감사를 드립니다.

Presidnet & C.E.O. 하 강수

Dear Customer,

BESTECH Co., Ltd. is the representative and leading company specializing in vacuum industrial fields, which has been developing, designing, manufacturing, producing vacuum industrial product in Korea.

We have been devoting ourselves to developing products, which raises customers' value under the company motto, “Maximize customer satisfaction” since planning step of product development and also, we have always paid attention to customers' opinion. BESTECH's belief currently makes fruitfulness through producing high-class product, innovatively improving duration, and developing and manufacturing the best quality vacuum pump.

Also, through our passion on the technology, “Endlessly develop new products!”, we have endowed each part and product with dynamical vitality and our products have been recognized, selected, and loved as the most advanced and the best products by customers in related markets as well.

The company recognized by customers! The company receiving love from customers!

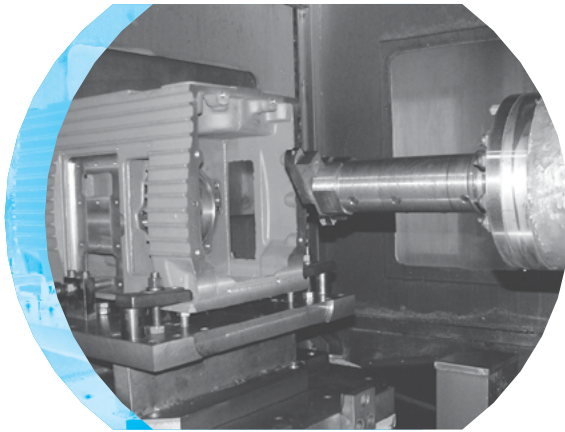
We sincerely thank you, customers for loving and kindly using our products will all our hearts and also, we, the whole personnel will recompense your encouragement for the best technology, the most advanced product, and convenient service.

Thank you.

President & C.E.O. Gang Su Ha

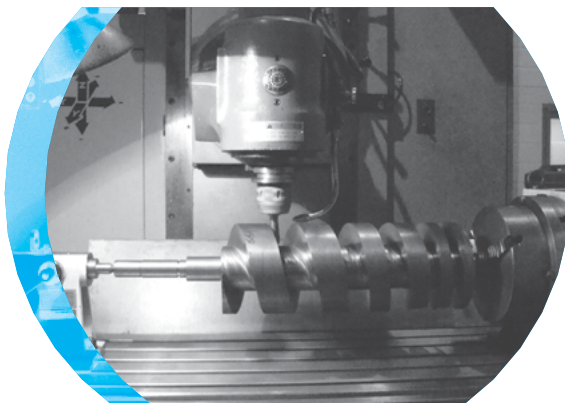
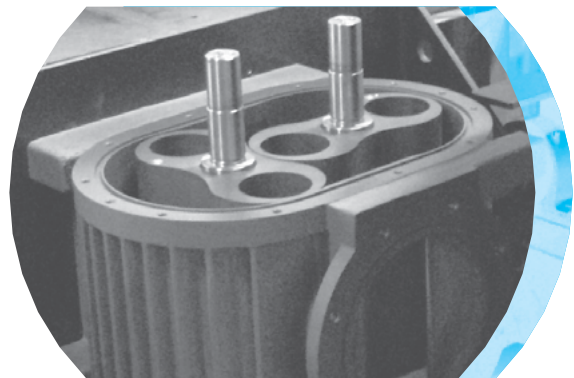
BESTECH VACUUM

PRODUCTS



- Oil Rotary Vacuum Pump
- Dry Vacuum Pump
- Mechanical Booster Pump
- Diffusion Pump

- Vacuum Valve
- Flange and Accessory
- Pump Exhaust Combination
- Semiconductor Industry



- Chemical Industry
- Biotechnology Industry
- Solar Battery Industry
- Electronics Industry
- Nuclear Power Industry



VACUUM PUMP

MS SERIES

● SMALL ROTARY VANE PUMP



▲ MS6A



▲ MS12A



▲ MS25A



▲ MS40A



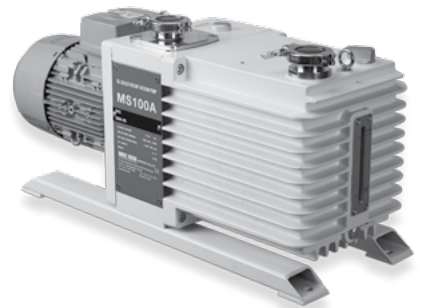
VACUUM PUMP

MS SERIES

-
-
- **SMALL ROTARY VANE PUMP**



▲ MS60A



▲ MS100A



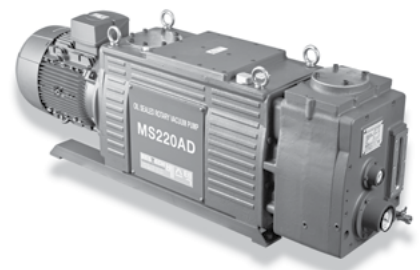
▲ MS135A



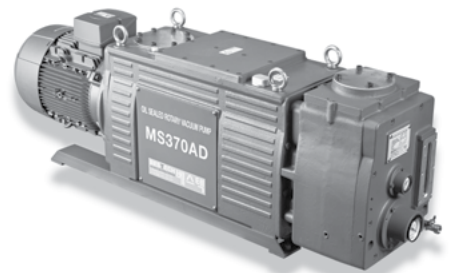
VACUUM PUMP

MS SERIES

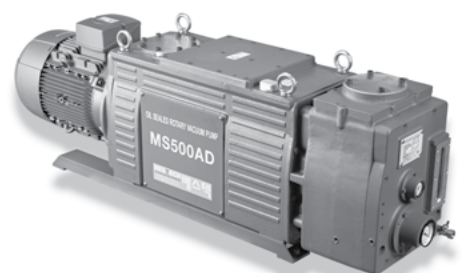
- MEDIUM ROTARY VANE PUMPS



▲ MS220AD(S)



▲ MS370AD(S)



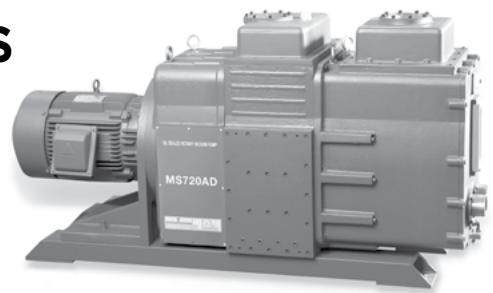
▲ MS500AD(S)



VACUUM PUMP

MS SERIES

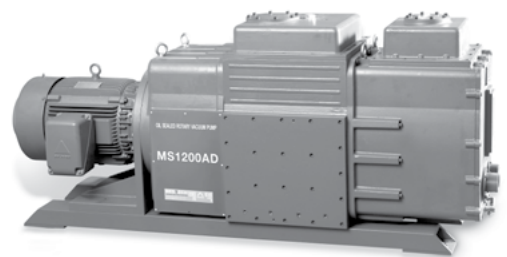
-
-
- **LARGE ROTARY VANE PUMPS**



▲ MS720AD(S)



▲ MS960AD(S)



▲ MS1200AD(S)

VACUUM PUMP

MS SERIES

SMALL ROTARY VANE PUMP

소형 펌프의 특징 & 장점 Advantage for vacuum pump

(MS6A, MS12A, MS25A, MS40A, MS60A, MS100A, MS135A)

• 오일역류 방지 밸브 장착

펌프가 작동중에 예상치 못한 정전이나 모터 고장으로 갑자기 멈추었다가 재가동시 펌프내의 오염으로 부터 진공설비를 완벽하게 보호하여 내구성을 좋게 하였다.

• Oil Backflow prevention valve

When the pump is suddenly stopped by a power failure or motor failure not unexpected during operation And restart From contamination inside the pump to fully protect the vacuum system has good durability.

• ISO 규격의 Motor Flange 적용

ISO 플랜지의 규격 모터를 사용하여 어느 곳에서나 그리고 누구나 모터 교체가 용이하도록 하였다.

• ISO standards application(Motor Flange)

According to using ISO standards motor application, anyone can shift and change the motor easily at anyplace and anytime.

• ISO 규격의 흡입구 배기구 적용

ISO 국제 규격에 맞는 "Quick Clamp"를 사용하여 짧은 시간내에 진공설비와 펌프를 쉽게 장착 및 분리 할수있도록 하였다.

• ISO standards application(Intake and Exhaust Ports)

These pump us the standard ISO KF(quick clamp)fitting on both intake and exhaust ports th allow for quick connection and disconnection to vacuum system.

• MS Series는 소음이 매우적다.

이상적인 구조를 기반으로 설계하여 가동시에 발생하는 소음을 감소하였다.

• MS Series, Small noise

Ideally designed, we realized very small noise

• 취급이 간편하고 커플링측 점검이 용이하다.

펌프측면에 커버를 설치하여 누구나 쉽게 커플링 측을 점검할수 있도록 하였다.

• Handling is simple and easy to check coupling side.

Install the cover on the pump side were anyone can easily check the coupling side.

• 오일 씰 교환이 용이하다.

축(Shaft) 누유(leakage)에 대한 신뢰도가 높으며 점검이 용이하다.

• The replacement about oil seal is easy.

The trust of the shaft leakage is high, it is easy to check.

VACUUM PUMP

MS SERIES

SMALL ROTARY VANE PUMP

소형 구조 & 작동원리 Structure and operation principle

MS 시리즈는 직결형 오일로터리 진공펌프이다.

펌프 구조는 아래 단면도에서 보는 바와 같이 펌프실린더 그리고 펌프보호를 위한 역류방지 밸브가 있으며 펌프 하우징과 실린더안에서 편심되어 있는 로터, 베인, 배기 밸브 등 그외 다수 구성품으로 구성되어 있다.

MS 시리즈 진공펌프의 작동원리는 실린더와 편심되어 있는 로터가 회전하면 흡입과 배기가 순차적으로 진행하도록 하는 원리이다.

모터의 회전 동력은 플렉시블 커플링에 의해 펌프로 전달되어 모터가 회전함에 따라 펌프도 회전한다.

로터가 회전하면 로터의 홈 안에 있는 두개의 베인이 원심력과 오일압력에 의해 실린더 내면에 슬라이딩하며 회전한다.

흡입구를 통과하여 흡입된 가스는 펌프 실린더 내로 유입된다.

회전 운동을 하고 있는 베인은 흡입구 관로를 지나가면 가스는 두개의 베인 사이에 갇혀서 배기구에 있는 배기밸브 방향으로 회전되어 진다.

앞쪽의 베인이 배기구멍을 지나면서 가스는 압축되기 시작하여 충분히 압축된가스는 배기 밸브를 열고 배기구를 통하여 배기되며 실린더의 내면과 베인, 로터의 베인홈과 베인, 기타운동되는 부위에 윤활과 기밀유지를 위해 오일을 공급해준다.

MS Series pump is oil rotary vacuum pump.

This structure of MS oil rotary vacuum pump series consist of pump body, Backflow prevention valve for pump protection,

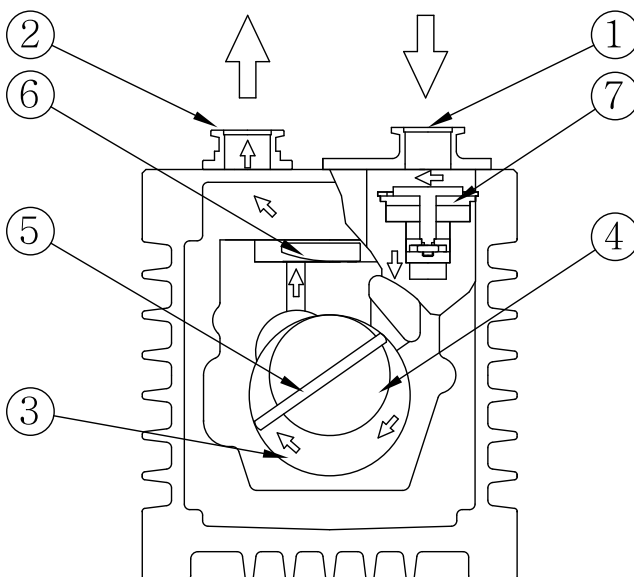
including pump housing, rotor being eccentric in cylinder motor oil case, vane, Exhaust valve and parts related to it Structure and operation principle of MS series vacuum pump operating is rotation type.

At this time, the rotor has the eccentricity and the cylinder at the pump so that makes suction and exhaustion in order.

As the rotor rotates, two vanes mounted at rotor slides and turns at internal cylinder by centrifugal force and oil pressure.

The gas filtered through the dirt trap. At suction port flows into the pump cylinder.

As vanes rotating and slide near the intake aperture, the gas is confined between two vanes, then the gas turns and moves to exhaust valve. Passing exhaust valve is discharged through the exhaust port.



1. SUCTION PORT
2. EXHAUST PORT
3. PUMP CYLINDER
4. ROTOR
5. VANE
6. EXHAUST VALVE
7. BACKFLOW PREVENTION VALVE

VACUUM PUMP

MS SERIES

MEDIUM ROTARY VANE PUMP

중형 펌프의 특징 & 장점 Advantage for vacuum pump

(MS220AS, MS220AD, MS370AS, MS370AD, MS500AS, MS500AD)

• 안정된 냉각 효과

1차 실린더와 오일 케이싱 사이에 냉각수가 흐르고 있어 냉각 효과가 매우 뛰어나다.
(저 진공에서 연속운전이 가능하다.)

• The stable cooling effect

Because the cooling water is flowing between the first cylinder and the oil casing and the cooling effect is superior. (Continuous running is possible at low vacuum)

• 안정된 진공도

오일펌프는 진공압력의 높고 낮음에 따라 실린더 내부에 적정량의 오일을 공급함으로써 가동 시간 대비 진공도 변화량이 매우 작다.

• Stable vacuum pressure

The oil pump supplies proper amount of oil inside the cylinder according to vacuum pressure degree, which causes very small amount of changing vacuum pressure compared to operation hour.

• 진동이 매우 적다.

편심을 최소화하는 기하학적 설계를 적용한 직결구동을 실현함으로써 동일 배기량의 피스톤 형식에 비해 진동이 매우 적다.

• The small vibration

By realizing directly connected driving that the geometric design is applied to minimize the eccentric rotation, it shows very small vibration in compared to piston type having the same displacement.

• 경량화, 소형화된 진공펌프

실린더와 케이싱을 일체화하여 설치면적을 최소화한 독창적인 형식이다.

• Weight reduction, and a miniaturized vacuum pump

Integration of the cylinder and the casing Minimize the installation area of the original format.

MEDIUM ROTARY VANE PUMP

중형 펌프의 특징 & 장점 Advantage for vacuum pump

(MS220AS, MS220AD, MS370AS, MS370AD, MS500AS, MS500AD)

• 소음이 매우 작다.

배기밸브에 위치하고 있는 밸브캐치의 형상을 이상적으로 설계하여 소음이 매우 작다. 1단형 펌프에서는 소음 조절이 가능한 사일런스 슬로우 밴트 밸브가 있다.

• Small noise

By ideally designing the valve catcher situated at the exhaust valve, we realized very small noise.

• 오일여과용 필터와 오일 압력계가 장착되어 있다.

오일필터에 의해 이물질은 거른 오일을 펌프 내부로 공급하며, 필터압력계를 보면 필터의 교환 시점을 알 수 있다.

• Oil pressure gauge and oil filter are equipped.

Filtered oil without strange material is supplied inside the oil pump and also, you can know when the filter will be changed through the filter pressure guage.

• 호환성이 높다.

1단형 펌프와 2단형 펌프는 호환이 가능하도록 제작되었다.

• Excellent compatibility

It is manufactured in order that the one-stage pump and the two-stage pump are mutually compatible.

• 오일 공급량을 자동 제어한다.

실린더 내의 진공 압력에 따른 오일 공급량을 적절하게 제어해 준다.

• Automatic control oil supply volume

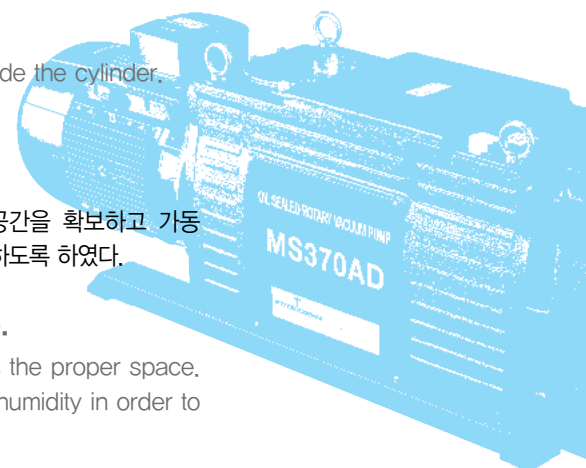
It properly control oil supply according to pressure inside the cylinder.

• 유수분리가 용이하도록 설계되었다.

케이싱과 연결되어 있는 익스텐션 커버의 내부는 적절한 공간을 확보하고 가동 중에도 오일의 흐름을 최소화하여 오일과 수분의 분리가 용이하도록 하였다.

• This pump is designed for easy maintenance.

Inside extension connected with casing cover ensures the proper space. Also, it is designed in order to easily separate oil and humidity in order to minimize oil flow even during operation.



VACUUM PUMP

MS SERIES

MEDIUM ROTARY VANE PUMP

중형 펌프의 특징 & 장점 Advantage for vacuum pump

(MS220AS, MS220AD, MS370AS, MS370AD, MS500AS, MS500AD)

- **취급이 간편하고 분해 점검이 용이하다.**

케이싱 내부의 세정을 용이하도록 펌프측면과 상단에 다수의 커버를 설치하여 누구나 쉽게 분해, 세정할 수 있도록 하였다.

- **Simple treatment and easy overhaul**

The casing has several side covers at pump's side and top for easy cleanup, which has everyone easily disassemble and clean up it.

- **ISO 규격의 Motor Flange 적용**

ISO 플랜지의 규격모터를 사용함으로써 어느 곳에서나 그리고 누구나 모터 교체가 용이하도록 하였다.

- **ISO standards application**

According to using ISO standards motor application, anyone can shift and change the motor easily at anyplace and anytime.

- **오일 미스트 트랩의 장착이 용이함 – 선택사양**

오일 미스트 트랩을 장착하면 오일의 소모량이 적고 유연발생과 소음을 줄일 수 있도록 하였다.

- **Oil Mist Trap are possible to take easily–Option**

Oil Mist Trap is designed for less oil smoke, noise and oil consumption.

- **가스 발라스트 밸브의 장착이 가능함 – 선택사양**

수분의 응축을 줄이기 위해 가스 발라스트 밸브를 장착할 수 있다.

- **Gas ballast valve are possible to be easily installed–Option.**

It can take an adoption gas ballast valve in order to reduce condensation of moisture.

- **오일순환 안전장치가 장착되어 있음**

오일필터가 막히면 오일안전 장치가 자동으로 작동되어 거르지 않은 오일을 윤활부에 즉시 공급한다.

- **Affixed the oil circulation safety device**

When the oil filter is blocked, automatically, the oil circulation safety device immediately supplies the oil which is not filtered to the lubricating parts.

LARGE ROTARY VANE PUMPS

대형 펌프의 특징 & 장점 Advantage for vacuum large pump

(MS720AS, MS720AD, MS960AS, MS960AD, MS1200AS, MS1200AD)

• 업계최대용량

고진공 펌프로서 업계최대용량의 직결구동형식이다.

• The industry's highest capacity

High vacuum pump. Is the industry's highest-capacity direct-coupled system.

• 냉각수 열교환량 극대화

1차 실린더 워터자켓 접촉면적이 최대화되도록 구성하여 동일한 냉각수량으로 2배 이상의 방열효과를 구현한다.

• maximization of cooling water heat exchanger

The primary cylinder water jacket is configured to maximize the contact area With the same amount of cooling water at least twice the heat radiation effect implements.

• 역류방지밸브 적용

대용량 펌프 최초로 역류방지밸브를 적용하여 프로세스 오염을 방지할 수 있다.

• Apply backflow valve

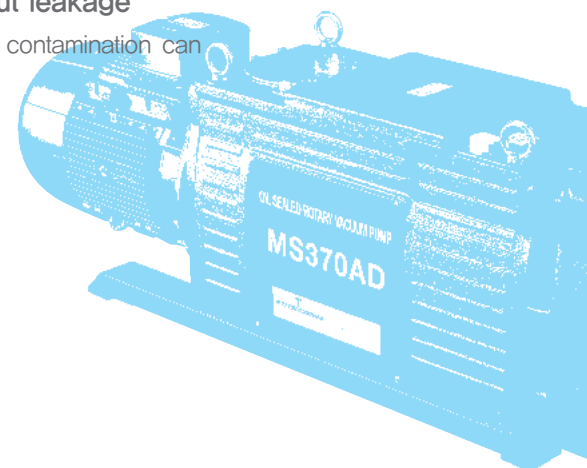
Mass pump having first non-return valve was applied. So the process can be prevented from being contaminated.

• 누유없는 청정환경 구현

축 인출부 누유현상이 방지되는 구조로써 오염 없이 유지관리가 가능하다.

• Implementation of a clean environment without leakage

The structure of the front axle is prevented leakage, contamination can be managed without.



LARGE ROTARY VANE PUMPS

대형 펌프의 특징 & 장점 Advantage for vacuum large pump

(MS720AS, MS720AD, MS960AS, MS960AD, MS1200AS, MS1200AD)

- 강성에 따른 내구성향상

회전자, 축, 오일펌프 등의 구조 및 재료의 강성을 향상시켜 내구성을 강화시켰다.

- Improve the durability of stiffness

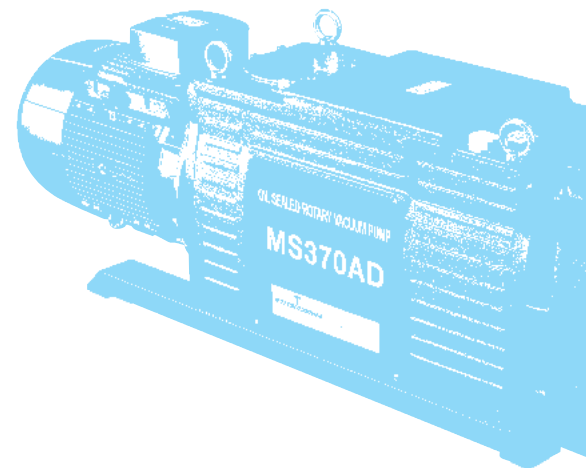
Rotor, shaft, oil pump, etc. enhance the rigidity of the material Reinforced durability.

- 첨단기술로써 대형부품 구성

주요 부품의 최적화된 설계 및 제작기술로 마찰열 등 고진공 직결구동형식이 구현되지 못했던 문제점을 해결하여 이상적인 메커니즘을 취한다.

- Improve the durability of rigidity

Part of an optimized design and the production technology Other types of frictional heat in the implementation of direct drive high vacuum did solve the problem. An ideal intoxication mechanism.



VACUUM PUMP

MS SERIES

MEDIUM, LARGE ROTARY VANE PUMP

중형, 대형 구조 & 작동원리 Structure and operation principle

MS 시리즈는 직결형 오일로터리 진공펌프이다.

사용범위는 실험실에서부터 산업용 진공 산업까지 광범위하게 사용할 수 있도록 설계되었다.

펌프 구조는 아래 단면도에서 보는 바와 같이 펌프실린더, 로터, 베인, 배기밸브와 각 부품으로 구성되어 있다.

MS 시리즈 진공펌프의 작동원리는 실린더와 편심되어 있는 로터가 회전하면 흡입과 배기가 순차적으로 진행하도록 하는 원리이다. 모터의 회전 동력은 플렉시블 커플링에 의해 펌프로 전달되어 모터가 회전함에 따라 펌프도 회전한다.

로터가 회전하면 로터의 홈 안에 있는 두개의 베인이 원심력과 오일압력에 의해 실린더 내면에 슬라이딩하며 회전한다.

흡입구 여과망을 통과하여 흡입된 가스는 펌프 실린더 내로 유입된다. 회전 운동을 하고 있는 베인은 흡입구 관로를 지나가면 가스는 두개의 베인 사이에 갇혀서 배기구에 있는 배기밸브 방향으로 회전되어 진다.

앞쪽의 베인이 배기관을 지나면서 가스는 압축되기 시작하여 충분히 압축된 가스는 배기밸브를 열고 배기라인을 통하여 배기된다. 실린더 내면과 베인, 로터의 베인홈과 베인, 베어링, 슬라이딩되는 모든 부위의 윤활과 기밀을 위해 오일을 실린더에 공급하여 준다.

MS Series pump is oil rotary vacuum pump.

This Pump is designed to be widely applied from laboratory to industrial vacuum facilities. This structure of MS oil rotary vacuum pump series consist of Pump cylinder, Rotor, Vane, Exhaust Valve and Other parts.

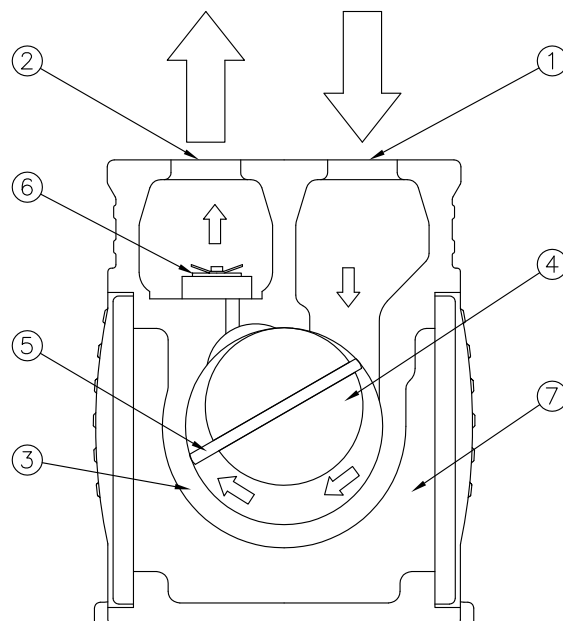
Structure and operation principle of MS series vacuum pump operating is rotation type. At this time, the rotor has the eccentricity and the cylinder at the pump so that makes suction and exhaustion in order.

As the rotor rotates, two vanes mounted at rotor slides and turns at internal cylinder by centrifugal force and oil pressure.

The gas filtered through the dirt trap filter at suction port flows into the pump cylinder.

As vanes rotating and slide near the intake aperture, the gas is confined between two vanes, then the gas turns and moves to exhaust valve. Passing exhaust valve is discharged through the exhaust port.

The vane is rotated by the exhaust hole that makes gas compressing sufficiently, the gas can open exhaust valve to exhaust through the exhausting line. Oil is supplied to vane, surface inside cylinder, vane to vane groove of rotor, bearing and all sliding parts for lubrication and airtight.



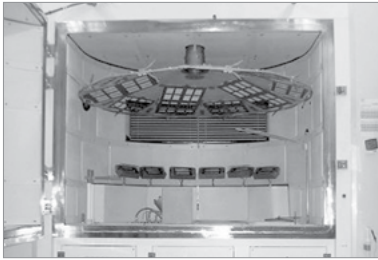
1. SUCTION PORT
2. EXHAUST PORT
3. PUMP CYLINDER
4. ROTOR
5. VANE
6. EXHAUST VALVE
7. COOLING LINE

VACUUM PUMP

MS SERIES

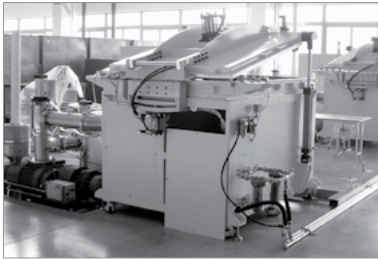
● ROTARY VANE PUMPS

적용분야 Application field



진공증착, 스퍼터링, 이온플레이팅

Vacuum Coating, Sputtering, Ion Plating



진공포장, 진공흡착, 진공이송, 진공성형, 진공주조

Vacuum Packing, Vacuum Absorption,
Vacuum Transfer, Vacuum Forming,
Vacuum Casting



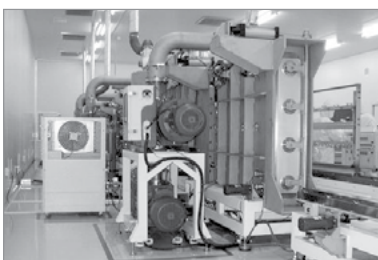
진공열처리로, 소결로, 브레이징로

Vacuum Heat Treatment, Powder Furnace,
Brazing Furnace



진공건조, 동결건조, 진공 탈가스

Vacuum Drying, Vacuum Freezing Drying,
Vacuum Out Gasing



가스치환, 충전, 진공 단열

Gas Substitution, Charging, Vacuum Insulation

누설 시험장치, 기타 진공분야

Leak Testing System, Vacuum Field

VACUUM PUMP

MS6A

SMALL ROTARY VANE PUMP

사양 Specification



MS6A

Specification

ITEM	MODEL	MS6A
Displacement Speed(유효배기속도) ℓ /min	50Hz	80
	60Hz	100
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		0.4(4)
Oil Volume Required(윤활유량) ℓ		1.1
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW25
Exhaust Port(배기구)		NW25
Dimension(외형치수) (L×W×H)		465×170×244,3
Weight(제품무게) (Kg)		25
Option(선택사양)		Oil Mist Trap

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS12A

SMALL ROTARY VANE PUMP

사양 Specification



MS12A

Specification

ITEM	MODEL	MS12A
Displacement Speed(유효배기속도) ℓ /min	50Hz	170
	60Hz	200
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		0.4(4)
Oil Volume Required(윤활유량) ℓ		1.1
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW25
Exhaust Port(배기구)		NW25
Dimension(외형치수) (L×W×H)		490×170×244,3
Weight(제품무게) (Kg)		27
Option(선택사양)		Oil Mist Trap

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS25A

SMALL ROTARY VANE PUMP

사양 Specification



MS25A

Specification

ITEM	MODEL	MS25A
Displacement Speed(유효배기속도) ℓ /min	50Hz	350
	60Hz	420
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		0.75(4)
Oil Volume Required(윤활유량) ℓ		1.8
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW25
Exhaust Port(배기구)		NW25
Dimension(외형치수) (L×W×H)		585×210×284,3
Weight(제품무게) (Kg)		44
Option(선택사양)		Oil Mist Trap

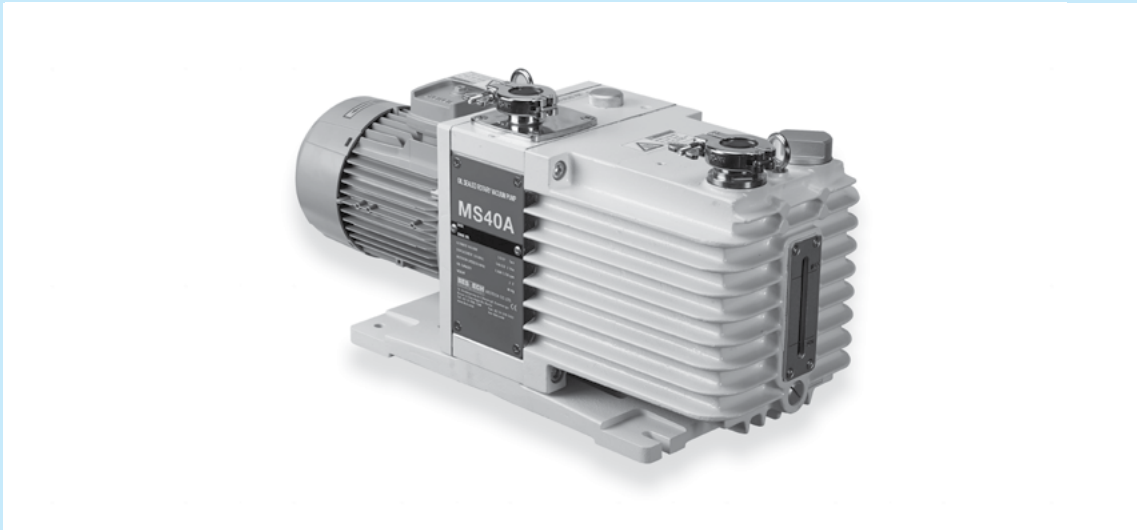
- 10^5 Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10^5 Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS40A

SMALL ROTARY VANE PUMP

사양 Specification



MS40A

Specification

ITEM	MODEL	MS40A
Displacement Speed(유효배기속도) ℓ /min	50Hz	540
	60Hz	650
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		0.75(4)
Oil Volume Required(윤활유량) ℓ		2
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW25
Exhaust Port(배기구)		NW25
Dimension(외형치수) (L×W×H)		616×210×284.3
Weight(제품무게) (Kg)		46
Option(선택사양)		Oil Mist Trap

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS60A

SMALL ROTARY VANE PUMP

사양 Specification



MS60A

Specification

ITEM	MODEL	MS60A
Displacement Speed(유효배기속도) ℓ /min	50Hz	830
	60Hz	1,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		1.5(4)
Oil Volume Required(윤활유량) ℓ		4.5
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW40
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		719,5×270×364,3
Weight(제품무게) (Kg)		72
Option(선택사양)		Oil Mist Trap

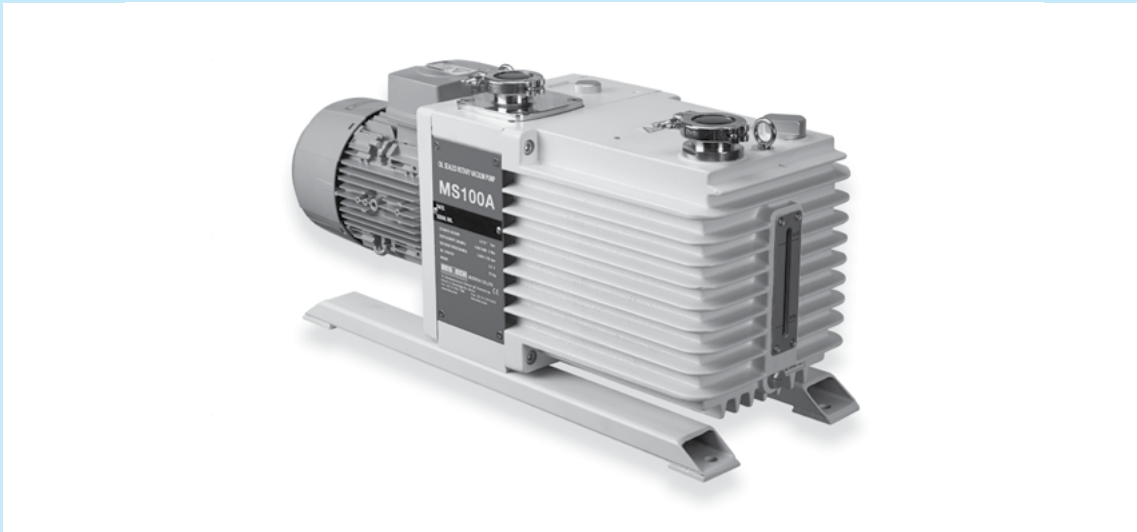
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS100A

SMALL ROTARY VANE PUMP

사양 Specification



MS100A

Specification

ITEM	MODEL	MS100A
Displacement Speed(유효배기속도) ℓ/min	50Hz	1,300
	60Hz	1,600
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		2.2(4)
Oil Volume Required(윤활유량) ℓ		6.5
Cooling(냉각) ℓ/min		Air Cooling
Suction Port(흡입구)		NW40
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		806×270×364,3
Weight(제품무게) (Kg)		92
Option(선택사양)		Oil Mist Trap

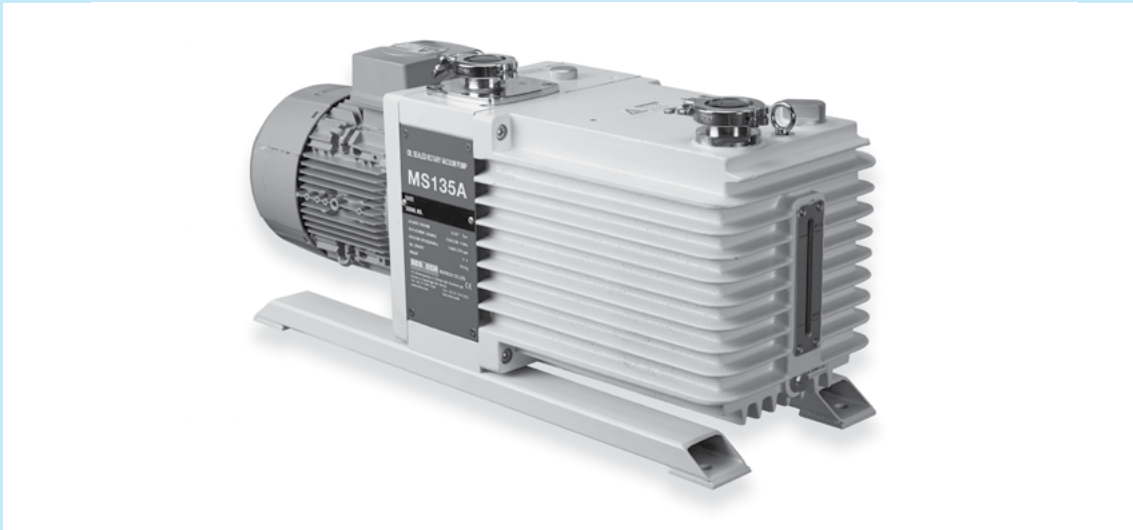
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS135A

SMALL ROTARY VANE PUMP

사양 Specification



MS135A

Specification

ITEM	MODEL	MS135A
Displacement Speed(유효배기속도) ℓ /min	50Hz	1,850
	60Hz	2,200
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		3.7(4)
Oil Volume Required(윤활유량) ℓ		9
Cooling(냉각) ℓ /min		Air Cooling
Suction Port(흡입구)		NW40
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		875,5×270×364,3
Weight(제품무게) (Kg)		115
Option(선택사양)		Oil Mist Trap

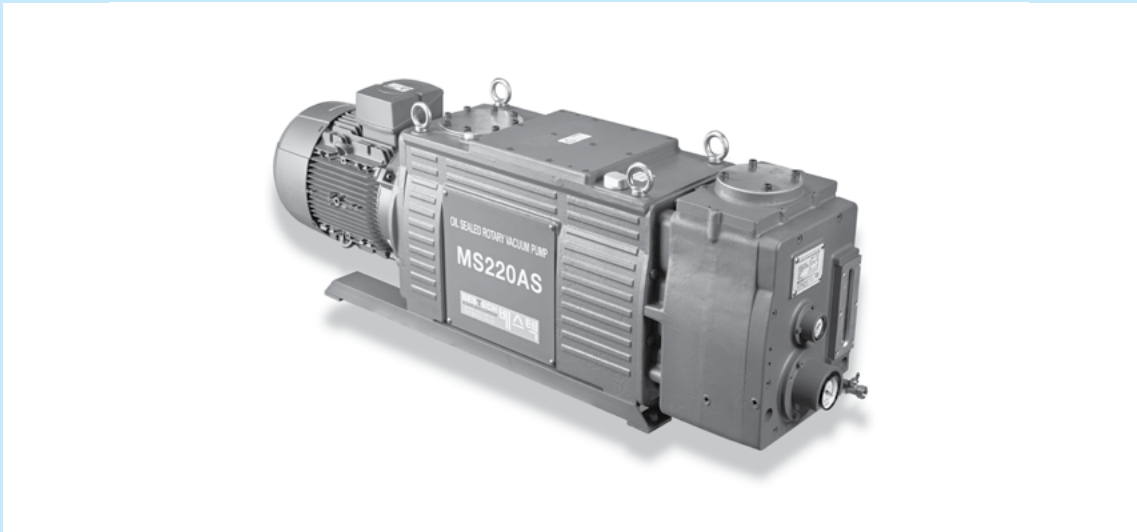
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS220AS

