adicomp® advanced air solutions

WEATHER PROOF SCREW COMPRESSOR
MODEL: WIND11-270-INOX

SPECIAL UNIT SUITABLE FOR OUTDOOR INSTALLATION

- Completely automatic
- Oil injected
- Belt driven
- Silenced
- Air cooled
- Reduces power cost
- 24 Volt control
- Low noise level
- Simplified Servicing
- Receiver mounted 270 L

This package consists of a rotary screw compressor, oil injected, belt driven connected to electric motor, complete with all usual accessories such as electric control panel, compressed air after-cooler and noise absorbing canopy SUITABLE FOR OUTDOOR INSTALLATION.

<u>Internal heater thermostatic controlled</u>

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DESIGN FEATURES FOR YOUR BENEFIT

Constructive characteristics:

1- Air end and transmission

The air end is of screw type ,single stage, oil injected and consists of two rotors: one male with 5 lobes and one female with 6 caves with asymmetric profile. The rotation of the two rotors achieves the compression of the air sucked in with continuity and without pulsation.

Belt driven transmission in this range of power is an important characteristics of our screw compressor packages as it make possible the operation of the air end with the maximum efficiency.

The compression is achieved in one only stage and the heat generated by the compression it is absorbed and removed by the oil injected between the two rotors. The oil also lubricates all mechanical rotating parts and assure a good sealing between the rotors and rotors and housing.

The rotors are made from forged steel and manufactured by NC machines

Ball bearings and needle bearings are fitted to absorb respectively axial and radial loads

Air end are manufactured by Termomeccanica of La Spezia (I) under licence from S.R.M. (Svenska Rotary Machinery) and the profile is the latest one "D" type.

2 - Oil circuit

It consist of following:

Air/oil receiver achieving the first centrifugal separation of oil from compressed air

Separator cartridge , multistage with high efficiency

Air cooled oil radiator with great exchanging surface

Oil filter cartridge

Oil thermostatic valve

Oil minimum pressure valve

The oil that is kept in circulation by pressure differential between air/oil receiver and air end performs three major functions:

- absorbs and dissipate the heat
- assures a perfect sealing in the compression chamber
- lubricates all moving parts

3 - Cooling circuit

The cooling circuit includes the combined oil radiator and the compressed air aftercooler. The cooling medium is the ambient air that it is conveyed by a suitable electric fan.

4 -Electric motor

The electric motor used is made by an important international Italian Company as Marelli/Simens. Insulation class is F with over temperature class B ant the protection is TEFC (IP55)

The electric motor is flanged to the air end by means of flexible coupling and bell housing and therefore the power is transmitted without any loss differently than others using "vee" belt transmission.

5- Electric panel

The electrical contactors are Siemens and are included into an electric box in IP55 in accordance CE norms.

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6 - Control and regulation circuit

Electronic panel with pressure & temperature transducer to control and regulate automatically the unit. In the display of the electronic panel are always visible operating pressure and operating temperature and by pushing different buttons it can be seen a lot of other parameters. There are indication of too high operating temperature, overload of main and fan motor and wrong sense of rotation. Automatically it will also appear the required maintenance.

The electronic panel control the load/off load of unit by closing, opening the suction control valve and depressurising the system when stopped. There is an intelligent algorithm inside that stop automatically the unit after calculating if this is convenient.

7- Other components of screw compressor package

a- Suction filter with high degree of filtration and with big dust accumulation capacity
b- Safety valve
c- Non return valve in the air circuit
d- First lubricant filling
e- Main isolator switch
f- Silencing canopy in sheet metal steel, powder coated and internally covered with noise absorbent foam capable to bring the noise level within the parameters accepted by the inspection authority. The canopy is complete with ample doors for the easy inspection of all components and has a robust steel frame with facility for the easy handling and lifting.

9- Horizontal receiver 270/500 L

Due to its storage and buffer capacity, the air receiver plays a key role within a compressed air installation: It provides capacity during periods of peak demand and is often used to separate condensate from the compressed air. Therefore, it is important for the receiver to be correctly sized for the specific system, to be resistant against corrosion and to have long inspection intervals. Air receivers from adicomp meet all of these requirements. All the receiver are painted with blue color RAL5015 and assembled according to the CE norms.

10- Installation

The installation of this screw compressor package is extremely simple. No foundations are required. It is sufficient to place the unit in the foreseen site that must be level ant to do the following connections:

- Electrical connection from the supply to the electric panel on the unit itself
- Pneumatic connection from the unit to the air receiver or to the distribution line

Above described screw compressor package is according to CE and EMV regulation

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CONDITION OF REFERENCE:		
Suction pressure	Bar (a)	1
Relative Humidity	%	60
Operating pressure	Bar (g)	4.5
Suction air temperature	°C	20
OPERATIVE LIMITS:		
Max. operating pressure	Bar (g)	6.0
Min. operating pressure	Bar (g)	4
Min ambient temperature	°C	-15
Max. suction air temperature	°C	45
PERFORMANCE:		
Free Air Delivery at conditions of reference	lt/min	2000
Absorbed power at motor shaft (excluded cooling fan)	Kw	10.8
Absorbed power at motor shaft fully unload	Kw	0.5
Compressed air delivery temperature above ambient	°C	15-20
Oil capacity	liters	3.5
Oil residual in compressed air	Mg/m3	2-3
Noise level	dB (A)	68
RECEIVER:		
Horizontal receiver CE87/404 blue painted RAL5015	L	270
DATA FOR THE INSTALLATION:		
Nominal power electric motor installed	Kw	11
Efficiency	%	84.3
Insulation class/over-temperature		F/B
Protection		IP55
Service factor		1.0
Nominal speed of cooling fan installed	rpm	2500
Absorbed power of cooling fan installed	kW	0.1
DIMENSIONS:		
Compressed air connection	/	½"
Height	mm	1450
Length	mm	1800
Width	mm	800
Weight	Kg	290

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