How to Use This Catalog

This catalogue is designed to aid you in selecting the most appropriate product for your specific application. The INDEXES on page 1 and 2 show the corresponding pages of particular models. The page on which each model is shown consists of a specification table, a performance chart, a power consumption chart, and an external/mounting dimensions diagram.

Explanation of Technical Terms

For compressors

Rated pressure:	This is the optimum pressure point, where you will get the best capabilities such as performance and service life, and where the pump is designed to have almost the same airflow regardless of input cycle, whether it is 50Hz or 60Hz.
Rated airflow:	The discharge airflow volume at the rated pressure.
Maximum pressure:	The highest obtainable pressure at which the pump was designed to produce zero discharge airflow (not assured; referential value only).
Power consumption:	The input wattage value during operation at the rated pressure.
Current:	The electric current value when operated at rated pressure (for reference only).
Duty cycle:	The period of operation time in which the coil temperature will not exceed the coil insulation class limit for which it was designed.
Airflow characteristics:	Discharge pressure-airflow curve (for reference only).
Power consumption characteristics:	Discharge pressure-power consumption curve (for reference only).

For vacuum pumps

Maximum vacuum:	The highest vacuum the pump can attain with the pump inlet closed (except some of the exclusive models).
Free air displacement:	The airflow volume at zero vacuum (within three (3) minutes after the start).
Power consumption:	The maximum input wattage on the power consumption curve (up to the maximum vacuum point).
Electric current:	The maximum electric current on the current characteristics (for reference only).
Rated operating time:	The longest continuous running time within the range of coil insulation classification (without additional cooling).
Airflow characteristics:	Vacuum degree-airflow curve (for reference only).
Power consumption characteristics:	Vacuum degree-power consumption curve (for reference).
Exhaust characteristics:	The time required to attain the respective vacuum within a 10 liter container (for reference).

For DC pumps

Operating ambient temperature:	0~40˚C (5~50˚C for only DP0105)
Operating ambient humidity:	30~85% without condensation present

Verify in your application if the pump outlet must be unloaded before restarting.

Application examples and applicable fluids for compressors and vacuum pumps

Application: for incorporation into equipment **Applicable fluid:** Air

For compressors & vacuum pumps

Life expectancy:	Expected accumulated operating hours until the discharge airflow reduces by 20% under rated conditions. The actual life might vary in accordance with the actual operating conditions or environment such as output pressure setting, maintenance schedule, ventilation, ambient temperature, duty cycle, etc. Please note that operation with quite different supply voltage than the rated will not only affect the pressure, the vacuum rate and the airflow but may also influence the life expectancy of the pump.
Rated frequency:	In the case of AC drive, the rated frequency will be different by the versions, some are only for 50Hz or for 60Hz, some are for both 50Hz and 60Hz.
Coil insulations:	The suggested class, most bare units attaining "E" class, is based on Japanese electric regulations. They are merely suggestions since bare units are considered as "components" and are not classified as complete products or systems.

Insulation Class (for reference)	(Temperature limit, degrees C)
A	100
E	115
B	125
F	150
H	170

Outside & mounting dimensions:	Useful for assessing the required space for installation. Allow extra 5-10 mm each in order to prevent the pump from hitting its surroundings as it vibrates on rubber insulating feet.
Rated power supply:	The two major types are 115V AC/60Hz and 230V AC/50Hz. However, most of the models, not all of them, can be used at both 50Hz and 60Hz with different performance characteristics.
Operating ambient temperature:	0～40˚C
Operating ambient humidity:	30～85% non-condensing

For liquid pumps

Self-priming power:	The power that the pump will draw 25˚C water up.

1kPa is equal to the power that draws up 25˚C water by 10cm.

Improvement suggestion

While our compressors and vacuum pumps employ a unique internal coil cooling feature to reduce or control the rise in internal temperature, please be advised that operating at higher than rated pressures may result in elevated temperatures. Should these temperatures become excessive, operating duty cycles may need to be reduced, or the use of an auxiliary cooling fan should be considered.

This catalogue will give the guidelines to let you determine the appropriate model for your application(s). However, in certain cases you may need further detailed information, which will be provided in the form of a specifications sheet for each model/version by our technical staff who will further assist you in your selection.

Specifications and designs are subject to change at any time without notice.
It is recommended for OEM customers to confirm the specifications required in writing before placing orders.