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS220AS

Specification

ITEM	MODEL	MS220AS
Displacement Speed(유효배기속도) ℓ /min	50Hz	3,320
	60Hz	4,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4x10 ⁻²)
Motor(사용동력) Kw(Pole)		5.5(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	4
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG80
Exhaust Port(배기구)		VG50
Dimension(외형치수) (L×W×H)		1,243.7×357.6×510
Weight(제품무게) (Kg)		237
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

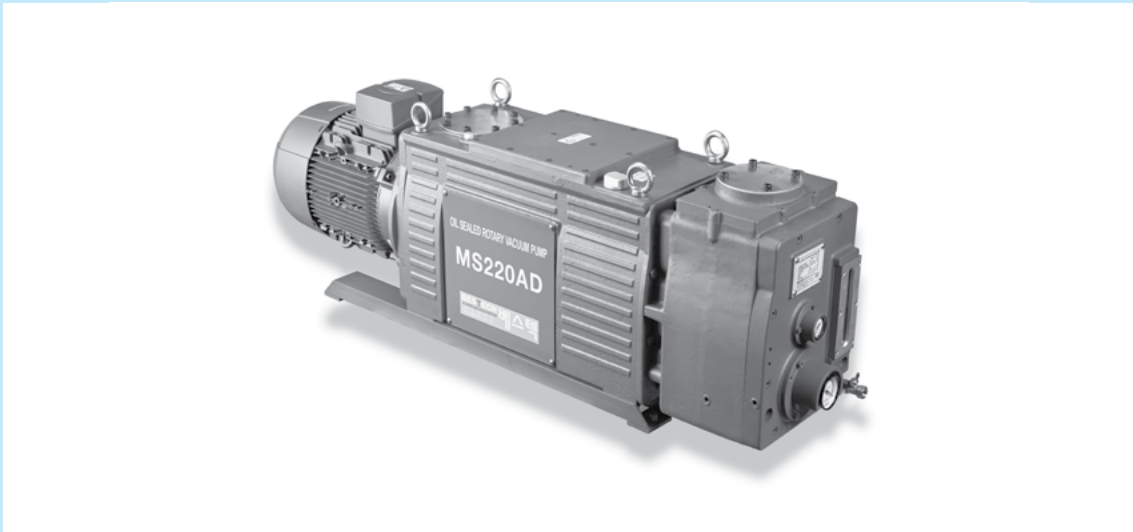
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS220AD

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS220AD

Specification

ITEM	MODEL	MS220AD
Displacement Speed(유효배기속도) ℓ /min	50Hz	3,320
	60Hz	4,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		5.5(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	4
	Pressure(Mpa)	0.2 < P
Suction Port(흡입구)		VG80
Exhaust Port(배기구)		VG50
Dimension(외형치수) (L×W×H)		1,243.7×357.6×510
Weight(제품무게) (Kg)		255
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이다. (Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

MS370AS

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS370AS

Specification

ITEM	MODEL	MS370AS
Displacement Speed(유효배기속도) ℓ /min	50Hz	5,000
	60Hz	6,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4x10 ⁻²)
Motor(사용동력) Kw(Pole)		7.5(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	6
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG80
Exhaust Port(배기구)		VG50
Dimension(외형치수) (L×W×H)		1,326.5×357.6×510
Weight(제품무게) (Kg)		277
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS370AD

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS370AD

Specification

ITEM	MODEL	MS370AD
Displacement Speed(유효배기속도) ℓ /min	50Hz	5,000
	60Hz	6,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		7.5(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	6
	Pressure(Mpa)	$0.2 < P$
Suction Port(흡입구)		VG80
Exhaust Port(배기구)		VG50
Dimension(외형치수) (L×W×H)		1,326.5×357.6×510
Weight(제품무게) (Kg)		297
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

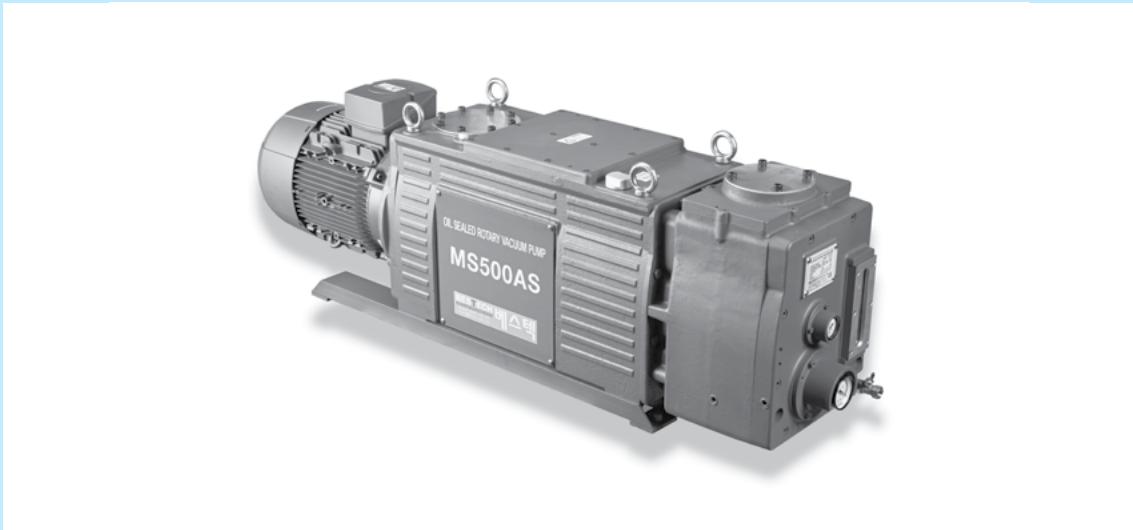
- 10^5 Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10^5 Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이다.(Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

MS500AS

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS500AS

Specification

ITEM	MODEL	MS500AS
Displacement Speed(유효배기속도) ℓ /min	50Hz	6,680
	60Hz	8,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4X10 ⁻²)
Motor(사용동력) Kw(Pole)		11(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	8
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG100
Exhaust Port(배기구)		VG80
Dimension(외형치수) (L×W×H)		1,533×357.6×510
Weight(제품무게) (Kg)		357
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

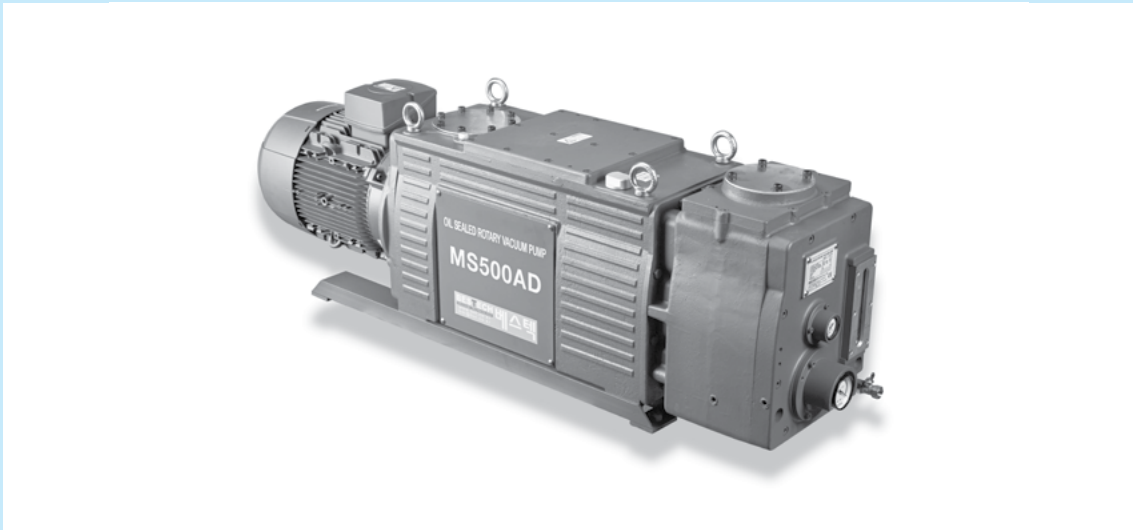
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정함 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS500AD

MEDIUM ROTARY VANE PUMPS

사양 Specification



MS500AD

Specification

ITEM	MODEL	MS500AD
Displacement Speed(유효배기속도) ℓ /min	50Hz	6,680
	60Hz	8,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		11(4)
Oil Volume Required(윤활유량) ℓ		20
Cooling Water(냉각수)	Flow Rate(ℓ /min)	8
	Pressure(Mpa)	0.2 < P
Suction Port(흡입구)		VG100
Exhaust Port(배기구)		VG80
Dimension(외형치수) (L×W×H)		1,533×357.6×510
Weight(제품무게) (Kg)		380
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve

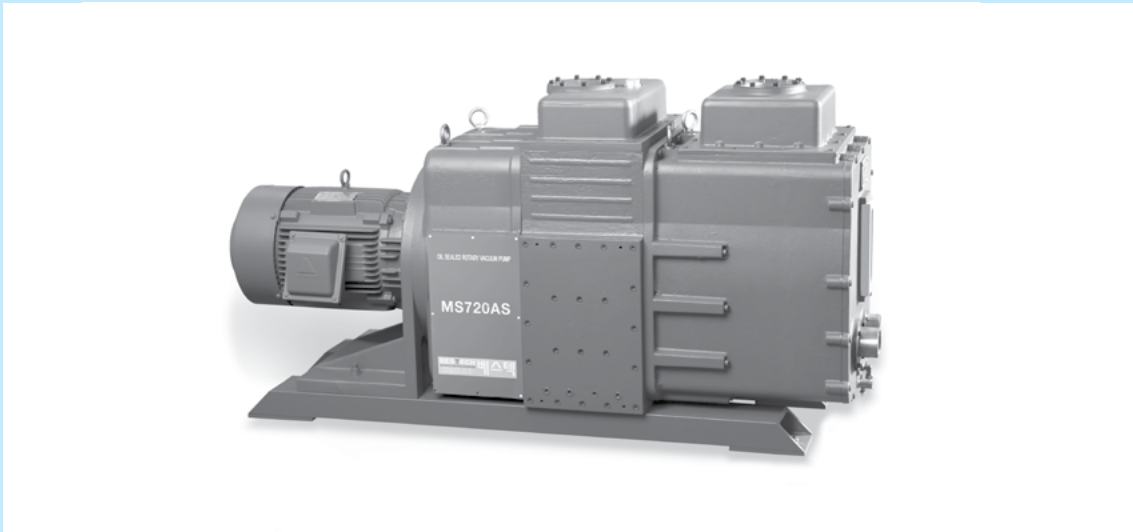
- 10³Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10³Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이다.(Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

MS720AS

LARGE ROTARY VANE PUMPS

사양 Specification



MS720AS

Specification

ITEM	MODEL	MS720AS
Displacement Speed(유호배기속도) ℓ /min	50Hz	10,000
	60Hz	12,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4X10 ⁻²)
Motor(사용동력) Kw(Pole)		18.5(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ /min)	20
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG100
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		1,895×594×942
Weight(제품무게) (Kg)		1,330
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

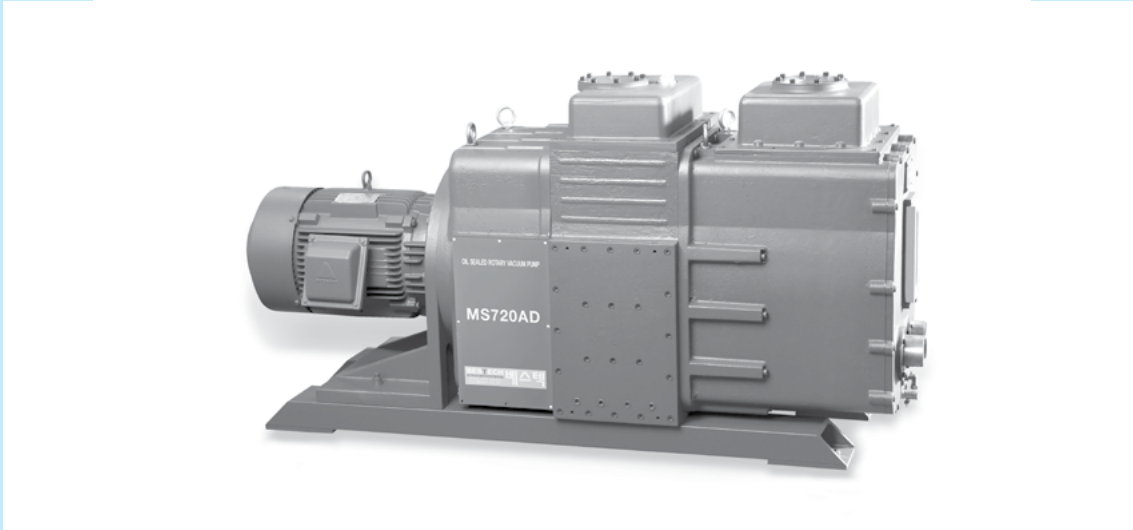
- 10⁶Pa(760Torr)에서 유호배기속도 측정(Displacement exhaust speed measurement in 10⁶Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS720AD

LARGE ROTARY VANE PUMPS

사양 Specification



MS720AD

Specification

ITEM	MODEL	MS720AD
Displacement Speed(유호배기속도) ℓ/min	50Hz	10,000
	60Hz	12,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		18.5(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ/min)	20
	Pressure(Mpa)	$0.2 < P$
Suction Port(흡입구)		VG100
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		1,895×594×942
Weight(제품무게) (Kg)		1,380
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

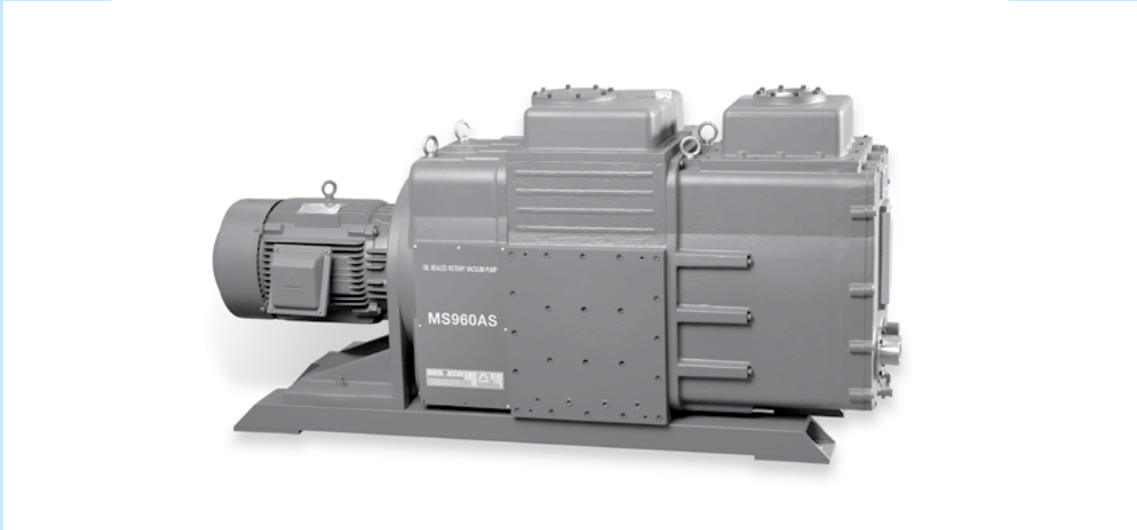
- 10^2 Pa(760Torr)에서 유호배기속도 측정(Displacement exhaust speed measurement in 10^2 Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

MS960AS

LARGE ROTARY VANE PUMPS

사양 Specification



MS960AS

Specification

ITEM	MODEL	MS960AS
Displacement Speed(유효배기속도) ℓ /min	50Hz	13,300
	60Hz	16,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4X10 ⁻²)
Motor(사용동력) Kw(Pole)		22(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ /min)	20
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG150
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		1,938×594×942
Weight(제품무게) (Kg)		1,405
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

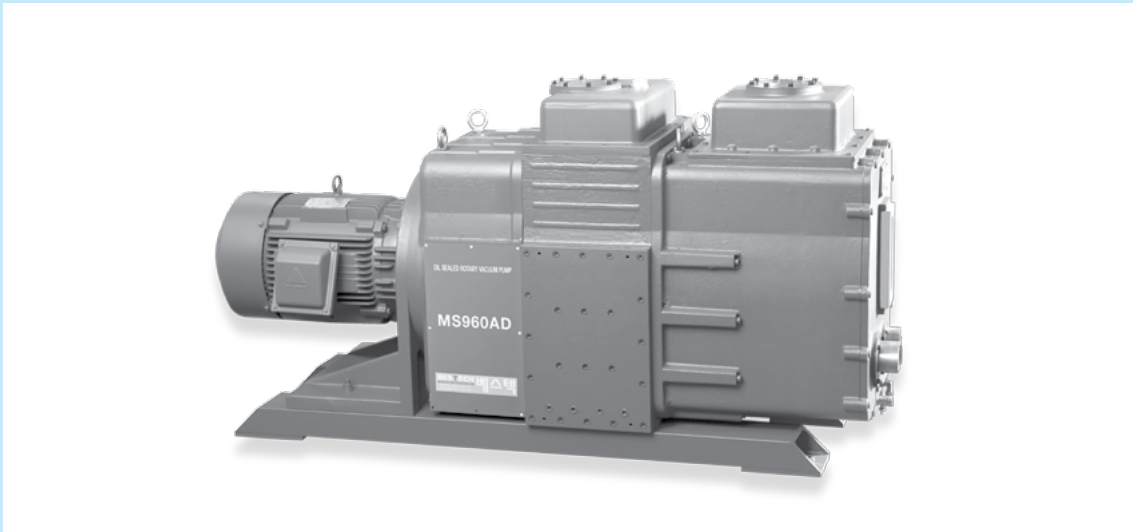
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS960AD

LARGE ROTARY VANE PUMPS

사양 Specification



MS960AD

Specification

ITEM	MODEL	MS960AD
Displacement Speed(유효배기속도) ℓ /min	50Hz	13,300
	60Hz	16,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-3} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		22(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ /min)	20
	Pressure(Mpa)	0.2 < P
Suction Port(흡입구)		VG150
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		1,938×594×942
Weight(제품무게) (Kg)		1,455
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

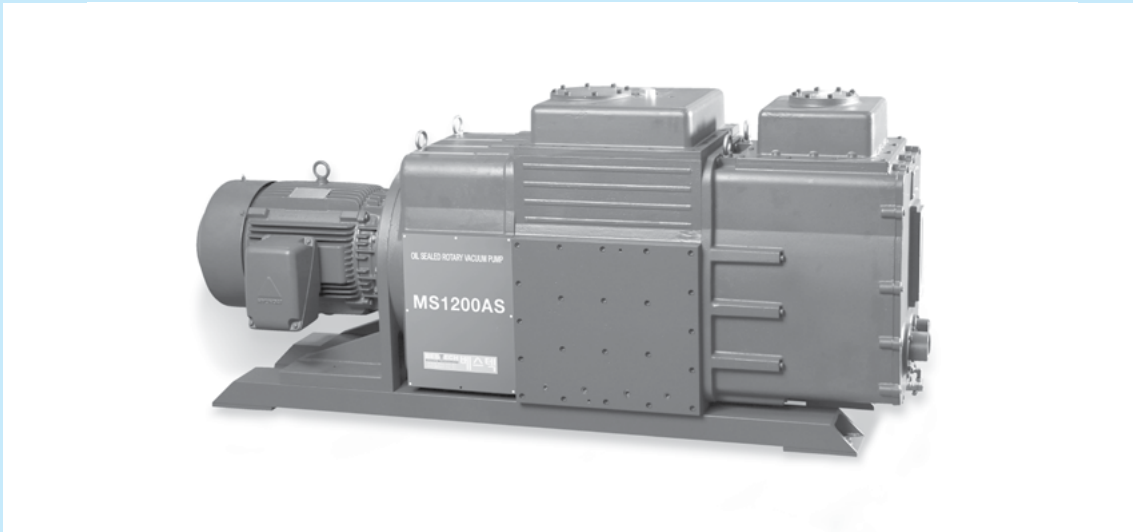
- 10³Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10³Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

MS1200AS

LARGE ROTARY VANE PUMPS

사양 Specification



MS1200AS

Specification

ITEM	MODEL	MS1200AS
Displacement Speed(유효배기속도) ℓ /min	50Hz	16,600
	60Hz	20,000
Ultimate Pressure(도달압력) Pa(Torr)		5.3(4X10 ⁻²)
Motor(사용동력) Kw(Pole)		30(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ /min)	20
	Pressure(Mpa)	0.2<P
Suction Port(흡입구)		VG150
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		2,232×594×942
Weight(제품무게) (Kg)		1,480
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

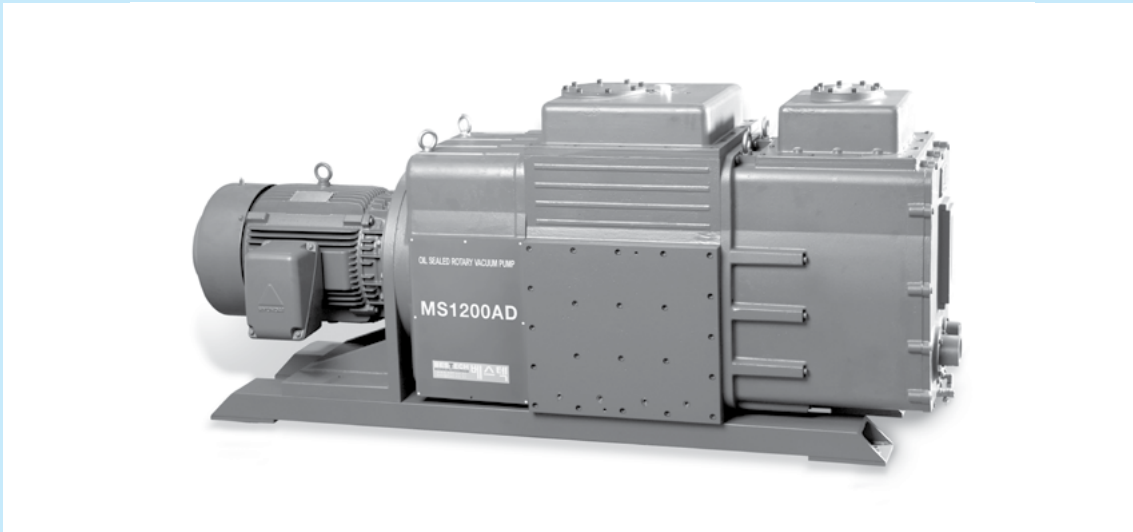
- 10³Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10³Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

MS1200AD

LARGE ROTARY VANE PUMPS

사양 Specification



MS1200AD

Specification

ITEM	MODEL	MS1200AD
Displacement Speed(유호배기속도) ℓ /min	50Hz	16,600
	60Hz	20,000
Ultimate Pressure(도달압력) Pa(Torr)		$6.75 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)		30(6)
Oil Volume Required(윤활유량) ℓ		80
Cooling Water(냉각수)	Flow Rate(ℓ /min)	20
	Pressure(Mpa)	0.2 < P
Suction Port(흡입구)		VG150
Exhaust Port(배기구)		VG100
Dimension(외형치수) (L×W×H)		2,232×594×942
Weight(제품무게) (Kg)		1,530
Option(선택사양)		Oil Mist Trap
		Gas Ballast Valve
		Saffy System(Cooling, Over Heat, Over)

- 10⁻²Pa(760Torr)에서 유호배기속도 측정(Displacement exhaust speed measurement in 10⁻²Pa(760Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이다.(Arrival pressure makes use of cold negative pole ionization vacuum gauge)

VACUUM PUMP

OIL MIST TRAP

OPTION(OIL MIST TRAP)

사양 Specification



OIL MIST TRAP

Specification

ITEM \ MODEL	EF7,12	EF24,35	EF48,55	EF48,85	OMT3K	OMT5K	OMT7K	OMT12K	OMT16K	OMT20K
Connect Flange(연결 플랜지)	NW25		NW40		VF50		VF80	VF100		
Filter Number(필터수량) ea	1				3	5(1/4)	5			
Filter Size(필터사이즈) (ØxH)	Ø70 x 75L	Ø100 x 100L	Ø100 x 146L	Ø100 x 196L	Ø100 x 146L	Ø100 x 100/146L	Ø100 x 196L	Ø150 x 210L	Ø150 x 280L	Ø150 x 350L
Safety valve Number(안전밸브수량)	-				1		2			
Weight(제품무게) (Kg)	0.8	1.3	1.6	1.8	12.5	21.5	24.5	46	49	53
Dimension(외형치수) (ØxH)	Ø115 x 118.6L	Ø143 x 138.6L	Ø143 x 1194.6L	Ø143 x 244.6L	Ø296.5 x 374	Ø376.5 x 381	Ø375.5 x 486.4	Ø506.5 x 577	Ø506.5 x 647	Ø506.5 x 717
Application of Pump(적용펌프)	MS6A, MS12A	MS25A, MS40A	MS60A	MS100A, MS135A	MS220 AD(S)	MS370 AD(S)	MS500 AD(S)	MS720 AD(S)	MS960A D(S)	MS1200 AD(S)

