S2X Sliding Vane Rotary Vacuum Pumps

Description

S2X Series' Vacuum Pumps are designed in a double-stage construction.

The rotor blades are mounted in the cylindrical stator eccentrically. When the rotor is in a high-speed rotating, the free sliding blades in the rotor slot will be thrust outwards strongly because of the centrifugal force and the spring force the tips of the rotor blades will keep close the outlet on the interior wall of the stator. Then the inlet and the outlet on the stator will be separated by them. And the periodically along with the rotating of the rotor, while the space leading to the outlet will be reduced continuously and periodically. Therefore the air or the mixture of gases will be sucked by the inlet of the high vacuum stage first, and will be compressed and exhausted through its discharge valve. During the operation, in case the pressure of the exhausted gas is not strong enough to open the discharge valve, the compressed gas in the high vacuum stage will be delivered to the 2nd stage further, and will be exhausted into the atmosphere through the discharge valve of the 2nd stage at last. Thus at the suction end of the pump, the vacuum will be attained. The discharge valves are immersed in oil, which circulates in the pump for lubricating and sealing.

The pump is installed with gas ballast valve. In case there is little vapour mixed in the pumped gas, open the gas ballast valve and feed the air to the gas exhaust space of the pump. Then the vapour will be exhausted to the atmosphere along with the air and will not be condensed into water in the pump so as to prevent the oil from emulsion by the condensed water and to prolong service life of the pump oil.

Specification

Model
S2X-4C
S2X-8
S2X-15
S2X-30A
S2X-70A
Remark
Pumping speed (L/S)
4
8
15
30
70
With a Maleod gauge
Ultimate pressure
Without gas ballast
?6×10 -2Pa
?6×10 -4 mbar
?4.5×10 -4Torr
With gas ballast

?6×10 -1 Pa
?1.33 Pa

?6×10 -3mbar
?1.33×10 -2mbar

?4.5×10-3Torr
?1×10 -2Torr
Ultimate total pressure
?1 Pa
?6×10 -1 Pa
With the thermal couple or Pirani gauge and other total pressure vacuum gauges.
?10 -2mbar
?6×10 -3 mbar
?0.75×10 -2 Torr
?4.5×10 -3Torr

Motor power(KW)
0.55
1.1
2.2
3
5.5
Temperature rise (?)
?40
Noise Lw dB(A)
?75
?78
?80
?82
?86

Dia of inlet (mm)
25
40
40
65
80
Rotartional Speed r.p.m
450
320
450
420
Oil capacity(L)
1
2
2.8
2
4.2
Overall dimensions (cm)
49×31×41
79×43×54
79×53×54
78×50×56
91×65×70
Suitable electro-magnetic valve
DDC-JQ25
DDC-JQ40
DDC-JQ65
DDC-JQ80
Weight (kg)
59
158
202
236
338
Cooling water (L/min)

>1
>2
Inlet and outlet water pipes isG3/8"

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