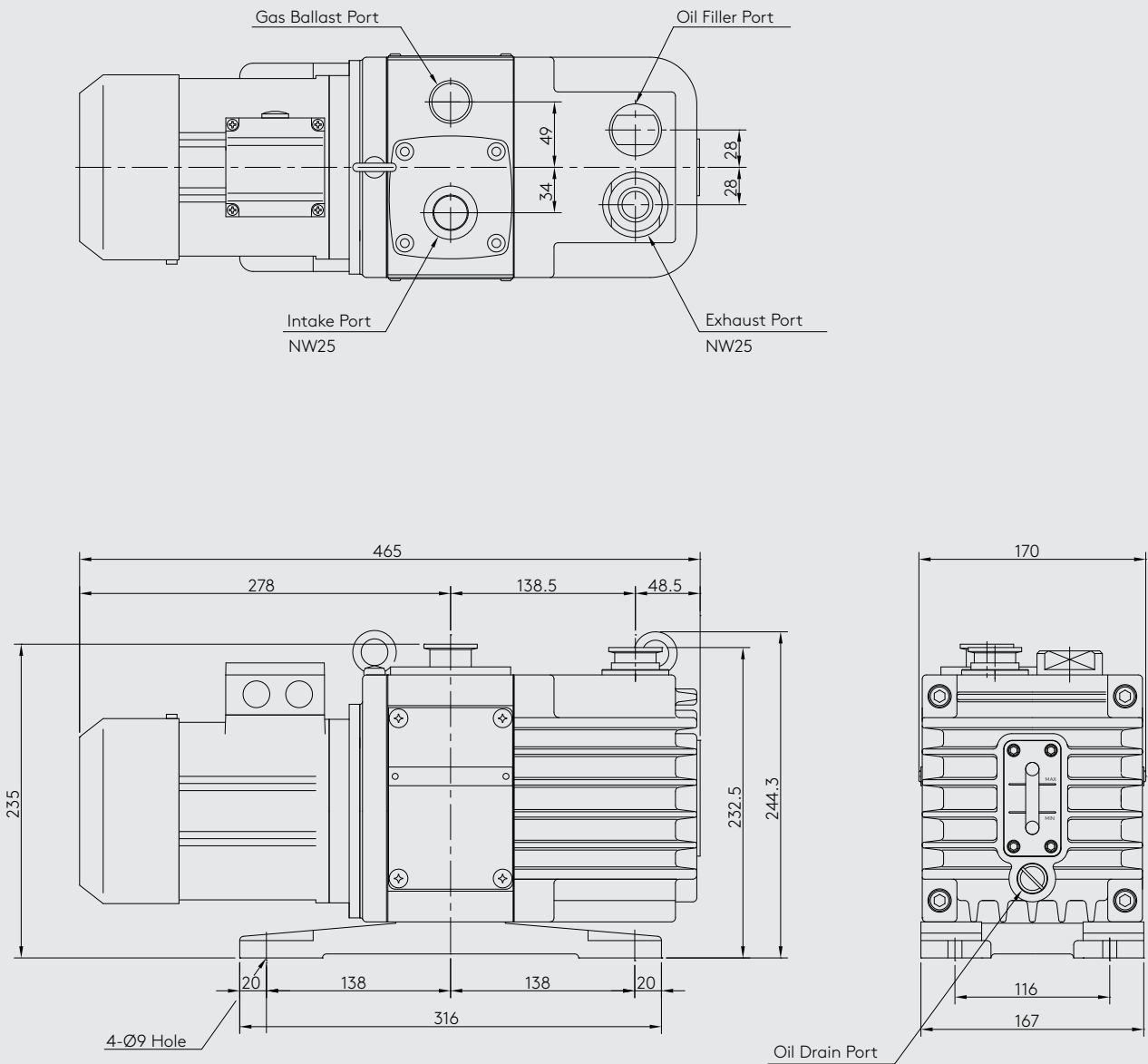
VACUUM PUMP

MS6A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS6A



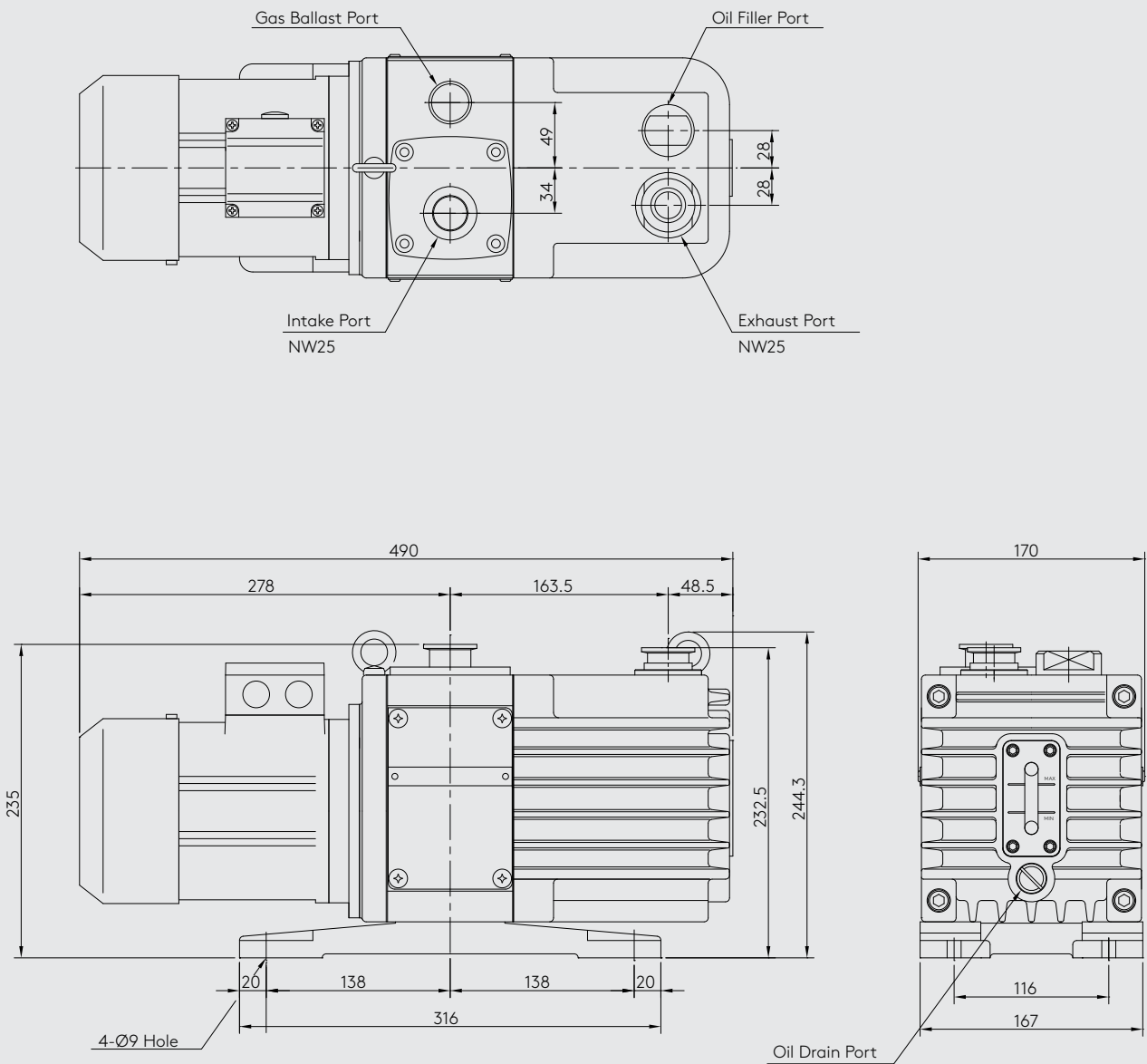
VACUUM PUMP

MS12A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS12A



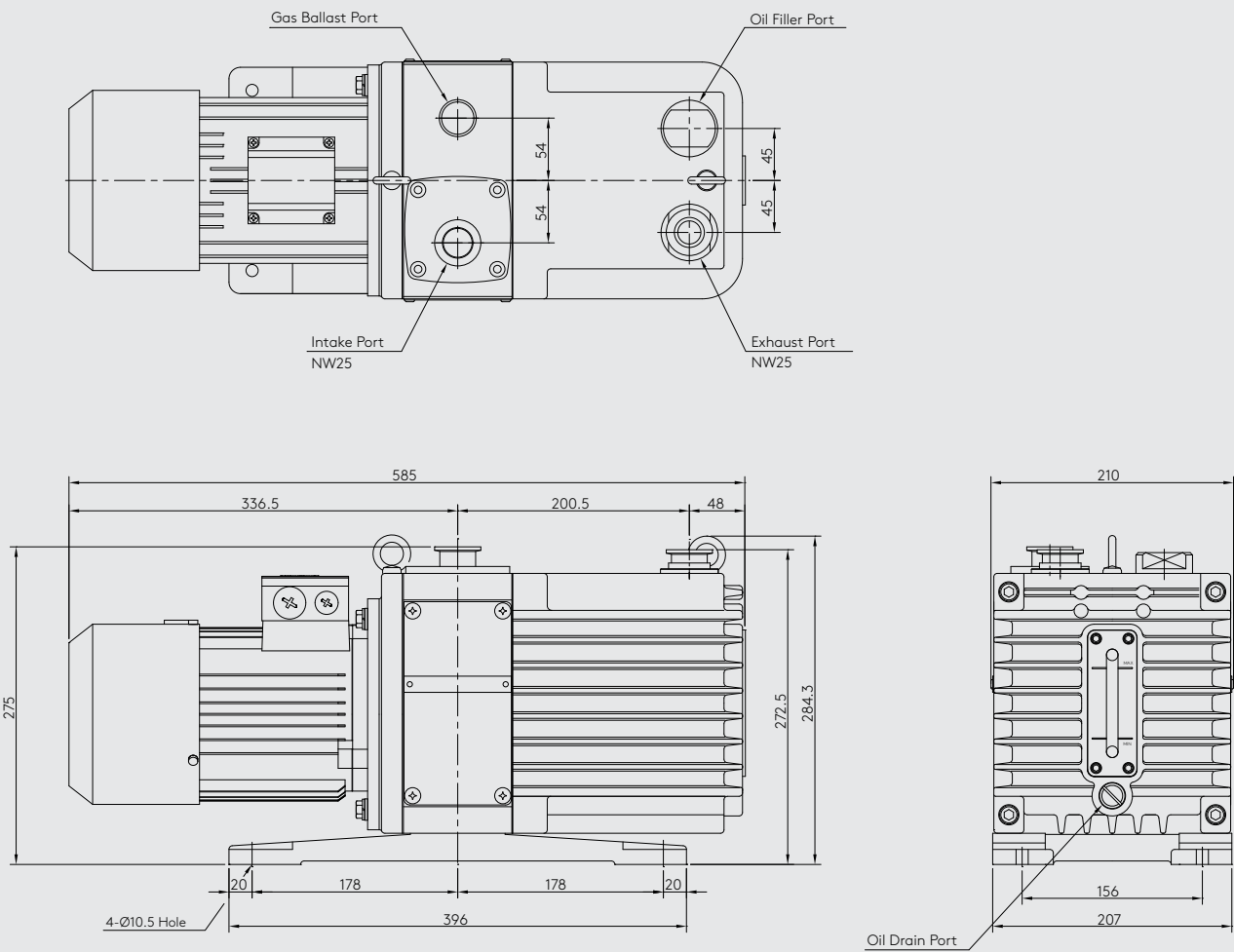
VACUUM PUMP

MS25A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS25A



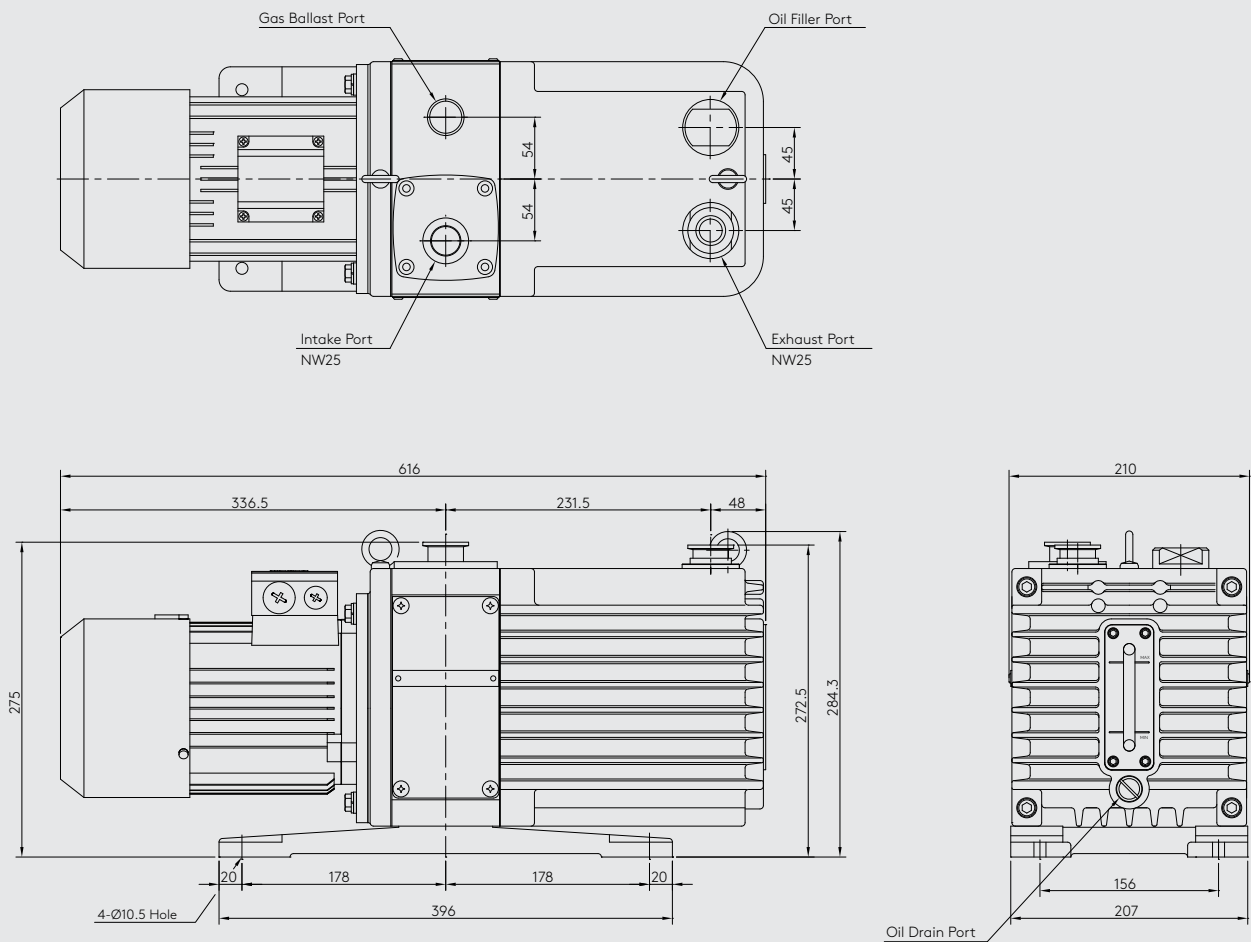
VACUUM PUMP

MS40A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS40A



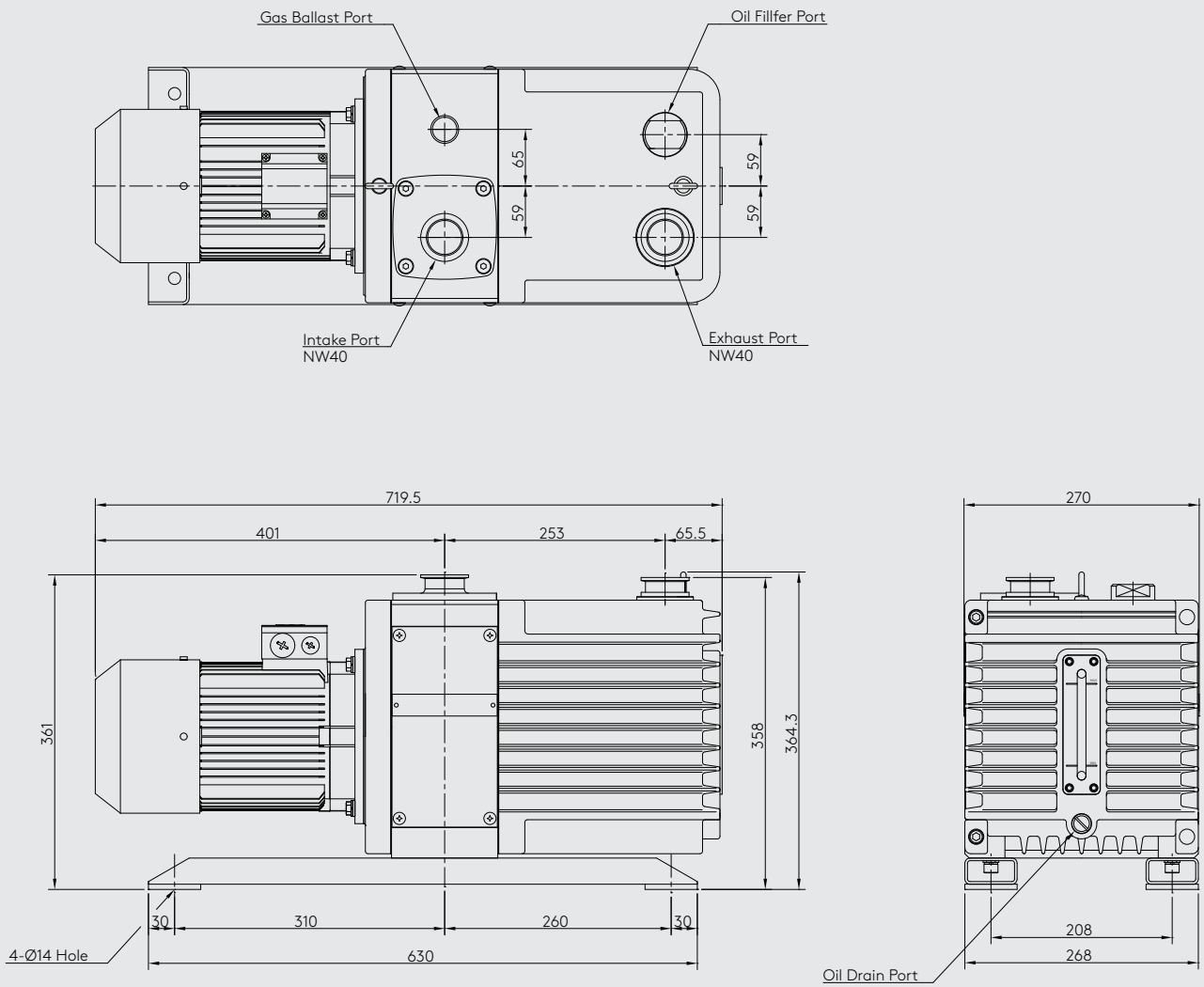
VACUUM PUMP

MS60A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS60A



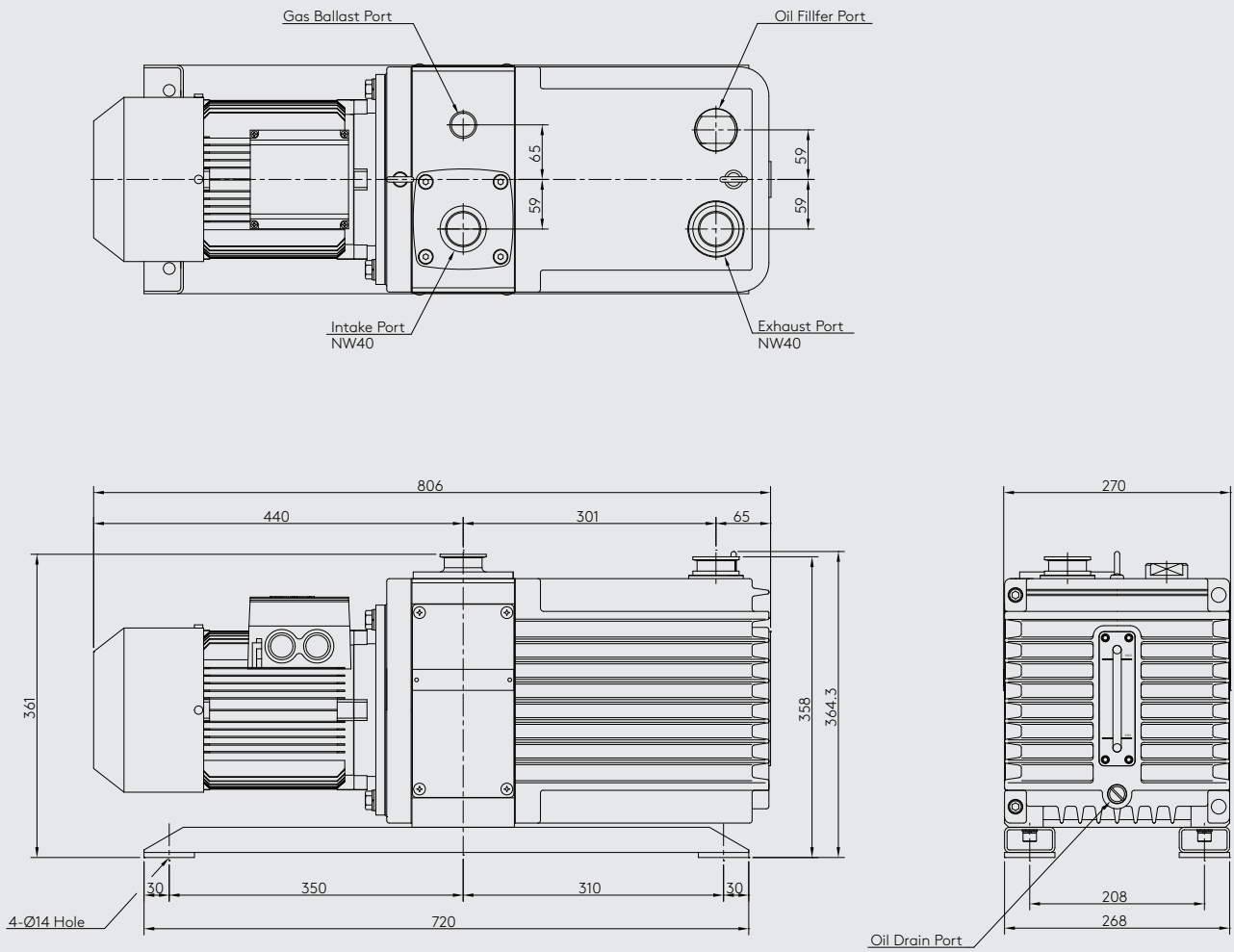
VACUUM PUMP

MS100A

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS100A



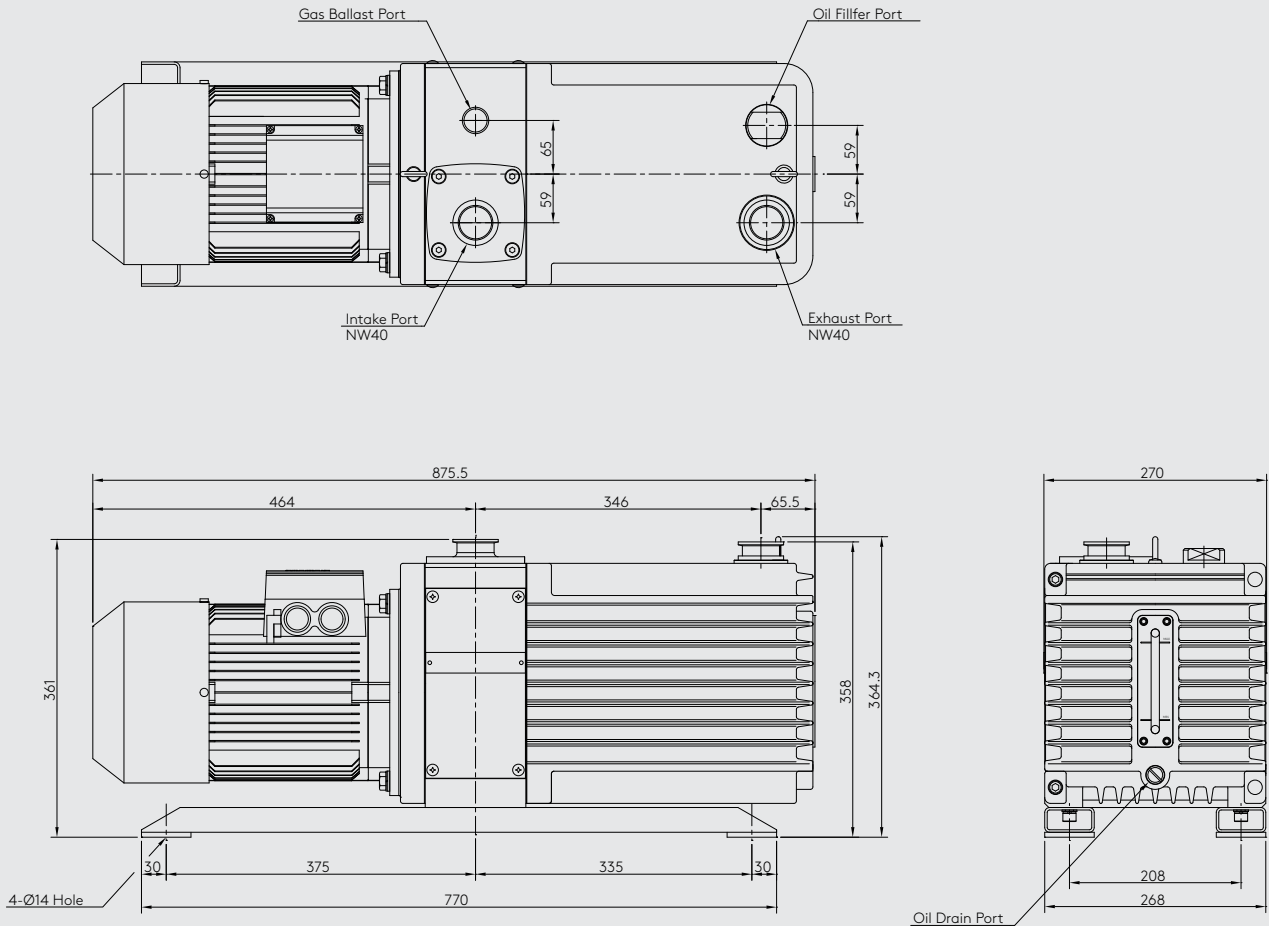
VACUUM PUMP

MS135

SMALL ROTARY VANE PUMP

외형치수 Outside dimension

MS135A



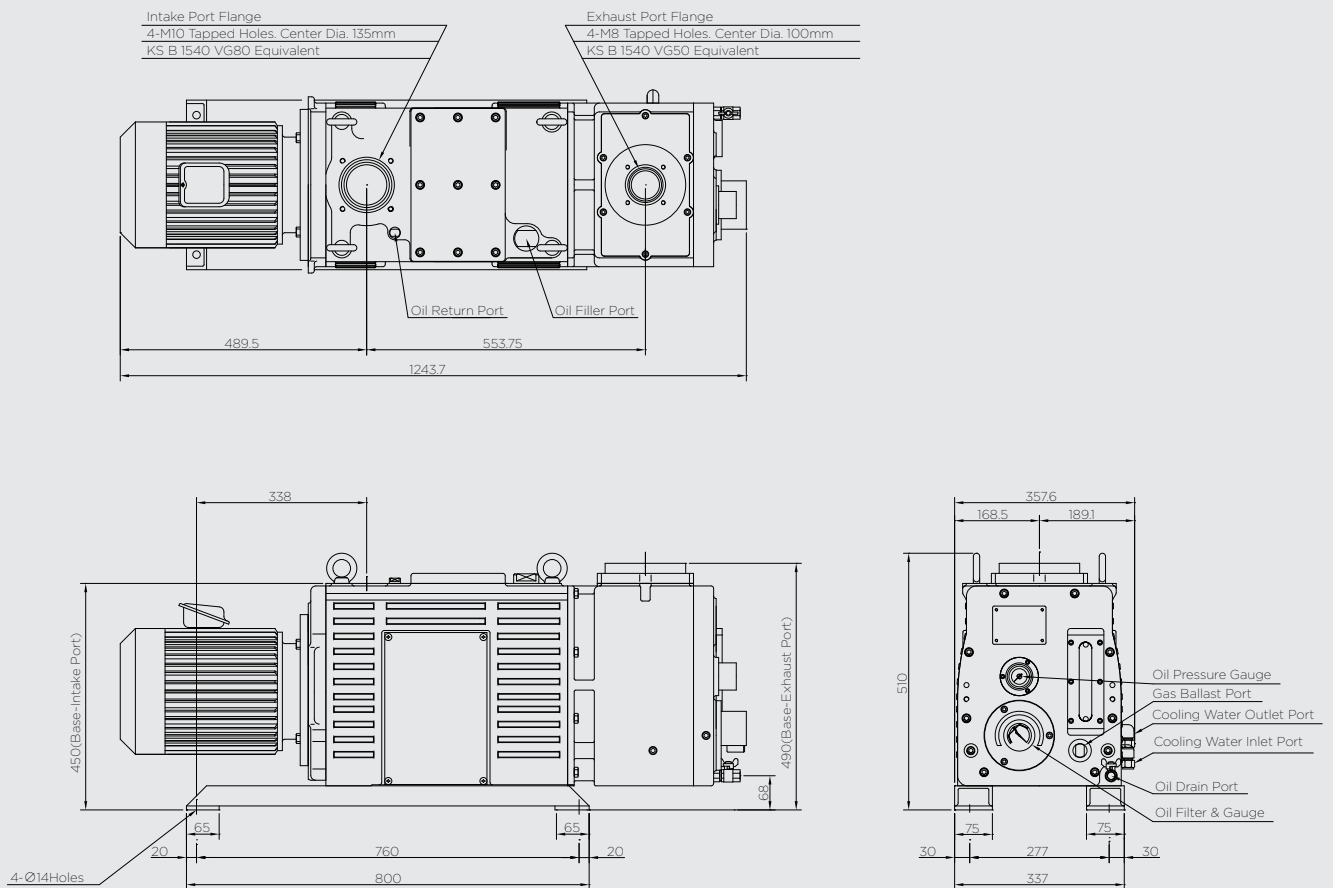
VACUUM PUMP

MS220AS, MS220AD

MEDIUM ROTARY VANE PUMPS

외형치수 Outside dimension

MS220AS, MS220AD



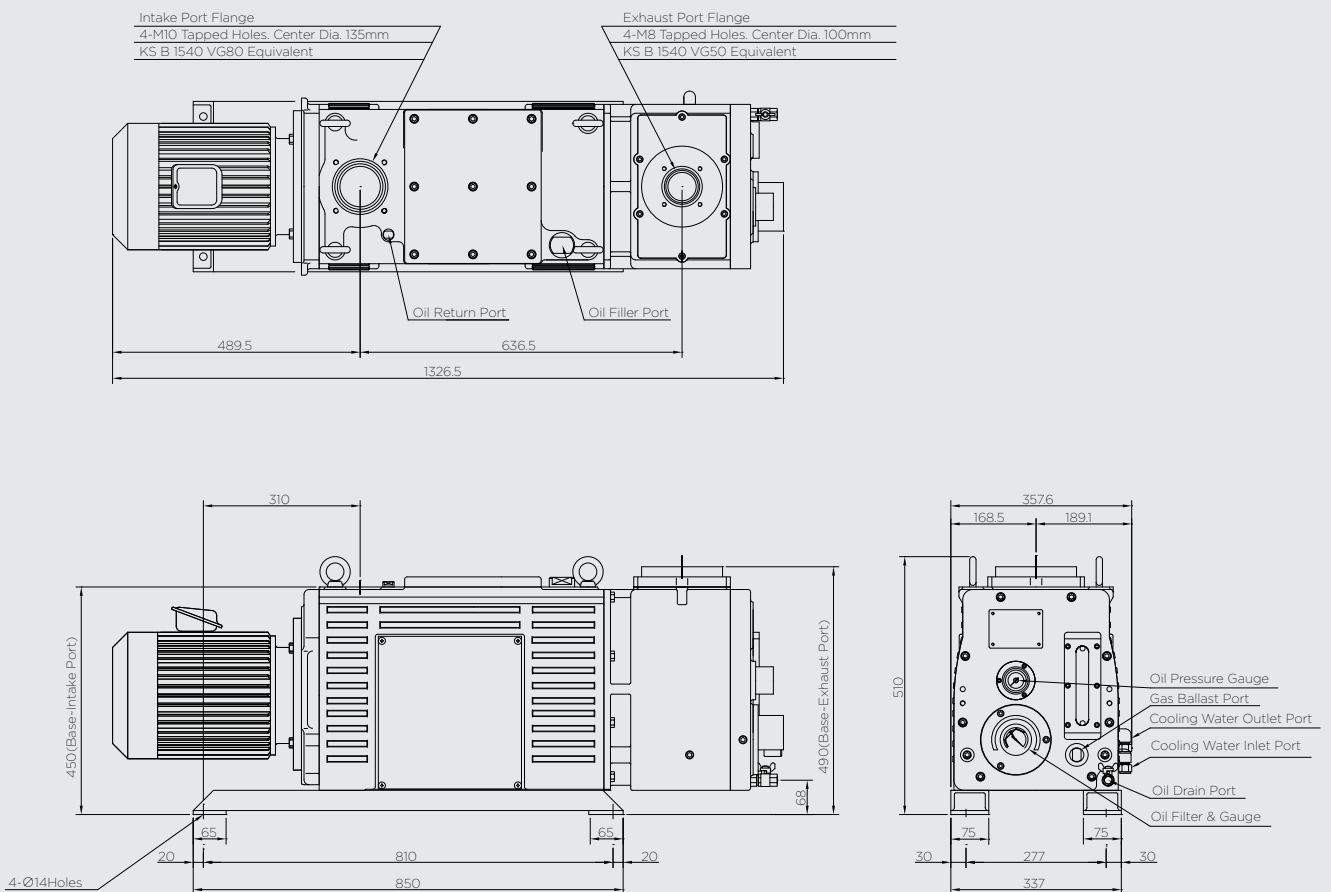
VACUUM PUMP

MS370AS, MS370AD

MEDIUM ROTARY VANE PUMPS

외형치수 Outside dimension

MS370AS, MS370AD



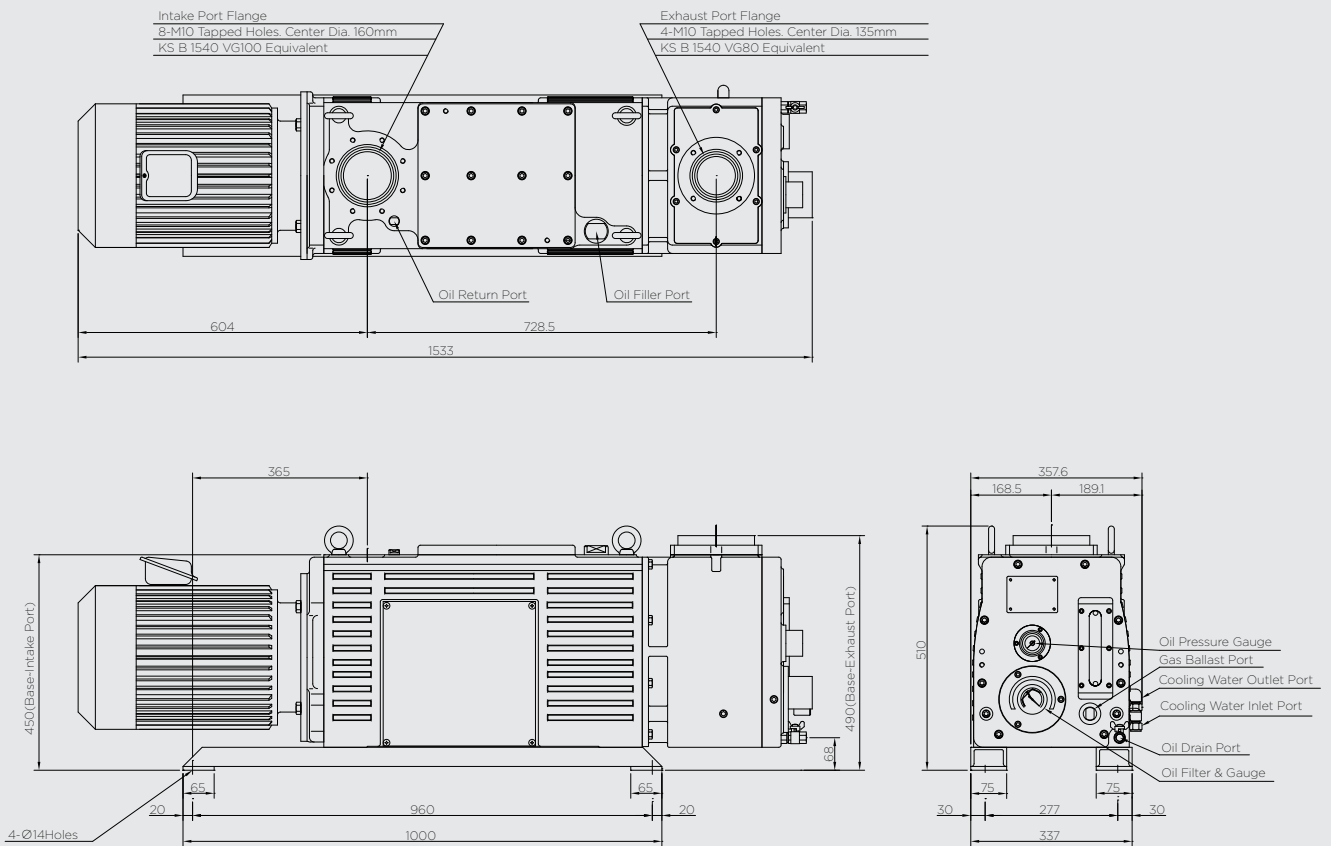
VACUUM PUMP

MS500AS, MS500AD

MEDIUM ROTARY VANE PUMPS

외형치수 Outside dimension

MS500AS, MS500AD



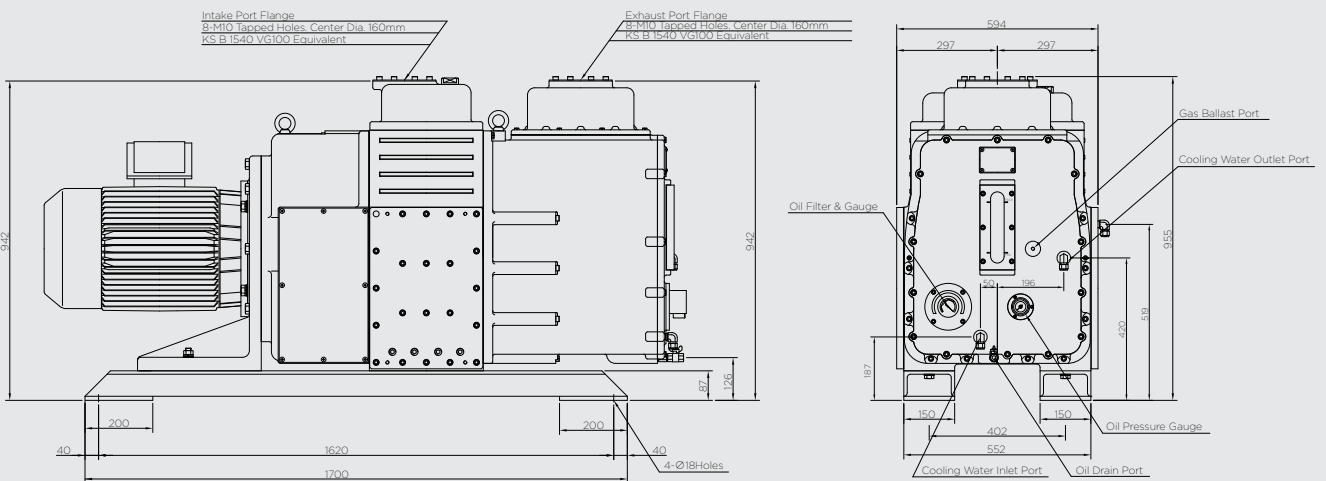
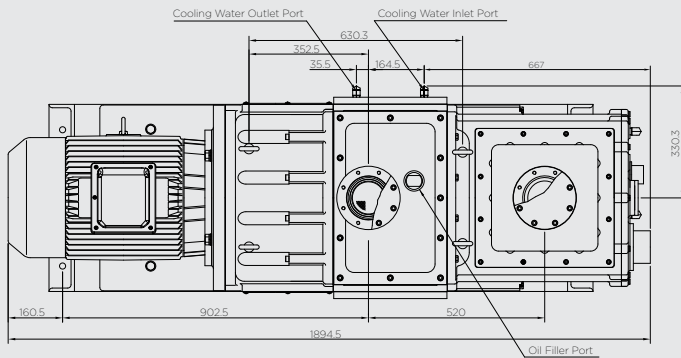
VACUUM PUMP

MS720AS, MS720AD

LARGE ROTARY VANE PUMPS

외형치수 Outside dimension

MS720AS, MS720AD



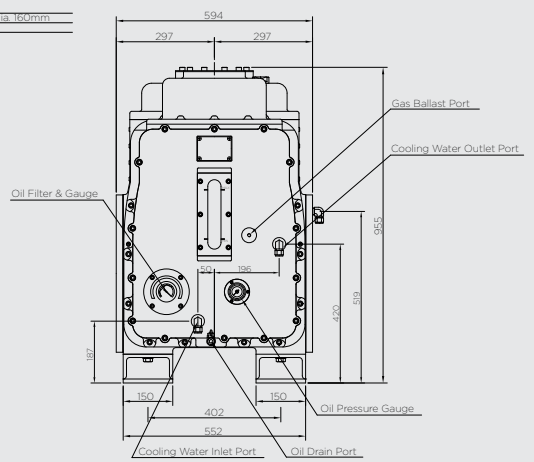
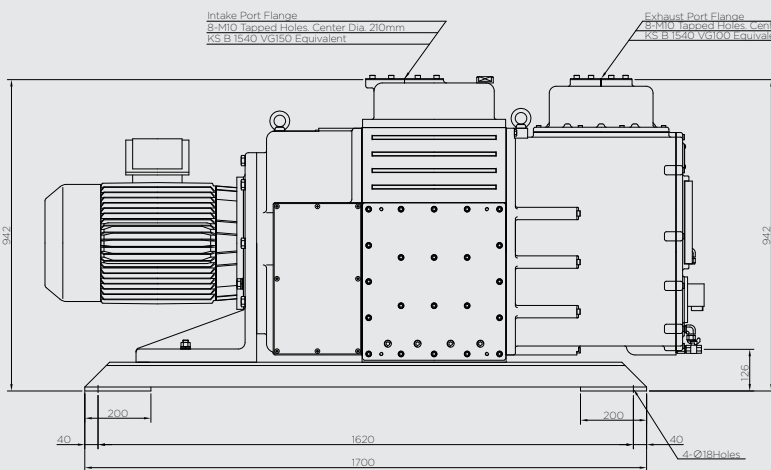
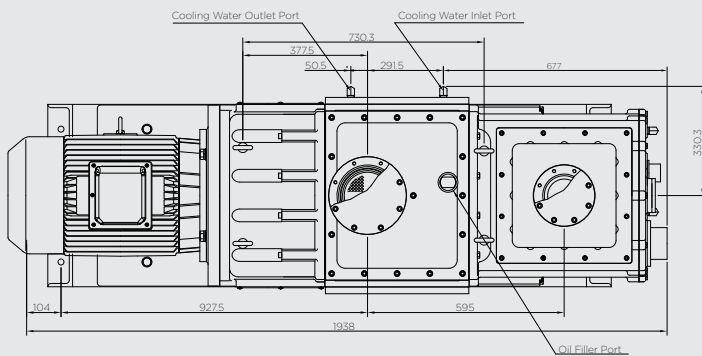
VACUUM PUMP

MS960AS, MS960AD

LARGE ROTARY VANE PUMPS

외형치수 Outside dimension

MS960AS, MS960AD



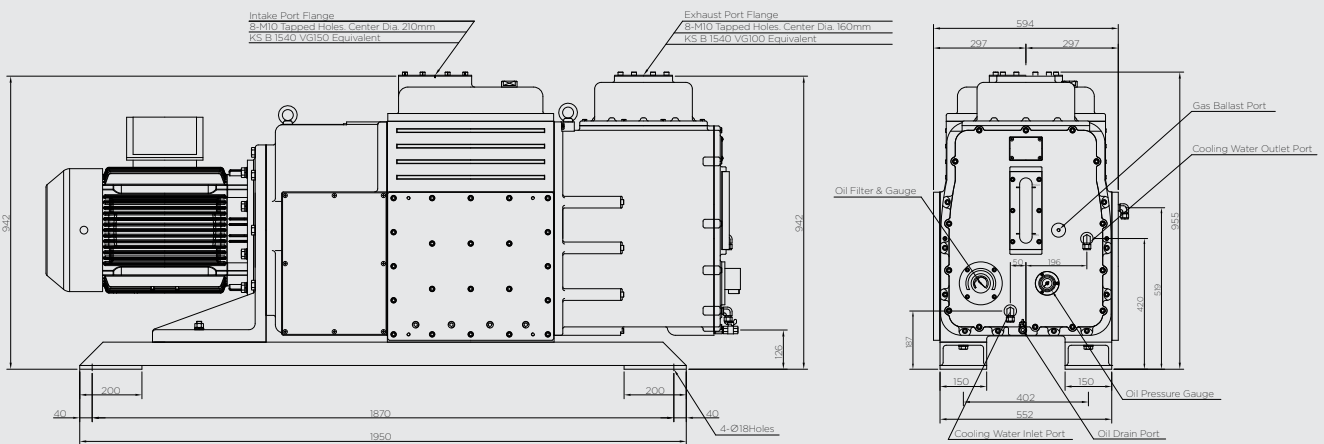
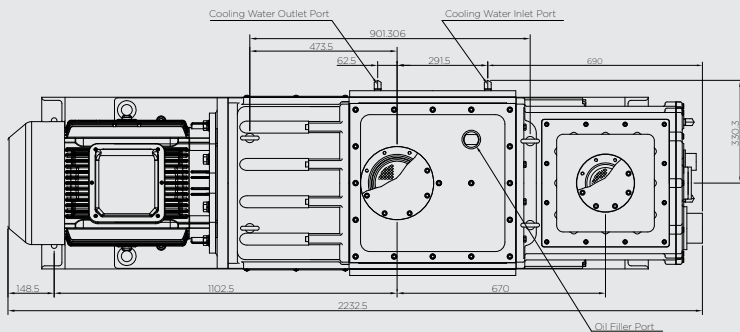
VACUUM PUMP

MS1200AS, MS1200AD

LARGE ROTARY VANE PUMPS

외형치수 Outside dimension

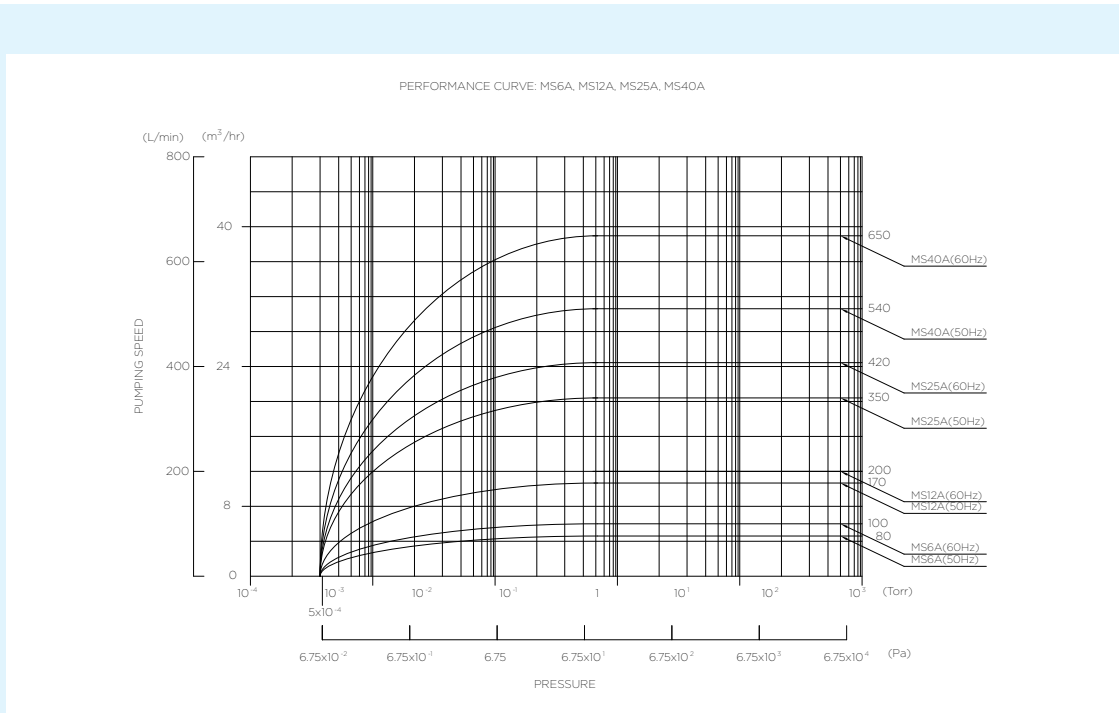
MS1200AS, MS1200AD



VACUUM PUMP

SMALL ROTARY VANE PUMP

배기속도곡선 Pumping speed curve



▶ MS6A



▶ MS12A



▶ MS25A



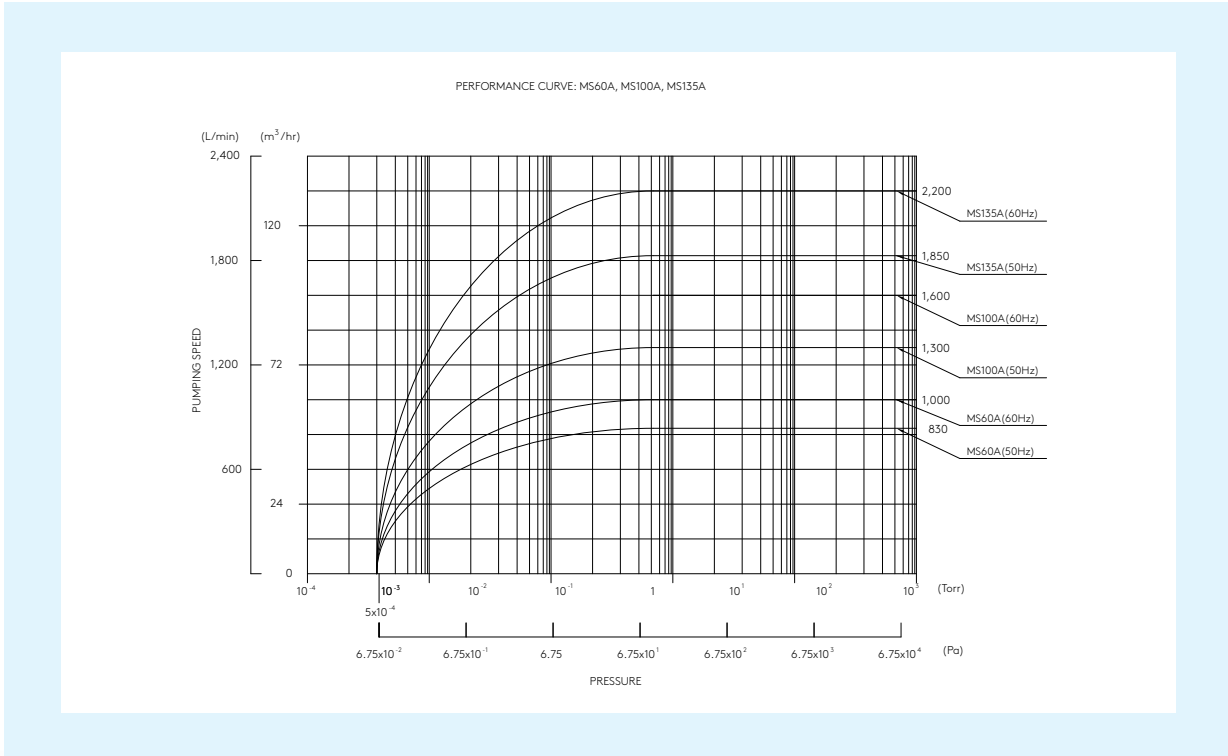
▶ MS40A



VACUUM PUMP

SMALL ROTARY VANE PUMP

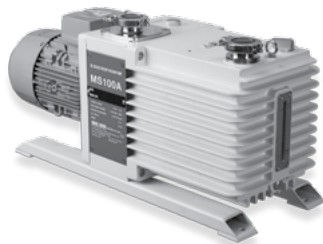
배기속도곡선 Pumping speed curve



▶ MS60A



▶ MS100A



▶ MS135A

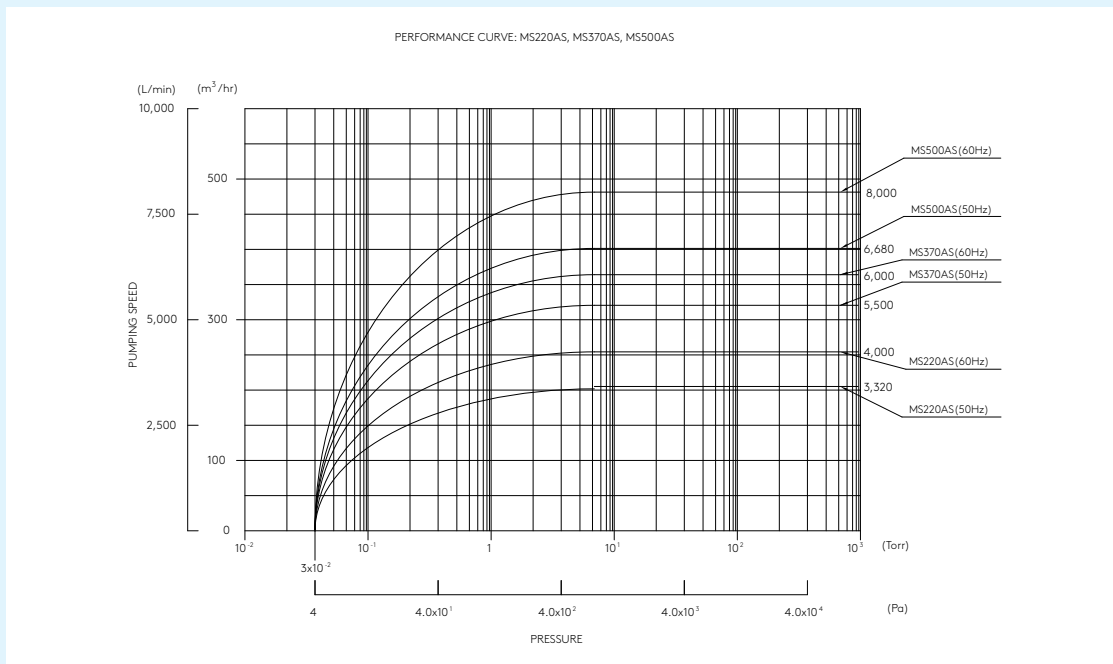


VACUUM PUMP

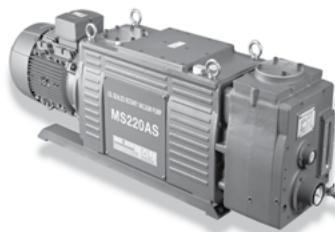
MS-ONE STAGE

MEDIUM ROTARY VANE PUMPS

1단형펌프 배기속도곡선 Pumping speed curve



▶ MS220AS



▶ MS370AS



▶ MS500AS

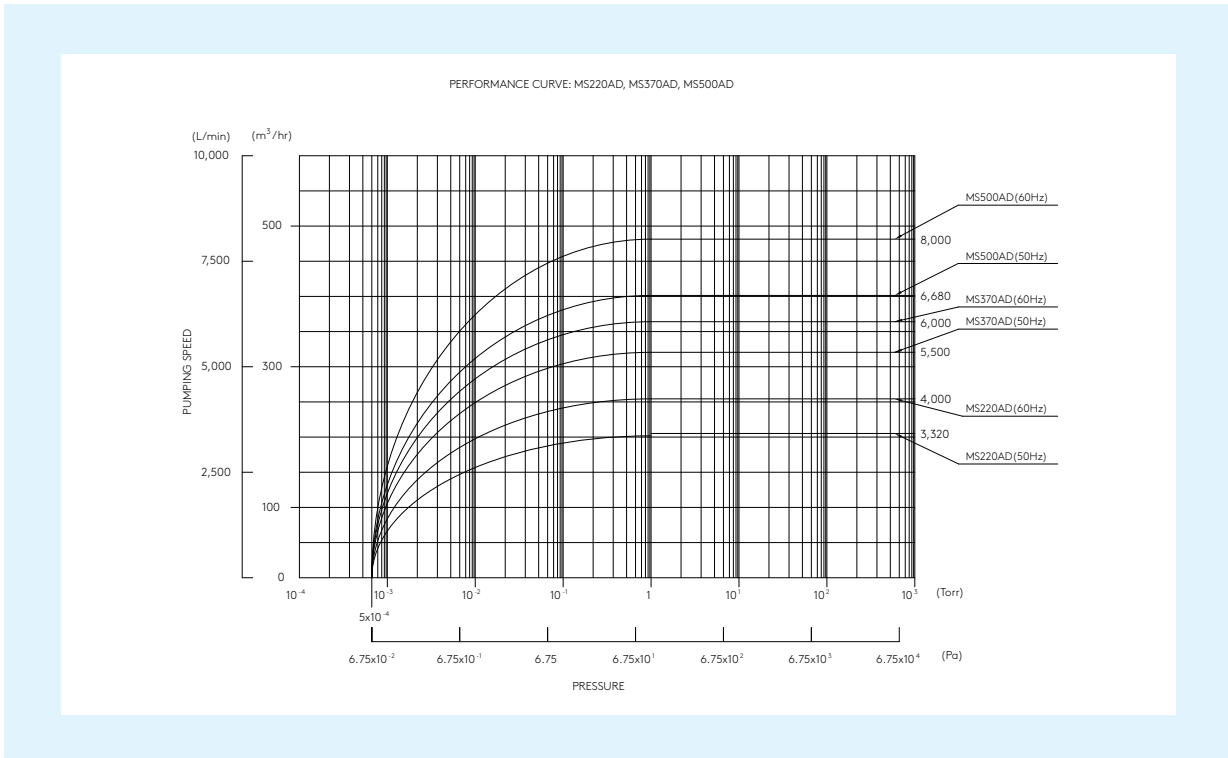


VACUUM PUMP

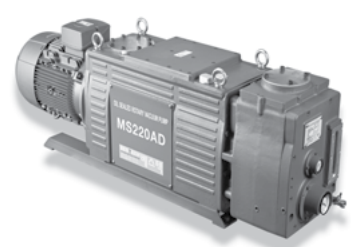
MS-TWO STAGE

MEDIUM ROTARY VANE PUMPS

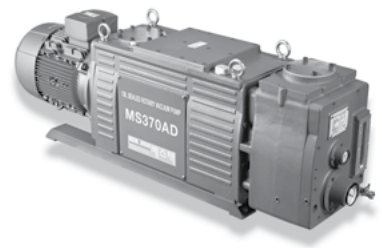
2단형펌프 배기속도곡선 Pumping speed curve



▶ MS220AD



▶ MS370AD



▶ MS500AD

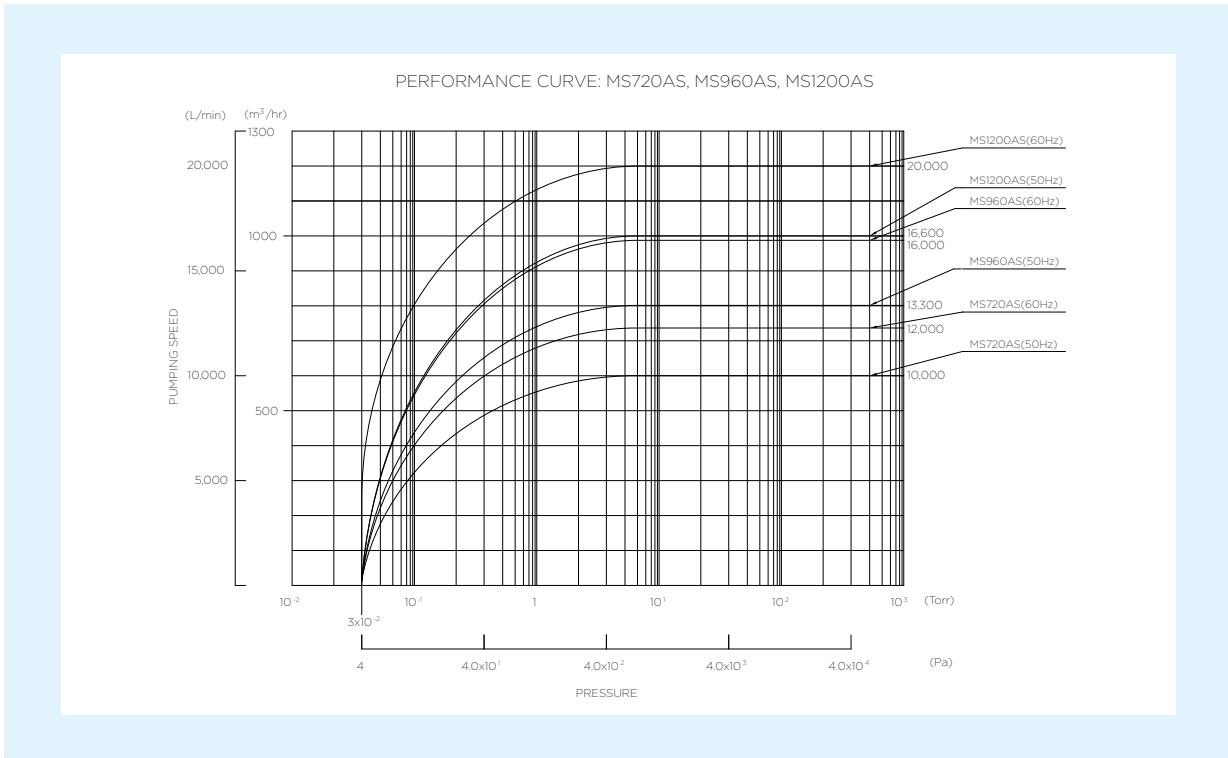


VACUUM PUMP

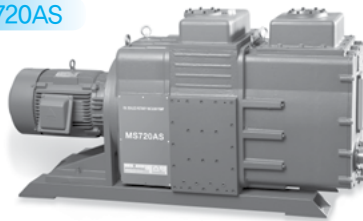
MS-ONE STAGE

LARGE ROTARY VANE PUMPS

1단형펌프 배기속도곡선 Pumping speed curve



▶ MS720AS



▶ MS960AS



▶ MS1200AS

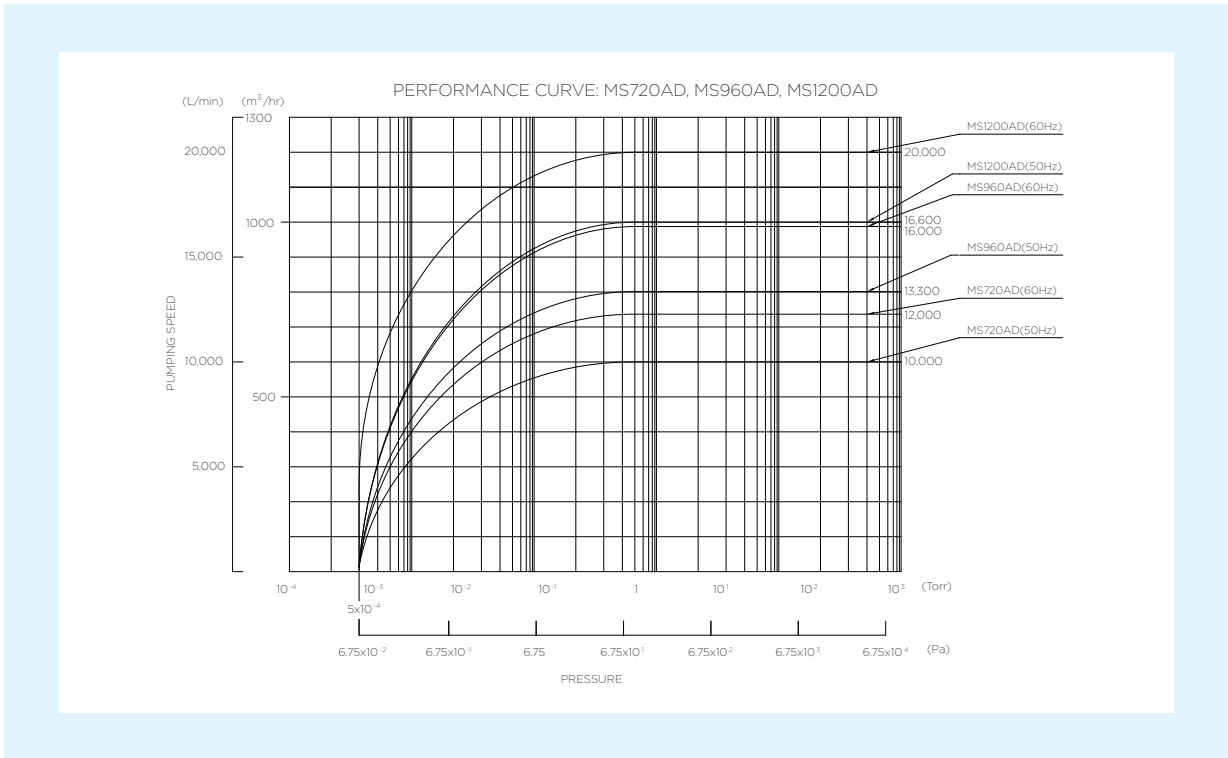


VACUUM PUMP

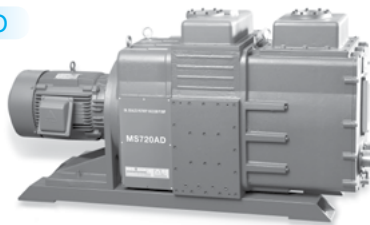
MS-TWO STAGE

LARGE ROTARY VANE PUMPS

2단형펌프 배기속도곡선 Pumping speed curve



▶ MS720AD



▶ MS960AD



▶ MS1200AD



VACUUM PUMP

BOOSTER PUMPS

B(M) SERIES



▲ BM1A



▲ BM12A

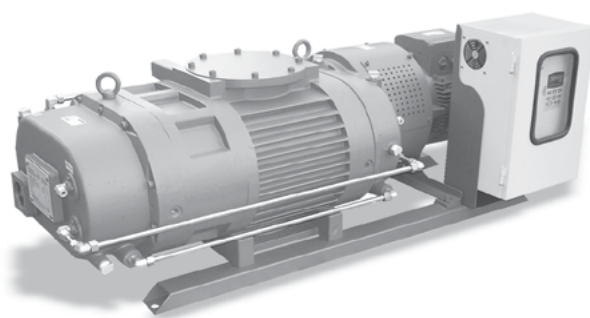


▲ BM24A

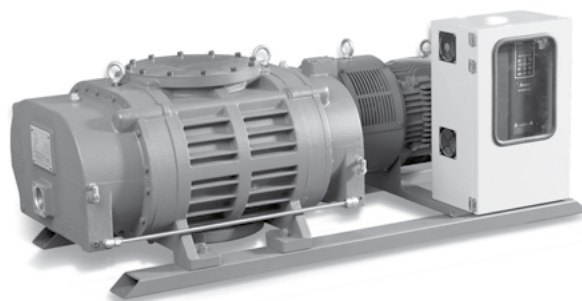
VACUUM PUMP

BOOSTER PUMPS

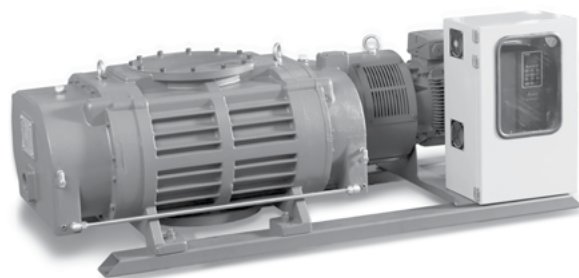
B(M) SERIES



▲ BI36A



▲ BI55A



▲ BI70A

VACUUM PUMP

B(M) SERIES

BOOSTER PUMPS

펌프의 특징 & 장점 Advantage for vacuum pump

• 안정된 성능

케이싱 내에는 윤활유가 없기 때문에 수증기, 용제 등의 증기에 대해서도 안정된 성능을 얻을 수 있다.

• Performance is very good.

To get the efficiency inside casing because it is not the lubricating oil is stabilized even about the fume of vapor and solvent etc.

• 내부식성이 우수하다.

가스 부위와 접하는 표면은 강성이 높고, 내부식성이 우수한 표면 처리를 하였다.

• The better resistant to abrasion

Inside contact surface is higher strongness, It can take the special treatment at surface as the demand that those are very strong resistant to abrasion.

• 상호 호환성을 향상시켰다.

BM형과 B형은 대기압 기동방식과 비대기압 기동방식의 차이이며 간단히 커플링 교체만으로 동시에 사용이 가능하도록 하였다.

• The compatibility is good.

BM type and B type which are having difference that is atmospheric starting method or non-atmospheric starting. It can use for your order to change their coupling easily.

• ISO 규격의 모터 플랜지 적용

ISO 플랜지의 규격모터를 사용함으로써 어느 곳에서도 그리고 누구나 모터 교체가 용이하도록 하였다.

• ISO standards application.

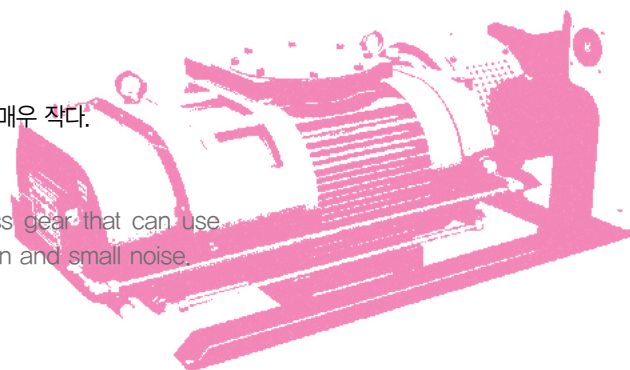
According to using ISO standards motor application, anyone can shift and change the motor easily at anyplace and anytime.

• 높은 정밀도와 강성기어를 사용하였다.

높은 강성기어를 사용함으로써 고속회전에도 소음과 진동이 매우 작다.

• Used high precision gear with high hardness

Used a high precision and the high grade hardness gear that can use with high-speed rotation, this gear has small vibration and small noise.



VACUUM PUMP

B(M) SERIES

BOOSTER PUMPS

펌프의 특징 & 장점 Advantage for vacuum pump

- **Solid Disk 타입의 Mechanical Seal 적용(선택적 적용)**

높은 강도의 Solid Disk를 적용한 Mechanical Seal은 내마모성과 내구성이 매우 높다.

- **Solid disk type mechanical seal applications(selective application)**

Mechanical seal where applies solid disk of the high grade hardness, wear is less and durability are very good.

- **양방향의 더블 립씰 적용(선택적 적용)**

내구성이 좋은 양방향의 더블 립씰을 사용함으로써 누설량이 매우 적어 보다 안정적인 높은 압력을 얻을 수 있다.

- **The double lip seal can use on both direction of pressure.(selective application)**

The double lip seal on the both direction that has the durability is good and the leakage very small so it has stable and high vacuum pressure.

- **보다 안정적이며 회전 전달력이 빠른 마그네틱커플링 적용**

마그네틱커플링을 모터 축에 일체화함으로써 고속 회전 시 높은 안정성을 유지하고, 펌프 축과 모터 축의 부하 편차 시 적절한 회전수를 유지하여 빠르게 모터의 회전량을 펌프 축에 전달하도록 한다.

- **The better stability and fast connecting magnet coupling application**

To make one body with magnet coupling and axis of motor that has stability when pump rotate with high speed. If Pump and motor have not rotate equally each other, that is, loaded deflection, Magnet coupling makes it's the rotating speed fast from motor.

- **흡입라인의 방향을 다양하게 하였다.**

BM(B)12A와 BM(B)24A BI(B)36A는 흡입구 방향을 수평 형(H)과 수직 형(V)으로 사용이 가능하다.

- **Direction of suction line variously**

BM(B)12A, BM(B)24A, BI(B)36A can adopt the horizontal(H) or vertical(V) at inlet port suction's direction.

- **인버터를 적용한 배기량 제어 가능(선택적 적용)**

BI12A, BI24A, BI36A는 인버터를 적용하여 배기량 제어가 가능하도록 하였다.

- **The displacement control possible which applies the inverter(selective application)**

BI12A, BI24A and BI36A applied the inverter optionally in order to control exhaustion.

VACUUM PUMP

B(I) SERIES

LARGE BOOSTER PUMPS

대형 펌프의 특징 & 장점 Advantage for vacuum large pump

(B55A, BI55A, B70A, BI70A)

- **업계최대용량**

고진공 펌프로써 업계최대용량의 직결구동형식이다.

- **Industry's capacity**

Form of direct drive pumps. The industry's highest capacity.

- **소형, 경량화된 구조**

고용량 대비 고속회전수(3600rpm)의 소형화된 형식으로써 설치 및 관리면적이 매우 적게 소요된다. 또한, 알루미늄 합금재질로 구성되어 취급이 간편하다.

- **Small, light-weight structure**

High-capacity pump rotational speed(3600rpm) is a miniaturized format. It takes very little installation and management. Further, the aluminum alloy consists of the handling is easy.

- **냉각수 열교환량 극대화**

본체에 직접 워터자켓을 형성하여 냉각수를 순환하므로 냉각효과가 뛰어나다.

- **Maximize the amount of cooling water heat exchanger**

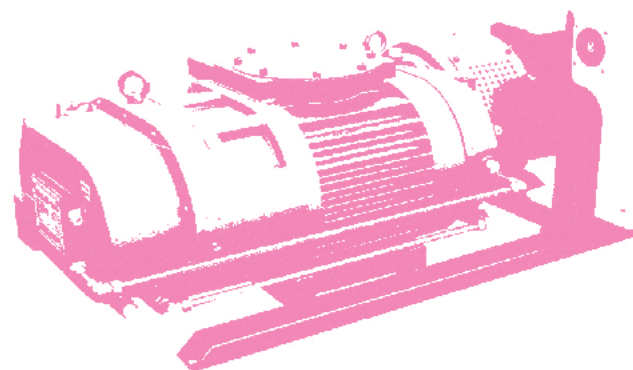
water line, by creating a cooling effect inside the pump is superior.

- **고진공 안정성**

높은 정밀도의 제작기술로써 고속회전체의 미세간극을 유지하여 안정된 성능에 도달할 수 있다.

- **High vacuum stability**

Pumps for precision manufacturing rotor with microscopic can keep the gap. So a stable vacuum could reach performance.



VACUUM PUMP

B(I) SERIES

LARGE BOOSTER PUMPS

대형 펌프의 특징 & 장점 Advantage for vacuum large pump

(B55A, BI55A, B70A, BI70A)

• 윤활유량 및 오염도 가시장치

각 윤활실에 가시창(Sight glass)를 설치하여 윤활유량 및 오염도 적정성을 판단할 수 있다.

• You can check the amount of oil and pollution

Sight glass is installed on each of the lubricating oil contamination levels and can be confirmed.

• 신속한 초기 배기구조

보조펌프 저진공 배기 시 진공실(Process Area) 및 윤활실(Lubrication Area)이 관로 장애 없이 신속하게 배기되어 규정 진공상태로 도달할 수 있다.

• Rapid initial exhaust structure

Auxiliary vacuum pump exhaust state that Lubrication Area Process Area and the problem Therefore, a vacuum state is reached faster.

• 인버터 제어 - 선택사양

모터 기동을 인버터로 제어함으로써 회전수 가변을 통하여 최상의 가동성능을 유지하고 펌프부하를 줄이도록 한다.

• Inverter Control - Optional

Start the motor by controlling the inverter operation best performance, the load of the pump can be reduced.

• 윤활실 별도배기 시스템 - 선택사양

진공실(Process Area)과 윤활실(Lubrication Area)을 별도 배기하여 오염을 차단할 수 있다.

• Separate exhaust system Lubrication Area - Optional

Lubrication Area Process Area and the contamination of the exhaust can be blocked separately.

• 일체형 소재의 메카니칼 씰 적용

높은 강도의 일체형 소재를 적용한 메카니칼 씰은 내마모성과 내구성이 매우 높다.

• Solid disk type mechanical seal application

Mechanical seal where applies solid disk of the high grade hardness, wear is less and durability are very good.

VACUUM PUMP

B(M) SERIES

BOOSTER PUMPS

구조 & 작동원리 Structure and operation principle

B(M) 시리즈는 루츠형 메카니칼 부스터펌프이다.

메카니칼 부스터펌프의 작동원리는 케이싱 내에 있는 2개의 땅콩모양의 로터가 축에 고정되어 있는 타이밍 기어에 의해 서로 반대방향으로 같은 주기로 회전하도록 되어있다.

흡입라인에 유입된 기체는 케이싱과 로터 사이의 공간에 밀폐되어 있다가 로터의 회전에 의해 배기라인으로 배출되며 이것을 1차 펌프(베이스 펌프)가 대기중으로 방출시킨다.

로터와 로터, 로터와 케이싱은 매우 작은간격을 유지하며 회전하기 때문에 실린더 내부와 로터에는 윤활유가 필요 없다. 따라서 깨끗한 진공배기가 가능하다.

또한, 로터는 고속회전(Max. 3500rpm)을 하면서도 케이싱과 마찰이 없으므로 반영구적이기도 하다.

특히 재질은 고강도, 고순도의 알루미늄 합금을 사용하였으며 표면의 내부식성과 경도를 더욱 향상 시키기 위해 표면처리를 하도록 하였다.

메카니칼 씰은 특수 재질의 카본과 솔리드 씰을 사용하여 마모율이 적고 보다 높은 내화학성이 있다.

B(M) Series pump is Roots type Mechanical Booster Pump. Structure operation principle of mechanical booster pump is rotated in compliance with opposite direction each other adopted two peanut shaped rotor at two rotor in casing by timing gear at shaft.

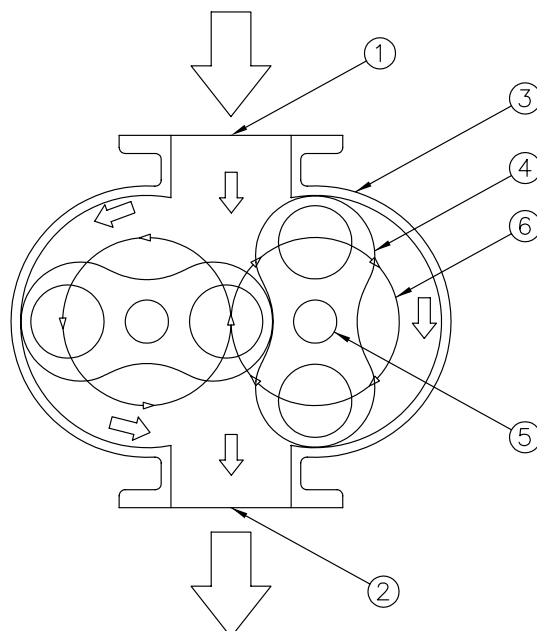
After the gas which flows into a suction line is shut tightly in space between casing and rotor, the gas flow is formed in space by rotation by rotors and discharge to the exhausted line, this gas is discharged to atmosphere by sub vacuum pump(base vacuum pump).

This booster pump is lubricating oil free because between rotor and rotor, between rotor and casing that rotate with a little gap. It can make the evacuation mach clearly.

Even though this rotor can make high-speed rotation(max.3500rpm) that have not much friction loss at casing to rotor, so that is very semipermanent and economic.

Specially the rotor is made of the aluminum alloy that is high strength and high purity, so that has a surface preparation process in order to have a resistance of the causticity of the surface and improving the hardness of the rotor much more.

Mechanical seal uses the carbon and the solid which are a special material so that have better resistant to abrasion and chemical reaction.



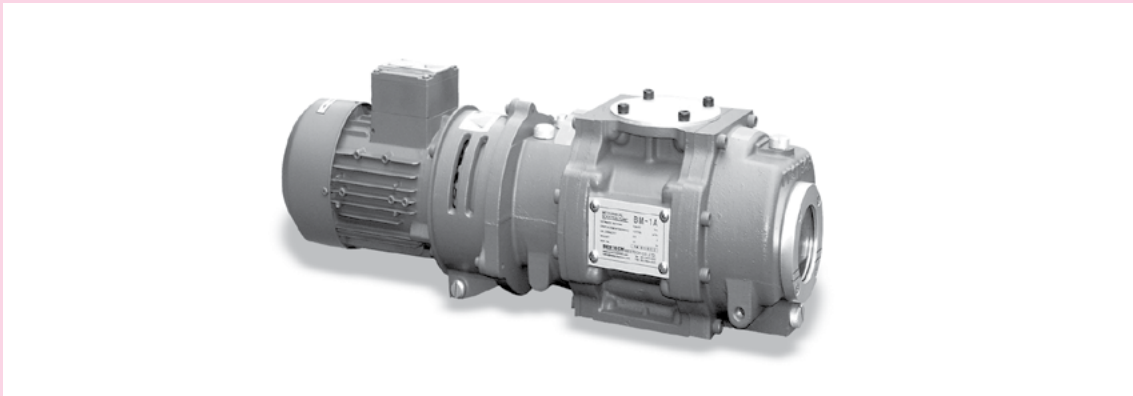
1. SUCTION PORT
2. EXHAUST PORT
3. PUMP CYLINDER
4. ROTOR
5. SHAFT
6. TIMING GEAR

VACUUM PUMP

BM1A, B1A

BOOSTER PUMPS

사양 Specification



BM1A, B1A

Specification

ITEM	MODEL	BM1A	B1A
Displacement Speed(유효배기속도) m ³ /hr	50Hz	106	
	60Hz	127	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	9.3×10 ³ (70)
	60Hz		7.3×10 ³ (55)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	8.0×10 ³ (60)
	60Hz		6.7×10 ³ (50)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		0.4(2P)	
Oil Volume Required(윤활유량) ℓ		0.4	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	Air Cooling(공랭)	
	Pressure(Mpa)		
Suction Port(흡입구) KSB1540		VG50	
Exhaust Port(배기구) KSB1540		VF50	
Dimension(외형치수) (L×W×H)		607,3×219×198	
Weight(제품무게) (Kg)		23	22
Assistance(base) Pump (보조펌프)		400~1,000 ℓ/min	

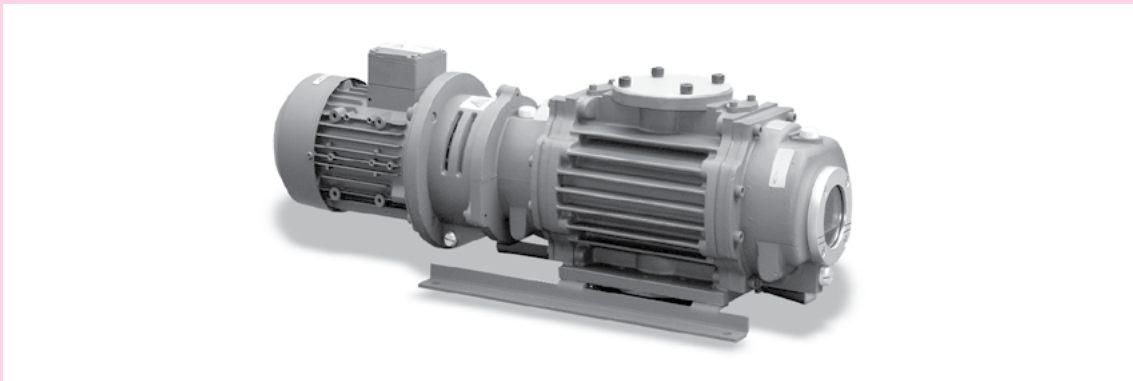
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr) at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM3B, B3B

BOOSTER PUMPS

사양 Specification



BM3B, B3B

Specification

ITEM	MODEL	BM3B	B3B
Displacement Speed(유효배기속도) m ³ /hr	50Hz	212	
	60Hz	254	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	9.3×10 ³ (70)
	60Hz		7.3×10 ³ (55)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	8.0×10 ³ (60)
	60Hz		6.7×10 ³ (50)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		0.75(2P)	
Oil Volume Required(윤활유량) ℓ		0.4	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	Air Cooling(공랭)	
	Pressure(Mpa)		
Suction Port(흡입구) KSB1540		VG65	
Exhaust Port(배기구) KSB1540		VF65	
Dimension(외형치수) (L×W×H)		762.8×235×236	
Weight(제품무게) (Kg)		36	35
Assistance(base) Pump (보조펌프)		800~2,000 ℓ/min	

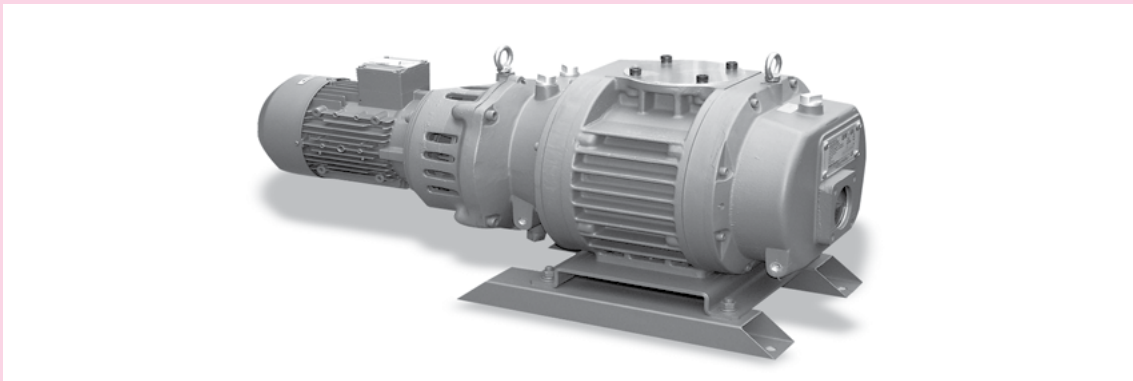
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM6A, B6A

BOOSTER PUMPS

사양 Specification



BM6A, B6A

Specification

ITEM	MODEL	BM6A	B6A
Displacement Speed(유효배기속도) m ³ /hr	50Hz	513	
	60Hz	616	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	1.3×10 ³ (10)
	60Hz		1.1×10 ³ (8)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	7.3×10 ³ (55)
	60Hz		6.7×10 ³ (45)
Ultimate Pressure(도달압력) Pa(Torr)	6.75×10 ⁻² (5×10 ⁻⁴)		
Motor(사용동력) Kw(Pole)	2.2(2P)		
Oil Volume Required(윤활유량) ℓ	1.6		
Cooling Water(냉각수)	Flow Rate(ℓ/min)	3	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540	VG80		
Exhaust Port(배기구) KSB1540	VF80		
Dimension(외형치수) (L×W×H)	850×359×413		
Weight(제품무게) (Kg)	91		86
Assistance(base) Pump (보조펌프)	1,500–4,000 ℓ/min		

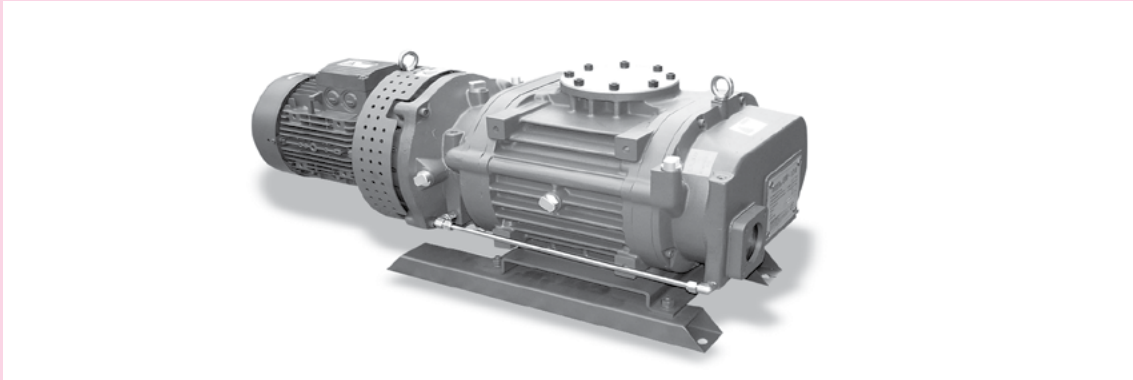
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함.
(Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM12A-V, B12A-V

BOOSTER PUMPS

사양 Specification



BM12A-V, B12A-V

Specification

ITEM	MODEL	BM12A-V	B12A-V
Displacement Speed(유호배기속도) m ³ /hr	50Hz	1,137	
	60Hz	1,365	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	1.3×10 ³ (10)
	60Hz		1.1×10 ³ (8)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	7.3×10 ³ (55)
	60Hz		6.0×10 ³ (45)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		3.75(2P)	
Oil Volume Required(윤활유량) ℓ		2	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	4	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG100	
Exhaust Port(배기구) KSB1540		VF80	
Dimension(외형치수) (L×W×H)		994×431×414	
Weight(제품무게) (Kg)		130	120
Assistance(base) Pump (보조펌프)		3,000-9,000 ℓ/min	

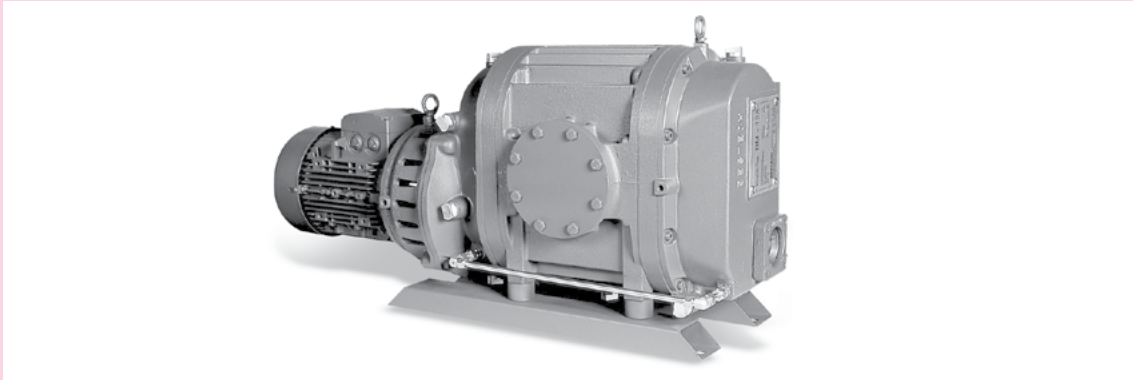
- 13Pa(1.0×10⁻¹Torr)에서 유호배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM12A-H, B12A-H

BOOSTER PUMPS

사양 Specification



BM12A-H, B12A-H

Specification

ITEM	MODEL	BM12A-H	B12A-H
Displacement Speed(유효배기속도) m ³ /hr	50Hz	1,137	
	60Hz	1,365	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	1.3×10 ³ (10)
	60Hz		1.1×10 ³ (8)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	7.3×10 ³ (55)
	60Hz		6.0×10 ³ (45)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		3.75(2P)	
Oil Volume Required(윤활유량) ℓ		1	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	4	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG100	
Exhaust Port(배기구) KSB1540		VF80	
Dimension(외형치수) (L×W×H)		994×310×511.5	
Weight(제품무게) (Kg)		130	120
Assistance(base) Pump (보조펌프)		3,000–9,000 ℓ/min	

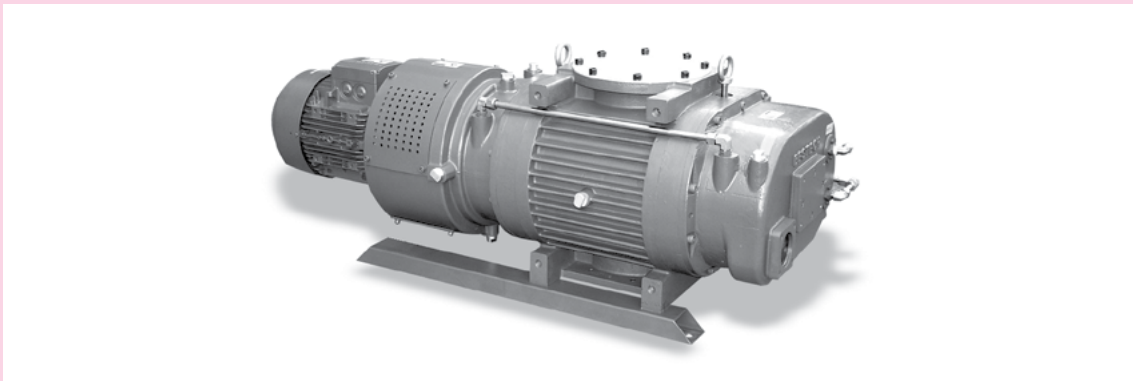
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM24A-V, B24A-V

BOOSTER PUMPS

사양 Specification



BM24A-V, B24A-V

Specification

ITEM	MODEL	BM24A-V	B24A-V
Displacement Speed(유효배기속도) m ³ /hr	50Hz	2,340	
	60Hz	2,800	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	5.6×10 ³ (42)
	60Hz		4.7×10 ³ (35)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		7.5(2P)	
Oil Volume Required(윤활유량) ℓ		4.8	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	5	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG200	
Exhaust Port(배기구) KSB1540		VF200	
Dimension(외형치수) (L×W×H)		1,357×601.5×506	
Weight(제품무게) (Kg)		280	260
Assistance(base) Pump (보조펌프)		5,000-15,000 ℓ/min	

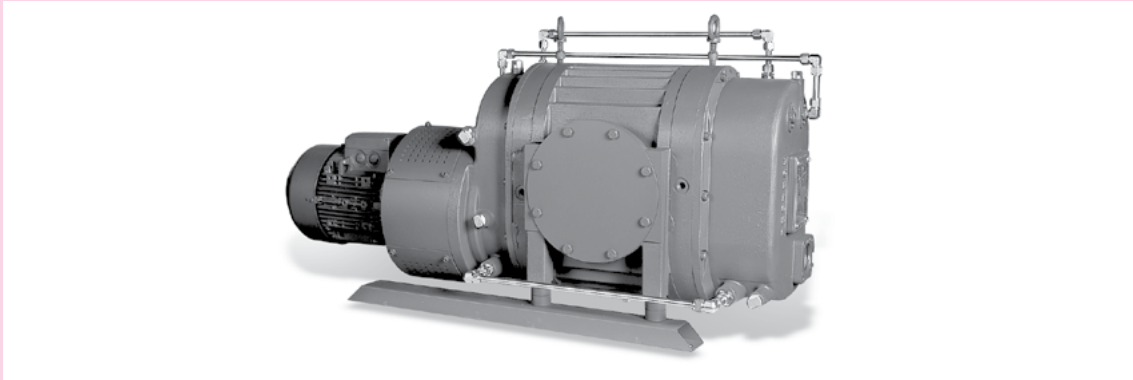
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BM24A-H, B24A-H

BOOSTER PUMPS

사양 Specification



BM24A-H, B24A-H

Specification

ITEM	MODEL	BM24A-H	B24A-H
Displacement Speed(유효배기속도) m ³ /hr	50Hz	2,340	
	60Hz	2,800	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	5.6×10 ³ (42)
	60Hz		4.7×10 ³ (35)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		7.5(2P)	
Oil Volume Required(윤활유량) ℓ		3	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	5	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG200	
Exhaust Port(배기구) KSB1540		VF200	
Dimension(외형치수) (L×W×H)		1,357×460×608	
Weight(제품무게) (Kg)		280	260
Assistance(base) Pump (보조펌프)		5,000-15,000 ℓ/min	

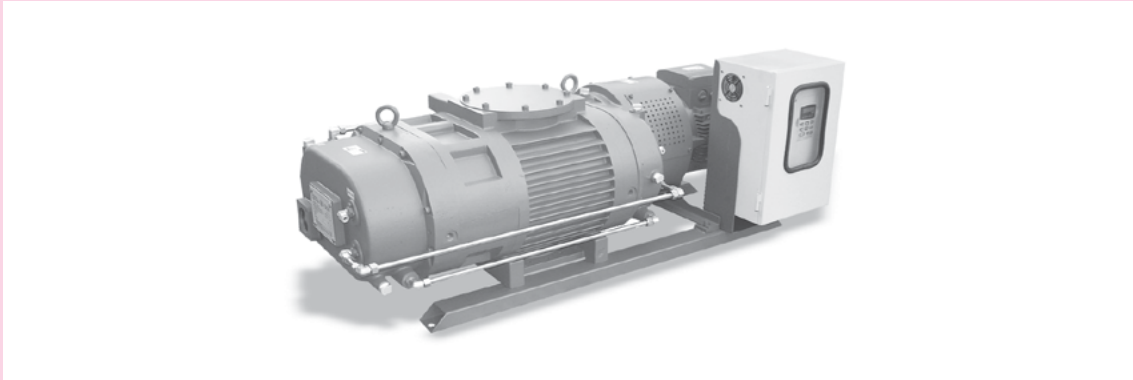
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BI36A-V, B36A-V

BOOSTER PUMPS

사양 Specification



BI36A-V, B36A-V

Specification

ITEM	MODEL	BI36A-V	B36A-V
Displacement Speed(유효배기속도) m ³ /hr	50Hz	4,130	3441
	60Hz	4,130	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	5.6×10 ³ (42)
	60Hz		4.7×10 ³ (35)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		11(2P)	
Oil Volume Required(윤활유량) ℓ		4.8	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	5	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG200	
Exhaust Port(배기구) KSB1540		VF200	
Dimension(외형치수) (L×W×H)		1,357×601.5×506	
Weight(제품무게) (Kg)		450	430
Assistance(base) Pump (보조펌프)		8,000~25,000 ℓ/min	

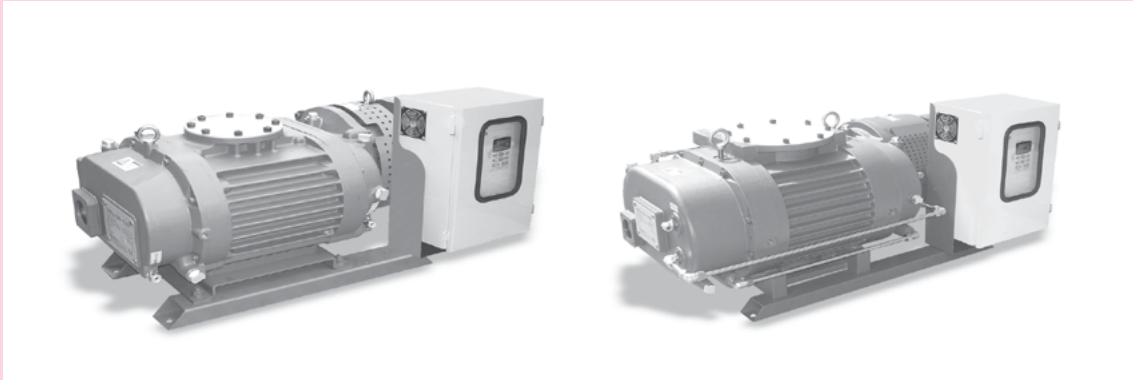
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BI12A, BI24A

BOOSTER PUMPS

사양 Specification



BI12A, BI24A

Specification

ITEM	MODEL	BI12A	BI24A
Displacement Speed(유효배기속도) m ³ /hr	50Hz	1,365	2,800
	60Hz		
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1×10 ⁵ (760)	
	60Hz		
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1×10 ⁵ (760)	
	60Hz		
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력) Kw(Pole)		3.75(2P)	7.5(2P)
Oil Volume Required(윤활유량) ℓ		2	4.8
Cooling Water(냉각수)	Flow Rate(ℓ/min)	4	5
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG100	VG200
Exhaust Port(배기구) KSB1540		VF80	VF200
Dimension(외형치수) (L×W×H)		994×431×414	1,357×601.5×506
Weight(제품무게) (Kg)		138,5	289
Assistance(base) Pump (보조펌프)		3,000–9,000 ℓ/min	5,000–15,000 ℓ/min

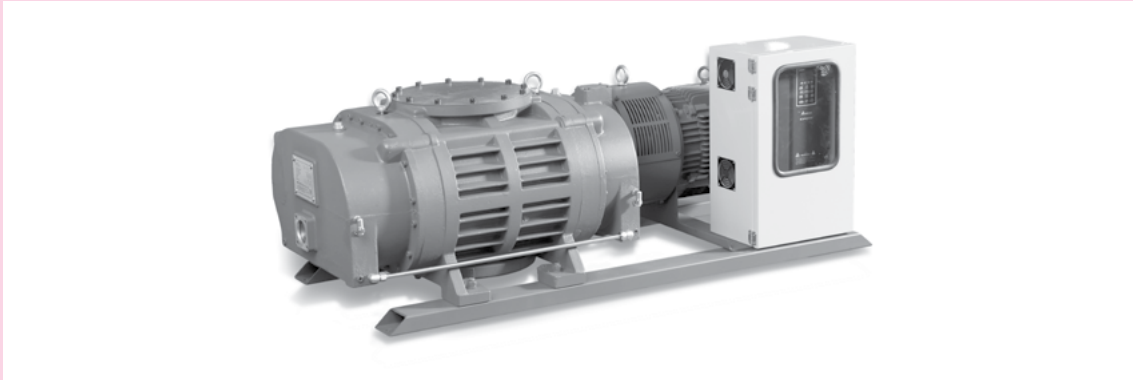
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BI55A, B55A

LARGE BOOSTER PUMPS

사양 Specification



BI55A, B55A

Specification

ITEM	MODEL	BI55A	B55A
Displacement Speed(유효배기속도) m ³ /hr	50Hz	5,600	4,600
	60Hz	5,600	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	5.3×10 ³ (40)
	60Hz		4.5×10 ³ (34)
Allowable drive Pressure(기동가능압력) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력)Kw(Pole)		15(2P)	
Oil Volume Required(윤활유량) ℓ		7	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	10	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG300	
Exhaust Port(배기구) KSB1540		VF300	
Dimension(외형치수) (L×W×H)		1,694×700×626	1,694×700×583
Weight(제품무게) (Kg)		528	508
Assistance(base) Pump (보조펌프)		12,000 – 25,000 ℓ/min	

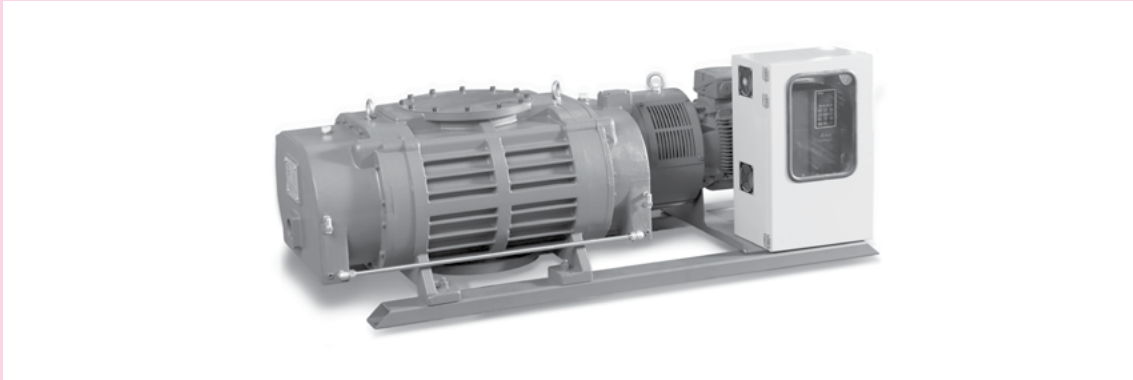
- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

BI70A, B70A

LARGE BOOSTER PUMPS

사양 Specification



BI70A, B70A

Specification

ITEM	MODEL	BI70A	B70A
Displacement Speed(유효배기속도) m ³ /hr	50Hz	7,000	5,800
	60Hz	7,000	
Max. Suction Pressure(최대흡입압력) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Max. perm. Pressure Differ.(최대허용압력차) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	5.3×10 ³ (40)
	60Hz		4.5×10 ³ (34)
Allowable drive Pressure(기동가능압력) Pa(Torr)	50Hz	1.0×10 ⁵ (760)	6.7×10 ² (5)
	60Hz		5.3×10 ² (4)
Ultimate Pressure(도달압력) Pa(Torr)		6.75×10 ⁻² (5×10 ⁻⁴)	
Motor(사용동력)Kw(Pole)		18.5(2P)	
Oil Volume Required(윤활유량) ℓ		7	
Cooling Water(냉각수)	Flow Rate(ℓ/min)	10	
	Pressure(Mpa)	0.2	
Suction Port(흡입구) KSB1540		VG300	
Exhaust Port(배기구) KSB1540		VF300	
Dimension(외형치수) (L×W×H)		1,771×700×626	1,771×700×583
Weight(제품무게) (Kg)		560	540
Assistance(base) Pump (보조펌프)		12,000 – 25,000 ℓ/min	

- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

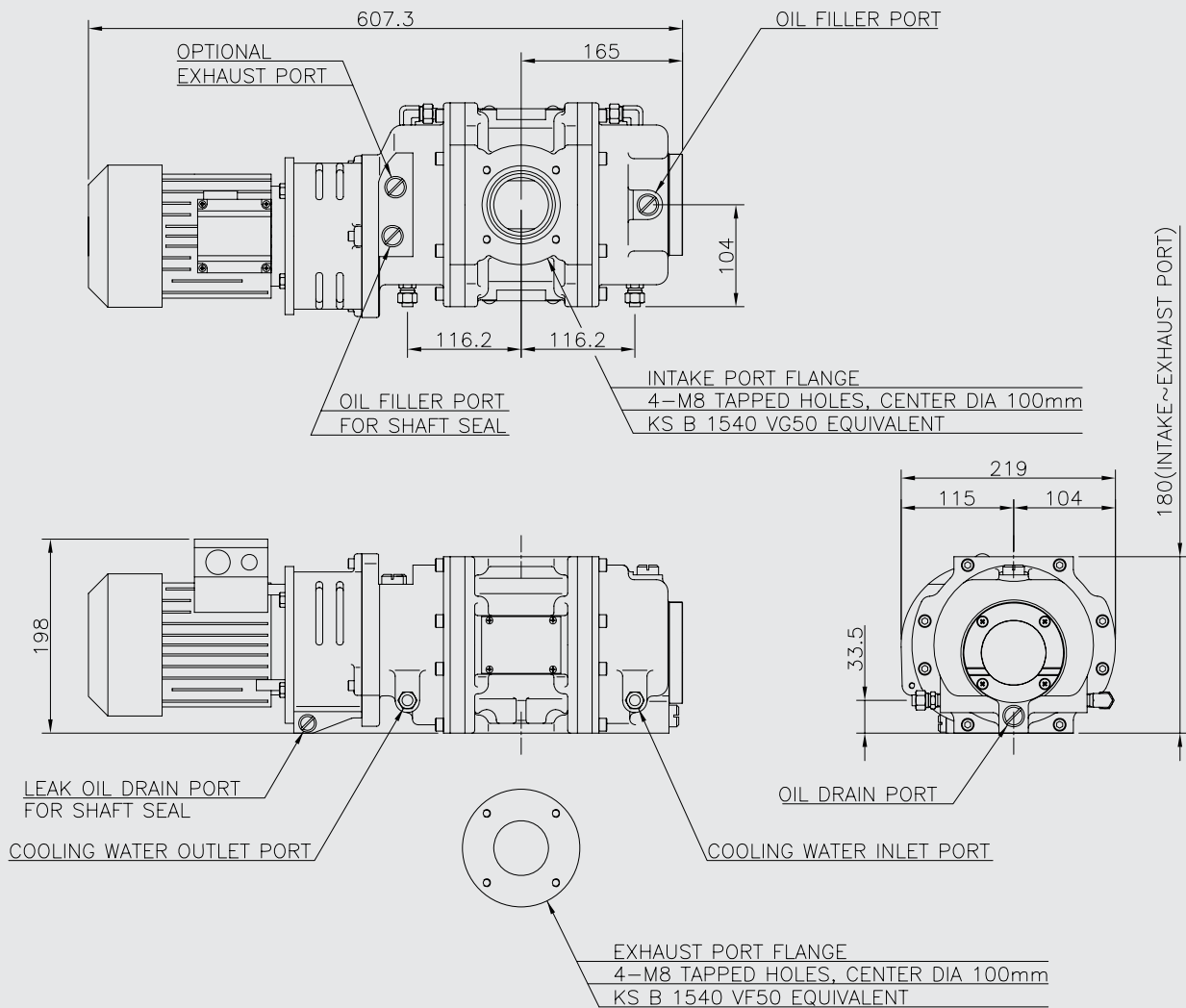
VACUUM PUMP

BM1A, B1A

BOOSTER PUMPS

외형치수 Outside dimension

BM1A, B1A



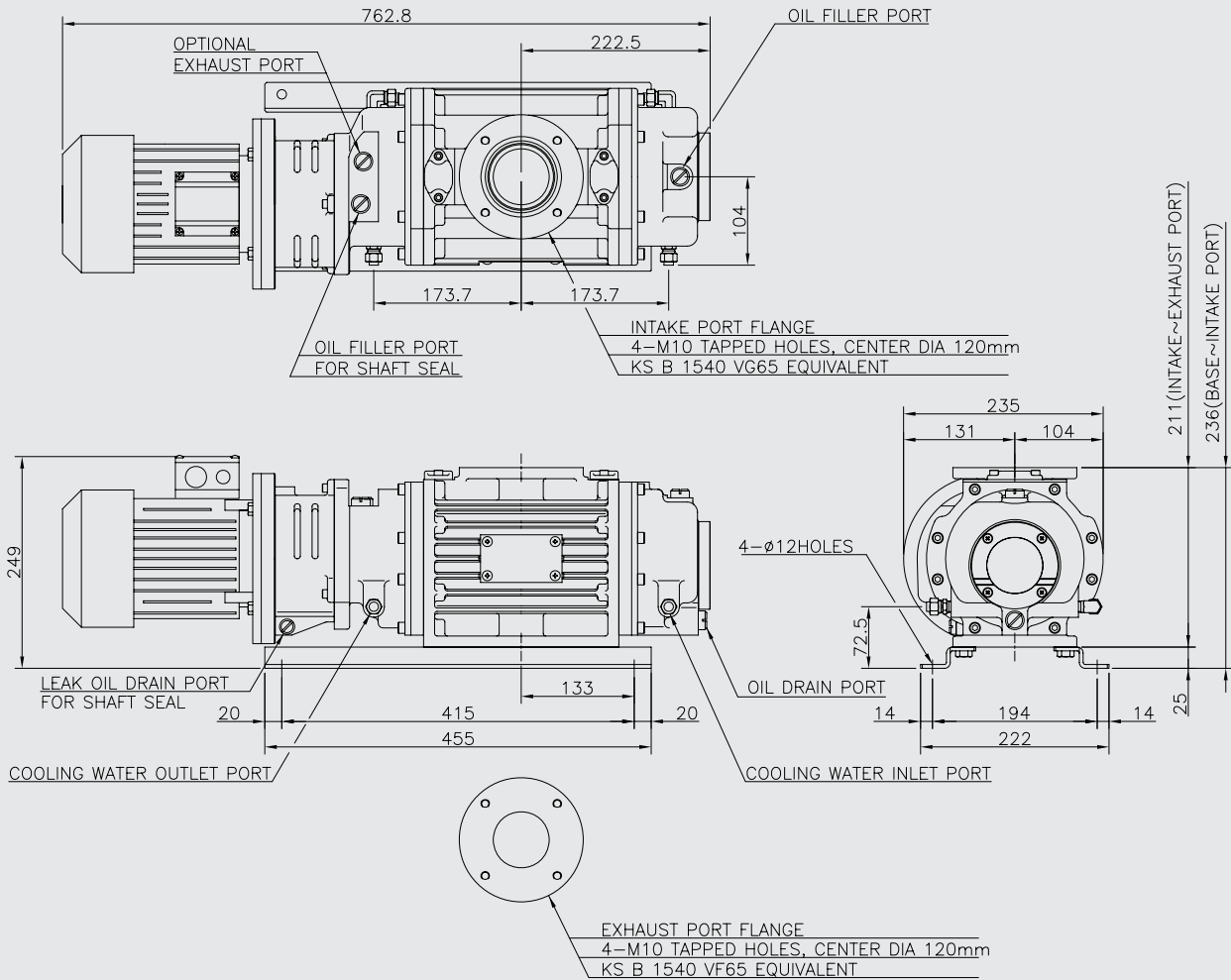
VACUUM PUMP

BM3B, B3B

BOOSTER PUMPS

외형치수 Outside dimension

BM3B, B3B



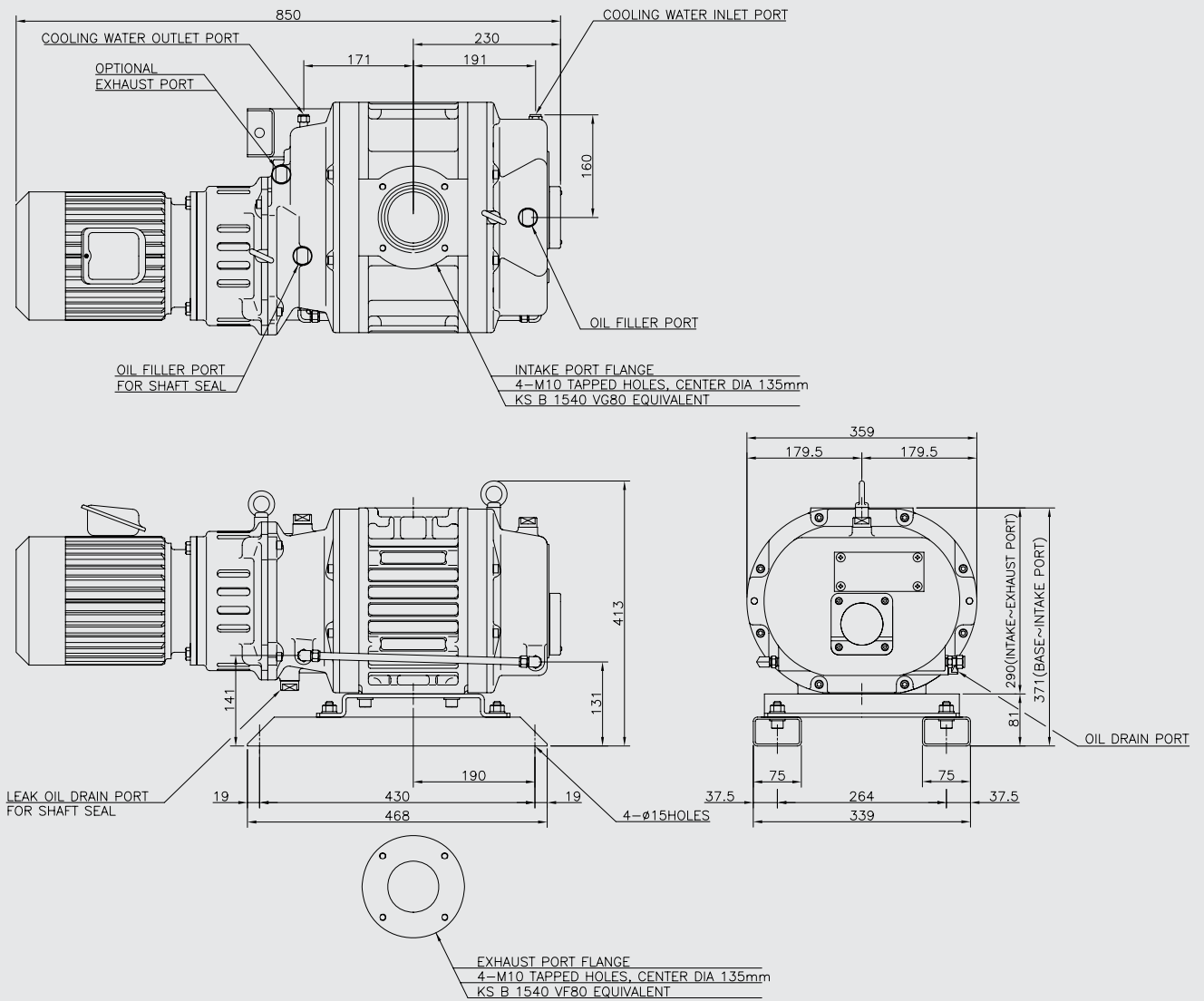
VACUUM PUMP

BM6A, B6A

BOOSTER PUMPS

외형치수 Outside dimension

BM6A, B6A



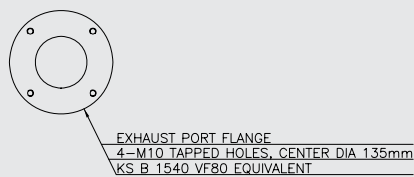
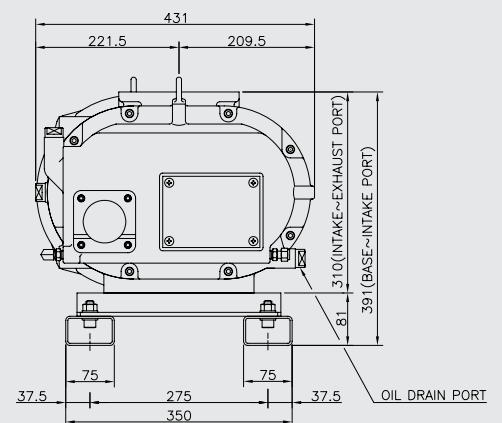
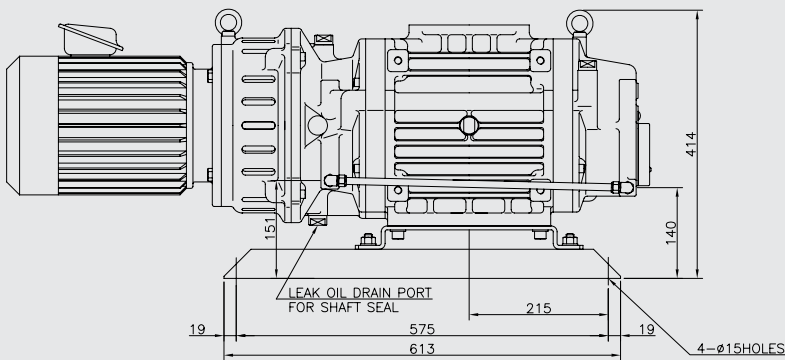
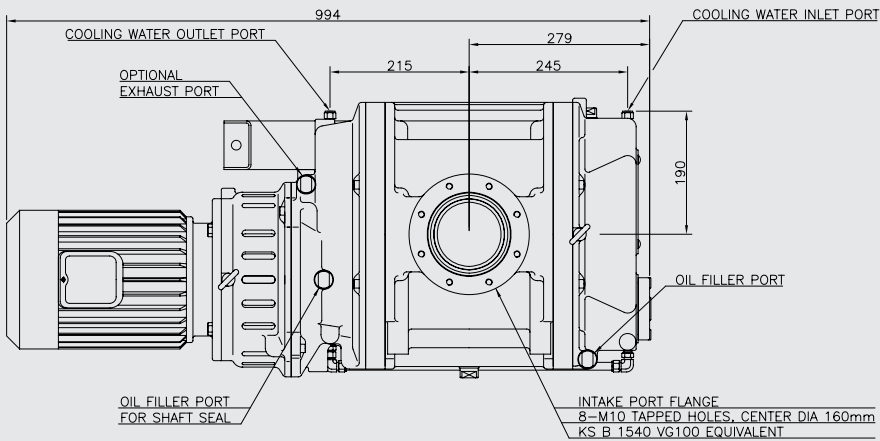
VACUUM PUMP

BM12A-V, B12A-V, BI12A

BOOSTER PUMPS

외형치수 Outside dimension

BM12A-V, B12A-V, BI12A



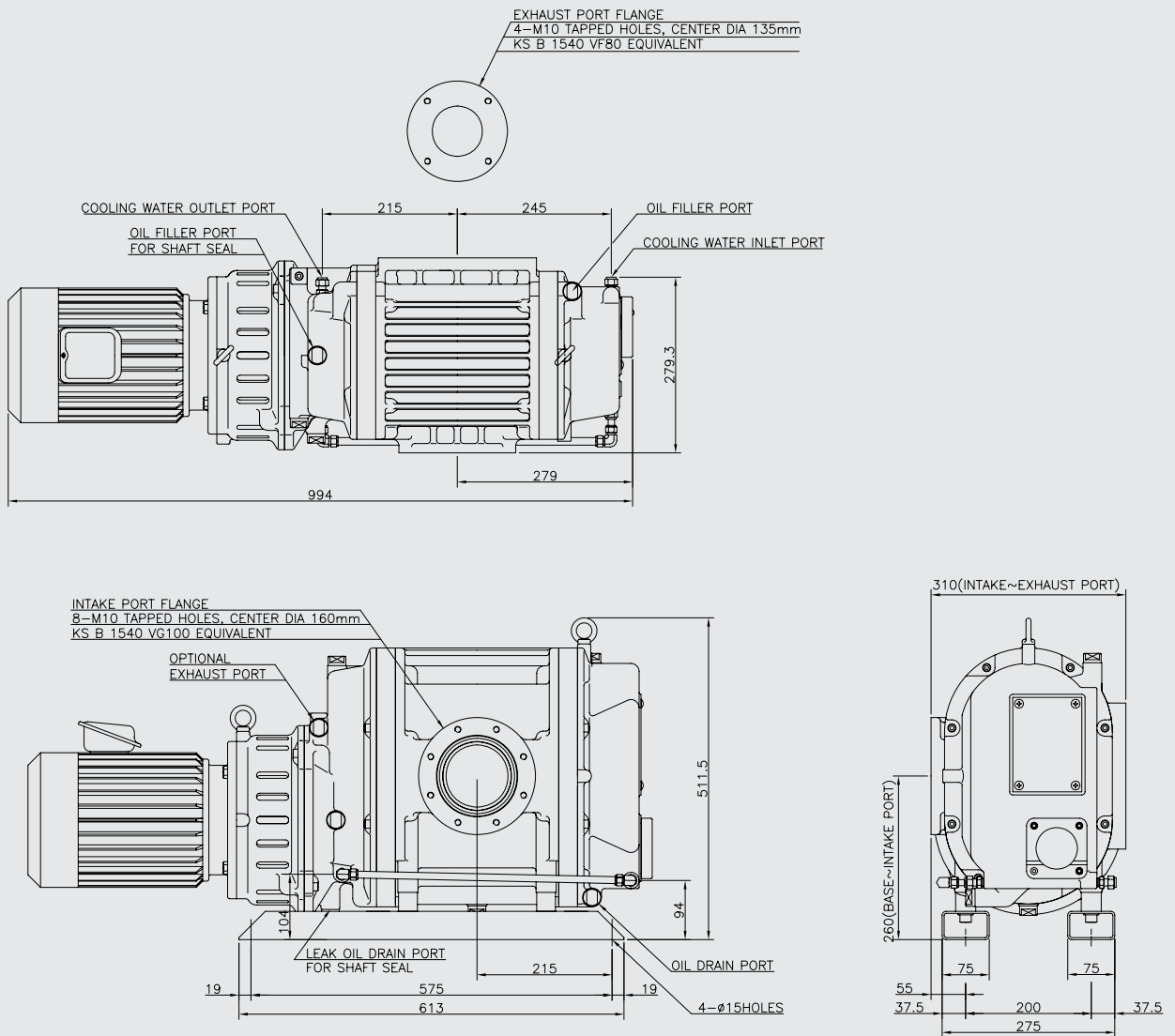
VACUUM PUMP

BOOSTER PUMPS

BM12A-H, B12A-H

외형치수 Outside dimension

BM12A-H, B12A-H



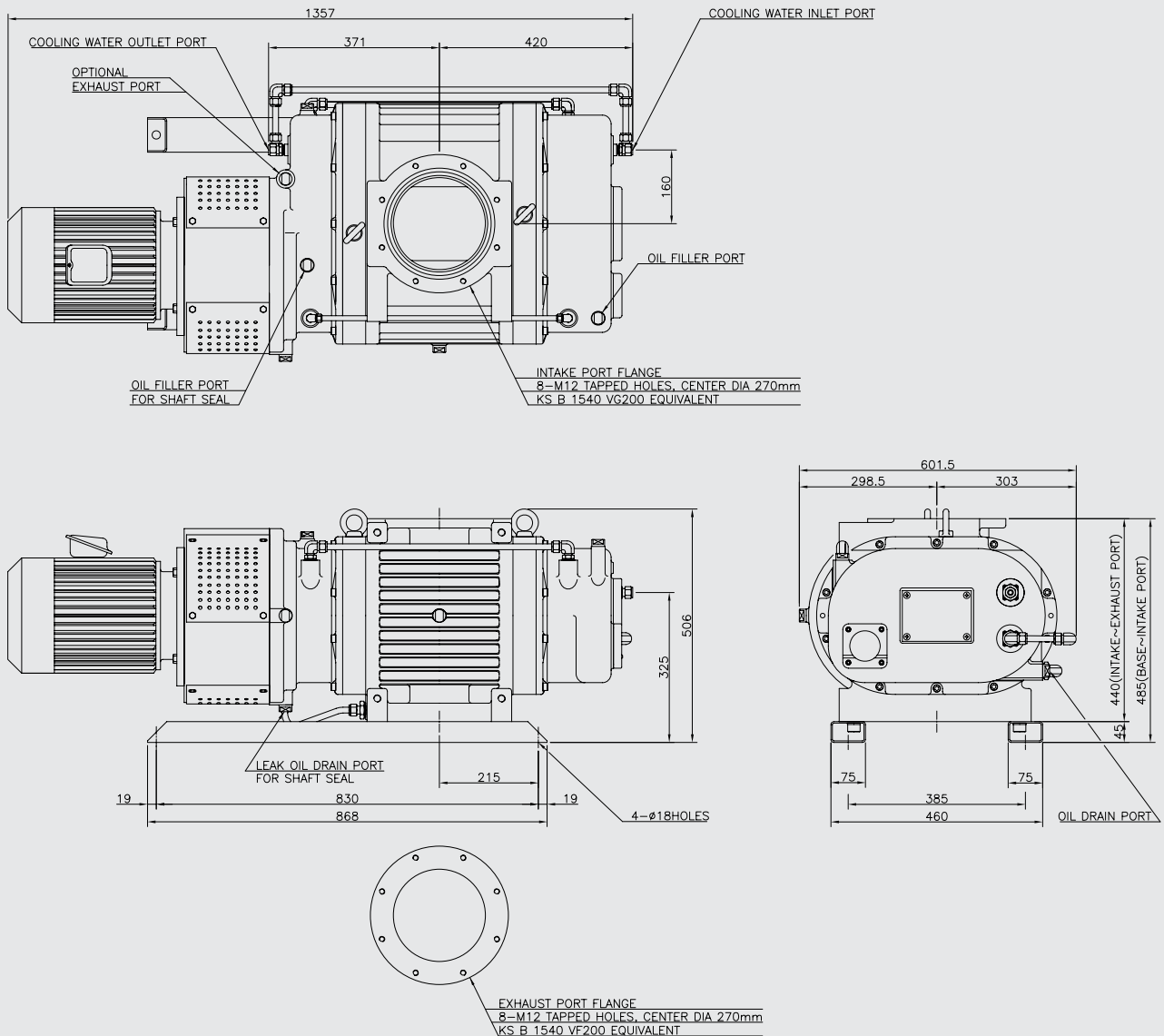
VACUUM PUMP

BM24A-V, B24A-V, BI24A

BOOSTER PUMPS

외형치수 Outside dimension

BM24A-V, B24A-V, BI24A



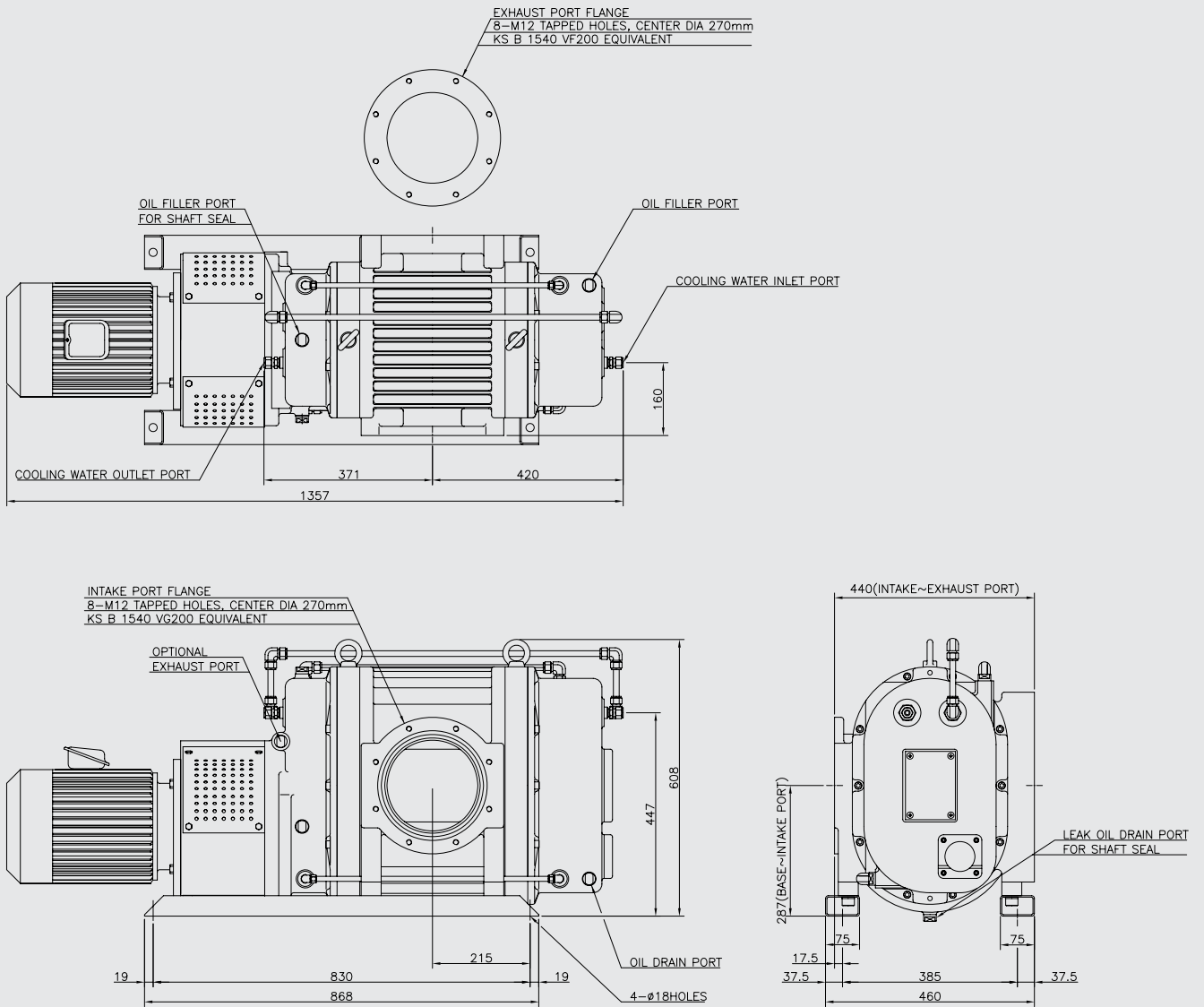
VACUUM PUMP

BM24A-H, B24A-H

BOOSTER PUMPS

외형치수 Outside dimension

BM24A-H, B24A-H



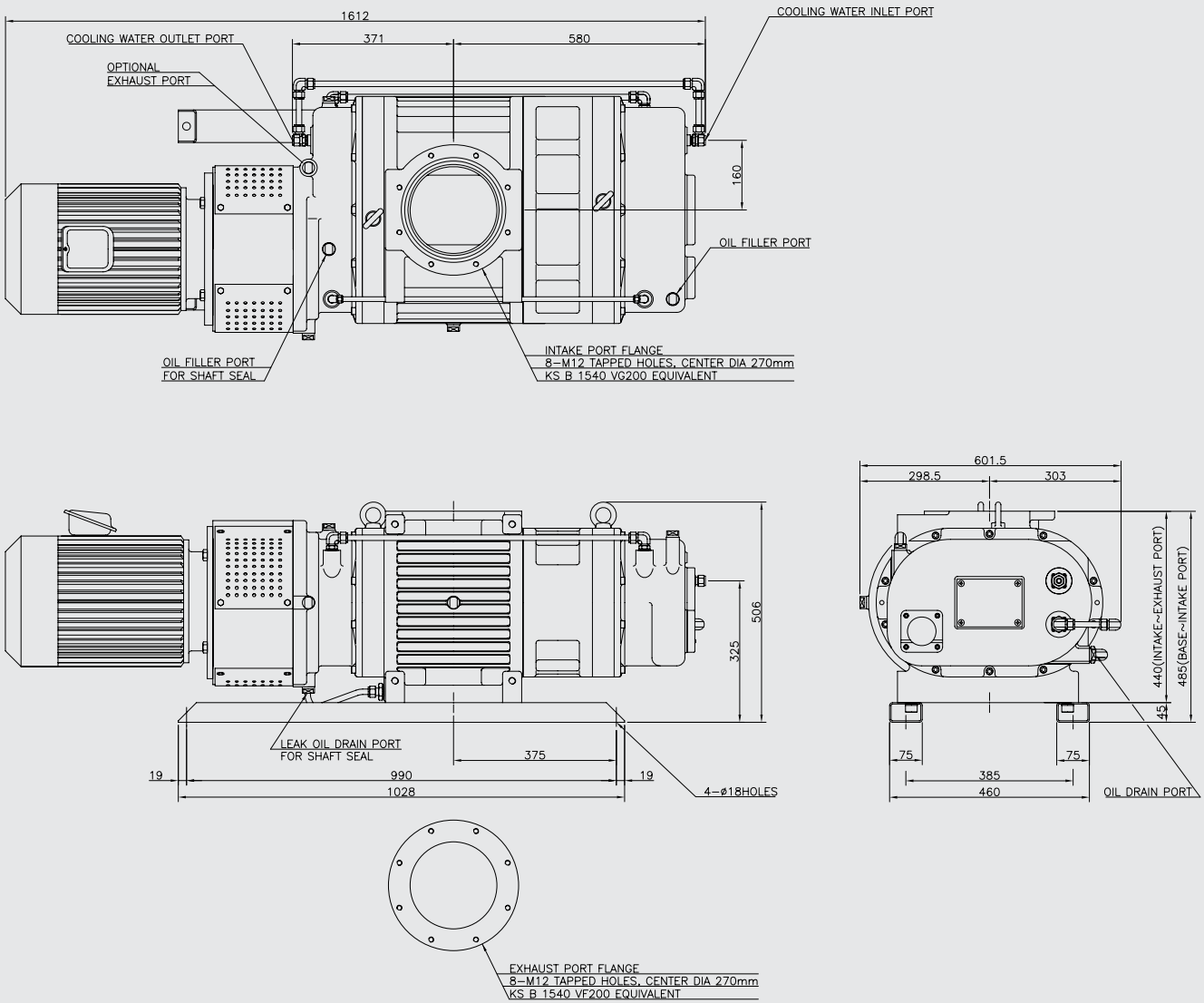
VACUUM PUMP

BI36A-V, B36A-V

BOOSTER PUMPS

외형치수 Outside dimension

BI36A-V, B36A-V



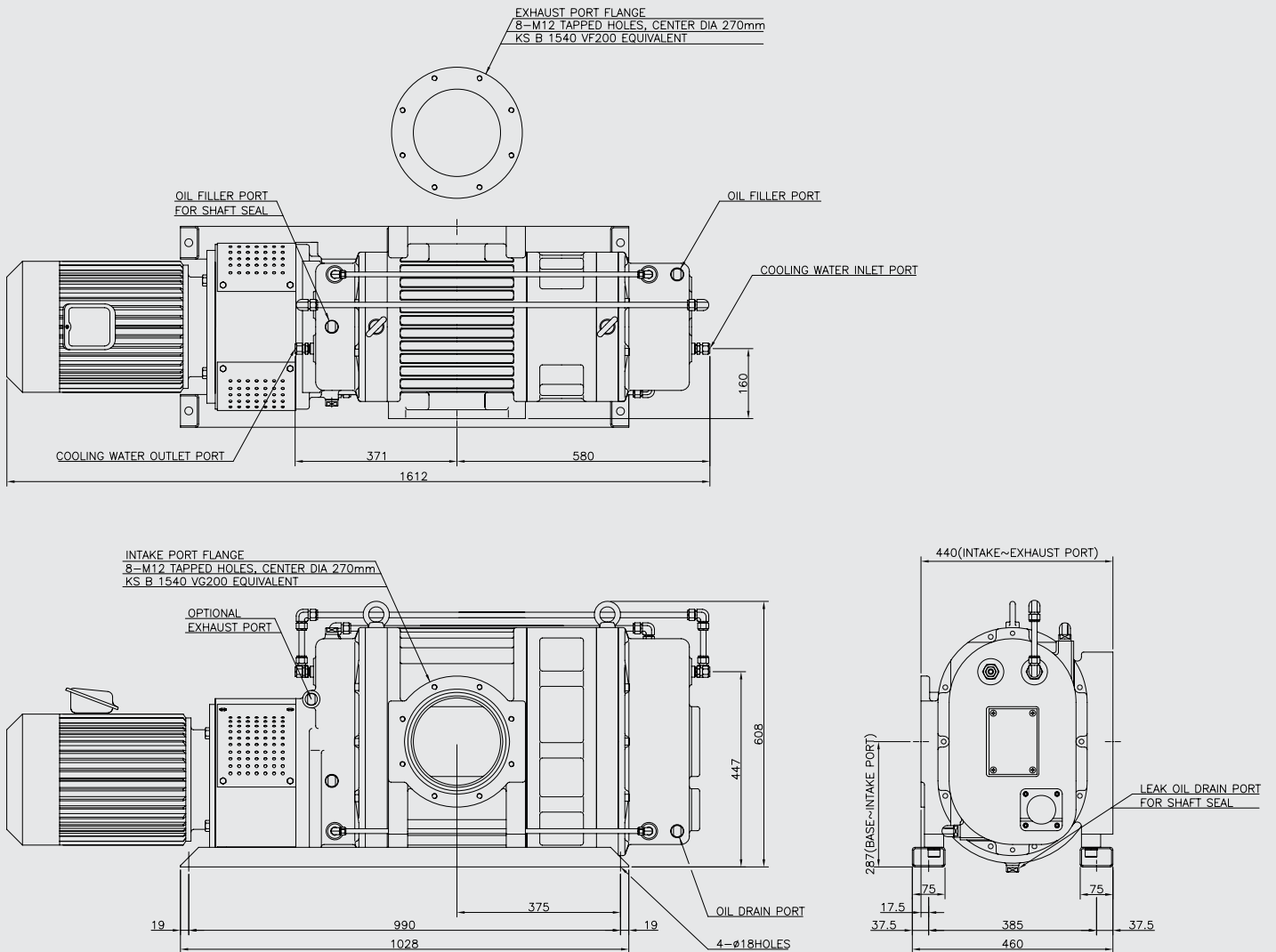
VACUUM PUMP

BI36A-H, B36A-H

BOOSTER PUMPS

외형치수 Outside dimension

BI36A-H, B36A-H



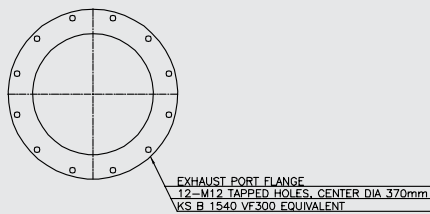
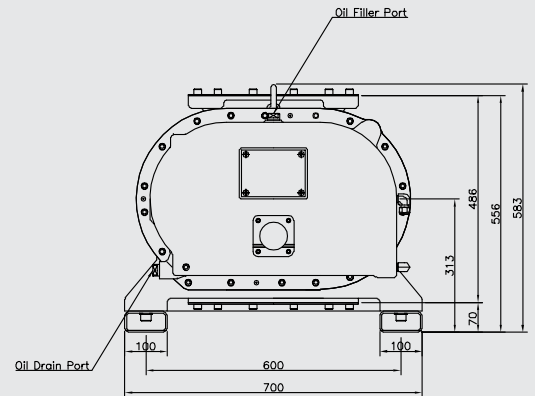
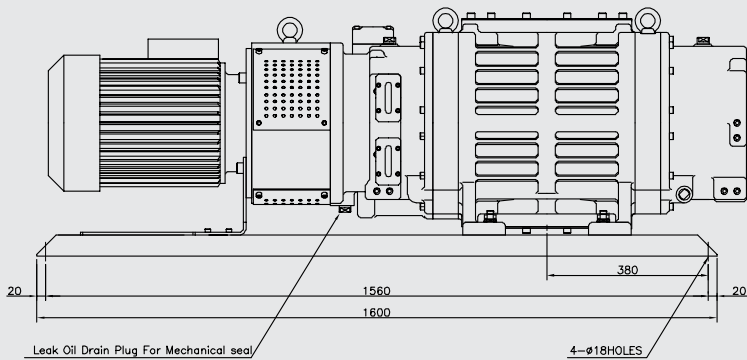
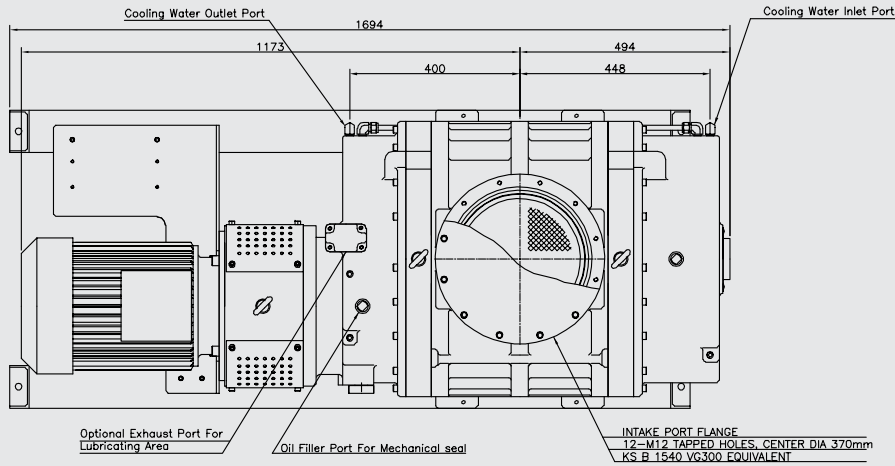
VACUUM PUMP

B55A

LARGE BOOSTER PUMPS

외형치수 Outside dimension

B55A



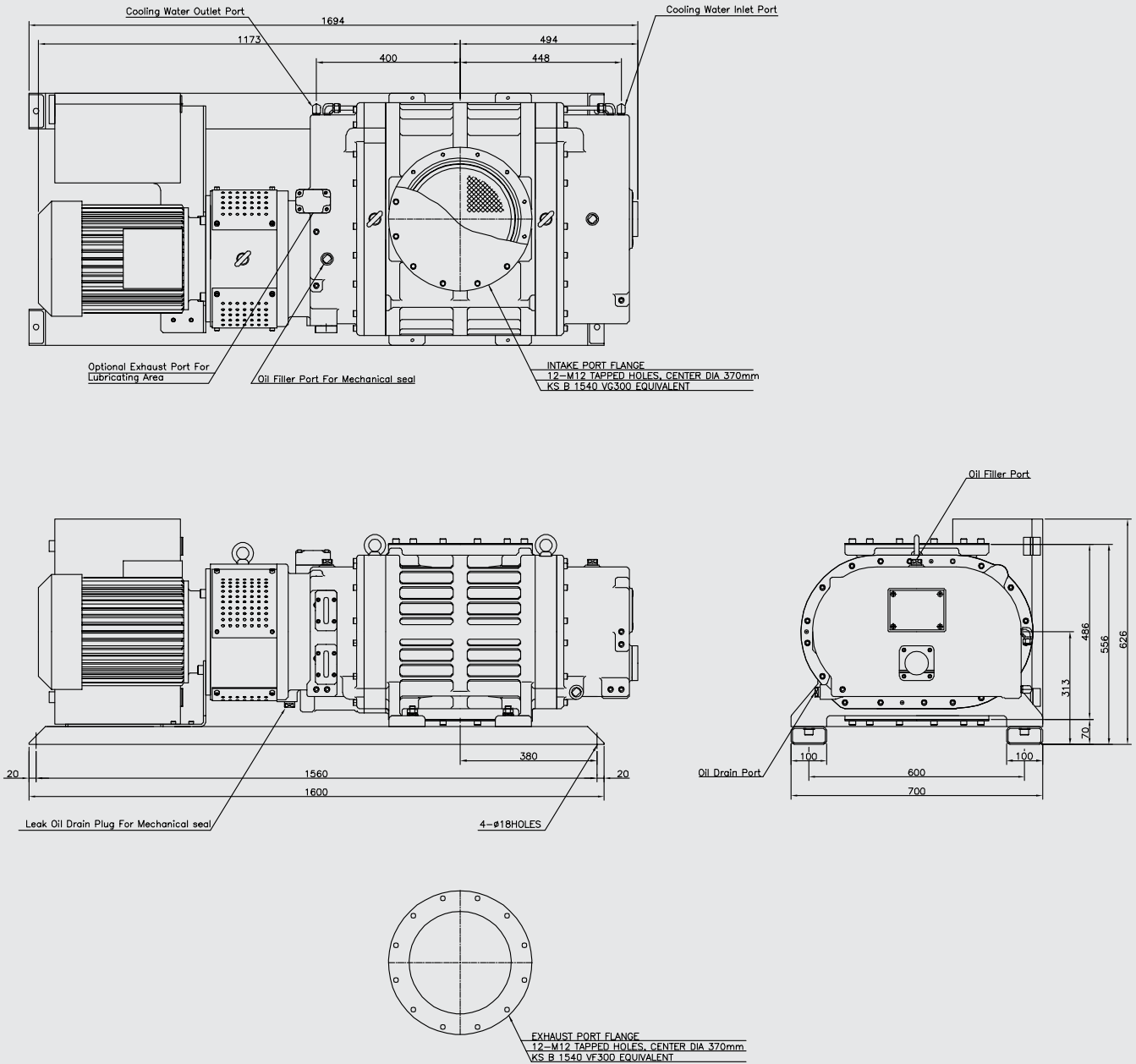
VACUUM PUMP

BI55A

LARGE BOOSTER PUMPS

외형치수 Outside dimension

BI55A



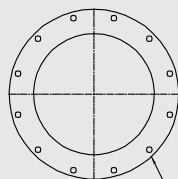
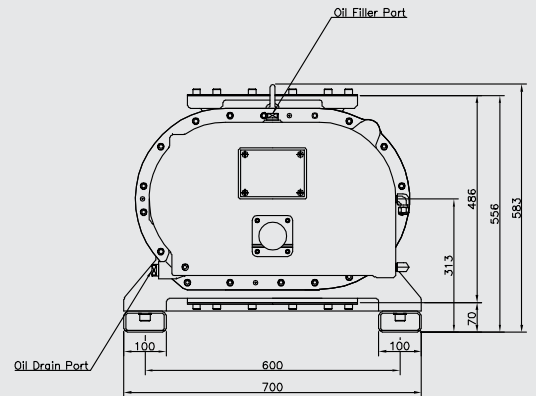
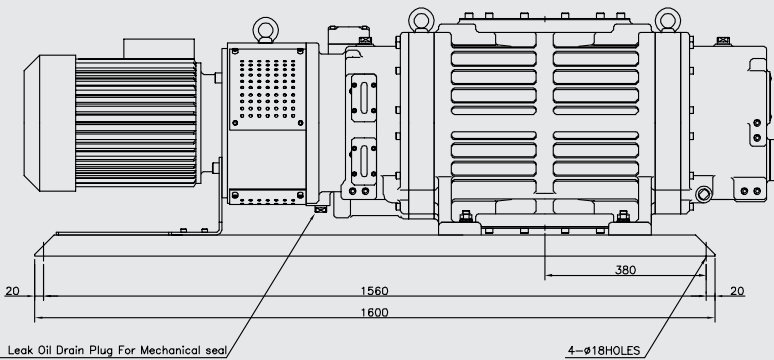
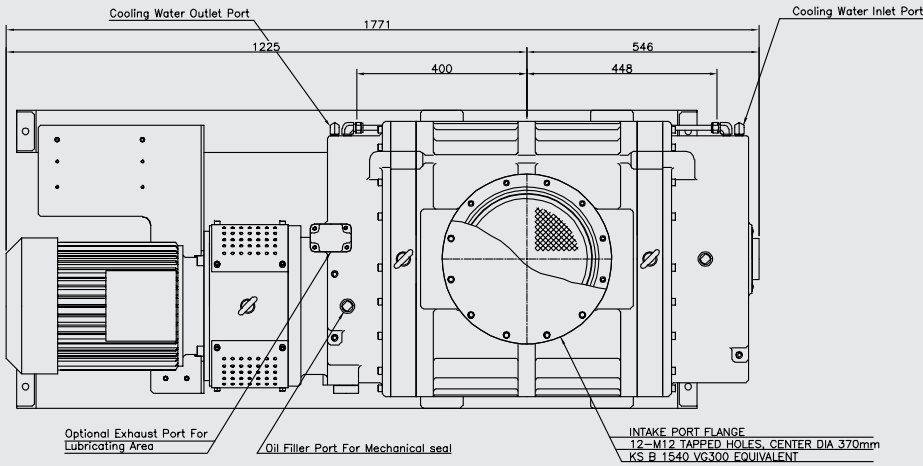
VACUUM PUMP

B70A

LARGE BOOSTER PUMPS

외형치수 Outside dimension

B70A



EXHAUST PORT FLANGE
12-M12 TAPPED HOLES, CENTER DIA. 370mm
KS B 1540 VF300 EQUIVALENT

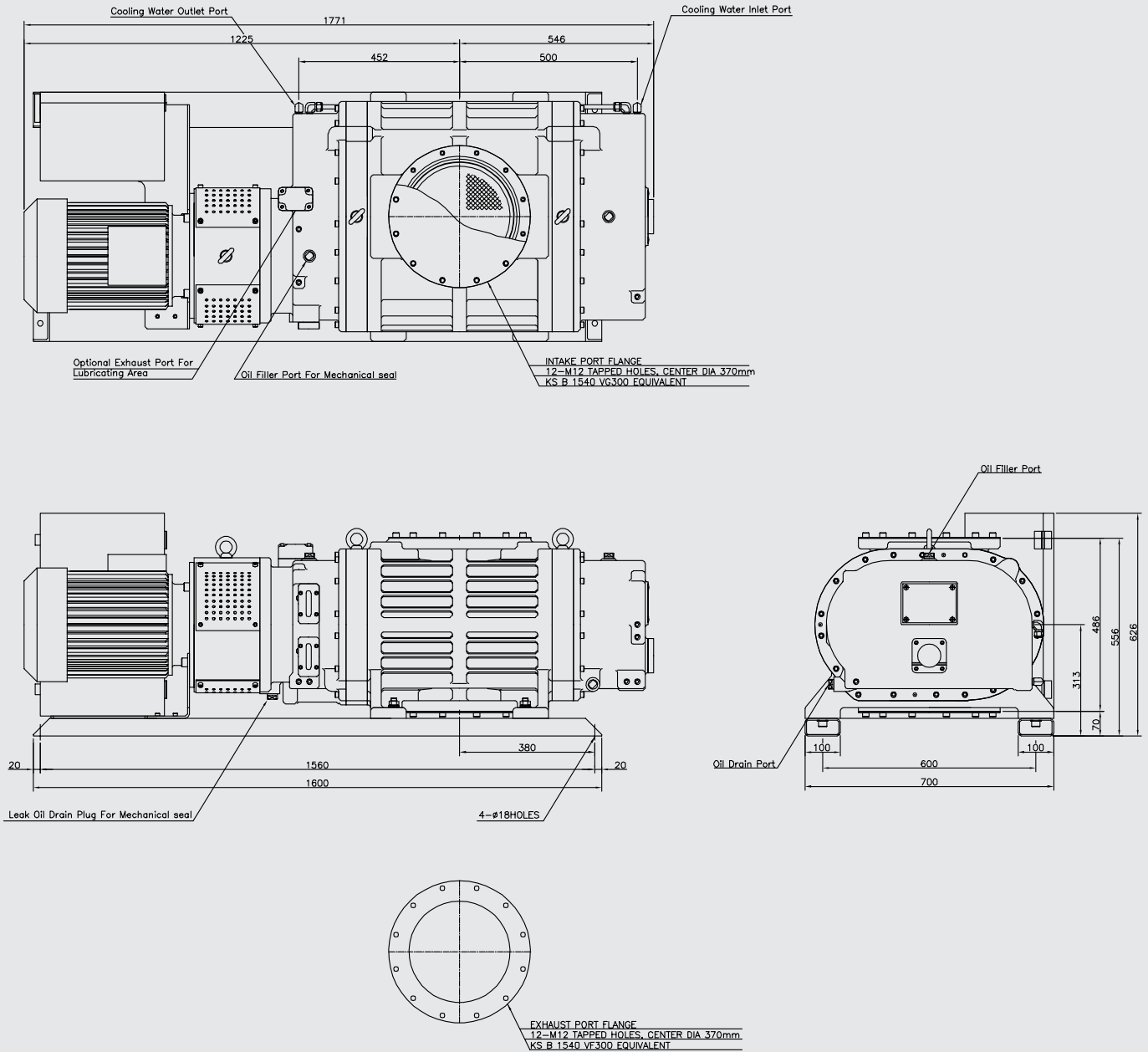
VACUUM PUMP

BI70A

LARGE BOOSTER PUMPS

외형치수 Outside dimension

BI70A

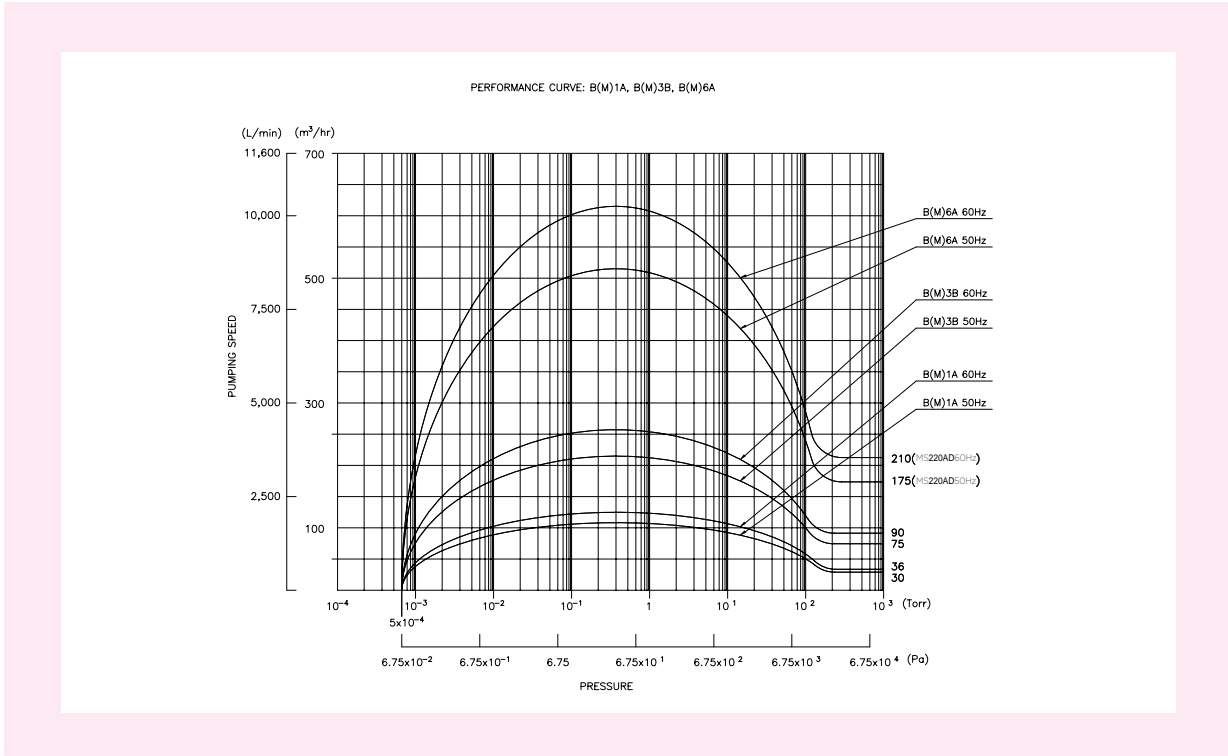


VACUUM PUMP

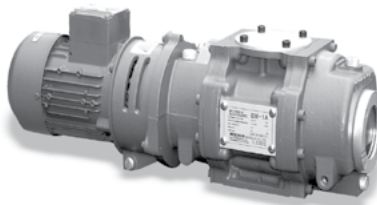
B(M), B SERIES

BOOSTER PUMPS

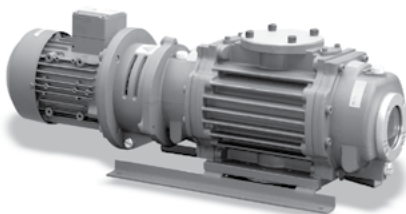
부스터펌프 배기속도곡선 Pumping speed curve



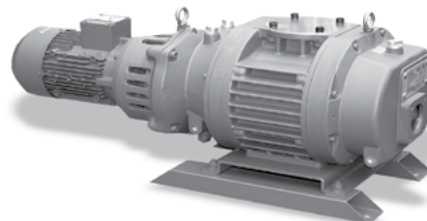
▶ BM1A



▶ BM3B



▶ BM6A

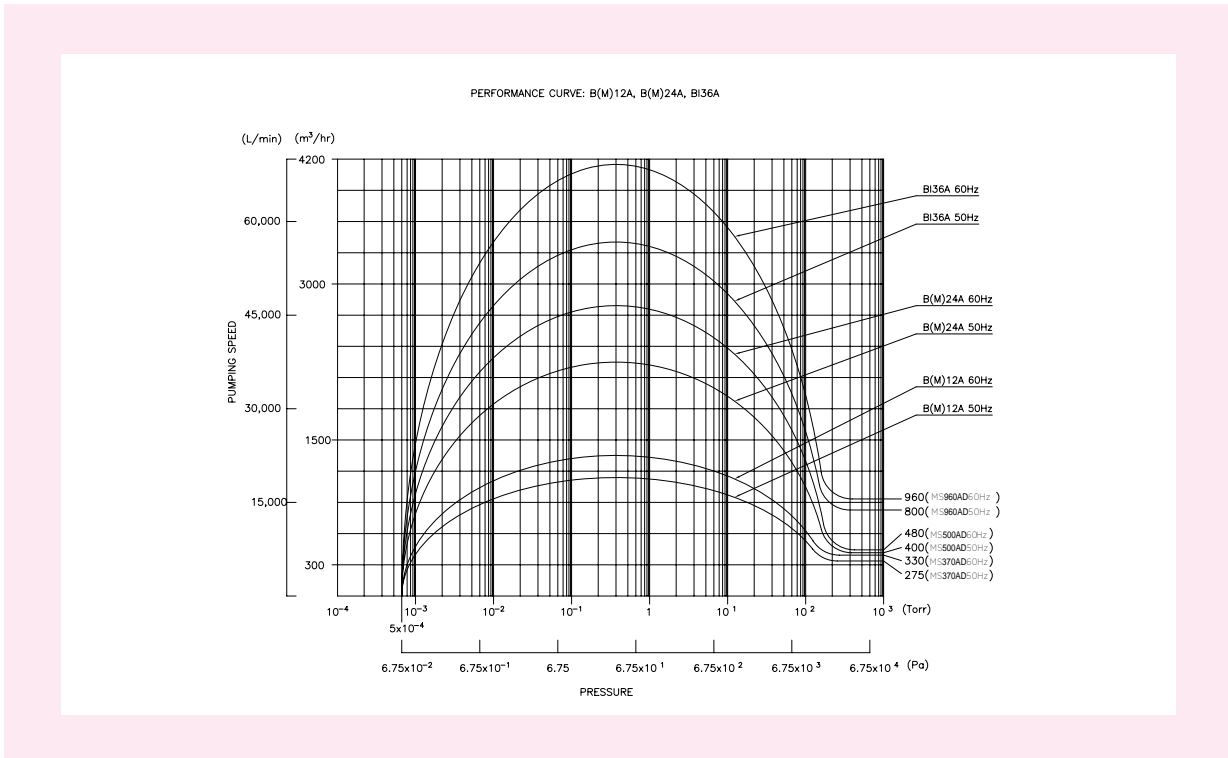


VACUUM PUMP

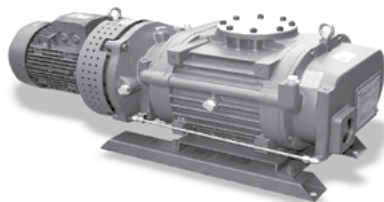
B(M), B SERIES

BOOSTER PUMPS

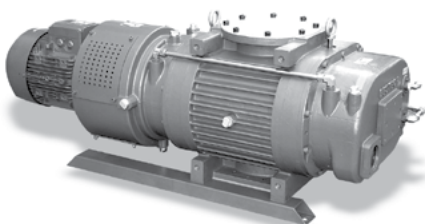
부스터펌프 배기속도곡선 Pumping speed curve



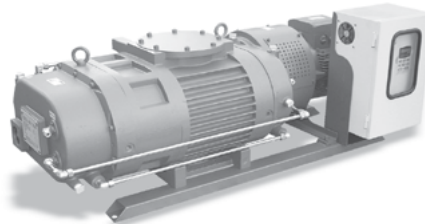
▶ BM12A



▶ BM24A



▶ BI36A

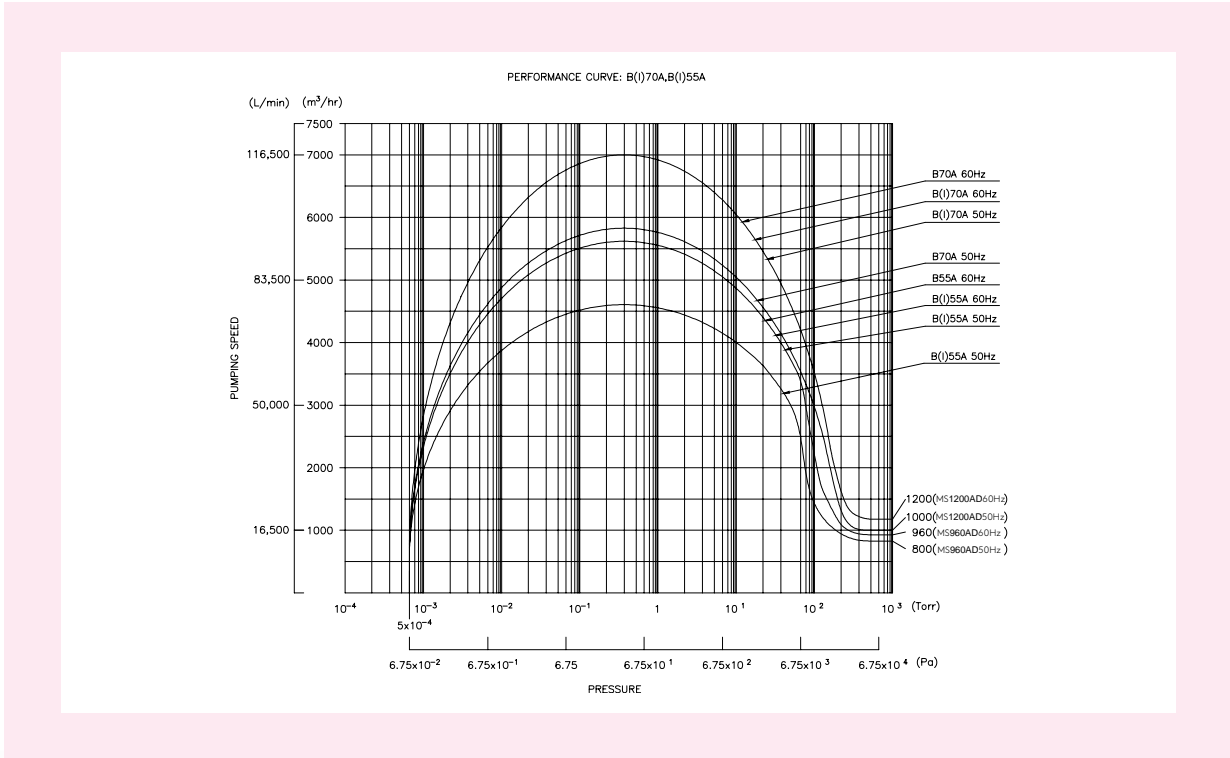


VACUUM PUMP

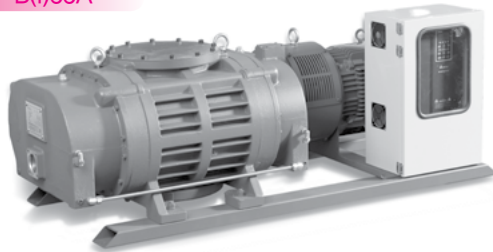
BI, B SERIES

LARGE BOOSTER PUMPS

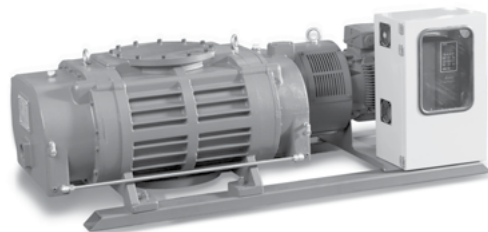
부스터펌프 배기속도곡선 Pumping speed curve



▶ B(I)55A



▶ B(I)70A



VACUUM PUMP

DRY PUMPS

SD, SES SERIES



▲ SD120



▲ SES700



▲ SES300

● DRY PUMPS

■ 펌프의 특징 & 장점 Advantage for vacuum pump ■

• 가스의 흐름을 고려한 펌프 구조

맞물려 회전하는 로터에 의한 배기가스 흐름은 항상 일정한 순방향으로 진행하도록 하여 배기효율을 극대화하였다.

• Good design and structure which considers the gas flowing

Flowing gas rotate with rotor which those set each other that the gas flowed easily that makes it has maximize exhaustion efficiently.

• 높은 내부식성과 내화학성

가스 부위와 접하는 내부 부품은 필요에 따라 다양한 표면처리가 가능하여 내부식성과 내화학성에 매우 강하다.

• The better resistant to abrasion and chemical reaction

Inside parts can take the special treatment at surface as the demand that those are very strong resistant to abrasion and chemical reaction.

• 구성 부품의 단순화

축과 로터를 일체화하여 슬라이딩으로 인한 로터의 위상 변화가 없도록 하여 펌프의 내구성을 향상시켰다.

• Simplification of compositions

Durability is much improve to make the single body that shaft and rotor. it has considered that axis not change when the rotation module slide.

• 고품질 소재 사용

기포가 극히 적은 양질의 FCD 주물을 사용하여 고품질의 제품을 실현하였다.

• Using high quality materials

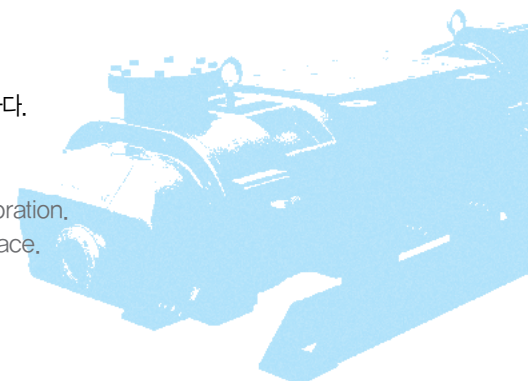
Using the accomplished quality material 'FCD cast-iron ware' which has seldom the bubble that makes vacuum pump high quality.

• 소음과 진동이 작다.

정숙한 작동으로 소음과 진동이 작아 쾌적한 공간에서 사용이 가능하다.

• More less noise and more less vibration

Dry pump has operating with less noise and more less vibration. This pump can be able to operate comfortably in clean place.



VACUUM PUMP

SD, SES SERIES

● DRY PUMPS

■ 펌프의 특징 & 장점 Advantage for vacuum pump ■

• 가변피치 방식의 다단로터 적용

가변피치 방식의 다단로터를 적용하여 정속한 운전과 높은 진공도를 얻을 수 있다. 또한 동일 배기량의 등변피치 방식에 비해 크기가 작아 설치 공간이 작다.

• Variable pitch type multi stage rotor

When screw dry pump operating at high vacuum ultimate pressure, it is much better vacuum pressure rapidly and very good advantage of space share that compared with invariable pitch type stage model at the same grade.

• PCB 제어가 가능

SES Series는 PCB를 이용한 제어를 하도록 하여 자기 진단이 가능하고, 다양한 안전장치를 간단하게 구성하도록 하였으며 케이스카바를 이용하여 외관이 미려하다.

• Possibility to PCB controls

SES Series uses PCB in order to control that can take the self-diagnosis so that is possible to make a simple and easy to compose with the various safety device. Using the case cover that has good appearance.

• 신개념의 밸런스 웨이트의 장착

로터의 고속회전 시 균일한 밸런스를 위해 별도의 밸런스 웨이트를 장착함으로써 보다 안정적인 가동 성능을 보장하도록 하였다.

• New ideal balance weight adoption

Dry pump has adopted balance weight to balancing equally while the rotors have high speed rotation, This balance weight make the guarantee of the better operating performance.

• 높은 온도의 Process에서도 운전이 가능

공정에서 유입되는 고온의 가스를 그대로 펌프 외부로 방출하도록 함으로써 펌프 몸체로 전달되는 열이 적어 고온의 공정에서 운전이 가능하다.

• It can be use for high temperature process.

The high temperature gas inflow from the process that can be exhaust to way out in order to prevent thermal absorption, so this pump can operate at high temperature process.

• ISO 규격의 Motor flange 적용

ISO 규격의 모터를 적용 누구나 쉽게 모터 교환이 가능하도록 하였다.

• ISO standards application

To use ISO standards Motor application Anyone can shift and change the motor easily at anyplace and anytime.

VACUUM PUMP

SD, SES SERIES

DRY PUMPS

구조 & 작동원리 Structure and operation principle

가변피치 방식의 다단 스크루 드라이 펌프(Multi Stage Screw Dry Pump)의 작동원리는 Casing내에 있는 2개의 Screw 모양의 Rotor가 Shaft에 고정되어 있는 Timing Gear에 의해 서로 반대방향으로 같은 주기로 회전하도록 되어있다.

흡입라인에 유입된 기체는 Casing과 Screw Rotor 사이의 공간에 밀폐되면서 Screw Rotor의 회전으로 인해 가스의 흐름이 축 방향으로 형성되어 배기라인으로 배출되고 대기 중으로 방출시킨다.

Screw Rotor와 Screw Rotor, Screw Rotor와 Casing은 매우 작은 간격을 유지하며 회전하기 때문에 Casing 내부와 Screw Rotor에는 윤활유가 필요 없다. 이는 깨끗한 진공배기를 가능하게 해준다.

또한 Screw Rotor는 고속회전(Max. 3500rpm)을 하면서도 Casing과 Screw Rotor, Screw Rotor와 Screw Rotor에는 마찰이 없으므로 마모가 없어 반영구적이다.

특히 Screw Rotor의 재질은 균질의 FCD주물을 사용하였으며 표면의 내부식성과 강도를 더욱 향상시키기 위해 표면 처리를 하도록 하였다.

또한 PCB 제어가 가능하며 각종 안전부품의 장착이 가능하도록 하였다. Shaft Seal은 립실을 적용하여 소음이 작고 씰 내구성이 있으며 진공 도달능력이 뛰어나다. Booster Pump와 직렬로 조합하여 사용 시에는 보다 안정적인 진공을 얻을 수 있다.

Structure and operation principle of variable pitch methods
Multi stage screw dry pump is rotated in compliance with opposite direction each other two screw rotor in casing by timing gear at shaft.

After the gas which flows into a suction line is shut tightly in space between casing and screw rotor, the gas flow is formed in space by screw rotor's axis and discharge to the Exhausted line atmosphere by Screw rotor rotation.

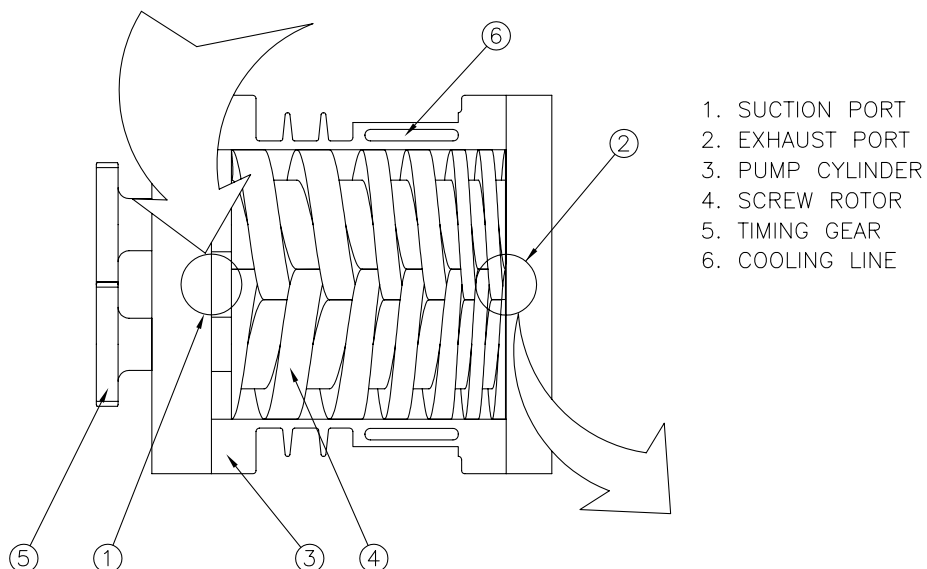
This dry pump is lubricating oil free because between screw rotor and screw rotor, between screw rotor and casing that rotate with a little gap.

To make a clean evacuation is superior.

Even though this screw rotor can make high-speed rotation(max. 3500rpm) that screw rotor have not much friction loss at casing to screw rotor, screw rotor to screw rotor, so that is very semipermanent and economic.

Specially, the screw rotor is made of homogeneous FCD cast-iron ware that has a surface treatment process in order to have a resistance of the causticity of the surface and improving the intensity of the screw rotor much more.

Also dry pump can controls by PCB and safety device or parts can be adopted. Adopted lip seal at shaft that has superior endurance, noise is small and vacuum pressure conserve. Dry pump operate with booster pump Series will have much short exhausted time and much better ability of having a high stabled vacuum ultimate pressure.



VACUUM PUMP

SD120

DRY PUMPS

사양 Specification



SD120

Specification

ITEM	MODEL	SD120
Displacement Speed(유효배기속도) m ³ /hr	50Hz	104
	60Hz	125
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		4(2)
Oil Volume Required(윤활유량) ℓ		0.5
Cooling Water(냉각수)	Flow Rate(ℓ/min)	5
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		VG65
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		926.3×417×417
Weight(제품무게) (Kg)		198
Option(선택사양)		Silencer, Check Valve

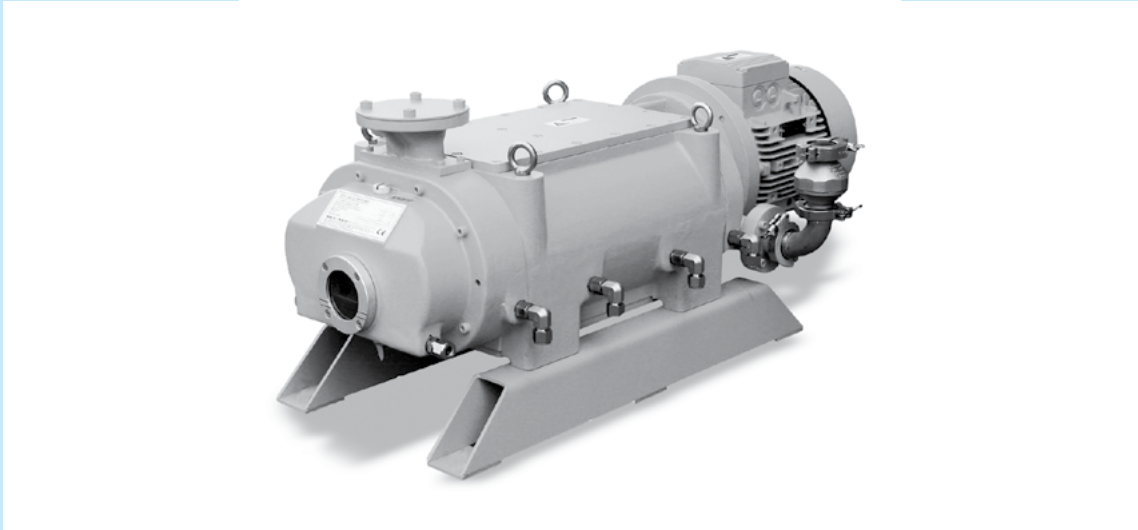
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SD300

DRY PUMPS

사양 Specification



SD300

Specification

ITEM	MODEL	SD300
Displacement Speed(유효배기속도) m ³ /hr	50Hz	225
	60Hz	270
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		7.5(2)
Oil Volume Required(윤활유량) ℓ		0.5
Cooling Water(냉각수)	Flow Rate(ℓ /min)	10
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		VG80
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,196.3×417×428
Weight(제품무게) (Kg)		280
Option(선택사양)		Silencer, Check Valve

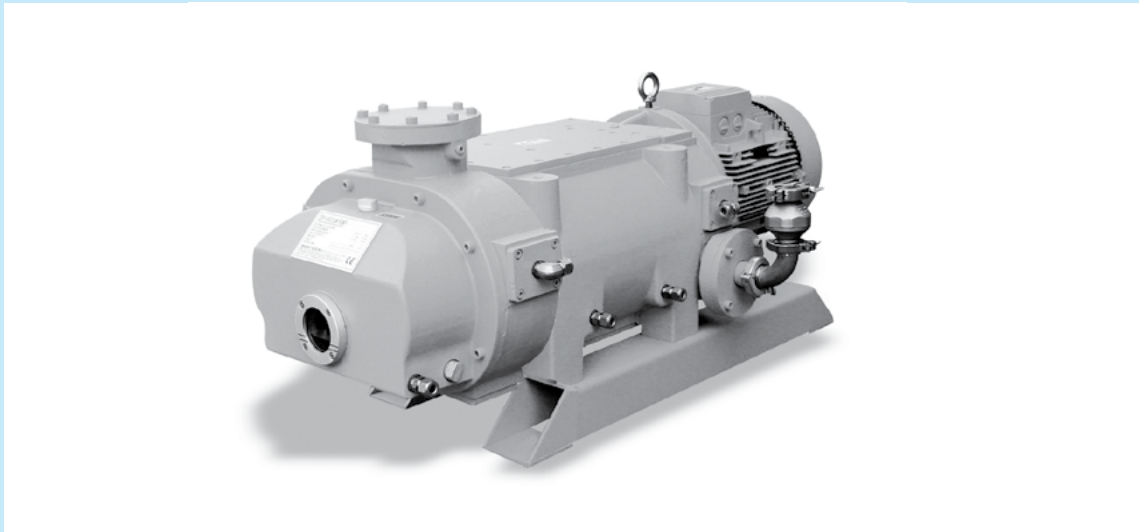
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SD480

DRY PUMPS

사양 Specification



SD480

Specification

ITEM	MODEL	SD480
Displacement Speed(유효배기속도) m ³ /hr	50Hz	400
	60Hz	480
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		11(2)
Oil Volume Required(윤활유량) ℓ		1.0
Cooling Water(냉각수)	Flow Rate(ℓ /min)	15
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		VG100
Exhaust Port(배기구) KSB1540		VF80
Dimension(외형치수) (L×W×H)		1,462.4×755.3×515
Weight(제품무게) (Kg)		460
Option(선택사양)		Silencer, Check Valve

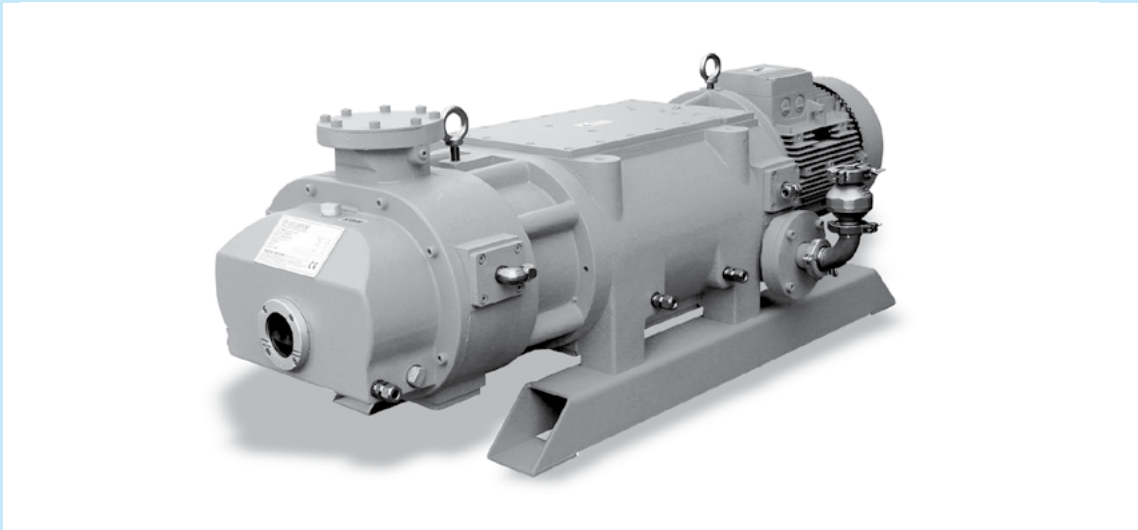
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SD660

DRY PUMPS

사양 Specification



SD660

Specification

ITEM	MODEL	SD660
Displacement Speed(유효배기속도) m ³ /hr	50Hz	554
	60Hz	665
Ultimate Pressure(도달압력) Pa(Torr)		$6.7 \times 10^{-1}(5 \times 10^{-3})$
Motor(사용동력) Kw(Pole)		15(2)
Oil Volume Required(윤활유량) ℓ		1.0
Cooling Water(냉각수)	Flow Rate(ℓ/min)	15
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		VG100
Exhaust Port(배기구) KSB1540		VF80
Dimension(외형치수) (L×W×H)		1,662.4×755.3×515
Weight(제품무게) (Kg)		635
Option(선택사양)		Silencer, Check Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SES120

DRY PUMPS

사양 Specification



SES120

Specification

ITEM	MODEL	SES120
Displacement Speed(유효배기속도) m ³ /hr	50Hz	125
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		4(2)
Oil Volume Required(윤활유량) ℓ		0.5
Cooling Water(냉각수)	Flow Rate(ℓ / min)	5
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		ISO80
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,145,9×500×643
Weight(제품무게) (Kg)		250
Option(선택사양)		Silencer, Check Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SES330

DRY PUMPS

사양 Specification



SES330

Specification

ITEM	MODEL	SES330
Displacement Speed(유효배기속도) m ³ /hr	50Hz	270
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		$6.7 \times 10^{-1}(5 \times 10^{-3})$
Motor(사용동력) Kw(Pole)		7.5(2)
Oil Volume Required(윤활유량) ℓ		0.5
Cooling Water(냉각수)	Flow Rate(ℓ/min)	10
	Pressure(Mpa)	0.2 < P
Suction Port(흡입구) KSB1540		ISO80
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,644.8×705×815
Weight(제품무게) (Kg)		350
Option(선택사양)		Silencer, Check Valve

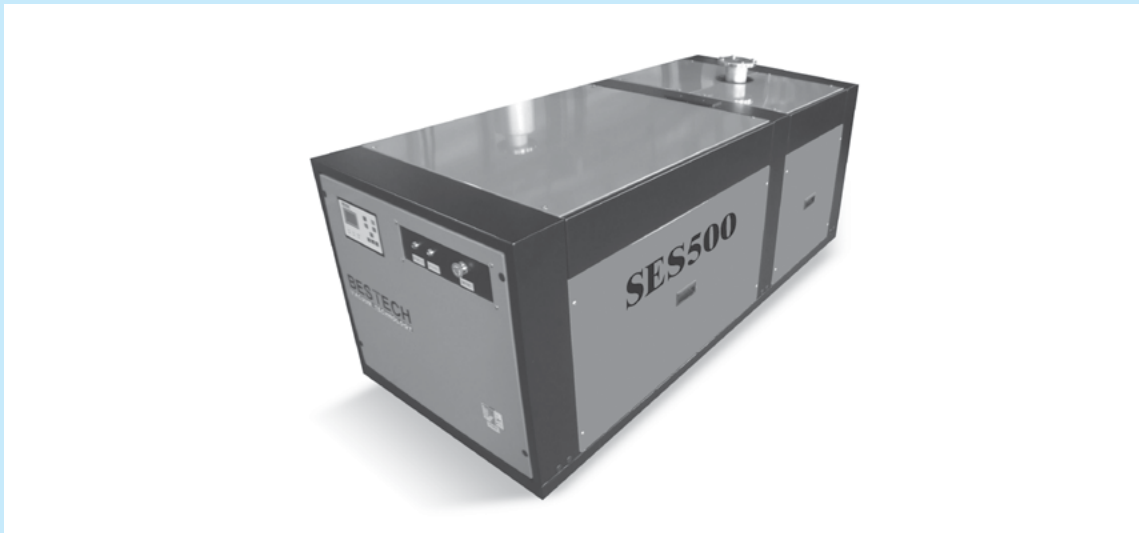
- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SES500

DRY PUMPS

사양 Specification



SES500

Specification

ITEM	MODEL	SES500
Displacement Speed(유효배기속도) m ³ /hr	50Hz	480
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		11(2)
Oil Volume Required(윤활유량) ℓ		1.0
Cooling Water(냉각수)	Flow Rate(ℓ/min)	15
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		ISO100
Exhaust Port(배기구) KSB1540		VF80
Dimension(외형치수) (L×W×H)		1,780×1,080,8×862
Weight(제품무게) (Kg)		560
Option(선택사양)		Silencer, Check Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정된 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SES700

● DRY PUMPS

사양 Specification



SES700

Specification

ITEM	MODEL	SES700
Displacement Speed(유효배기속도) m ³ /hr	50Hz	665
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻¹ (5×10 ⁻³)
Motor(사용동력) Kw(Pole)		15(2)
Oil Volume Required(윤활유량) ℓ		1.0
Cooling Water(냉각수)	Flow Rate(ℓ/min)	15
	Pressure(Mpa)	0.2<P
Suction Port(흡입구) KSB1540		ISO100
Exhaust Port(배기구) KSB1540		VF80
Dimension(외형치수) (L×W×H)		1,980×1,080,8×862
Weight(제품무게) (Kg)		650
Option(선택사양)		Silencer, Check Valve

- 10⁵Pa(760Torr)에서 유효배기속도 측정(Displacement exhaust speed measurement in 10⁵Pa(760Torr))
- 도달압력은 피라니진공계를 사용하여 측정한 값이다.(Arrival pressure makes use of pirani vacuum gauge)

VACUUM PUMP

SES300

DRY PUMPS

사양 Specification



SES300

Specification

ITEM	MODEL	SES300
Displacement Speed(유효배기속도) m ³ /hr	50Hz	254
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻² (5×10 ⁻⁴)
Motor(사용동력) Kw(Pole)	Dry Pump (SD120)	4(2)
	Booster Pump (B3B)	0.75(2)
Oil Volume Required(윤활유량) ℓ	Dry Pump(Fomblin 25/6)	0.5
	Booster Pump(Fomblin 14/6)	0.4
Cooling Water(냉각수)(10-30℃)	Flow Rate(ℓ /min)	5
	Pressure(Mpa)	0.2<P
Nitrogen	Flow Rate(SLM)	5-50
	Pressure(Mpa)	0.1-0.5
Suction Port(흡입구) KSB1540		ISO80
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,145.9×500×921
Weight(제품무게) (Kg)		310
Option(선택사양)		Silencer, Check Valve

- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻³Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻³Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

SES600

DRY PUMPS

사양 Specification



SES600

Specification

ITEM	MODEL	SES600
Displacement Speed(유효배기속도) m ³ /hr	50Hz	610
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		6.7×10 ⁻² (5×10 ⁻⁴)
Motor(사용동력) Kw(Pole)	Dry Pump (SD120)	4(2)
	Booster Pump (B6A)	2.2(2)
Oil Volume Required(윤활유량) ℓ	Dry Pump(Fomblin 25/6)	0.5
	Booster Pump(Fomblin 14/6)	1.6
Cooling Water(냉각수)(10-30℃)	Flow Rate(ℓ/min)	5
	Pressure(Mpa)	0.2<P
Nitrogen	Flow Rate(SLM)	5-50
	Pressure(Mpa)	0.1-0.5
Suction Port(흡입구) KSB1540		ISO80
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,145.9×500×1,003
Weight(제품무게) (Kg)		370
Option(선택사양)		Silencer, Check Valve

- 13Pa(1.0×10⁻¹Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10⁻¹Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10⁻¹Pa(3×10⁻³Torr)을 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10⁻¹Pa(3×10⁻³Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

VACUUM PUMP

SES1200

DRY PUMPS

사양 Specification



SES1200

Specification

ITEM	MODEL	SES1200
Displacement Speed(유효배기속도) m ³ /hr	50Hz	1,365
	60Hz	
Ultimate Pressure(도달압력) Pa(Torr)		$6.7 \times 10^{-2} (5 \times 10^{-4})$
Motor(사용동력) Kw(Pole)	Dry Pump (SD120)	4(2)
	Booster Pump (B12A)	3.75(2)
Oil Volume Required(윤활유량) ℓ	Dry Pump(Fomblin 25/6)	0.5
	Booster Pump(Fomblin 14/6)	2.0
Cooling Water(냉각수)(10-30℃)	Flow Rate(ℓ/min)	5
	Pressure(Mpa)	0.2 < P
Nitrogen	Flow Rate(SLM)	5-50
	Pressure(Mpa)	0.1-0.5
Suction Port(흡입구) KSB1540		ISO100
Exhaust Port(배기구)		NW40
Dimension(외형치수) (L×W×H)		1,145.9×500×1,003
Weight(제품무게) (Kg)		410
Option(선택사양)		Silencer, Check Valve

- 13Pa(1.0×10^{-1} Torr)에서 유효배기속도 측정 (Displacement exhaust speed measurement in 13Pa(1.0×10^{-1} Torr))
- 도달압력은 냉음극전리 진공계를 사용하여 측정된 값이며 피라니진공계 사용 시 4.0×10^{-3} Pa(3×10^{-3} Torr)를 유지함 (Because Arrival pressure makes use of cold negative pole ionization vacuum gauge is value that measure and keeps 4.0×10^{-3} Pa(3×10^{-3} Torr)at pirani vacuum gauge use)
- 상기값은 표준보조펌프 적용 시 측정된 값이며, 보조펌프의 성능에 따라 측정값은 가변됨(Ultimate pressure is value measured at standard assistance pump application, and measurement value is variable by assistance pump performance)

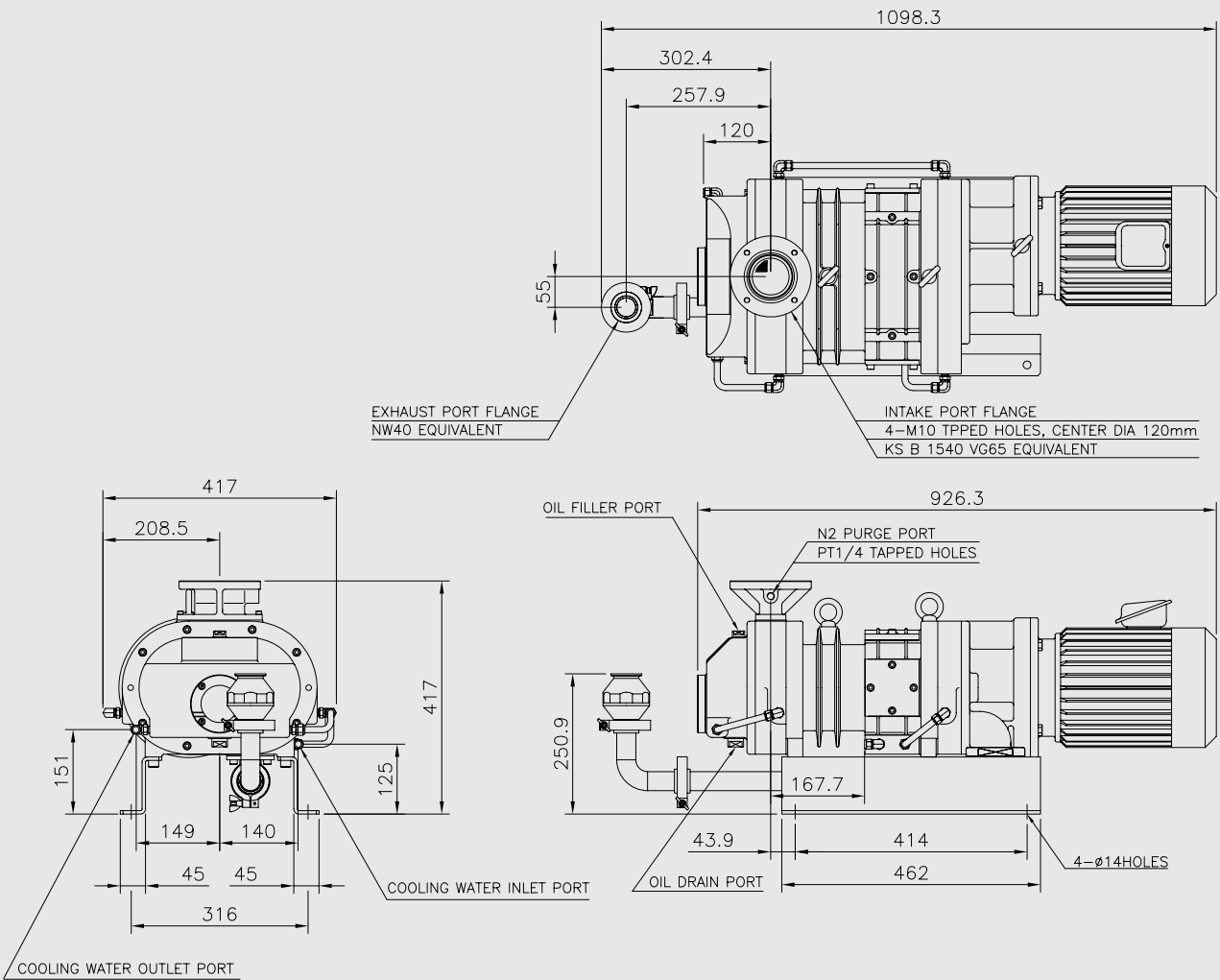
VACUUM PUMP

SD120

DRY PUMPS

외형치수 Outside dimension

SD120



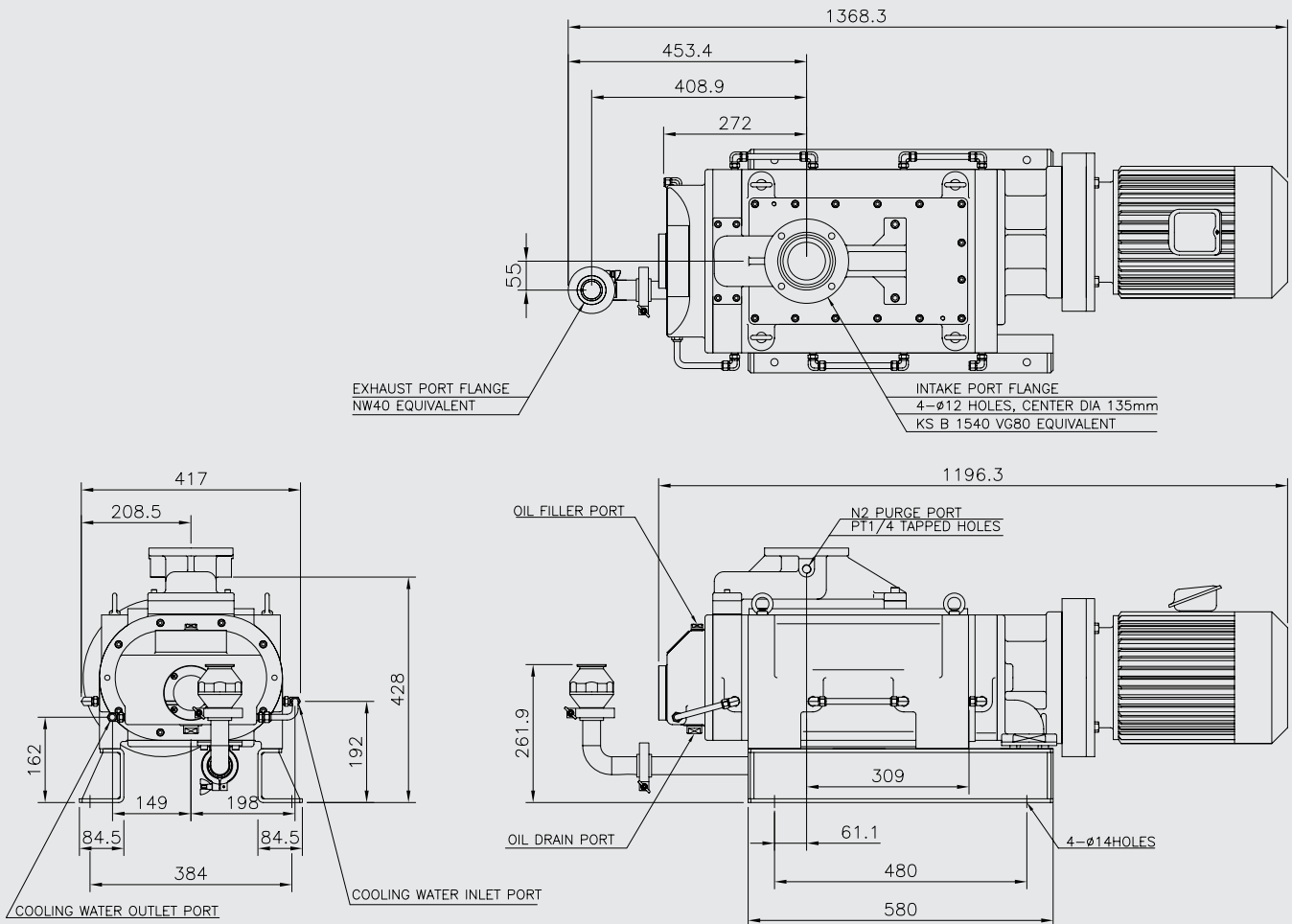
VACUUM PUMP

SD300

DRY PUMPS

외형치수 Outside dimension

SD300



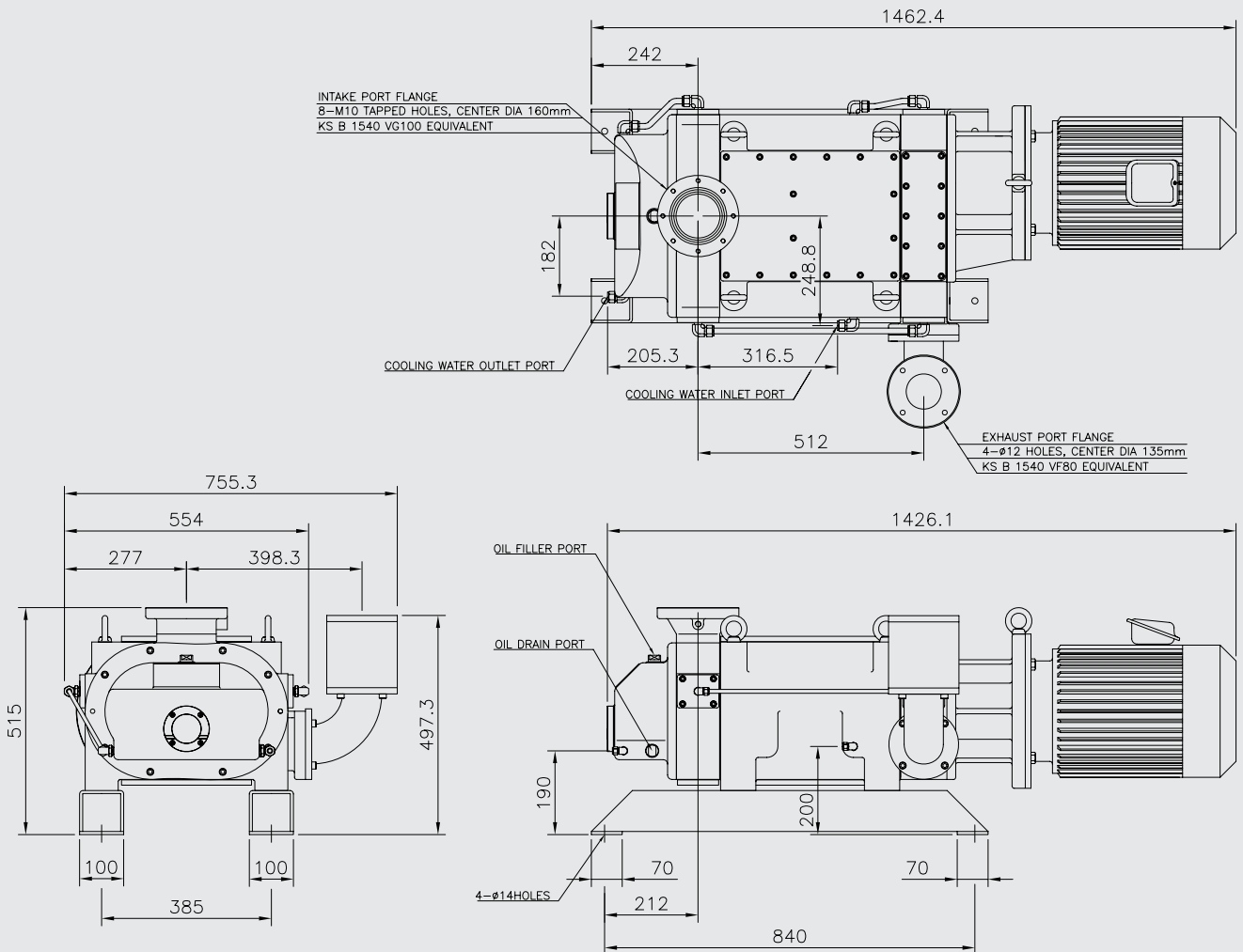
VACUUM PUMP

SD480

DRY PUMPS

외형치수 Outside dimension

SD480



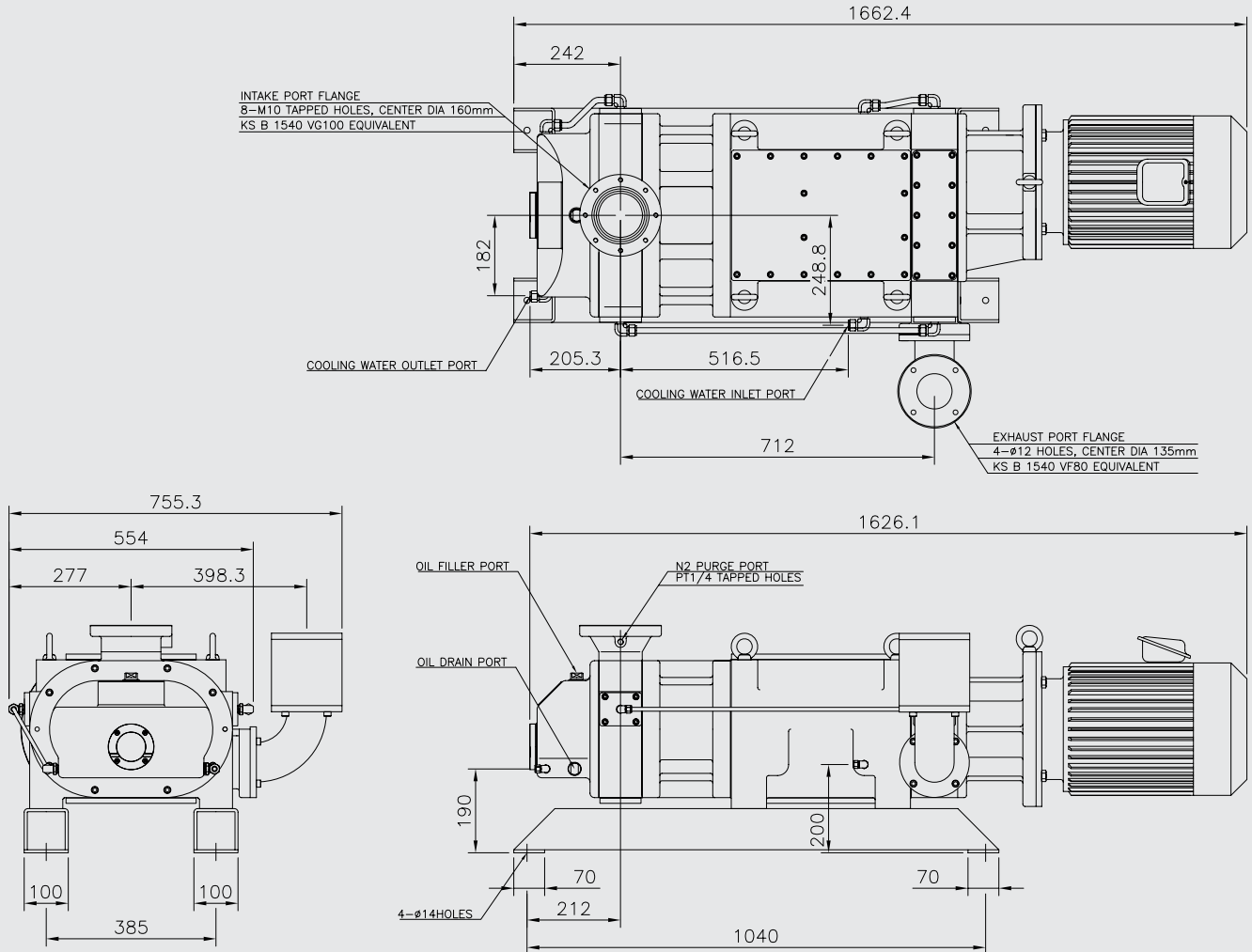
VACUUM PUMP

SD660

DRY PUMPS

외형치수 Outside dimension

SD660



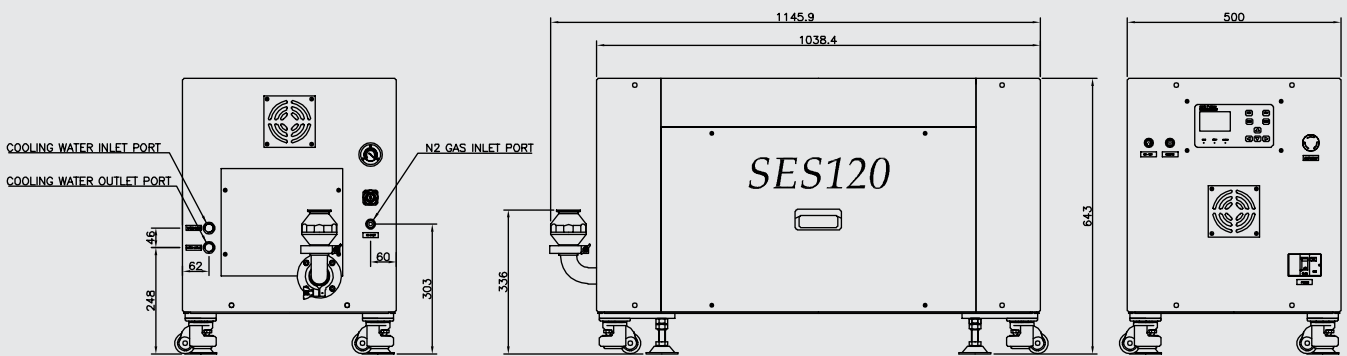
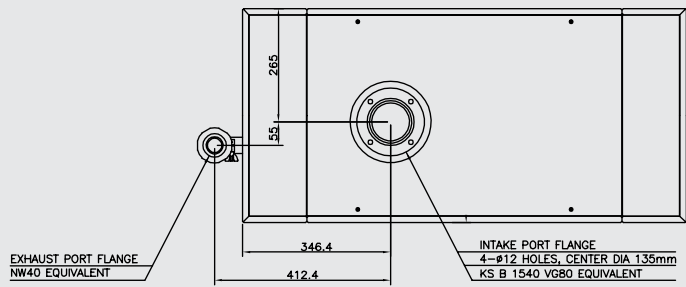
VACUUM PUMP

SES120

● DRY PUMPS

외형치수 Outside dimension

SES120



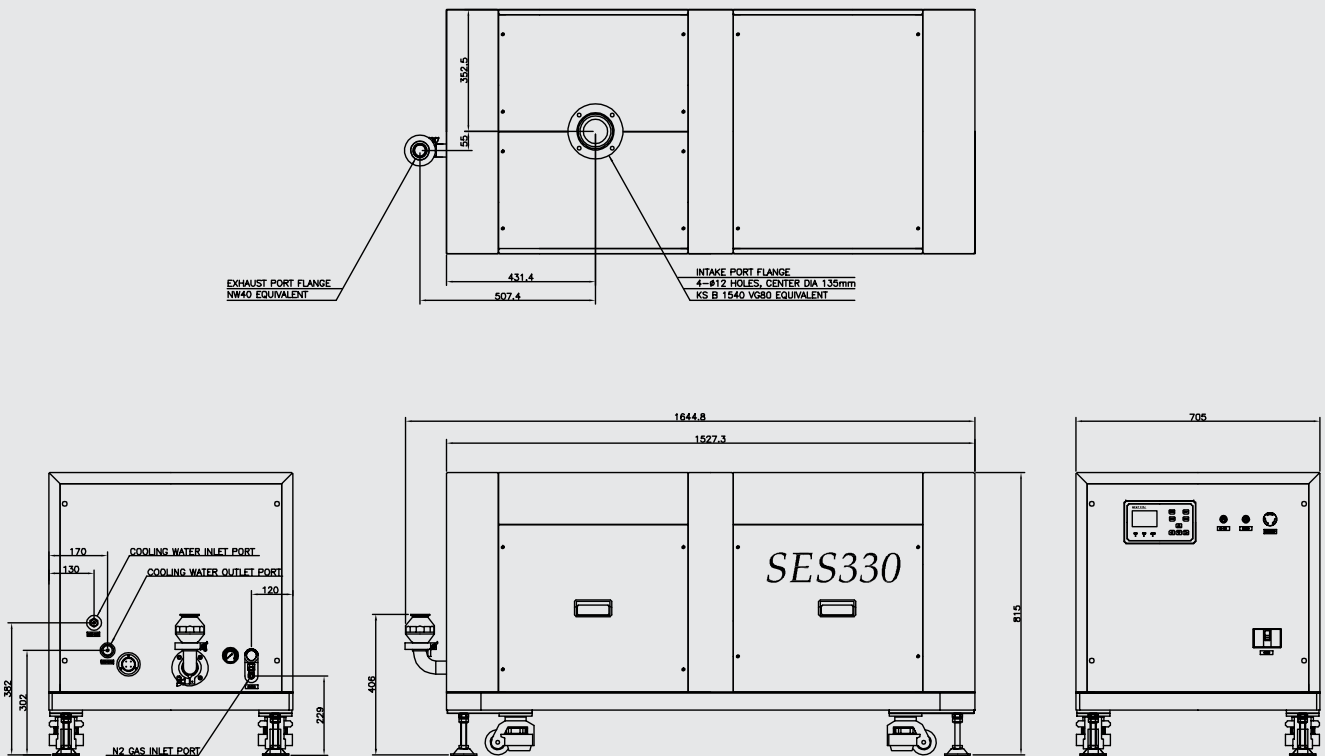
VACUUM PUMP

SES330

DRY PUMPS

외형치수 Outside dimension

SES330



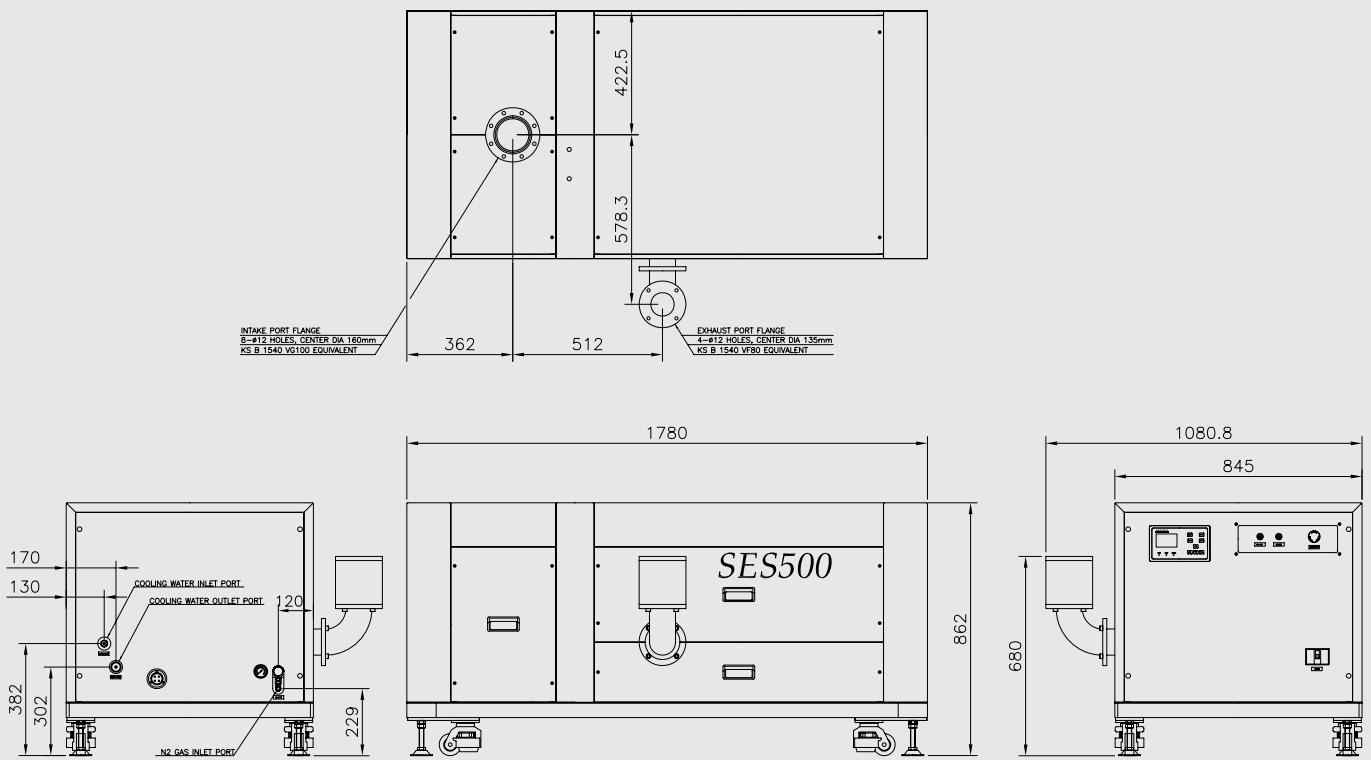
VACUUM PUMP

SES500

DRY PUMPS

외형치수 Outside dimension

SES500



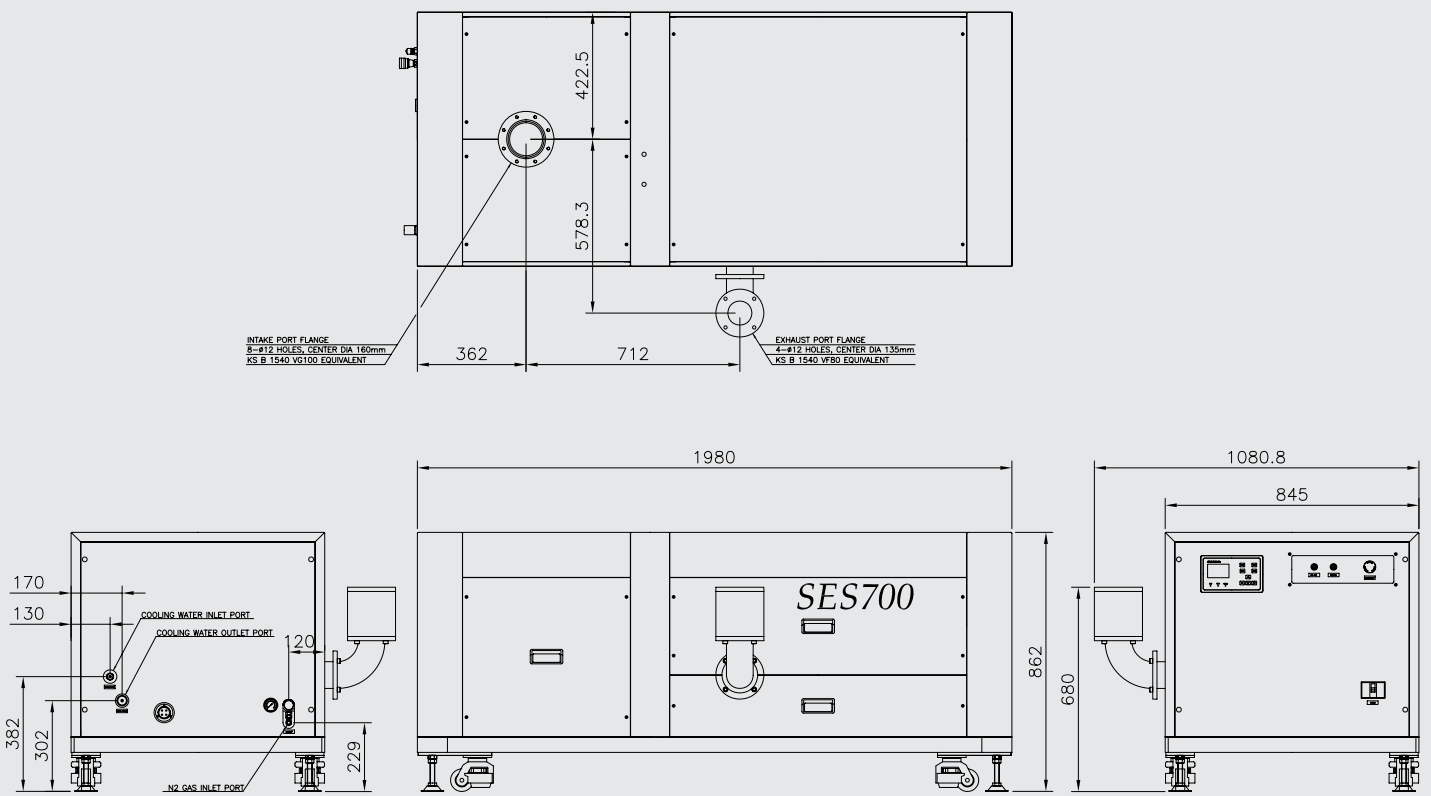
VACUUM PUMP

SES700

DRY PUMPS

외형치수 Outside dimension

SES700



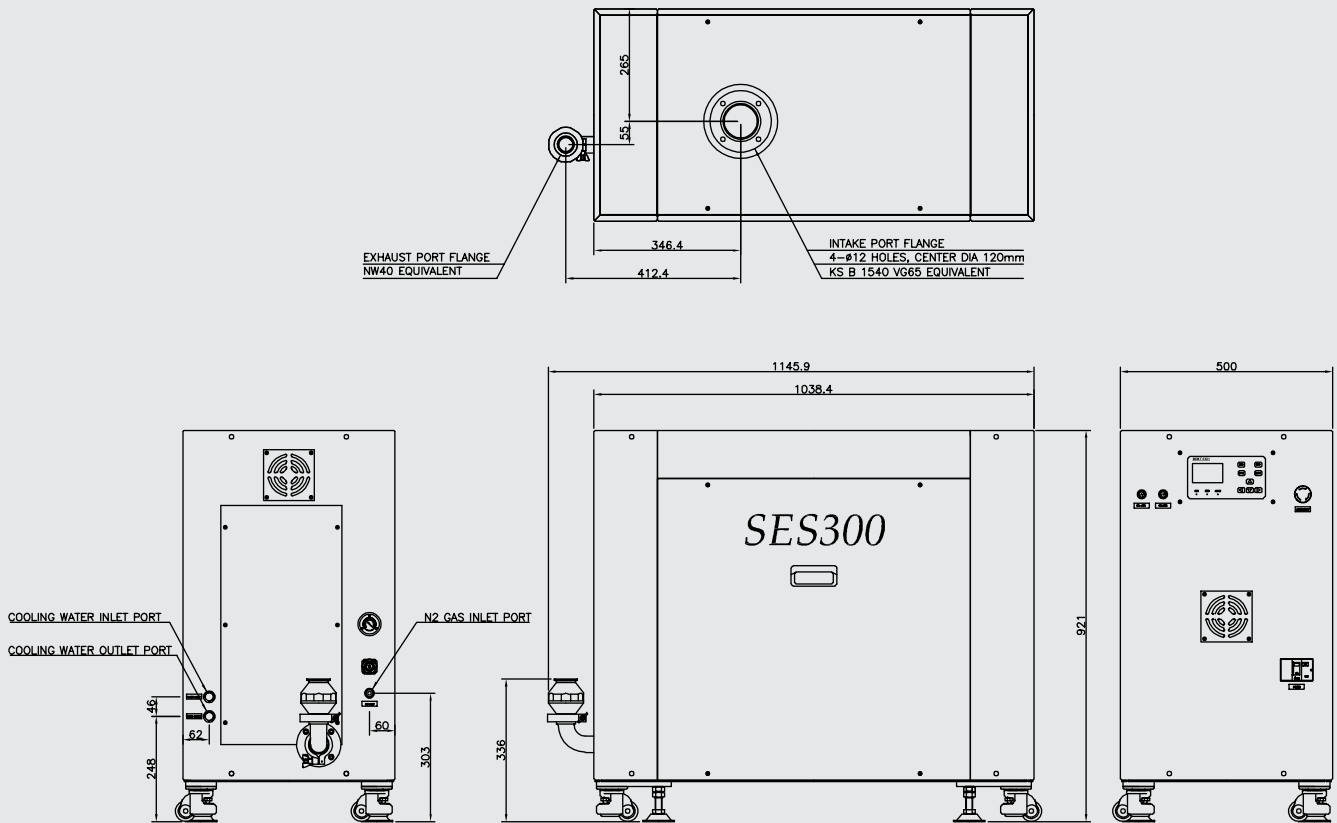
VACUUM PUMP

SES300

DRY PUMPS

외형치수 Outside dimension

SES300



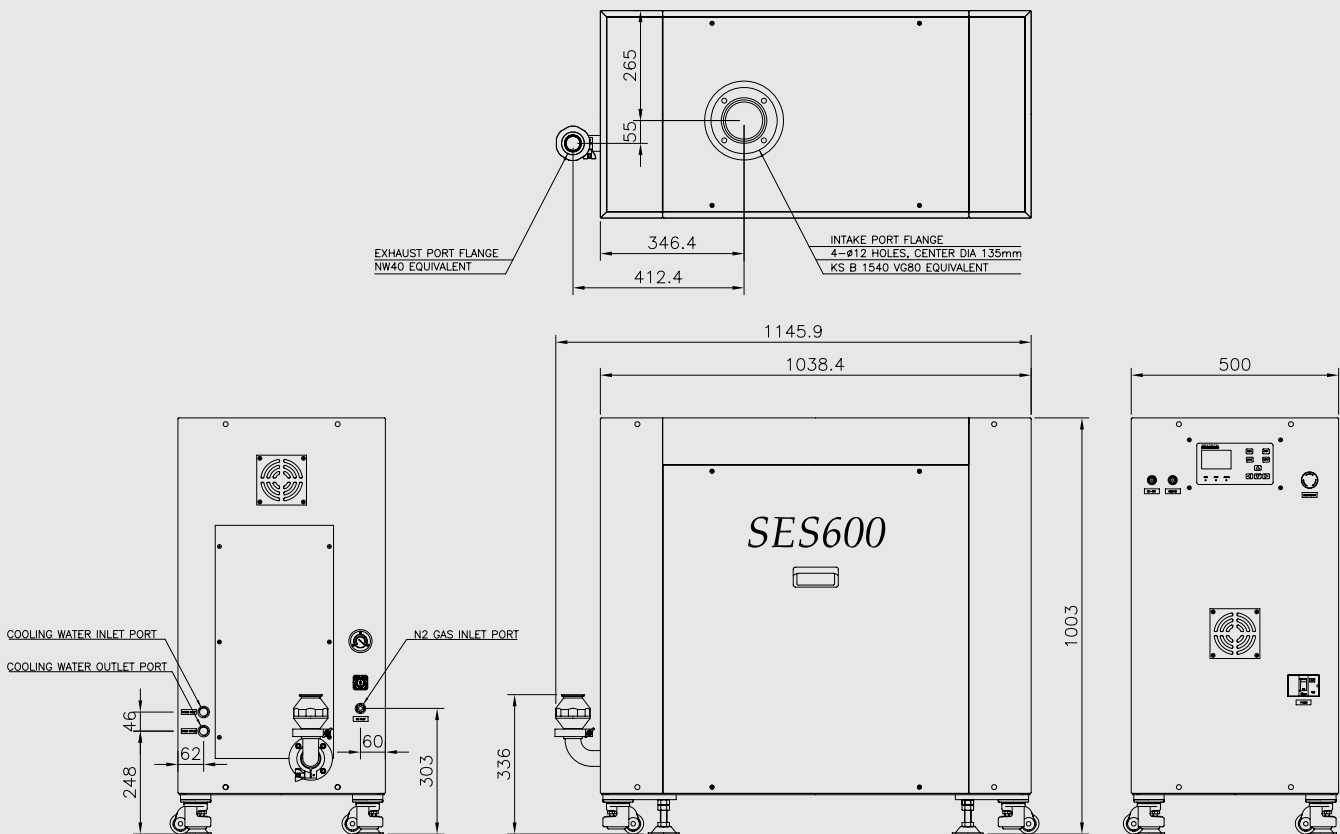
VACUUM PUMP

SES600

● DRY PUMPS

외형치수 Outside dimension

SES600



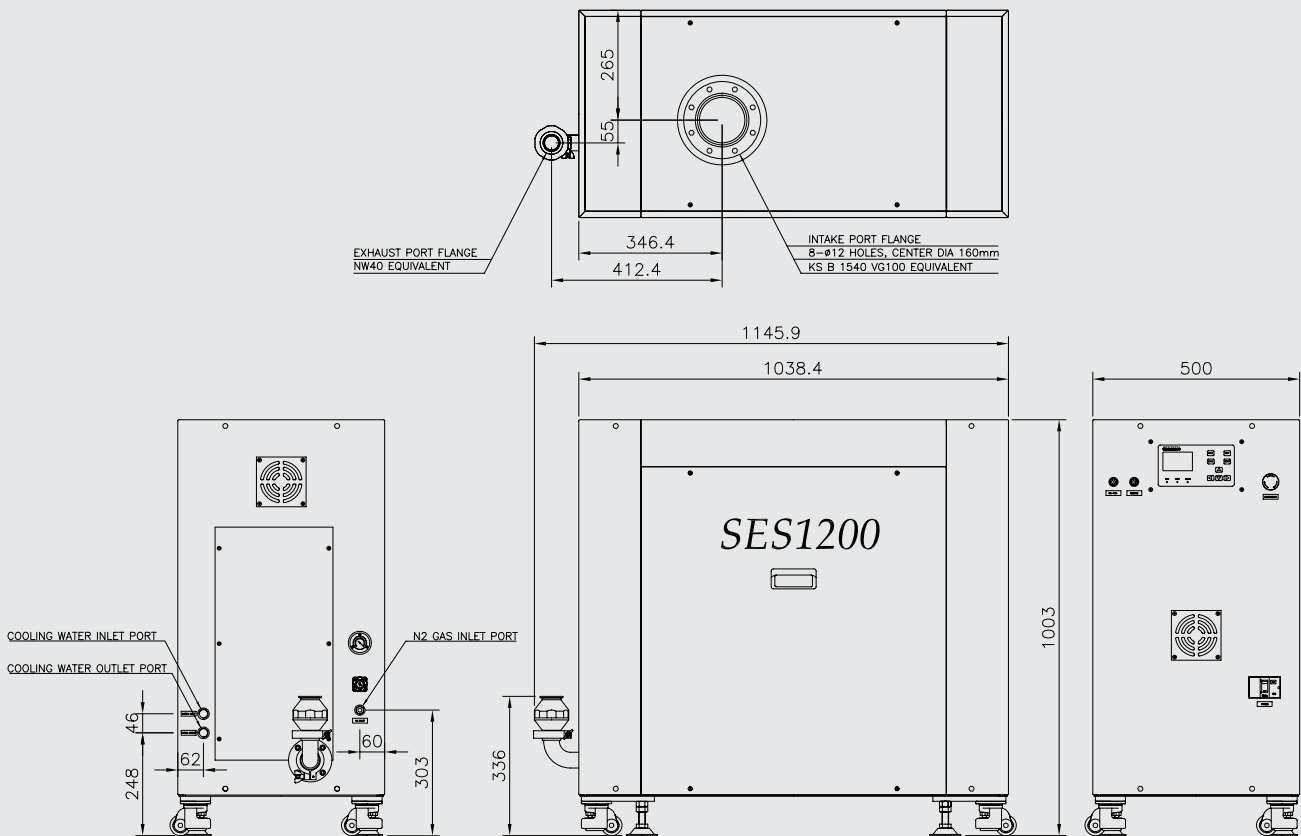
VACUUM PUMP

SES1200

DRY PUMPS

외형치수 Outside dimension

SES1200

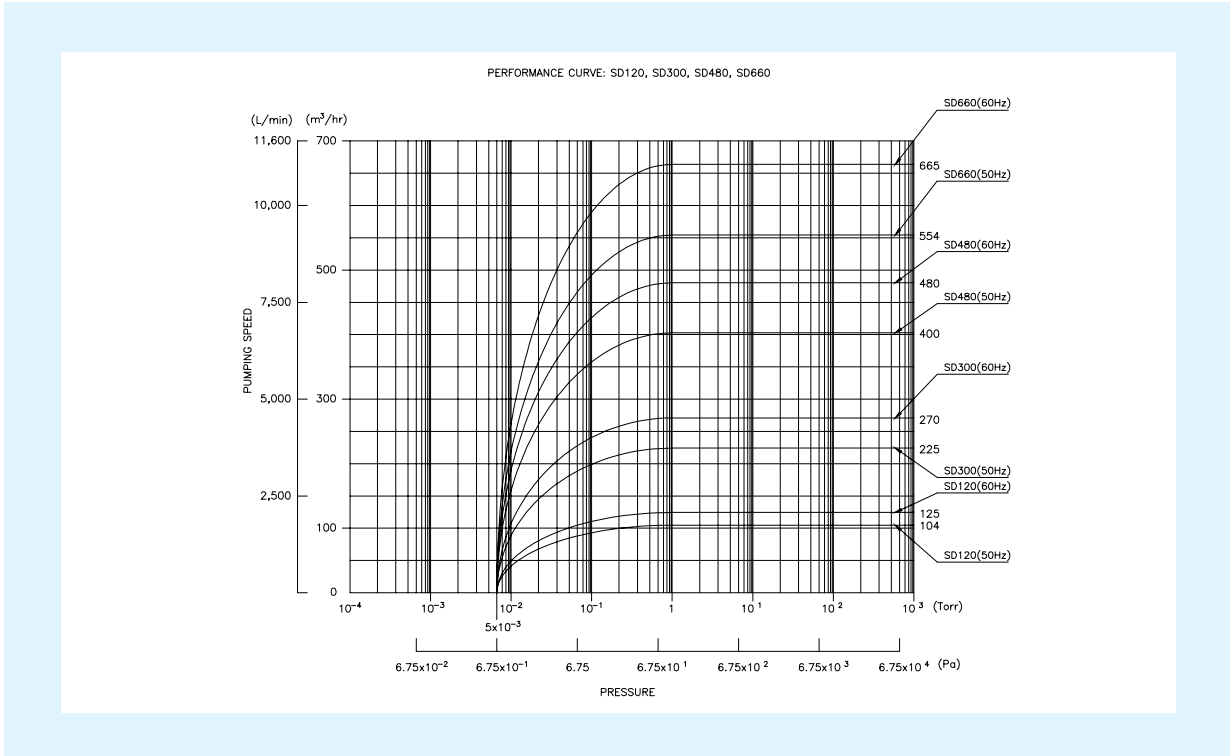


VACUUM PUMP

SD SERIES

DRY PUMPS

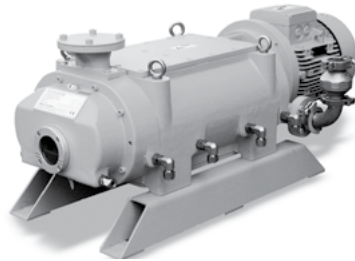
드라이펌프 배기속도곡선 Pumping speed curve



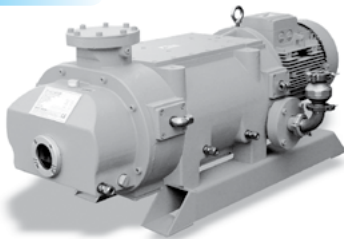
▶ SD120



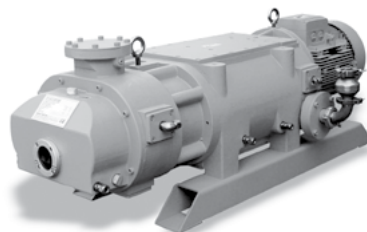
▶ SD300



▶ SD480



▶ SD660

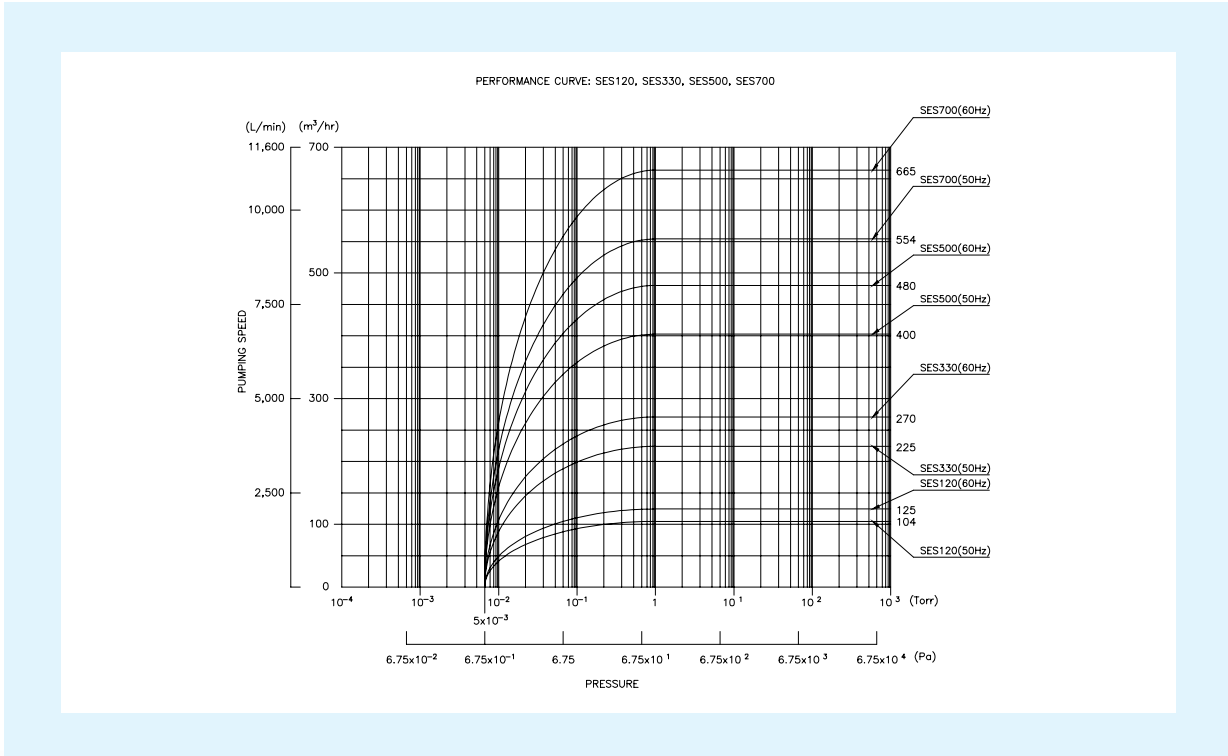


VACUUM PUMP

SES SERIES

DRY PUMPS

드라이펌프 배기속도곡선 Pumping speed curve



▶ SES120



▶ SES330



▶ SES500



▶ SES700

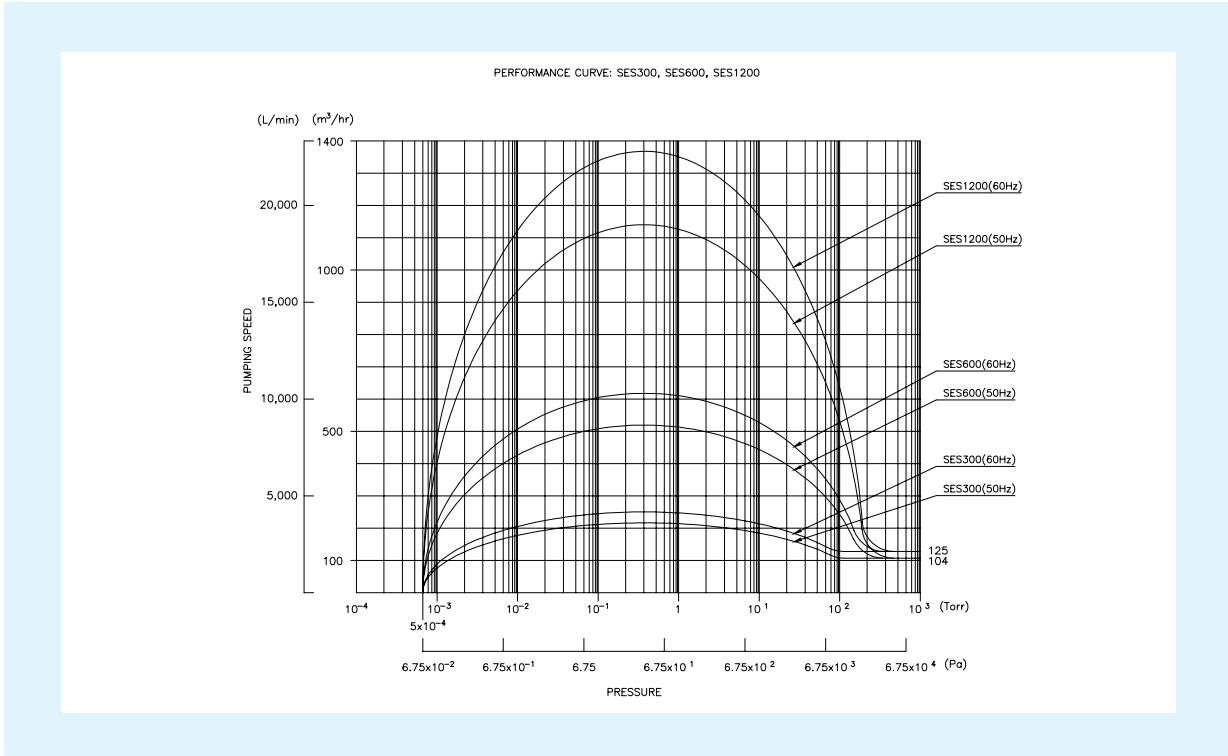


VACUUM PUMP

SES SERIES

DRY PUMPS

드라이펌프 배기속도곡선 Pumping speed curve



■ PUMP COMBINATION

MSBM SERIES

● ROTARY & BOOSTER

MS220AD+BM6A+OMT3K(MSBM-220D06)



MS370AD+BM12A+OMT5K(MSBM-370D12)

MS500AD+BM24A+OMT7K(MSBM-500D24)



PUMP COMBINATION

MSBM SERIES

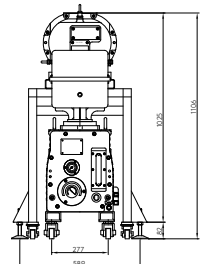
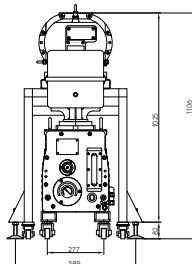
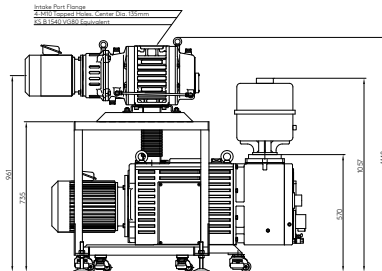
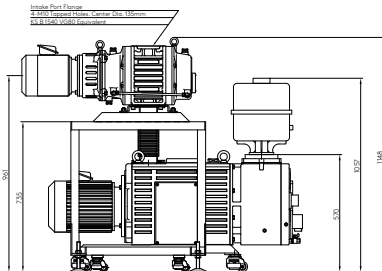
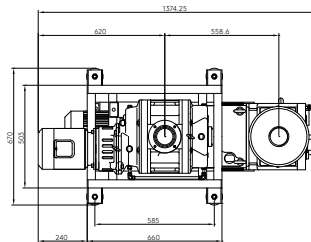
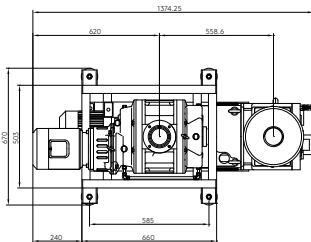
● ROTARY & BOOSTER



MSBM-220S06



MSBM-220D06



MS220AS+BM6A+OMT3K 조립도

MS220AD+BM6A+OMT3K 조립도

PUMP COMBINATION

MSBM SERIES

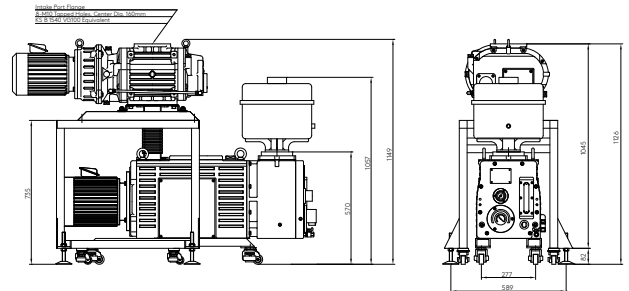
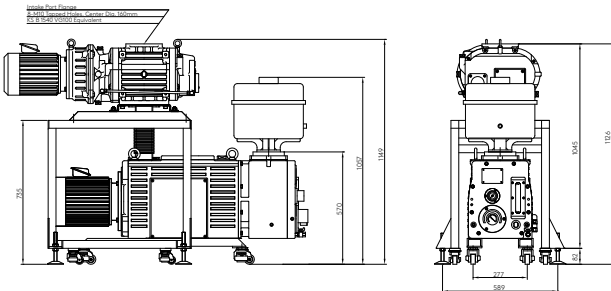
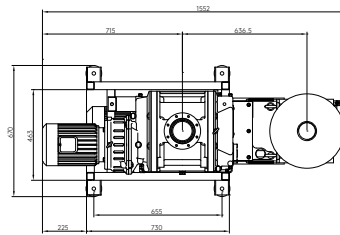
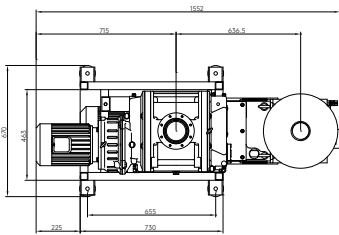
● ROTARY & BOOSTER



MSBM-370S12



MSBM-370D12



MS370AS+BM12A+OMT5K 조립도

MS370AD+BM12A+OMT5K 조립도

PUMP COMBINATION

MSBM SERIES

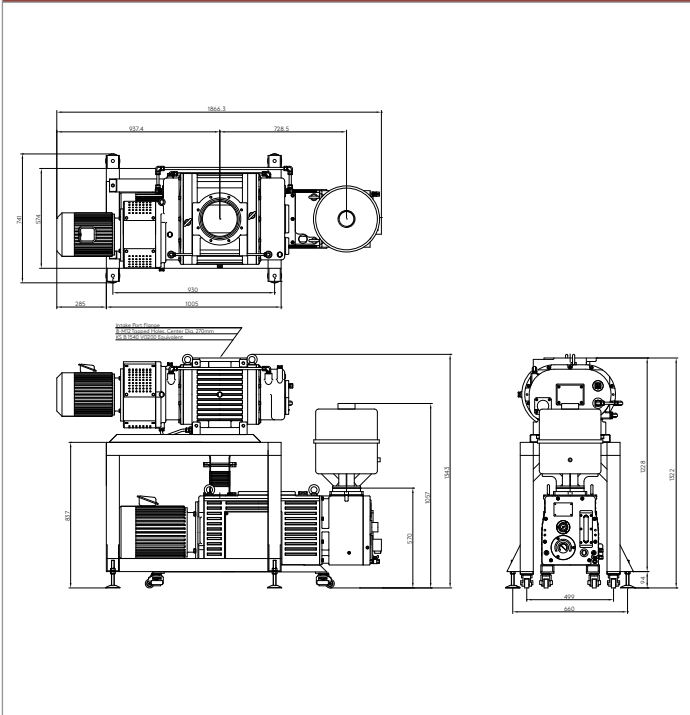
● ROTARY & BOOSTER



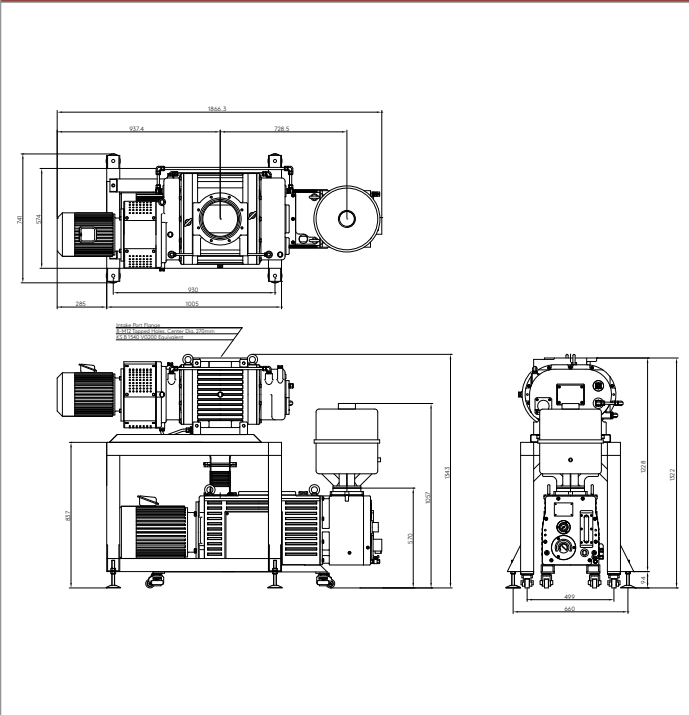
MSBM-500S24



MSBM-500D24



MS500AS+BM24A+OMT7K 조립도



MS500AD+BM24A+OMT7K 조립도

PUMP COMBINATION

MSB(I) SERIES

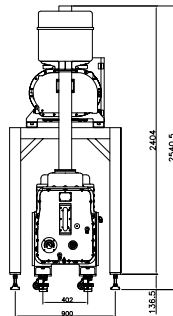
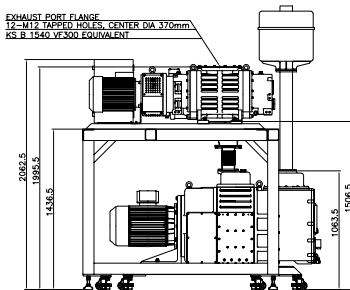
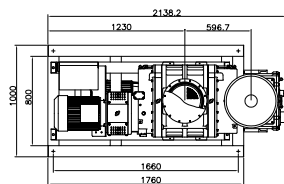
● ROTARY & BOOSTER



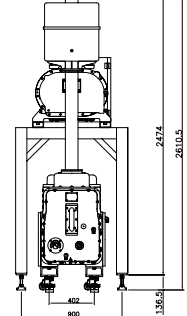
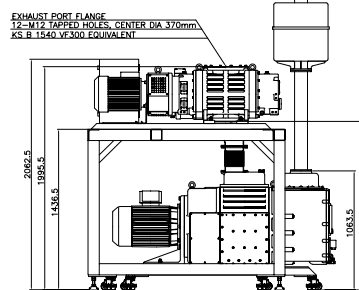
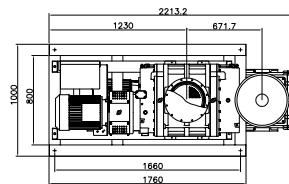
MSB(I)-720D55



MSB(I)-960D55



MS720AD+B(I)55A+OMT12K 조립도



MS960AD+B(I)55A+OMT16K 조립도

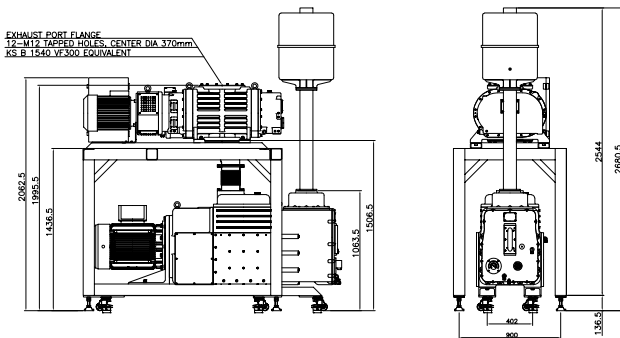
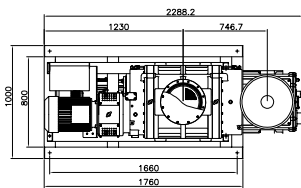
PUMP COMBINATION

MSB(I) SERIES

● ROTARY & BOOSTER



MSB(I)-1200D70



MS1200AD+B(I)70A+OMT20K 조립도

◆ 찾아오시는 길



※ 본 카달로그의 내용은 제품의 디자인과 품질의 향상을 위해 변경될 수 있습니다.
※ 본 카달로그의 모든 내용에 대해 일체의 무단 복제를 불허합니다.

편집 제작 2016. 08

※ Some parts of content in this catalogue should be changed to improve better design and quality of product.

※ All right reserved including the right of reproduction in whole or in part in any from without permission from BESTECH

Edited & Published in 2016. 08

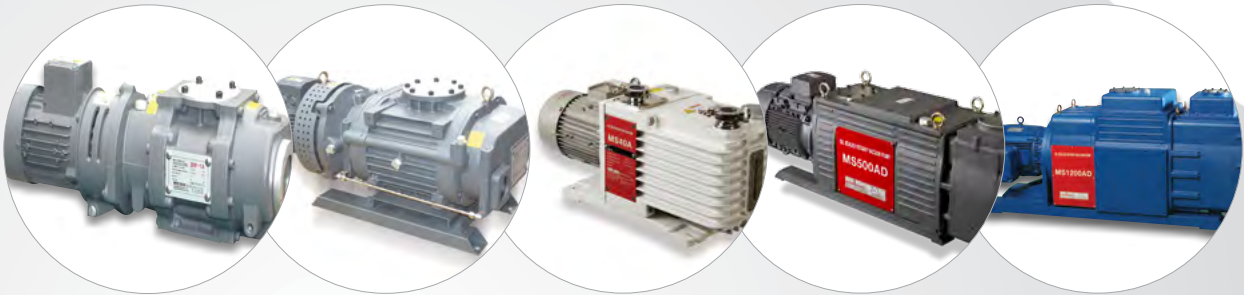
IOS9001/KSA900 품질인증
중기청 핵심부품 국산화업체



BESTECH
VACUUM TECHNOLOGY

BESTECH CO., LTD.
www.bst.co.kr/bst@bst.co.kr

베스텍(주)



VACUUM PUMP TECHNOLOGY



본사 및 공장

경기도 안산시 단원구 변영로 32번길 14
(우)425-110 (시화공단 4바 602호)

TEL: 031-498-7300

e-mail: bst@bst.co.kr

FAX: 031-319-5423

http://www.bst.co.kr

HEAD OFFICE & FACTORY

14, Beonnyeong-ro 32beon-gil, Danwon-gu, Ansan-si,
Gyeonggi-do, Korea 425-110 (4Ba 602Ho Shihwa industrial complex)

TEL: 82-31-498-7300

e-mail: bst@bst.co.kr

FAX: 82-31-319-5423

http://www.bst.co.kr